

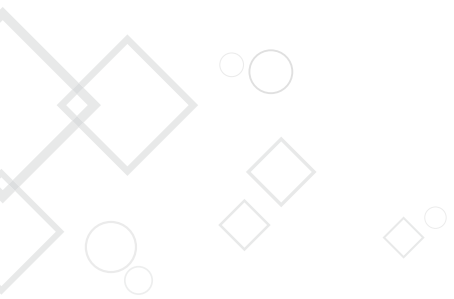
OFFICE LIGHTING

Catalogue 2018



LED

Introduction of
Havells





Havells India Limited is a leading Fast Moving Electrical Goods (FMEG) Company and a major power distribution equipment manufacturer with a strong global presence. Havells enjoys enviable market dominance across a wide spectrum of products, including Industrial & Domestic Circuit Protection Devices, Cables & Wires, Motors, Fans, Modular Switches, Home Appliances, Air Conditioners, Electric Water Heaters, Power Capacitors, CFL Lamps, Luminaires for Domestic, Commercial and Industrial Applications.

Today, Havells owns some of the most prestigious brands like Havells, Lloyd, Crabtree, Standard and Promptec. Its network constitutes of 4000 professionals, over 7575 dealers and 40 branches in the country. Our products are available in 40 countries. The company has twelve state-of-the-art manufacturing plants in India located at Haridwar, Baddi, Sahibabad, Faridabad, Assam, Alwar and Neemrana, manufacturing globally acclaimed products, synonymous with excellence and precision in the electrical industry.

The company pioneered the concept of exclusive brand showroom in the electrical industry with 'Havells Galaxy'. Today over 415 Havells Galaxies across the country are helping customers, both domestic and commercial, to choose from a wide variety of products for different applications. Havells became the first FMEG Company to offer door step service via its initiative 'Havells Connect'. Thanks to the quality of products and quicker service, it has minimum customer complaints and highest customer satisfaction.

Today, Havells alongwith its brands, have earned the distinction of being the preferred choice of electrical products for discerning individuals and industrial consumers both in India and abroad. Havells offers same quality products for both Indian and International markets. It is committed to keep powering the world with its state-of-the-art innovations and energy-efficient solutions. Currently over 90% of its product offerings are energy efficient and manufactured in-house.

Social and environmental responsibility has been at the forefront of Havells Operating Philosophy and as a result the company consistently contributes to socially responsible activities. For instance, the company is providing mid-day meal in government schools in Alwar district, covering more than 57000 students per day. The group company, QRG Healthcare runs a 140 bed hospital in Faridabad. In the past, the company has generously contributed to the society during various national calamities like the Bihar Flood, Tsunami and Kargil National Relief Fund, etc.

The essence of Havells' success lies in the expertise of its fine team of professionals, strong relationships with associates and the ability to adapt quickly & efficiently, coupled with the vision to always think ahead.

Introduction of
Plants



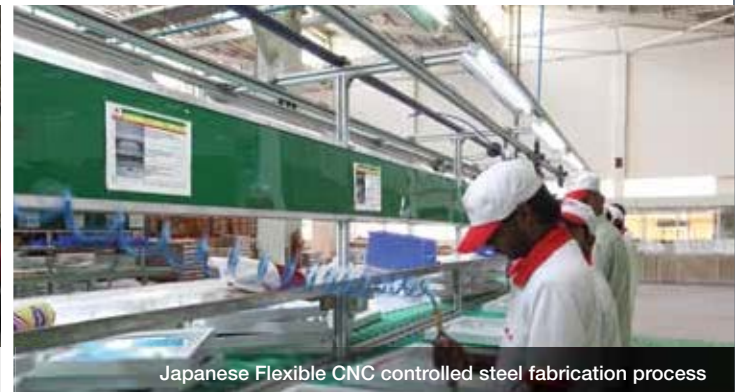
Neemrana Lighting Plant



Advanced technology cutting machine

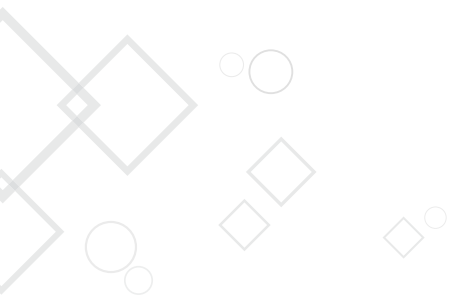


Italian Robotised Box Bending Machines



Japanese Flexible CNC controlled steel fabrication process

Havells State of the art Luminaire Plant, Neemrana



CERTIFICATIONS



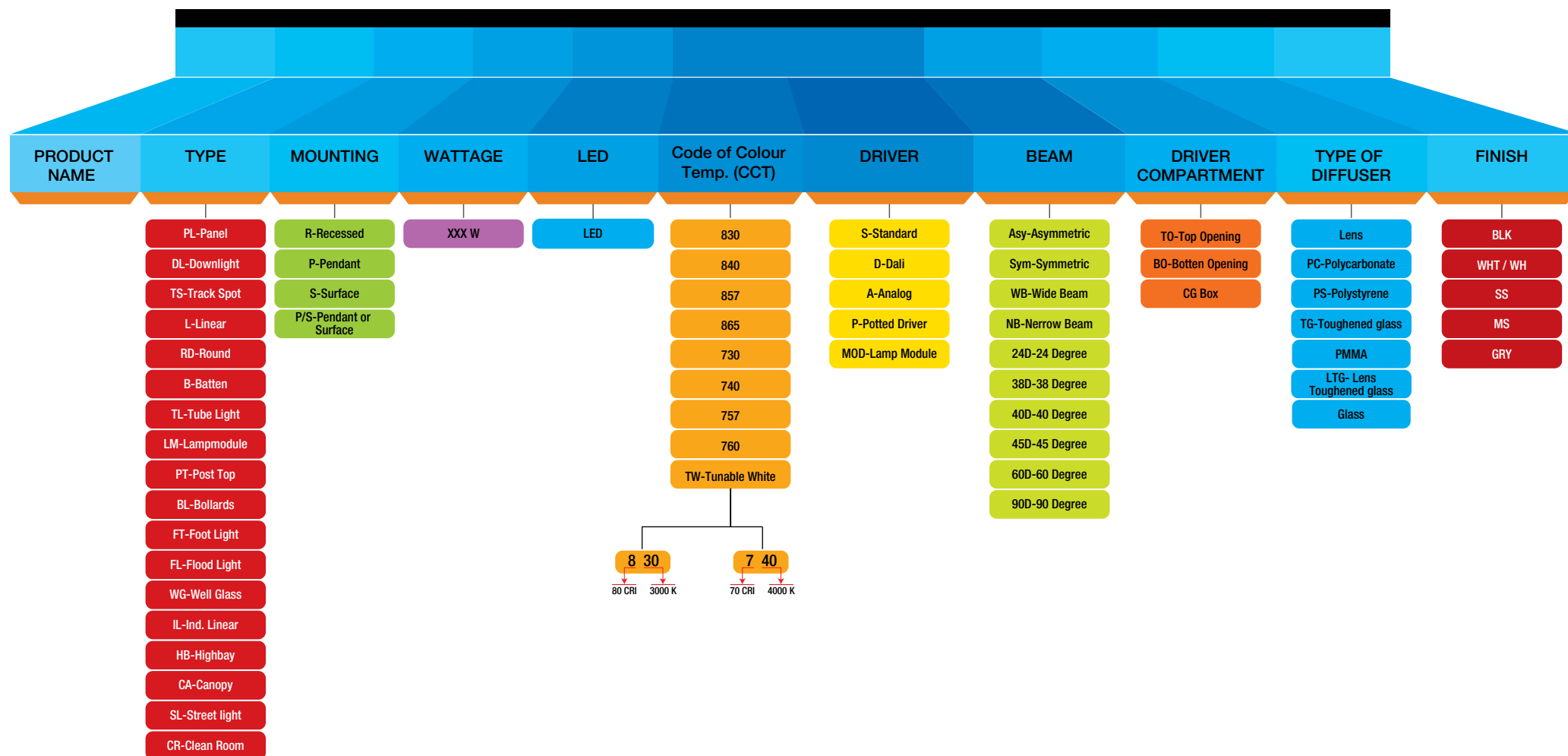
Havells lighting plant in Neemrana is spread over 30 acres of land with over 2,00,000 square feet of working space under a single roof. The plant has been made keeping in mind the global markets of Europe, US and the Middle East. Setting new benchmarks in the industry, this Havells plant will help bridge the technological divide between Europe and India when it comes to manufacturing high-end lighting luminaries.

Japanese flexible CNC controlled steel fabrication process for the accuracy in sheet punching & bending Italian robotised box bending machines to design complex enclosure shapes without human intervention Automated powder coating paint shop to minimize wastage & fast colour change Eco-friendly zero discharge plant Parabolic rolling machine for replicating complex and accurate forms and shapes Flexible assembly line Modern laboratories

Building customer confidence by providing a wide range of quality products and service through team work



PRODUCT CODE NOMENCLATURE



EXAMPLES:

PRODUCT NAME	TYPE	MOUNTING	WATTAGE	LED	CCT	DRIVER	BEAM	DRIVER COMPARTMENT	TYPE OF DIFFUSER	FINISH
BAYBRITESAUCERHBP200WLED757WBTOLTG										
BAYBRITESAUCER	HB	P	200 W	LED	757	-	WB	TO	LTG	-
ENDURAPEARLSL15WLED757SASYTOPC										
ENDURAPEARL	SL	-	15 W	LED	757	S	ASY	TO	PC	-
VENUSNEOHE2X2PLR18-42WLED857MOD										
VENUSNEOHE2X2	PL	R	34 W	LED	857	S	-	-	-	-



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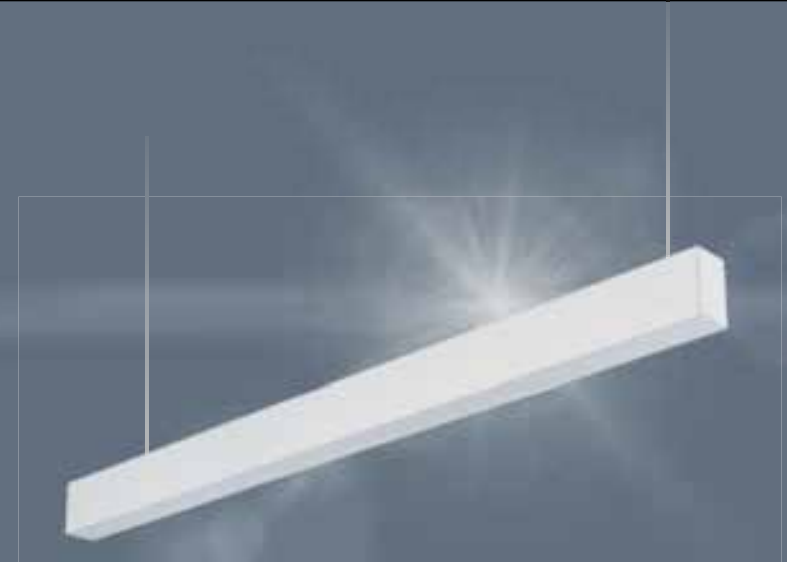


Linear



Destello LED introduces a uniquely clean, simple lighting system offering continuous, uniform lines of light across walls and ceilings. The minimal design offers a total-light effect providing outstanding visual comfort with reductions in luminance levels.

The numerous installation types meet the needs of the most demanding lighting designers and make Destello the perfect solution for spaces of every shape.



DESTELLO 50 SURFACE / SUSPENDED



PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort.
- Long life & Photobiologically safe LED'S
- High performance electronic driver ensures zero maintenance.
- No harmful UV & IR radiations.
- Environment friendly as it does not contain Mercury.
- Instant light with low running temperatures.
- Operating temperature :- 10° C to +45° C
- Operating voltage range : 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours
- Continuous, stand alone Installation option
- Architectural shapes available - "X", "+", "Y" & "L" on request.

Housing & Finish

Aluminum extruded housing in white powder coated finish and ABS end caps.

Optics

High transmittance PMMA opal diffuser for glare free symmetric light distribution.

Light source

High efficiency long life LED package in integral module with lumen efficacy >135 lm/W and viewing angle of 120° to ensure better uniformity.

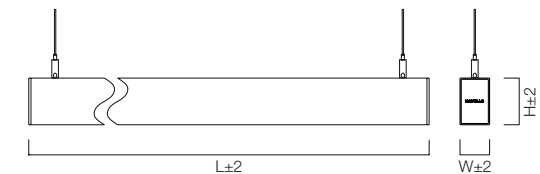
Electronic Driver

Powered by an integral isolated low THD electronic LED driver (SMPS based constant current supply) with output short circuit protection, surge protection & other reliability tests as per IS: 15885 Part 2/ Sec 13.

Mounting

- Suitable for suspended/ surface mounting with height adjustable suspension kit as per the instruction manual provided with the fixture
- Also suitable for continuous mounting using joining kits. Refer accessories

TECHNICAL DRAWING



Wattage	Length l (mm)	Width w (mm)	Height h (mm)
25 W	1137	53	76
36 W	1137	53	76

All dimensions are in mm
Tolerance: ± 5 mm

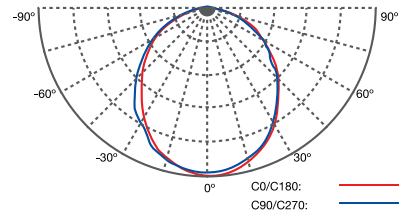
APPLICATIONS

- Office
- Meeting rooms
- Educational facilities
- Museums
- Corridors and libraries



Green LED | 25 W / 36 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
DESTELLO50LP/S25WLED840SPMMAWH	25 W	240	≥80	2400	4000 K	≥95
DESTELLO50LP/S25WLED857SPMMAWH	25 W	240	≥80	2500	5700 K	≥100
DESTELLO50LP/S36WLED840SPMMAWH	36 W	240	≥80	3400	4000 K	≥95
DESTELLO50LP/S36WLED857SPMMAWH	36 W	240	≥80	3600	5700 K	≥100

Joining Kit : LSSLOX0347. To be ordered separately for continuous installations.

Mains Cable : LSSLOX0354. Mains Cable 3-Core 1.5m.

Driver code : LSSLOX0319 for 25 W, LSSLOX0320 for 36 W.

Options available:- 2255mm - 50 W /72 W, 570mm - 13 W /18 W

Special shapes:- "X", "+", "Y", "L"

Also available in silver anodized finish.

IS 15885 (Part 2/Sec 13) IS 10322 (Part 5/Sec 13)



R-71002275



R-71001457



Destello LED introduces a uniquely clean, simple lighting system offering continuous, uniform lines of light across walls and ceilings. The minimal design offers a total-light effect providing outstanding visual comfort with reductions in luminance levels.

The numerous installation types meet the needs of the most demanding lighting designers and make Destello the perfect solution for spaces of every shape



DESTELLO 50 RECESS

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort.
- Long life & Photobiologically safe LED'S
- High performance electronic driver ensures zero maintenance.
- No harmful UV & IR radiations.
- Environment friendly as it does not contain Mercury.
- Instant light with low running temperatures.
- Operating temperature :- 10° C to +45° C
- Operating voltage range : 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours
- Continuous, stand alone Installation option
- Architectural shapes available - "X", "+", "Y" & "L" on request.

Housing & Finish

Aluminum extruded housing in white powder coated finish and ABS end caps.

Light source

High efficiency long life LED package in integral module with lumen efficacy >135 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance PMMA opal diffuser for glare free symmetric light distribution.

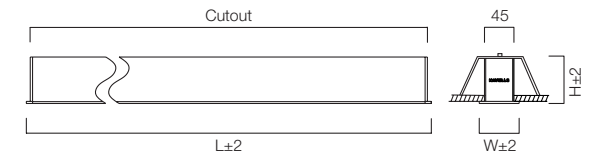
Electronic Driver

Powered by an integral isolated low THD electronic LED driver (SMPS based constant current supply) with output short circuit protection, surge protection & other reliability tests as per IS: 15885 Part 2/ Sec 13.

Mounting

- Suitable for Recess mounting through mounting clamps as per installation manual provided with the fixture
- Can be installed in continuous mounting using joining kits. Refer accessories.

TECHNICAL DRAWING



Wattage	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
25 W	1148	67	73	1140 x 55
36 W	1148	67	73	1140 x 55

All dimensions are in mm
Tolerance: ± 5 mm

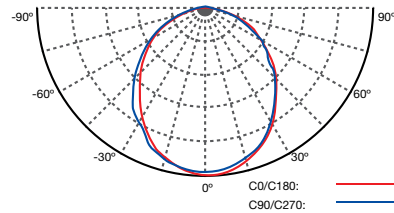
APPLICATIONS

- Offices
- Meeting rooms
- Educational facilities
- Museums
- Corridors and Libraries



Green LED | 25 W / 36 W | Life 50000 hours | HighEfficiency

POLAR DIAGRAM

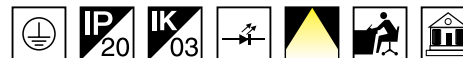


TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
DESTELLO50LR25WLED840SPMMAWH	25 W	240	≥80	2400	4000 K	≥95
DESTELLO50LR25WLED857SPMMAWH	25 W	240	≥80	2500	5700 K	≥100
DESTELLO50LR36WLED840SPMMAWH	36 W	240	≥80	3400	4000 K	≥95
DESTELLO50LR36WLED857SPMMAWH	36 W	240	≥80	3600	5700 K	≥100

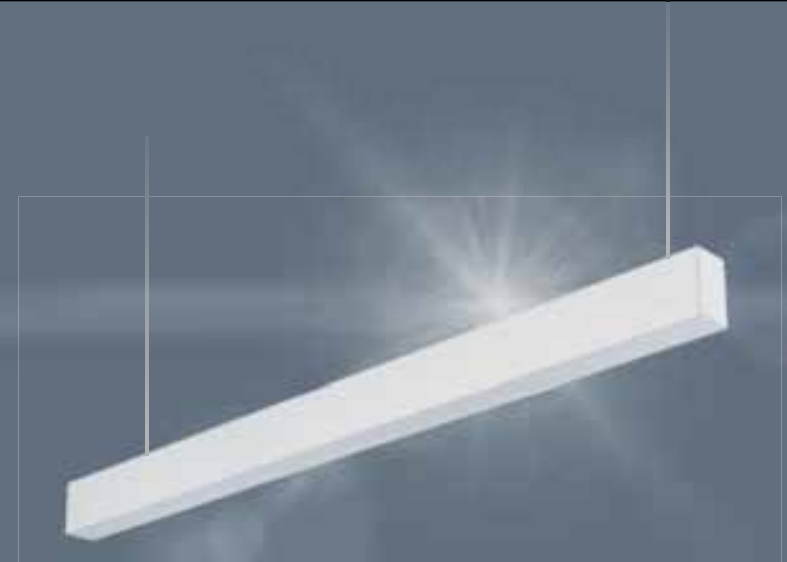
Joining Kit : LSSLOX0346. To be ordered separately for continuous installations.
 Mains Cable : LSSLOX0354. Mains Cable 3-Core 1.5m.
 Driver code : LSSLOX0319 for 25 W, LSSLOX0320 for 36 W.

Options available:- 2255 mm - 50 W /72 W, 570mm - 13 W /18 W
 Special shapes:- "X", "+", "Y", "L"
 Also available in silver anodized finish.



Destello LED introduces a uniquely clean, simple lighting system offering continuous, uniform lines of light across walls and ceilings. The minimal design offers a total-light effect providing outstanding visual comfort with reductions in luminance levels.

The numerous installation types meet the needs of the most demanding lighting designers and make Destello the perfect solution for spaces of every shape.



DESTELLO 70 SURFACE / SUSPENDED



PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort.
- Long life & Photobiologically safe LED'S
- High performance electronic driver ensures zero maintenance.
- No harmful UV & IR radiations.
- Environment friendly as it does not contain Mercury.
- Instant light with low running temperatures.
- Operating temperature :- 10° C to +45° C
- Operating voltage range : 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours
- Continuous, stand alone Installation option
- Architectural shapes available - "X", "+", "Y" & "L" on request.

Housing & Finish

Aluminum extruded housing in white powder coated finish and ABS end caps.

Light source

High efficiency long life LED package in integral module with lumen efficacy >135 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance PMMA opal diffuser for glare free symmetric light distribution.

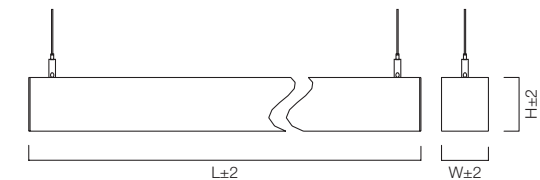
Electronic Driver

Powered by an integral isolated low THD electronic LED driver (SMPS based constant current supply) with output short circuit protection, surge protection & other reliability tests as per IS: 15885 Part 2/ Sec 13.

Mounting

- Suitable for suspended/ surface mounting with height adjustable suspension kit as per the instruction manual provided with the fixture
- Also suitable for continuous mounting using joining kits. Refer accessories.

TECHNICAL DRAWING



Wattage	Length l (mm)	Width w (mm)	Height h (mm)
25 W	1137	74	89
36 W	1137	74	89

All dimensions are in mm
Tolerance: ± 5 mm

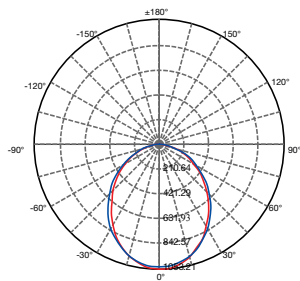
APPLICATIONS

- Offices
- Meeting rooms
- Educational facilities
- Museums
- Corridors and Libraries



Green LED | 25 W / 36 W | Life 50000 hours | HighEfficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
DESTELLO70LP/S25WLED840SPMMAWH	25 W	240	≥80	2400	4000 K	≥95
DESTELLO70LP/S25WLED857SPMMAWH	25 W	240	≥80	2500	5700 K	≥100
DESTELLO70LP/S36WLED840SPMMAWH	36 W	240	≥80	3400	4000 K	≥95
DESTELLO70LP/S36WLED857SPMMAWH	36 W	240	≥80	3600	5700 K	≥100

Joining Kit : LSSLOW0105 (To be ordered separately for continuous installations)

Mains Cable : 3-Core 1.5mtr : LSSLOX0354.

Driver code : LSSLOX0319 for 25 W, LSSLOX0320 for 36 W.

Options available:- 2273 mm - 50 W / 72 W, 588mm - 13 W / 18 W

Special shapes:- "X", "+", "Y", "L"

Also available in silver anodized finish.

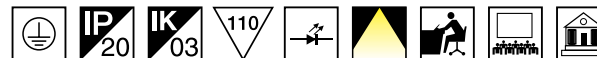
IS 15885 (Part 2/Sec 13) IS 10322 (Part 5/Sec 13)



R-71002275



R-71002640



Destello LED introduces a uniquely clean, simple lighting system offering continuous, uniform lines of light across walls and ceilings. The minimal design offers a total-light effect providing outstanding visual comfort with reductions in luminance levels.

The numerous installation types meet the needs of the most demanding lighting designers and make Destello the perfect solution for spaces of every shape.



DESTELLO 70 RECESS

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort.
- Long life & Photobiologically safe LED'S
- High performance electronic driver ensures zero maintenance.
- No harmful UV & IR radiations.
- Environment friendly as it does not contain Mercury.
- Instant light with low running temperatures.
- Operating temperature :- 10° C to +45° C
- Operating voltage range : 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours
- Continuous, stand alone Installation option
- Architectural shapes available - "X", "+", "Y" & "L" on request.

Housing & Finish

Aluminum extruded housing in white powder coated finish and ABS end caps.

Light source

High efficiency long life LED package in integral module with lumen efficacy >135 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance PMMA opal diffuser for glare free symmetric light distribution.

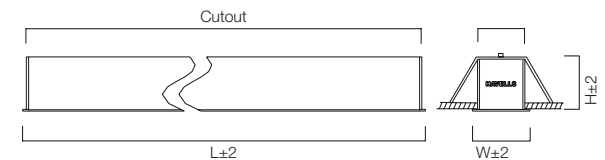
Electronic Driver

Powered by an integral isolated low THD electronic LED driver (SMPS based constant current supply) with output short circuit protection, surge protection & other reliability tests as per IS: 15885 Part 2/ Sec 13.

Mounting

- Suitable for Recess mounting through mounting clamps as per installation manual provided with the fixture
- Can be installed in continuous mounting using joining kits. Refer accessories.

TECHNICAL DRAWING



Wattage	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
25 W	1148	90	89	1140 x 76
36 W	1148	90	89	1140 x 76

All dimensions are in mm
Tolerance: ± 5 mm

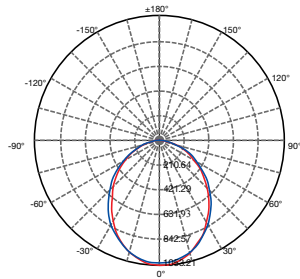
APPLICATIONS

- Office
- Meeting rooms
- Educational facilities
- Museums
- Corridors and libraries



Green LED | 25 W / 36 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
DESTELLO70LR25WLED840SPMMAWH	25 W	240	≥80	2400	4000 K	≥95
DESTELLO70LR25WLED857SPMMAWH	25 W	240	≥80	2500	5700 K	≥100
DESTELLO70LR36WLED840SPMMAWH	36 W	240	≥80	3400	4000 K	≥95
DESTELLO70LR36WLED857SPMMAWH	36 W	240	≥80	3600	5700 K	≥100

Joining Kit : LSSLOW0346 (To be ordered separately for continuous installations)

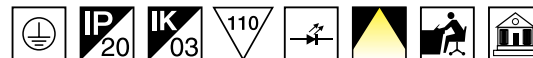
Mains Cable : 3-Core 1.5mtr : LSSLOX0354.

Driver code : LSSLOX0319 for 25 W, LSSLOX0320 for 36 W.

Options available:- 2273 mm - 50 W / 72 W, 588mm - 13 W / 18 W

Special shapes:- "X", "+", "Y", "L"

Also available in silver anodized finish.



Destello LED introduces a uniquely clean, simple lighting system offering continuous, uniform lines of light across ceilings. The minimal design affords a total-light effect providing outstanding visual comfort with reductions in luminance levels, at the same time illuminates the ceiling with a harmonious and pleasant appearance.

The numerous installation types meet the needs of the most demanding lighting designers and make Destello the perfect solution for spaces of every shape.



DESTELLO 50 DIRECT-INDIRECT

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort.
- Long life & Photobiologically safe LED'S
- High performance electronic driver ensures zero maintenance.
- No harmful UV & IR radiations.
- Environment friendly as it does not contain Mercury.
- Instant light with low running temperatures.
- Operating temperature :- 10° C to +45° C
- Operating voltage range : 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours
- Continuous, stand alone Installation option
- Architectural shapes available - "X", "+", "Y" & "L" on request.

Housing & Finish

Aluminum extruded housing in white powder coated finish and ABS end caps.

Light source

High efficiency long life LED package in integral module with lumen efficacy >135 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance PMMA opal diffuser for glare free symmetric light distribution.

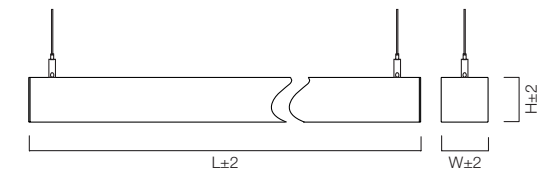
Electronic Driver

Powered by an integral isolated low THD electronic LED driver (SMPS based constant current supply) with output short circuit protection, surge protection & other reliability tests as per IS: 15885 Part 2/ Sec 13.

Mounting

- Suitable for suspended/ surface mounting with height adjustable suspension kit as per the instruction manual provided with the fixture
- Also suitable for continuous mounting using joining kits. Refer accessories.

TECHNICAL DRAWING



Wattage	Length l (mm)	Width w (mm)	Height h (mm)
36 W	1137	53	82

All dimensions are in mm
Tolerance: ± 5 mm

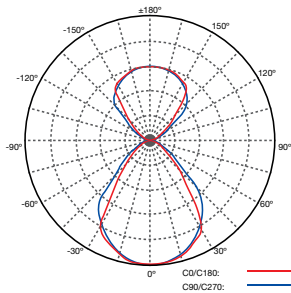
APPLICATIONS

- Offices
- Meeting rooms
- Educational facilities
- Museums
- Corridors and Libraries



Green LED | 36 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
DESTELLODILP36WLED840SPMMAWH	36 W	240	≥80	2910	4000 K	≥80
DESTELLODILP36WLED857SPMMAWH	36 W	240	≥80	3240	5700 K	≥90

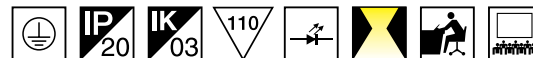
Joining Kit : LSSLOX0347 : (To be ordered separately for continuous installations).

Mains Cable : 3-Core 1.5 m : LSSLOX0354

Driver code : LSSLOX0320

Also available in silver anodized finish.

IS 15885 (Part 2/Sec 13) IS 10322 (Part 5/Sec 13)



Techzone introduces a uniquely clean, simple lighting system offering continuous lighting solutions for Armstrong Techzone ceiling system. The minimal design offers a total-light effect providing outstanding visual comfort with reductions in luminance levels.



TECHZONE

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort.
- Long life & Photobiologically safe LED'S
- High performance electronic driver ensures zero maintenance.
- No harmful UV & IR radiations.
- Environment friendly as it does not contain Mercury.
- Instant light with low running temperatures.
- Operating temperature :- 10° C to + 45° C
- Operating voltage range : 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours
- Continuous, stand alone Installation option

Housing & Finish

Housing in aluminum extrusion and CRCA in white powder coated finish and metal End caps.

Light source

High efficiency long life LED package in integral module with lumen efficacy >135 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance PMMA opal diffuser for glare free symmetric light distribution.

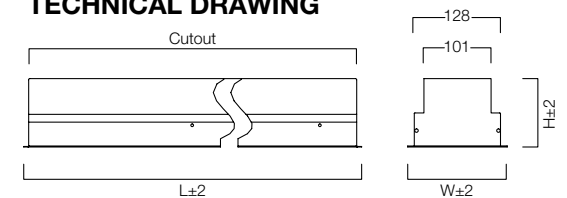
Electronic Driver

Powered by an integral, isolated lower THD electronic LED driver (SMPS based constant current supply) with Output Short Circuit protection, Surge protection & other safety tests as per IS: 15885 Part 2/ Sec 13.

Mounting

- Suitable for Recess mounting on techzone T-Bar as per installation manual provided with the fixture
- Can be installed in continuous mounting using joining kits.

TECHNICAL DRAWING



Wattage	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
28 W	1196	146	102	1184 x 132

All dimensions are in mm
Tolerance: ± 5 mm

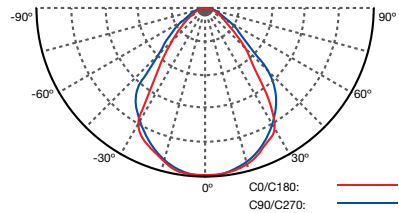
APPLICATIONS

- Armstrong Techzone ceiling



Green LED | 28 W | Life 50000 hours | High Efficiency

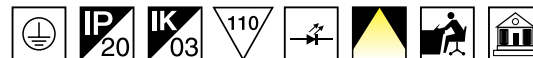
POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
TECHZONELR28WLED840SPMMAWH	28 W	240	≥80	2800	4000 K	≥100
TECHZONELR28WLED857SPMMAWH	28 W	240	≥80	2950	5700 K	≥105

Driver code : LEDDRIVER30WS



Wingo fully enhances the architectural geometries and visual comfort. Specially designed near to transparent optical system provides sufficient light levels on work planes, at the same time, illuminates the ceiling with a harmonious and pleasant appearance.

WINGO LED

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort.
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10°C to $+45^{\circ}\text{C}$
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

Made up of high quality extruded aluminum anodized channel for effective thermal

management, sturdiness and excellent corrosion resistant. Decorative grain finish ABS endcaps snap fitted to the housing, to enhance aesthetic appeal of the fixture.

Light source

High efficiency long life LED package in integral module with lumen efficacy $>135\text{ lm/W}$ and viewing angle of 120° to ensure better uniformity.

Optics

Special nanometer LGP that decouples the light fed into the sheet across the surface area by integrated prismatic optics, nearly 40% of light indirectly in a batwing and rest 60% de-glared downlight.

Electronic Driver

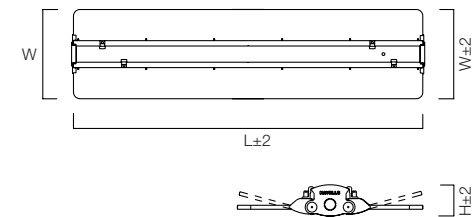
Powered by an integral isolated low THD electronic LED driver (SMPS based constant current supply) with output short circuit protection, surge protection & other reliability tests as per IS: 15885 Part 2/ Sec 13.

Mounting

Suspended mounting with height adjustable suspension kit as per the instruction manual provided with the fixture.



TECHNICAL DRAWING



Wattage	Length l (mm)	Width w (mm)	Height h (mm)
40 W	1112	280	48

All dimensions are in mm
Tolerance: $\pm 5\text{ mm}$

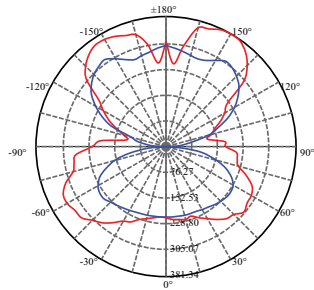
APPLICATIONS

- Conference rooms
- Director's cabin
- High end workspaces
- High end receptions and counters



Green LED | 40 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM

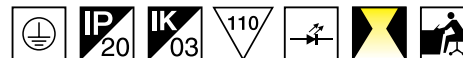


TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
WINGOLP40WLED830SPMMABLK	40 W	240	≥80	2190	3000 K	≥65
WINGOLP40WLED840SPMMABLK	40 W	240	≥80	2430	4000 K	≥70
WINGOLP40WLED857SPMMABLK	40 W	240	≥80	2700	5700 K	≥75

Driver code : LD36V0900PA(N).

IS 15885 (Part 2/Sec 13) IS 10322 (Part 5/Sec 13)



Suspended/ Surface mounted architectural luminaire provides uniquely clean and simple lighting system with soft light and glare free illumination. Available in continuous mounting option, Consta is the ideal solution for every space.



CONSTA LED SURFACE / SUSPENDED

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort.
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours

Housing & Finish

Made up of CRCA white powder coated for effective thermal management, sturdiness and excellent corrosion resistant.

Light source

High efficiency long life LED package in integral module with lumen efficacy ≥ 135 lm/W and viewing angle of 120 degree to ensure better uniformity.

End caps

Decorative grain finish white coloured ABS End capss snap fitted to the housing to increase the aesthetic appeal of the fixture.

Cover

High quality polycarbonate diffuser in opal finish for glare-free uniform light distribution, fixed to the housing.

Electronic Driver

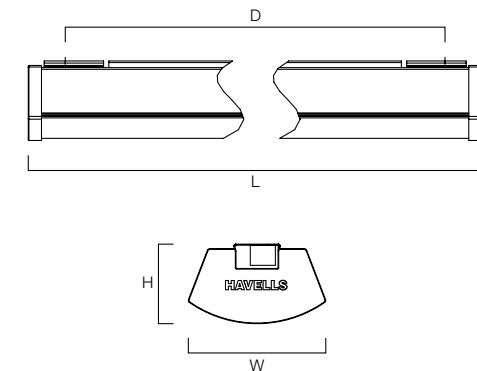
Powered by an integral isolated low THD electronic LED driver (SMPS based

constant current supply) with output short circuit protection, surge protection & other reliability tests as per IS: 15885 Part 2/ Sec 13.

Mounting

- Can be suspended with height adjustable suspension kit as per the instruction manual provided with the fixture.
- Can be installed in continuous row with click shut mechanism as per the instruction manual provided with the fixture.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Suspention Wire Distance (d)
20 W	600	106	60	544
40 W	1200	106	60	1144

All dimensions are in mm
Tolerance: ± 5 mm

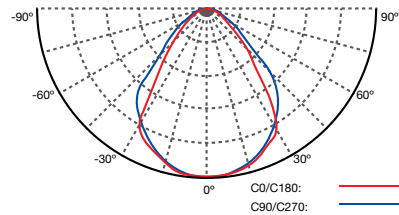
APPLICATIONS

- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Software development centers
- Modern work spaces
- Hospital premises



Green LED | 20 W / 40 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

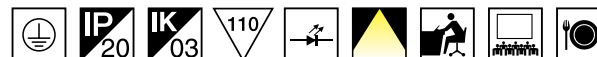
Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
CONSTA544LP20WLED830SPMMAWH	20 W	240	≥80	1800	3000 K	≥90
CONSTA544LP20WLED840SPMMAWH	20 W	240	≥80	1900	4000 K	≥95
CONSTA544LP20WLED857SPMMAWH	20 W	240	≥80	2000	5700 K	≥100
CONSTA1144LP40WLED830SPMMAWH	40 W	240	≥80	3600	3000 K	≥90
CONSTA1144LP40WLED840SPMMAWH	40 W	240	≥80	3800	4000 K	≥95
CONSTA1144LP40WLED857SPMMAWH	40 W	240	≥80	4000	5700 K	≥100

Driver code : LSSCRX1763 for 20 W, LSSCRX1763 - 2 nos. for 40 W.

IS 10322 (Part 5/Sec 13)



R-84000019



SABER LED luminaire merges classic styling with cutting edge technology to provide quality illumination and superior optical control. Use of direct/ indirect LED light engines makes it excellent choice for low height ceiling applications and areas where ceiling uniformity and indirect lighting is important.



SABER LED DIRECT-INDIRECT

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort.
- Long life & Photobiologically safe LED'S
- High performance electronic driver ensures zero maintenance.
- No harmful UV & IR radiations.
- Environment friendly as it does not contain Mercury.
- Instant light with low running temperatures.
- Operating temperature :- 10° C to +45° C
- Operating voltage range : 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours
- Continuous, stand alone Installation option
- Architectural shapes available - "X", "+", "Y" & "L" on request.

Housing & Finish

Aluminum extruded housing in white powder coated finish and ABS end caps.

Light source

High efficiency long life LED package in integral module with lumen efficacy >135 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance PMMA opal diffuser for glare free symmetric light distribution.

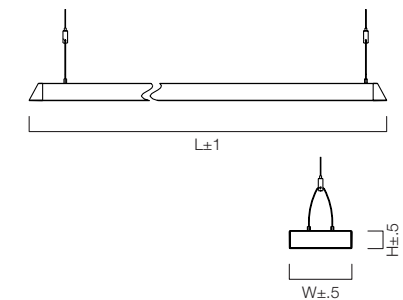
Electronic Driver

Powered by an integral isolated low THD electronic LED driver (SMPS based constant current supply) with output short circuit protection, surge protection & other reliability tests as per IS: 15885 Part 2/ Sec 13.

Mounting

- Suitable for suspended/ surface mounting with height adjustable suspension kit as per the instruction manual provided with the fixture
- Also suitable for continuous mounting using joining kits. Refer accessories.

TECHNICAL DRAWING



Wattage	Length l (mm)	Width w (mm)	Height h (mm)
36 W	1283	163	46

All dimensions are in mm
Tolerance: ± 5 mm

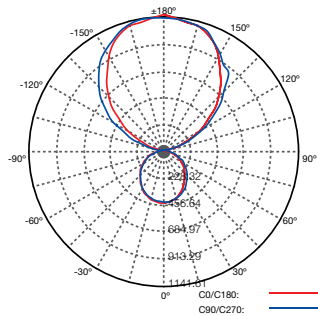
APPLICATIONS

- Office
- Meeting rooms
- Educational facilities
- Museums
- Corridors and libraries



Green LED | 36 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
SABERLP36WLED840SPMMAWH	36 W	240	≥80	4140	5700 K	≥115
SABERLP36WLED857SPMMAWH	36 W	240	≥80	3720	4000 K	≥105

Joining Kit : LSSLOX0350 : (To be ordered separately for continuous installations).

Mains Cable : 3-Core 1.5mtr : LSSLOX0354

Driver code : LSSLOX0320

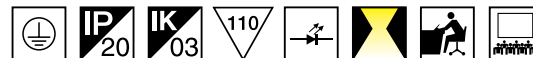
IS 15885 (Part 2/Sec 13) IS 10322 (Part 5/Sec 13)



R-71002275



R-71001457



Licon LED introduces a uniquely clean, simple lighting system offering continuous, uniform lines of light across ceilings. The minimal design affords a total-light effect providing outstanding visual comfort with reductions in luminance levels, at the same time illuminates the ceiling with a harmonious and pleasant appearance.

The numerous installation types meet the needs of the most demanding lighting designers and make Licon the perfect solution for spaces of every shape.



LICON SUSPENDED DIRECT-INDIRECT

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort.
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours

Housing & Finish

Aluminum extruded housing in silver powder coated finish.

Light source

High efficiency long life LED package in integral module with lumen efficacy >135 lm/W and viewing angle of 120 degree to ensure better uniformity.

Optics

High transmittance polycarbonate opal diffuser for glare free and low luminance direct, indirect and sideways light distribution. Upward and downward light ratio- 37:63.

Electronic Driver

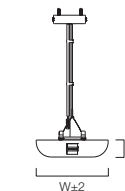
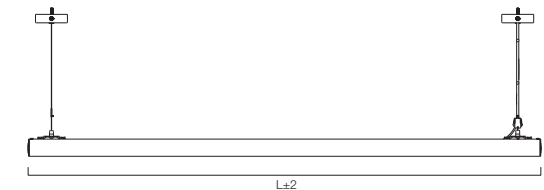
Powered by Built- In ,isolated low THD electronic LED driver (SMPS based constant current supply) with output short

circuit protection, surge protection & other reliability tests as per IS: 15885 Part 2/ Sec 13.

Mounting

- Suspended mounting with height adjustable suspension kit as per the instruction manual provided with the fixture
- Also suitable for continuous mounting using joining kits. Refer accessories

TECHNICAL DRAWING



Wattage	Length l (mm)	Width w (mm)	Height h (mm)
36 W	1206	170	40

All dimensions are in mm
Tolerance: ± 5 mm

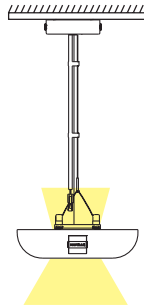
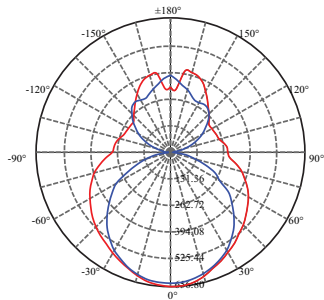
APPLICATIONS

- Workstations
- Meeting rooms/ cabins
- Classrooms
- Libraries
- Reception



Green LED | 36 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
LICONLP36WLED830SPCGRY	36 W	240	≥80	3560	3000 K	≥98
LICONLP36WLED840SPCGRY	36 W	240	≥80	3780	4000 K	≥105
LICONLP36WLED857SPCGRY	36 W	240	≥80	3960	5700 K	≥110

Driver code : LSSCRX2307

Accessories :

Primary suspension kit with mains cable to be ordered separately- LSCFEFLOP031

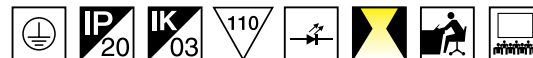
IS 15885 (Part 2/Sec 13) IS 10322 (Part 5/Sec 13)



R-85000612



R-84000019



Energy saving, environmental friendly, long life, decorative, corrosion resistant, surface-suspended luminaires with PS diffuser and extruded aluminium housing with LEDs as light source.



MONDO



PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours

Housing & Finish

Aluminum extrusion heat sink for effective thermal management, sturdiness and excellent corrosion resistant fitted in white finish.

Light source

High efficiency long life LED package in integral module with lumen efficacy >135 lm/W and viewing angle of 120 degree to ensure better uniformity.

Optics

PS diffuser in opal finish for glare free uniform light distribution.

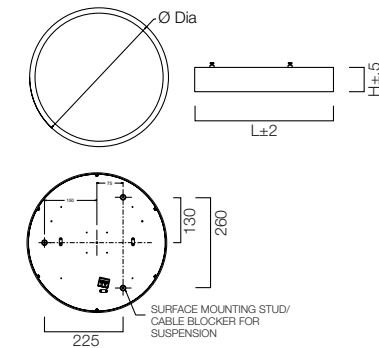
Electronic Driver

Powered by an integral isolated low THD electronic LED driver (SMPS based constant current supply) with output short circuit protection, surge protection & other safety tests as per IS: 15885 Part 2/ Sec 13.

Mounting

Suitable for suspended/ surface mounting as per the instruction manual provided with the fixture.

TECHNICAL DRAWING



Wattage	Dia Ø (mm)	Height h (mm)
25 W	400	70
36 W	600	70

All dimensions are in mm
Tolerance: ± 5 mm

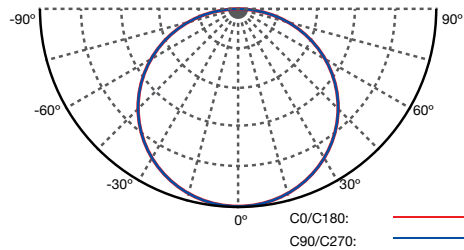
APPLICATIONS

- Corporate offices
- Banks & ATM outlets
- Software development centers
- Modern work spaces
- Showrooms



Green LED | 25 W / 36 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
MONDO400RDP/S25WLED830SPSWH	25 W	240	≥80	2070	3000 K	≥85
MONDO400RDP/S25WLED840SPSWH	25 W	240	≥80	2180	4000 K	≥90
MONDO400RDP/S25WLED857SPSWH	25 W	240	≥80	2300	5700 K	≥95
MONDO600RDP/S36WLED830SPSWH	36 W	240	≥80	2900	3000 K	≥85
MONDO600RDP/S36WLED840SPSWH	36 W	240	≥80	3050	4000 K	≥90
MONDO600RDP/S36WLED857SPSWH	36 W	240	≥80	3200	5700 K	≥95

Driver code : LSSLOX0319 for 25 W, LSSLOX0320 for 36 W.

LSSLOX0349 - Surface mounting kit

LSSLOX0348 - Suspension kit

Note : Surface mounting kit & suspension kit are not a part of standard packing. To be ordered separately.

IS 15885 (Part 2/Sec 13) IS 10322 (Part 5/Sec 13)



R-71002275



R-71002640





Panels



Ultra modern recess mounting luminaire with high performance LEDs, suitable for mounting with Armstrong/Grid ceiling.



VENUS NEO HE 2X2 18-42 W MOD

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to + 45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours

Housing & Finish

CRCA powder coated white after phosphochromate treatment.

Light source

High efficiency long life LED package in integral module with lumen efficacy of ≥ 110 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance polystyrene opal diffuser for glare free symmetric light distribution.

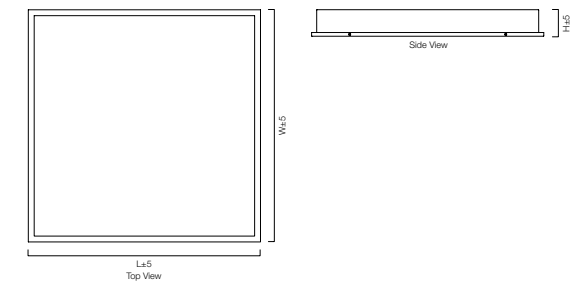
Electronic Driver

Powered by an independent Isolated, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other reliability test as per IS:15885 Part 2/Sec 13.

Mounting

Suitable only for Armstrong/Grid ceiling.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
18 W / 24 W / 28 W	595	595	65	580 x 580
34 W / 36 W / 42 W	595	595	65	580 x 580

All dimensions are in mm
Tolerance: ± 5 mm

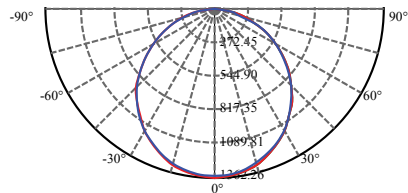
APPLICATIONS

- Conference Room
- Meeting Room
- Work stations
- Airport lounges
- Banks
- Hospital
- Hotel Lobbies



Green LED | 18-42 W | Life 50000 hours | HighEfficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
VENUSNEO1-10V2X2PLR34WLED840MOD	18-42 W	36	≥80	1800-3600	3000 K	≥100
VENUSNEO1-10V2X2PLR34WLED857MOD	18-42 W	36	≥80	1880-3780	4000 K	≥100
VENUSNEOHE2X2PLR18-42WLED840MOD	18-42 W	36	≥80	2000-3960	5700 K	≥110
VENUSNEOHE2X2PLR18-42WLED857MOD	18-42 W	36	≥80	2020-3980	6500 K	≥110

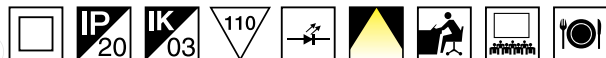
Ordering : Module + Driver (driver to be ordered separately)

Driver code: LEDDRIVER36V18 WS for 18 W, LEDDRIVER36V24 WS for 24 W, LEDDRIVER36V28 WS for 28 W, LEDDRIVER36V34 WS for 34 W / 36 W, LSSLOW0221 for 42 W.

Driver code for Dali : LEDDRIVER30V28WDALI for 28 W, LEDDRIVER30V34WDALI 34 W

Available in Dali and Analog Dimming on request.

Alluminium Frame POP/GYPSUM-LSSLOW0252



Ultra modern recess mounting luminaire with high performance LEDs, suitable for mounting with Armstrong/ Grid ceiling.



VENUS 42 W TUNABLE WHITE

PRODUCT SPECIFICATIONS

Features & Benefits

- Human-centric property, thus makes public spaces more human
- Provides improved productivity, better moods and overall happier workplaces.
- Controlled by App (Bluetooth connectivity).
- Offers unprecedented control over your interior environment.
- Offers visually comfortable environment
- Optional pre-set color temperatures or adjust to any CCT in the Productivity Range 3000 K - 5700 K
- Dimming Range 10%-100%
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures

- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours

Housing & Finish

CRCA powder coated white after phosphochromate treatment.

Light source

High efficiency long life LED package in integral module with lumen efficacy of >130 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance polystyrene opal diffuser for glare free symmetric light distribution.

Electronic Driver

Powered by an independent Isolated, SELV

Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other reliability test as per IS:15885 Part 2/ Sec 13.

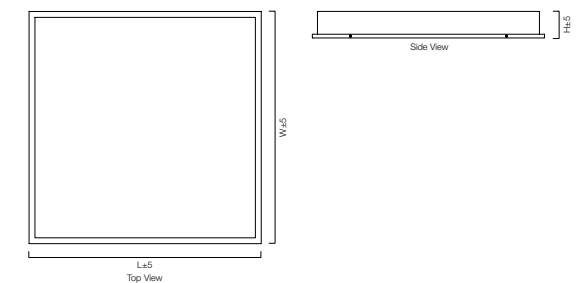
Bluetooth Dimmable Converter

Bluetooth 1-10 V Converter 2CH required for controlling the CCT in the productivity range 3000 K to 5700 K and dimming.

Mounting

Suitable only for Armstrong/Grid ceiling. Wiring diagram-refer installation instruction

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
42 W	595	595	65	580 x 580

All dimensions are in mm
Tolerance: ± 5 mm

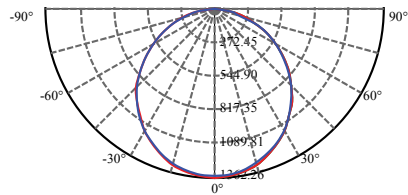
APPLICATIONS

- Conference Room
- Meeting Room
- Work stations
- Airport lounges
- Banks
- Hospital
- Hotel Lobbies



Green LED | 42 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



Alluminium Frame POP/GYPSUM-LSSLOW0252

TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
VENUSNEOTW2X2PLR42WLEDTWMOD	42 W	30	≥80	4000-4300	3000 K - 5700 K	up to ≥100

Bluetooth 1-10 V Converter 2CH required- **BLUETOOTH1- BLUETOOTH1-10 VCONV42 W**
Ordering: Fixture + Bluetooth Device (1 bluetooth can control upto 4 fixtures).

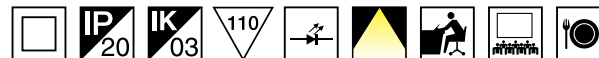
Spare Driver code: 1-10 V ANALOG DIMMABLE Driver (BIS approved): LSSCRX1795 - 2 nos.

App : **"Havells Smart App"** available on Play store /IOS store for Android/ IOS users.

IS 15885 (Part 2/Sec 13)



R-62000213



Environmental friendly, new generation, aesthetically designed, ultra modern recess mounting luminaire with high brightness SMD LEDs as light source, suitable for Armstrong/Grid ceiling.



VENUS NEO HE 4X1

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance suitable for high ceiling areas
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

CRCA powder coated white after phosphochromate treatment.

Light source

High efficiency long life LED package in integral module with lumen efficacy of >140 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance polystyrene opal diffuser for glare free symmetric light distribution.

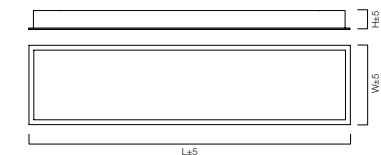
Electronic Driver

Powered by an independent Isolated, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other safety test as per IS:15885 Part 2/Sec 13.

Mounting

Suitable only for Armstrong/Grid ceiling.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
28 W	1195	295	70	1180 x 280
36 W	1195	295	70	1180 x 280

All dimensions are in mm
Tolerance: ± 5 mm

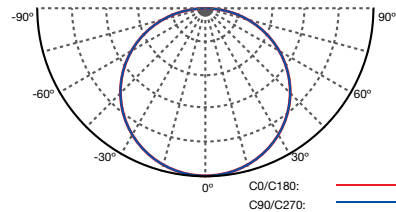
APPLICATIONS

- Conference Room
- Meeting Room
- Work stations
- Airport lounges
- Banks
- Hospital
- Hotel Lobbies



Green LED | 28 W / 36 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
VENUSNEOHE4X1PLR28-36WLED830MOD	28-36 W	36	≥80	2700-3560	3000 K	≥100
VENUSNEOHE4X1PLR28-36WLED840MOD	28-36 W	36	≥80	2850-3750	4000 K	≥105
VENUSNEOHE4X1PLR28-36WLED857MOD	28-36 W	36	≥80	3000-3700	5700 K	≥105

Driver codes:- LEDDRIVER36V28WS for 28 W, LEDDRIVER36V34WS for 34 W, LEDDRIVER36V36WS for 36 W

IS 15885 (Part 2/Sec 13)



The Venus Active is a range LED recessed Panels with Occupancy + light sensor. The range is perfect for general and office lighting applications such as circulation areas, corridors and breakout areas, and has a self learning feature for auto programming .



VENUS NEO HE 42 W ACTIVE

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- High performance electronic driver ensures zero maintenance
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Operating temperature: -10° C to +45° C
- Operating Voltage : 198 VAC - 264 VAC
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing

CRCA powder coated white after phosphochromate treatment.

Light source

High efficiency long life LED package with lumen efficacy of 140 lm/W with a viewing angle of 120°

to ensure better lumen output (For detailed photometric data, please refer LM79 report & IES file).

Optics

High transmittance polystyrene opal diffuser for glare free symmetric light distribution.

Electronic Driver

1. Isolated , SELV output Electronic Driver with Output Short-circuit protection, Surge Voltage protection and other safety & performance test as per IS:15885 Part 2/ Sec 13.

Active Features :

1. Small and inconspicuous, it does not change the appearance of the luminaires.
2. Active uses 60-70 hours to learn about its environment - external daylight conditions, and other luminaires around it.
3. Active brings added features - presence detection, daylight harvesting and seamless and comfortable dimming

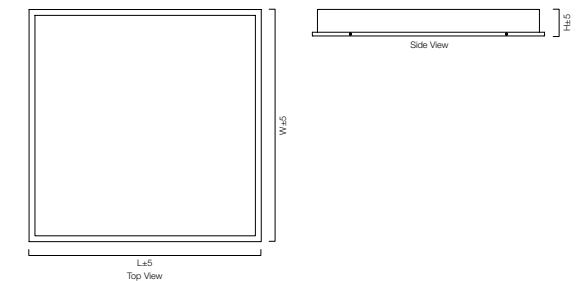
Operation of Active Luminaire

1. If the luminaire is alone, such as a storage room, cupboard, copy room etc. then the luminaire goes to minimum level and OFF in 10 minutes. If the luminaire is one of many luminaires, then the light stays on minimum level for more than an hour before switching OFF. This is done not to disturb other people in the working area and to create a safe and comfortable lighting scene. When the luminaire is affected by additional external light, i.e. close to a window, energy saving is utilized over the entire dynamic dimming area: 25-100 % When there is no external light affecting the luminaire additional energy saving cannot be utilized by daylight harvesting. The minimum light level is in this case clamped to 80 %, which ensures stable and reliable functioning of several luminaire sensors acting close to each other, preventing "waving effect" of sensors.

Mounting

Suitable only for Armstrong/Grid ceiling.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
42 W	595	595	65	580 x 580

All dimensions are in mm
Tolerance: ± 5 mm

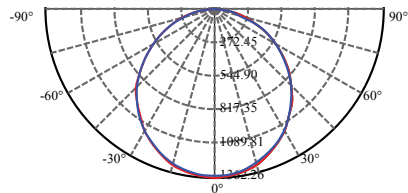
APPLICATIONS

- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Modern work spaces
- Hospital premises



Green LED | 42 W | Life 50000 hours | High Efficiency

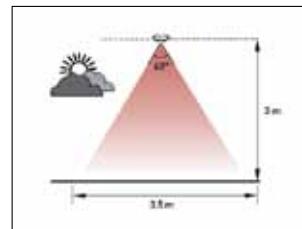
POLAR DIAGRAM



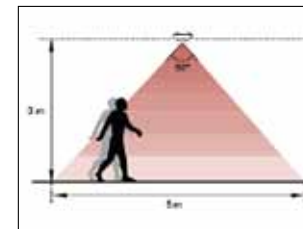
TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
VENUSNEOHE2X2R42WLED830ACTIVE	42 W	240	≥80	3850	3000 K	≥90
VENUSNEOHE2X2R42WLED840ACTIVE	42 W	240	≥80	4200	4000 K	≥100
VENUSNEOHE2X2R42WLED857ACTIVE	42 W	240	≥80	4250	5700 K	≥100

OPERATION OF ACTIVE SENSOR



Constant Light Coverage



Presence Detection Coverage



The Venus PIR is a range LED recessed Panels with Occupancy sensor. The range is perfect for general and office lighting applications such as circulation areas, corridors and breakout areas.



VENUS NEO HE PIR

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- High performance electronic driver ensures zero maintenance
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Operating temperature: -10° C to +45° C
- Operating Voltage : 140 V - 270 V AC
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing

CRCA powder coated white after phosphochromate treatment.

Light source

High efficiency long life LED package with lumen

efficacy of 140lm/W with a viewing angle of 120° to ensure better lumen output (For detailed photometric data, please refer LM 79 report & IES file).

Optics

High transmittance polystyrene opal diffuser for glare free symmetric light distribution.

Electronic Driver

1. Isolated , SELV output Electronic Driver with Output Short-circuit protection, Surge Voltage protection and other safety & performance test as per IS:15885 Part 2/Sec 13.

PIR Features :

1. PIR sensors allow you to sense motion, almost always used to detect whether a human has moved in or out of the sensors range.
2. They are small, inexpensive, low-power, easy to use and don't wear out.

Operation of PIR Luminaire

Dip switch 1:

When turned to SUN mode (down) it will work day & night, when turned to MOON mode (up) it will only work when the ambient light is less than 10 lux.

Dip switch 2:

In up position sensor will work with detection range of 3 m & in down position sensor will work with detection range of 6m.

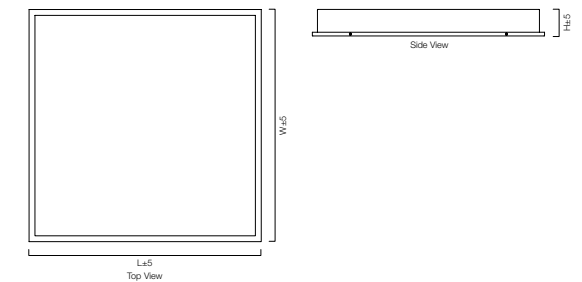
Dip switch 3-8:

To select time delay, move the desired dip switch upwards to activate it, time delay options are 5s, 30s, 1min, 5min, 8min. In case of multiple selection it will consider the minimum time selected.

Mounting

Suitable only for Armstrong/Grid ceiling.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
42 W	595	595	65	580 x 580

All dimensions are in mm
Tolerance: ± 5 mm

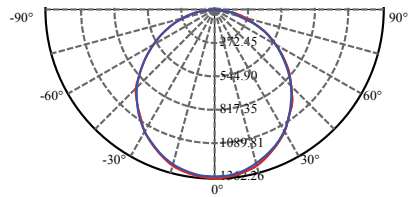
APPLICATIONS

- Airport lounges
- Corporate offices
- Banks & ATM outlets
- Modern work spaces
- Hospital premises

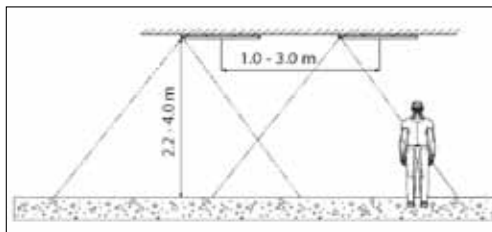


Green LED | 42 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



OPERATION OF PIR SENSOR



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
VENUSNEOHE2X2R18WLED830PIR	18 W	240	>80	1800	3000 K	≥100
VENUSNEOHE2X2R18WLED840PIR	18 W	240	>80	1890	4000 K	≥105
VENUSNEOHE2X2R18WLED857PIR	18 W	240	>80	1980	5700 K	≥110
VENUSNEOHE2X2R20WLED830PIR	20 W	240	>80	2000	3000 K	≥100
VENUSNEOHE2X2R20WLED840PIR	20 W	240	>80	2100	4000 K	≥105
VENUSNEOHE2X2R20WLED857PIR	20 W	240	>80	2200	5700 K	≥110
VENUSNEOHE2X2R24WLED830PIR	24 W	240	>80	2400	3000 K	≥100
VENUSNEOHE2X2R24WLED840PIR	24 W	240	>80	2520	4000 K	≥105
VENUSNEOHE2X2R24WLED857PIR	24 W	240	>80	2640	5700 K	≥110
VENUSNEOHE2X2R28WLED830PIR	28 W	240	>80	2800	3000 K	≥100
VENUSNEOHE2X2R28WLED840PIR	28 W	240	>80	2940	4000 K	≥105
VENUSNEOHE2X2R28WLED857PIR	28 W	240	>80	3080	5700 K	≥110
VENUSNEOHE2X2R34WLED830PIR	34 W	240	>80	3400	3000 K	≥100
VENUSNEOHE2X2R34WLED840PIR	34 W	240	>80	3570	4000 K	≥105
VENUSNEOHE2X2R34WLED857PIR	34 W	240	>80	3740	5700 K	≥110
VENUSNEOHE2X2R36WLED830PIR	36 W	240	>80	3600	3000 K	≥100
VENUSNEOHE2X2R36WLED840PIR	36 W	240	>80	3780	4000 K	≥105
VENUSNEOHE2X2R36WLED857PIR	36 W	240	>80	3960	5700 K	≥110

Driver codes:- LEDDRIVER36V18WS for 18 W, LEDDRIVER36V20WS for 20 W, LEDDRIVER36V24WS for 24 W, LEDDRIVER36V28WS for 28 W, LEDDRIVER36V34WS for 34 W, LEDDRIVER36V36WS for 36 W



Ultra modern recess mounting luminaire with high performance LEDs, suitable for mounting with Armstrong/Grid ceiling.



PLANO

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

CRCA powder coated white after phosphochromate treatment.

Light source

High efficiency long life LED package in integral module with lumen efficacy of >150 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance polystyrene opal diffuser for glare free symmetric light distribution.

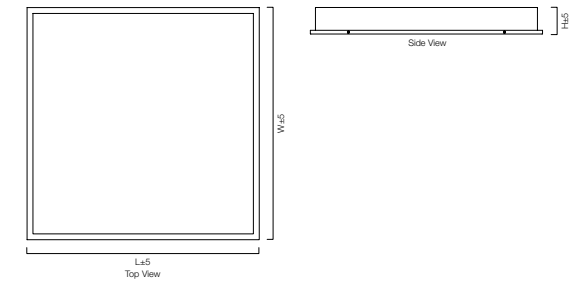
Electronic Driver

Powered by an independent, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other reliability test as per IS:15885 Part 2/Sec 13.

Mounting

Suitable only for Armstrong/Grid ceiling.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
18-36 W	595	595	65	580 x 580

All dimensions are in mm
Tolerance: ± 5 mm

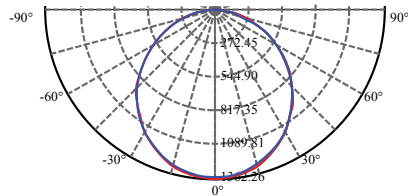
APPLICATIONS

- Conference Room
- Meeting Room
- Work stations
- Airport lounges
- Banks
- Hospital
- Hotel Lobbies



Green LED | 18 W / 24 W / 28 W / 34 W / 36 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



IS 15885 (Part 2/Sec 13)



R-85000612



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
PLANO2X2PLR18WLED840S	18 W	240	≥80	2160	4000 K	≥120
PLANO2X2PLR18WLED857S	18 W	240	≥80	2340	5700 K	≥130
PLANO2X2PLR24WLED830S	24 W	240	≥80	2520	3000 K	≥105
PLANO2X2PLR24WLED840S	24 W	240	≥80	2760	4000 K	≥115
PLANO2X2PLR24WLED857S	24 W	240	≥80	3120	5700 K	≥130
PLANO2X2PLR28WLED830S	28 W	240	≥80	2940	3000 K	≥105
PLANO2X2PLR28WLED840S	28 W	240	≥80	3220	4000 K	≥115
PLANO2X2PLR28WLED857S	28 W	240	≥80	3640	5700 K	≥130
PLANO2X2PLR34WLED830S	34 W	240	≥80	3400	3000 K	≥100
PLANO2X2PLR34WLED840S	34 W	240	≥80	3740	4000 K	≥110
PLANO2X2PLR34WLED857S	34 W	240	≥80	4080	5700 K	≥120
PLANO2X2PLR36WLED830S	36 W	240	≥80	3600	3000 K	≥100
PLANO2X2PLR36WLED840S	36 W	240	≥80	3960	4000 K	≥110
PLANO2X2PLR36WLED857S	36 W	240	≥80	4320	5700 K	≥120

Driver code: LSSCRX2239 for 18 W, LSSCRX2204 for 24 W, LSSCRX2175 for 28 W, LSSCRX2206 for 34 W, LSSCRX2208 for 36 W.

Environmental friendly, new generation, aesthetically designed, ultra modern recess mounting luminaire with high brightness SMD LEDs as light source, suitable for Armstrong/Grid ceiling.



PLUTO NEO 2x2

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance suitable for high ceiling areas
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10°C to $+45^{\circ}\text{C}$
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

CRCA powder coated white after phosphochromate treatment.

Light source

High efficiency long life LED package in integral module with lumen efficacy of ≥ 140 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance polystyrene opal diffuser for glare-free symmetric light distribution.

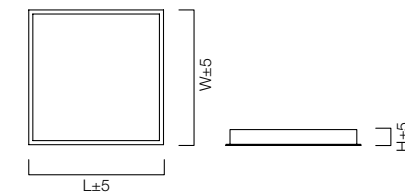
Electronic Driver

Powered by an independent Isolated, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other Safety test as per IS:15885 Part 2/Sec 13.

Mounting

Suitable only for Armstrong ceiling.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
28 W	595	595	70	580 x 580
34 W	595	595	70	580 x 580
42 W	595	595	70	580 x 580

All dimensions are in mm
Tolerance: ± 5 mm

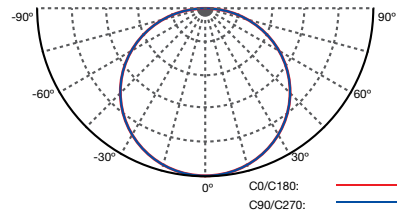
APPLICATIONS

- Conference Room
- Meeting Room
- Work stations
- Airport lounges
- Banks
- Hospital
- Hotel Lobbies



Green LED | 28 W / 34 W / 42 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



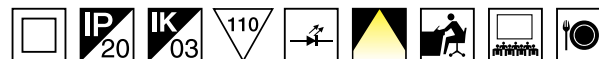
Alluminium Frame POP/GYPSUM-LSSLOW0252

TECHNICAL DATA

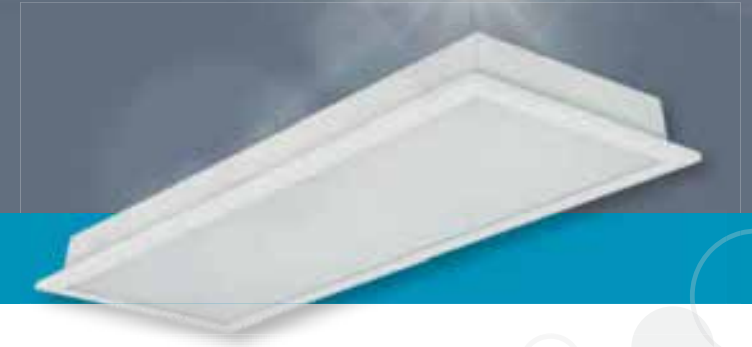
Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
PLUTONEO2X2PLR28WLED840S	28 W	240	≥80	3240	4000 K	≥115
PLUTONEO2X2PLR28WLED857S	28 W	240	≥80	3360	5700 K	≥120
PLUTONEO2X2PLR34WLED840S	34 W	240	≥80	3740	4000 K	≥110
PLUTONEO2X2PLR34WLED857S	34 W	240	≥80	3910	5700 K	≥115
PLUTONEO2X2PLR42WLED840S	42 W	240	≥80	4410	4000 K	≥105
PLUTONEO2X2PLR42WLED857S	42 W	240	≥80	4620	5700 K	≥110

Driver code: LED DRIVER30WS for 28 W, LEDDRIVERVENUSNEO36WS for 34 W, LEDDRIVERVENUSNEO42WS for 42 W.

IS 15885 (Part 2/Sec 13)



Environmental friendly, new generation, aesthetically designed, ultra modern recess mounting luminaire with high brightness SMD LEDs as light source, suitable for Armstrong/Grid ceiling.



PLUTO NEO 4X1

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance suitable for high ceiling areas
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10°C to $+45^{\circ}\text{C}$
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours

Housing & Finish

CRCA powder coated white after phosphochromate treatment.

Light source

High efficiency long life LED package in integral module with lumen efficacy of ≥ 140 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance polystyrene opal diffuser for glare-free symmetric light distribution.

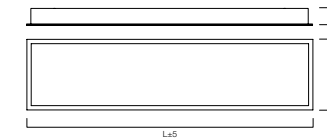
Electronic Driver

Powered by an independent Isolated, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other safety test as per IS:15885 Part 2/Sec 13.

Mounting

Suitable only for Armstrong/Grid ceiling.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
30 W	1195	295	70	1180 x 280
36 W	1195	295	70	1180 x 280

All dimensions are in mm
Tolerance: ± 5 mm

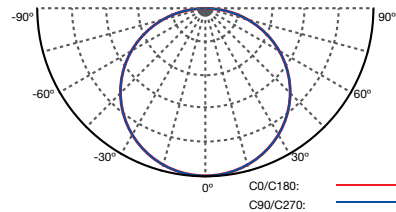
APPLICATIONS

- Conference Room
- Meeting Room
- Work stations
- Airport lounges
- Banks
- Hospital
- Hotel Lobbies



Green LED | 30 W / 36 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM

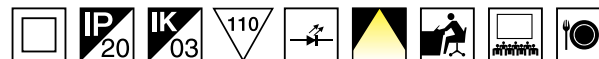


TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
PLUTONEO4X1PLR30WLED840S	30 W	240	≥80	3080	4000 K	≥100
PLUTONEO4X1PLR30WLED857S	30 W	240	≥80	3300	5700 K	≥110
PLUTONEO4X1PLR36WLED840S	36 W	240	≥80	3850	4000 K	≥105
PLUTONEO4X1PLR36WLED857S	36 W	240	≥80	3950	5700 K	≥105

Driver code: LEDDRIVER30WS for 30 W, LEDDRIVERVENUSNEO36WS for 36 W.

IS 15885 (Part 2/Sec 13)



High efficacy 2x1 recess flat panel with high brightness LED for glare-free homogeneous illumination, suitable for recessed mounting, Armstrong/POP/GB ceiling.



PLUTO 2X1

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance suitable for high ceiling areas
- Long life & photobiologically safe LEDs
- High performance Electronic Driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

CRCA powder coated white after phosphochromate treatment.

Light source

High efficiency long life LED package in integral module with lumen efficacy of ≥ 140 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance polystyrene opal diffuser for glare-free symmetric light distribution.

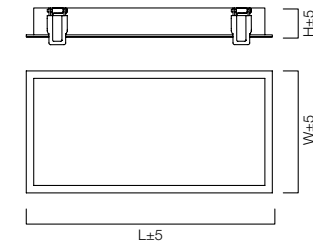
Electronic Driver

Powered by an independent Isolated, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other Safety tests as per IS:15885 Part 2/Sec 13.

Mounting

Suitable only for Armstrong/Grid & POP ceiling.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
20 W	595	295	70	580 x 280
28 W	595	295	70	580 x 280

All dimensions are in mm
Tolerance: ± 5 mm

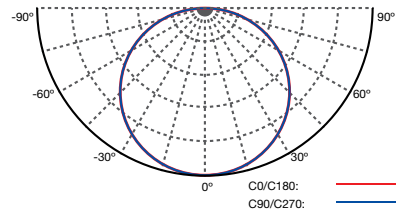
APPLICATIONS

- Conference Room
- Meeting Room
- Work stations
- Airport lounges
- Banks
- Hospital
- Hotel Lobbies



Green LED | 20 W / 28 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

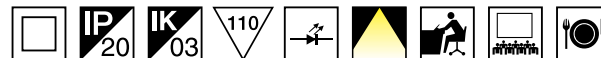
Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
PLUTO2X1PLR20WLED840S	20 W	240	≥80	1920	4000 K	≥95
PLUTO2X1PLR20WLED857S	20 W	240	≥80	2000	5700 K	≥100
PLUTO2X1PLR28WLED840S	28 W	240	≥80	2840	4000 K	≥100
PLUTO2X1PLR28WLED857S	28 W	240	≥80	2960	5700 K	≥105

Driver code: LSSCRX1837 for 20 W, LSSCRX2188 for 28 W

IS 15885 (Part 2/Sec 13)



R-85000612



High efficacy 1x1 recess LED flat panel with high brightness LED for glare-free homogenous illumination, suitable for Armstrong/POP/GB ceiling.



PLUTO 1X1

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance suitable for high ceiling areas
- Long life & photobiologically safe LEDs
- High performance Electronic Driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10°C to $+45^{\circ}\text{C}$
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

CRCA powder coated white after phosphochromate treatment.

Light source

High efficiency long life LED package in integral module with lumen efficacy of ≥ 140 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance polystyrene opal diffuser for glare-free symmetric light distribution.

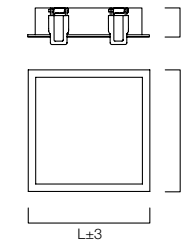
Electronic Driver

Powered by an independent Isolated, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other Safety tests as per IS:15885 Part 2/Sec 13.

Mounting

Suitable only for Armstrong/Grid & POP ceiling.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
15 W	295	295	70	280 x 280
15 W	295	295	70	280 x 280

All dimensions are in mm
Tolerance: ± 3 mm

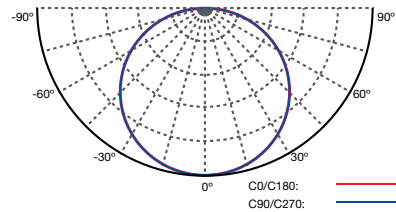
APPLICATIONS

- Conference Room
- Meeting Room
- Work stations
- Airport lounges
- Banks
- Hospital
- Hotel Lobbies



Green LED | 15 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

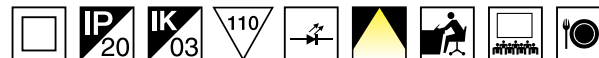
Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
PLUTO1X1PLR15WLED840S	15 W	240	≥80	1125	4000 K	≥80
PLUTO1X1PLR15WLED857S	15 W	240	≥80	1200	5700 K	≥80

Driver code: LHGDADAFCA1015.

IS 15885 (Part 2/Sec 13)



R-85000612



Ultra Slim recess mounted luminaire with high brightness LED package and Unique pattern acrylic de-glaring diffuser sheet for glare free uniform light distribution suitable for armstrong / grid ceiling.



ENDURA SLIM PRO PLUS 2X2

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

White Powder coated aluminum extruded frame for better thermal management & CRCA sheet used as a back cover and fixed with aluminum extrusion through SS Screws.

Light source

High efficiency long life LED package in integral module with lumen efficacy of ≥ 140 lm/W and viewing angle of 120° to ensure better uniformity.

Diffuser

Micro structured wave guide (LGP), Opal Polycarbonate diffuser for glare free, symmetrical light distribution.

Electronic Driver

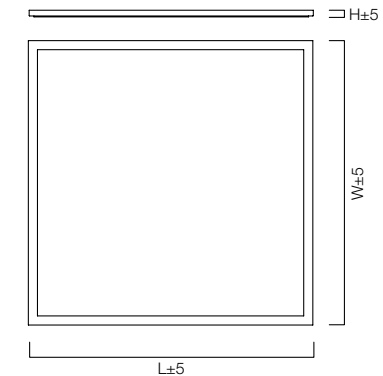
Powered by independent isolated, SELV output electronic driver (SMPS based constant current supply) with Short-circuit protection, Over Voltage protection & other safety test as per IS:15885 Part 2/Sec 13.

Connector is provided at the back of the fixture for input supply connection.

Mounting

- Suitable for armstrong ceiling
- Provision for open suspension with chain hooks through 4 holes (nos.) of $\varnothing 6$ mm provided behind the fixture

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)
28 W / 36 W	595	595	11

All dimensions are in mm
Tolerance: ± 5 mm

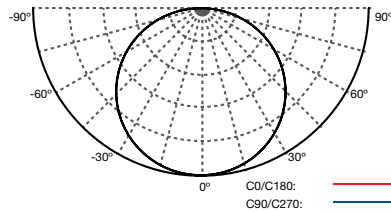
APPLICATIONS

- Conference Room
- Meeting Room
- Work stations
- Airport lounges
- Banks
- Hospital
- Hotel Lobbies



Green LED | 28 W / 36 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA (Driver to be ordered separately)

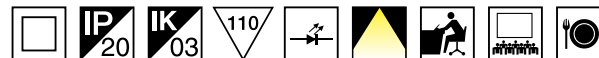
Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
ENDURASLIMPROPLUS2X2PLR28/36WLED840MOD	28/36 W	240	≥80	3250	4000 K	≥90
ENDURASLIMPROPLUS2X2PLR28/36WLED857MOD	28/36 W	240	≥80	3430	5700 K	≥95

Driver code : LEDDRIVER36V28WS for 28 W and LEDDRIVER36V36WS for 36 W.

Ordering :- Module + Driver

Alluminium Frame POP/GYPSUM-LSSLOW0252

IS 15885 (Part 2/Sec 13)



Innovative direct/indirect luminaires suitable for Armstrong/grid ceiling with high brightness LEDs and conical de-glaring prism center panel for efficient down light.



SCOOP

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LEDs
- High performance Electronic Driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours

Housing & Finish

CRCA white powder coated after phosphochromate treatment.

Light source

High efficiency long life LED package in integral module with lumen efficacy of ≥ 140 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

Unique pattern acrylic de-glaring diffuser sheet for glare-free uniform light distribution in the center.

High quality polycarbonate opal diffuser sheet at the sides for glare-free soft light.

Electronic Driver

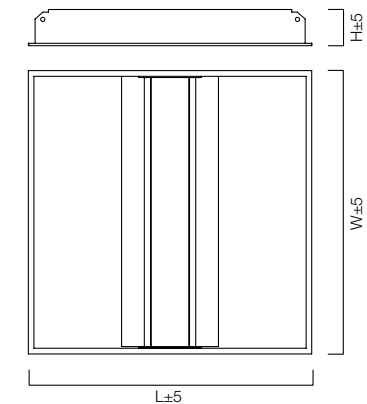
Powered by independent isolated, SELV output Electronic Driver (SMPS based constant current supply) with Short-circuit protection, Over Voltage protection & other Safety tests as per IS:15885 Part 2/Sec 13.

Connector is provided at the back of the fixture for input supply connection.

Mounting

- Suitable for armstrong ceiling
- Provision for open suspension with chain hooks through 4 holes (nos.) of $\varnothing 6$ mm provided behind the fixture.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Cutout Size (in mm)
34 W	595	595	76	580 x 580

All dimensions are in mm
Tolerance: ± 5 mm

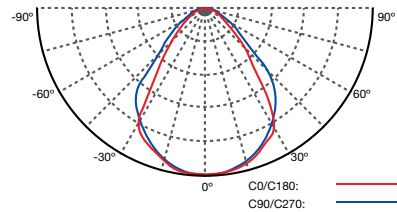
APPLICATIONS

- Conference Room
- Meeting Room
- Work stations
- Airport lounges
- Banks
- Hospital
- Hotel Lobbies



Green LED | 34 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



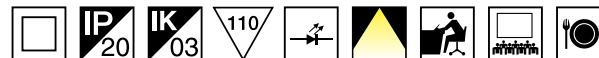
Alluminium Frame POP/GYPSUM-LSSLOW0252

TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
SCOOP2X2PLR34WLED840S	34 W	240	≥80	2850	4000 K	≥83
SCOOP2X2PLR34WLED857S	34 W	240	≥80	3000	5700 K	≥88

Driver code: LEDDRIVER30 WS.

IS 15885 (Part 2/Sec 13)



Aesthetically designed 1x1 LED flat panels for surface mounting which provides soft-light and glare-free symmetrical illumination.



PLUTO SURFACE 1X1

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance suitable for high ceiling areas
- Long life & photobiologically safe LEDs
- High performance Electronic Driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours

Housing & Finish

CRCA powder coated white after phosphochromate treatment.

Light source

High efficiency long life LED package in integral module with lumen efficacy of ≥ 140 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance polystyrene opal diffuser for glare-free symmetric light distribution.

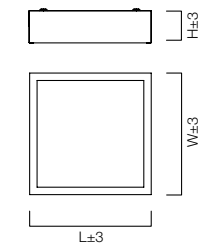
Electronic Driver

Powered by built-in Isolated, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other Safety tests as per IS:15885 Part 2/Sec 13.

Mounting

Provision for surface mounting through 4 holes (nos.) of $\varnothing 5$ mm provided at the back of the fixture.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)
15 W	295	295	70
15 W	295	295	70

All dimensions are in mm
Tolerance: ± 3 mm

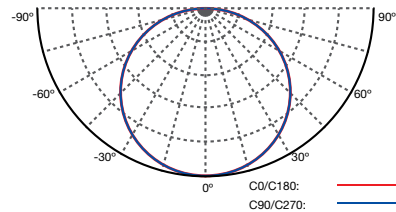
APPLICATIONS

- Conference Room
- Meeting Room
- Work stations
- Airport lounges
- Banks
- Hospital
- Hotel Lobbies



Green LED | 15 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM

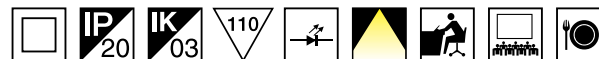


TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
PLUTOSURFACE1X1PLS15 WLED840S	15 W	240	≥80	1125	4000 K	≥75
PLUTOSURFACE1X1PLS15 WLED857S	15 W	240	≥80	1180	5700 K	≥78

Driver code: LHGDADAFCA1015.

IS 10322 (Part 5/Sec 1) 2012



Aesthetically designed 4x1 LED flat panel for surface mounting which provides soft-light and glare free symmetrical illumination.



PLUTO SURFACE 4X1

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance suitable for high ceiling areas
- Long life & photobiologically safe LEDs
- High performance Electronic Driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

CRCA powder coated white after phosphochromate treatment.

Light source

High efficiency long life LED package in integral module with lumen efficacy of ≥ 140 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance polystyrene opal diffuser for glare-free symmetric light distribution.

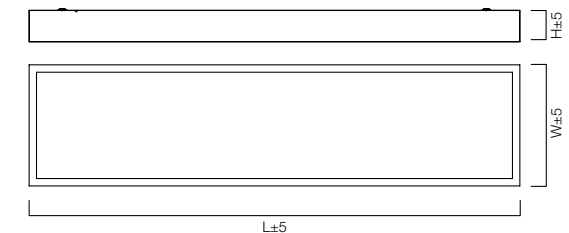
Electronic Driver

Powered by built-in Isolated, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other Safety tests as per IS:15885 Part 2/Sec 13.

Mounting

Provision for surface mounting through 4 holes (nos.) of $\varnothing 5$ mm provided at the back of the fixture.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)
34 W	1195	295	70
42 W	1195	295	70

All dimensions are in mm
Tolerance: ± 5 mm

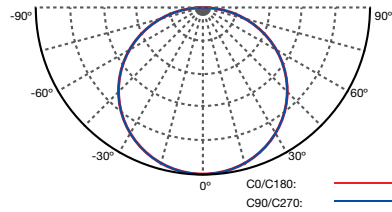
APPLICATIONS

- Conference Room
- Meeting Room
- Work stations
- Airport lounges
- Banks
- Hospital
- Hotel Lobbies



Green LED | 34 W / 42 W | Life 50000 hours | HighEfficiency

POLAR DIAGRAM



TECHNICAL DATA

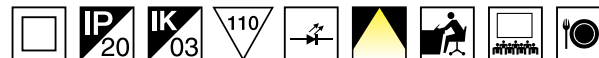
Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
PLUTOSURFACE4X1PLS34WLED840S	34 W	240	≥80	3240	4000 K	≥95
PLUTOSURFACE4X1PLS34WLED857S	34 W	240	≥80	3410	5700 K	≥100
PLUTOSURFACE4X1PLS42WLED840S	42 W	240	≥80	3800	4000 K	≥90
PLUTOSURFACE4X1PLS42 WLED857S	42 W	240	≥80	4000	5700 K	≥95

Driver code: LHGDCCFCQAL036 for 34 W and LHGDVDDFCQAL040 for 42 W.

IS 10322 (Part 5/Sec 1) 2012



R-8400019



Aesthetically designed 2x2 LED flat panels for surface mounting which provides soft-light and glare-free symmetrical illumination.

PLUTO SURFACE 2X2



PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance suitable for high ceiling areas
- Long life & photobiologically safe LEDs
- High performance Electronic Driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours

Housing & Finish

CRCA powder coated white after phosphochromate treatment.

Light source

High efficiency long life LED package in integral module with lumen efficacy of ≥ 140 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance polystyrene opal diffuser for glare-free symmetric light distribution.

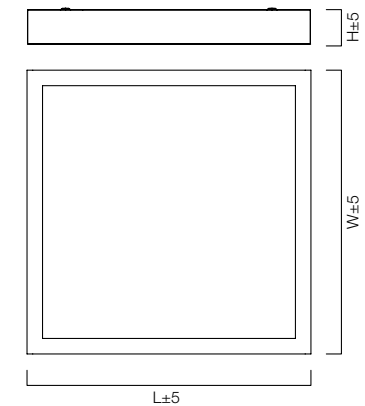
Electronic Driver

Powered by built-in Isolated, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other Safety tests as per IS:15885 Part 2/Sec 13.

Mounting

Provision for surface mounting through 4 holes (nos.) of $\varnothing 5$ mm provided at the back of the fixture.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)
34 W	595	595	70
42 W	595	595	70

All dimensions are in mm
Tolerance: ± 5 mm

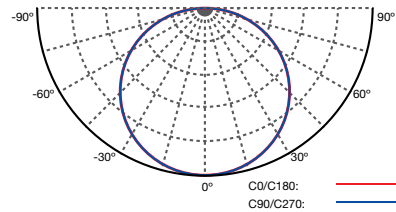
APPLICATIONS

- Conference Room
- Meeting Room
- Work stations
- Airport lounges
- Banks
- Hospital
- Hotel Lobbies



Green LED | 34 W / 42 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

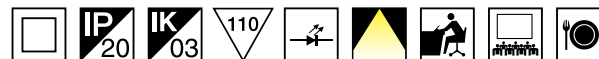
Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
PLUTOSURFACE2X2PLS34WLED840S	34 W	240	≥80	3260	4000 K	≥96
PLUTOSURFACE2X2PLS34WLED857S	34 W	240	≥80	3450	5700 K	≥101
PLUTOSURFACE2X2PLS42WLED840S	42 W	240	≥80	3800	4000 K	≥90
PLUTOSURFACE2X2PLS42WLED857S	42 W	240	≥80	4000	5700 K	≥95

Driver code: LSCELD000160 for 34 W, LHGDVDDFCQAL040 for 42 W.

IS 10322 (Part 5/Sec 1) 2012



R-84000019





Downlighters



Ultra bright compact 5 W LED Downlighters with high efficacy LEDs, ideally suited for low ceiling areas to give glare-free light (IP44 from front only).



ORBIT

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in low ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperature
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

White powder coated, elegantly designed pressure die-cast aluminium heat sink for efficient heat dissipation & white finish ABS ring for holding the diffuser.

Light source

High efficiency long life SMD LED mounted on MCPCB with high LED efficacy of ≥ 140 lm/W used to enhance the lumen output.

Optics

High quality polycarbonate frosted diffuser for glare-free uniform light distribution (For

detailed photometric data, please refer LM79 report & IES file).

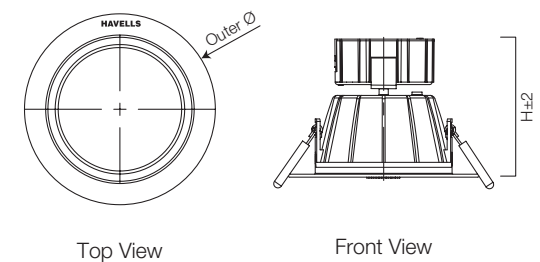
Electronic driver

Powered by an integral electronic driver in white polycarbonate housing, snap fixed on the fixture. (SMPS based constant current supply) with Output Short Circuit Protection, Surge Voltage Protection and other safety testss as per IS 15885 Part 2/Sec 13.

Mounting

Fixing into false ceiling by means of 2 nos. SS springs/ clips provided. For details refer installation instructions.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size (in mm)
5 W	114	83	95

All dimensions are in mm
Tolerance: ± 5 mm

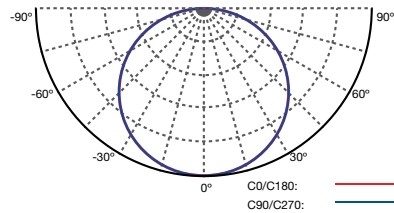
APPLICATIONS

- Retail Stores
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices



Green LED | 5 W | Life 50000 hours | HighEfficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
ORBITDLR5WLED830S	5 W	240	≥80	370	3000 K	≥74
ORBITDLR5WLED840S	5 W	240	≥80	380	4000 K	≥76
ORBITDLR5WLED857S	5 W	240	≥80	400	5700 K	≥80

Driver code: LSCELDO00065.

IS 15885 (Part 2/Sec 13)



Recess mounted downlighter with pressure die-cast aluminium heat sink & PC diffuser in white powder coated finish with integrated driver.



INTEGRA NEO

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

White powder coated, elegantly designed pressure die-cast aluminium heat sink for efficient dissipation & white finish polycarbonate ring for holding the diffuser.

Light source

High efficiency long life SMD LED mounted on MCPCB with high LED efficacy of ≥ 140 lm/W used to enhance the lumen output.

Reflector

High reflective polycarbonate conical shaped reflector to enhance the lumen output of the fixture.

Optics

High quality polycarbonate opal concave diffuser to enhance the aesthetics of the fixture and to provide glare-free uniform light distribution (For detailed photometric data, please refer LM79 report & IES file).

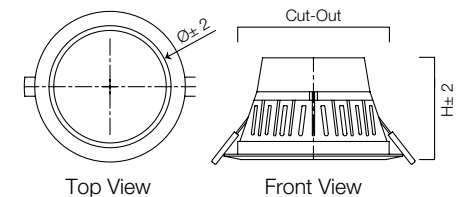
Electronic driver

Powered by integral SMPS based constant current electronic driver with lower THD <10, Output Short Circuit Protection, Surge Voltage Protection and other safety testss as per IS 15885 Part 2/Sec 13.

Mounting

Fixing into false ceiling by 2 nos. SS springs/ clips.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size (in mm)
10 W	111	90	90
12 W	158	90	138
15 W	158	90	138
24 W	197	90	175

All dimensions are in mm
Tolerance: ± 5 mm



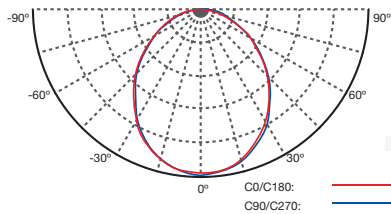
APPLICATIONS

- Residences
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices



Green LED | 10 W / 12 W / 15 W / 24 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM

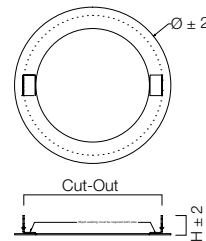


Accessories - Ring

CRCA powder coated rings to suit ceiling cut out to replace conventional luminaires with LED range with SS spring clips.

Ordering Code	Compatible with	ØxH (in mm)	Cutout Size (in mm)
LSCFEFLOX100	10 W	190 x 23.5	170
LSCFEFLOX101	12 W	190 x 23.5	170
LSCFEFLOX101	15 W	190 x 23.5	170
LSCFEFLOX103	24 W	240 x 23.5	220
LSCFEFLOX102	15 W	240 x 23.5	220

Dimensional Drawing for Ring



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
INTEGRANEODLR10WLED830S	10 W	240	≥80	810	3000 K	≥81
INTEGRANEODLR10WLED840S	10 W	240	≥80	850	4000 K	≥85
INTEGRANEODLR10WLED857S	10 W	240	≥80	1000	5700 K	≥100
INTEGRANEODLR12WLED840S	12 W	240	≥80	900	4000 K	≥75
INTEGRANEODLR12WLED857S	12 W	240	≥80	1000	5700 K	≥83
INTEGRANEODLR15WLED830S	15 W	240	≥80	1125	3000 K	≥75
INTEGRANEODLR15WLED840S	15 W	240	≥80	1215	4000 K	≥81
INTEGRANEODLR15WLED857S	15 W	240	≥80	1500	5700 K	≥100
INTEGRANEODLR18WLED830S	18 W	240	≥80	1530	3000 K	≥85
INTEGRANEODLR18WLED840S	18 W	240	≥80	1620	4000 K	≥90
INTEGRANEODLR18WLED857S	18 W	240	≥80	1800	5700 K	≥100
INTEGRANEODLR24WLED830S	24 W	240	≥80	1920	3000 K	≥80
INTEGRANEODLR24WLED840S	24 W	240	≥80	2040	4000 K	≥85
INTEGRANEODLR24WLED857S	24 W	240	≥80	2400	5700 K	≥100
INTEGRANEODLR15WLED840MOD*	15 W DALI	75-85	≥80	1350	4000 K	≥90
INTEGRANEODLR15WLED857MOD*	15 W DALI	75-85	≥80	1425	5700 K	≥95

* FOR DALI PRODUCTS, DRIVER TO BE ORDERED SEPARATELY, DALI Driver 15 W- DALI DRIVERFACT15 WD

Driver code : LSSCRX2090 for 10 W, LSSCRX2026 for 12 W, LSSCRX2026 for 15 W, LSSCRX2484 for 18 W LSSLNX0213 for 24 W

Recess mounted downlighter with pressure die-cast aluminium heat sink & PC diffuser in white powder coated finish with integrated driver.



INTEGRA GRAND

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

White powder coated, elegantly designed pressure die-cast aluminium heat sink for efficient dissipation & white finish polycarbonate ring for holding the diffuser.

Light source

High efficiency long life SMD LED mounted on MCPCB with high LED efficacy of ≥ 140 lm/W used to enhance the lumen output.

Reflector

High reflective polycarbonate conical shaped reflector to enhance the lumen output of the fixture.

Optics

High quality polycarbonate opal concave diffuser to enhance the aesthetics of the fixture and to provide glare-free uniform light distribution (For detailed photometric data, please refer LM79 report & IES file).

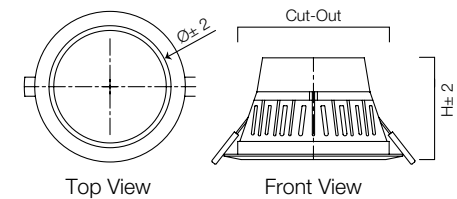
Electronic driver

Powered by integral SMPS based constant current electronic driver with lower THD <10, Output Short Circuit Protection, Surge Voltage Protection and other safety testss as per IS 15885 Part 2/Sec 13.

Mounting

Fixing into false ceiling by 2 nos. SS springs/ clips.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size (in mm)
10 W / 15 W	197	90	175

All dimensions are in mm
Tolerance: ± 5 mm

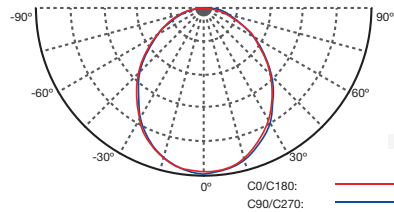
APPLICATIONS

- Residences
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices



Green LED | 10 W / 15 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
INTEGRAGRANDDLR10WLED830S	10 W	240	≥80	900	3000 K	≥90
INTEGRAGRANDDLR10WLED840S	10 W	240	≥80	940	4000 K	≥94
INTEGRAGRANDDLR10WLED857S	10 W	240	≥80	1000	5700 K	≥100
INTEGRAGRANDDLR15WLED830S	15 W	240	≥80	1280	3000 K	≥85
INTEGRAGRANDDLR15WLED840S	15 W	240	≥80	1350	4000 K	≥90
INTEGRAGRANDDLR15WLED857S	15 W	240	≥80	1500	5700 K	≥100
INTEGRAGRANDDLR15WLED840MOD*	15 W DALI	75-85	≥80	1350	4000 K	≥90
INTEGRAGRANDDLR15WLED857MOD*	15 W DALI	75-85	≥80	1425	5700 K	≥95

* FOR DALI PRODUCTS, DRIVER TO BE ORDERED SEPARATELY, DALI Driver 15 W- DALIDRIVERFACT15 WD

Driver code : LSSCRX2090 for 10 W, LSSCRX2026 for 15 W,



Recess mounted pressure die-cast aluminium luminaires in powder coated white finish with drop down PC diffuser with optimized heat sink for efficient heat dissipation and independent electronic driver.



RISE

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in low ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

White powder coated, elegantly designed pressure die-cast aluminium heat sink for efficient heat dissipation & white finish ABS ring for holding the diffuser.

Light source

High efficiency long life SMD LED mounted on MCPCB with high LED efficacy of ≥ 140 lm/W used to enhance the lumen output.

Optics

Diffused drop down diffuser for wide and glare-free symmetrical light distribution (For

detailed photometric data, please refer LM79 report & IES file).

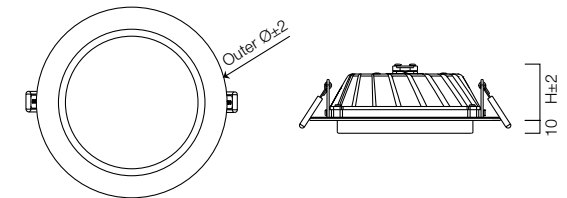
Electronic driver

Powered by an independent, isolated, SELV output electronic driver in white polycarbonate housing, snap fixed on the fixture. (SMPS based constant current supply) with Output Short Circuit Protection, Surge Voltage Protection and other safety testss as per IS 15885 Part 2/Sec 13.

Mounting

Fixing into false ceiling by means of 2 nos. SS springs/ clips provided. For details refer installation instructions.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size (in mm)
15 W	177	55	155

All dimensions are in mm
Tolerance: ± 5 mm

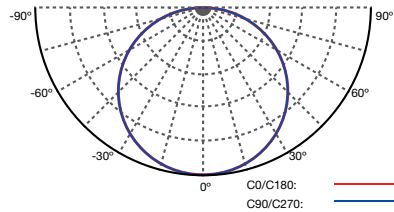
APPLICATIONS

- Retail Stores
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices



Green LED | 15 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
RISEDLR15WLED830S	15 W	240	≥80	1020	3000 K	≥65
RISEDLR15WLED840S	15 W	240	≥80	1080	4000 K	≥70
RISEDLR15WLED857S	15 W	240	≥80	1160	5700 K	≥75

Driver code: LSCELDO00065.



Recess mounted pressure die-cast aluminium luminaires in powder coated white finish in round profile with optimized heat sink for efficient heat dissipation and independent electronic LED driver.



ENDURA DL NEO 7 W / 10 W

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

Elegantly designed pressure die-cast aluminium housing & ring for efficient heat dissipation is white powder coated after phosphochromate treatment.

Light Source

High efficiency long life LED module with SMD LED package mounted on MCPCB. Lumen efficacy of LED ≥ 140 lm/W to enhance the lumen output.

Reflector

The conical shape of the housing in white finish act as reflector.

Optics

High quality polycarbonate diffuser in opal finish for glare-free uniform light distribution.

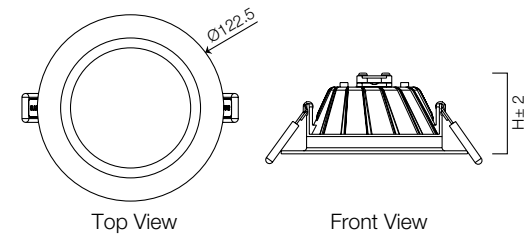
Electronic driver

Powered by an independent electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other reliability tests as per IS:15885 Part 2/Sec 13.

Mounting

Fixing into false ceiling by means of 2 nos. SS springs/ clips provided as per installation instructions.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size Ø (mm)
7 W	123	53	100
10 W	123	53	100

All dimensions are in mm
Tolerance: ± 5 mm

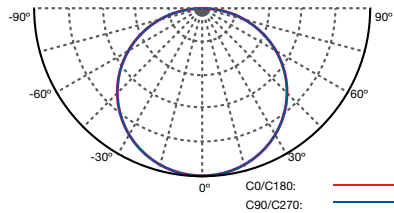
APPLICATIONS

- Shopping malls
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices



Green LED | 7 W / 10 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
ENDURANEODLR7WLED830S	7 W	240	≥80	505	3000 K	≥72
ENDURANEODLR7WLED840S	7 W	240	≥80	525	4000 K	≥75
ENDURANEODLR7WLED857S	7 W	240	≥80	560	5700 K	≥80
ENDURANEODLR10WLED840S	10 W	240	≥80	800	4000 K	≥80
ENDURANEODLR10WLED857S	10 W	240	≥80	850	5700 K	≥85

Driver code: LHGDADBFHRA1007 for 7 W, SCRX1397 for 10 W.

IS 15885 (Part 2/Sec 13)



R-85000612



Recess mounted pressure die-cast aluminium luminaires in powder coated white finish in round profile with optimized heat sink for efficient heat dissipation and separate replaceable electronic driver.



ENDURA DL NEO 12 W / 15 W / 18 W

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

Elegantly designed pressure die-cast aluminium housing & ring for efficient heat dissipation is white powder coated after phosphochromate treatment.

Light Source

High efficiency long life LED module with SMD LED package mounted on MCPCB. Lumen efficacy of LED ≥ 140 lm/W to enhance the lumen output.

Reflector

The conical shape of the housing in white finish act as reflector.

Optics

High quality polycarbonate diffuser in opal finish for glare-free uniform light distribution (For detailed photometric data, please refer LM79 report & IES file).

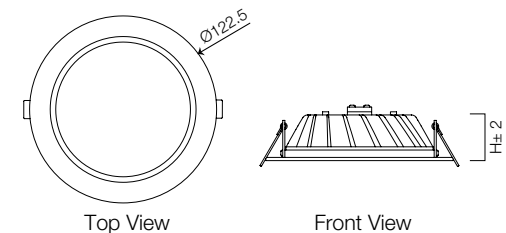
Electronic driver

Powered by an independent, isolated, SELV output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge Voltage protection & other safety tests as per IS:15885 Part 2/Sec 13.

Mounting

Fixing into false ceiling by means of 2 nos. SS springs clips provided as per installation instructions.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size Ø (mm)
12 W	177	45	155
15 W	177	45	155
18 W	177	45	155

All dimensions are in mm
Tolerance: ± 5 mm

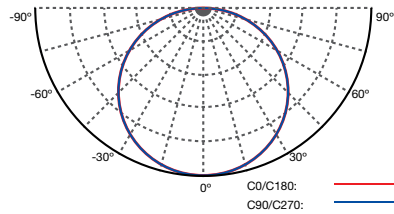
APPLICATIONS

- Shopping malls
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices



Green LED | 12 W / 15 W / 18 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
ENDURANEODLR12WLED830S	12 W	240	≥80	960	3000 K	≥80
ENDURANEODLR12WLED840S	12 W	240	≥80	1020	4000 K	≥85
ENDURANEODLR12WLED857S	12 W	240	≥80	1080	5700 K	≥90
ENDURANEODLR15WLED830S	15 W	240	≥80	1300	3000 K	≥90
ENDURANEODLR15WLED840S	15 W	240	≥80	1325	4000 K	≥95
ENDURANEODLR15WLED857S	15 W	240	≥80	1350	5700 K	≥90
ENDURANEODLR18WLED830S	18 W	240	≥80	1620	3000 K	≥90
ENDURANEODLR18WLED840S	18 W	240	≥80	1710	4000 K	≥95
ENDURANEODLR18WLED857S	18 W	240	≥80	1800	5700 K	≥90
ENDURANEO1-10VDLR15WLED830MOD	15 W(1-10 V)	30-45	≥80	1275	3000 K	≥85
ENDURANEO1-10VDLR15WLED840MOD	15 W(1-10 V)	30-45	≥80	1325	4000 K	≥90
ENDURANEO1-10VDLR15WLED857MOD	15 W(1-10 V)	30-45	≥80	1350	5700 K	≥95
ENDURANEODLR15WLED840MOD	15 W DALI	30-45	≥80	1325	4000 K	≥90
ENDURANEODLR15WLED857MOD	15 W DALI	30-45	≥80	1350	5700 K	≥95

* FOR DALI PRODUCTS, DRIVER TO BE ORDERED SEPARATELY, DALI Driver 15 W- DALIDRIVER15 WD

Driver code: LHGSDSCFHQAL012 for 12 W, LHGDADAFQQA1015 for 15 W, LSSCRX1908 for 18 W & LSSCRX2046 for 1-10V Analog.

IS 15885 (Part 2/Sec 13)



R-85000612



Recess mounted LED downlighter elegantly designed pressure die-cast aluminium heat sink for efficient heat dissipation and independent electronic LED driver.



ENDURA DL NEO 21 W / 25 W

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

Elegantly designed pressure die-cast aluminium housing for efficient heat dissipation is white powder coated after phosphochromate treatment.

Light Source

High efficiency long life LED module with SMD LED package mounted on MCPCB. Lumen efficacy of LED >140 lm/W to enhance the lumen output.

Reflector

The conical shape of the housing in white finish act as reflector.

Optics

High quality polycarbonate diffuser in opal finish for glare free uniform light distribution (For detailed photometric data, please refer LM79 report & IES file).

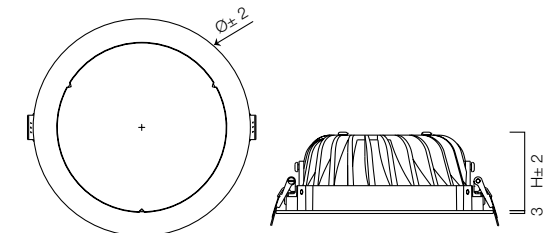
Electronic driver

Powered by an independent, isolated, SELV output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge Voltage protection & other safety test as per IS:15885 Part 2/Sec 13.

Mounting

Fixing into false ceiling by means of 2 nos. SS springs clips provided as per installation instructions.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size Ø (mm)
21 W	188	68	180
25 W	188	68	180

All dimensions are in mm
Tolerance: ± 5 mm

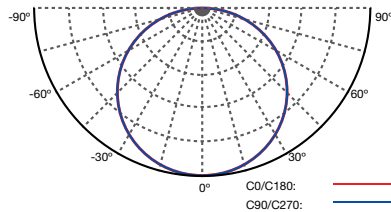
APPLICATIONS

- Shopping malls
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices



Green LED | 21 W / 25 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
ENDURANEODLR21WLED840MOD	21 W	33-48V	≥80	1680	4000 K	≥80
ENDURANEODLR21WLED857MOD	21 W	33-48V	≥80	1800	5700 K	≥85
ENDURANEODLR25WLED840MOD	25 W	33-48V	≥80	2280	4000 K	≥90
ENDURANEODLR25WLED857MOD	25 W	33-48V	≥80	2400	5700 K	≥95
ENDURANEODLR25 WLED840MOD	25 W DALI*	33-48V	≥80	2280	4000 K	≥90
ENDURANEODLR25 WLED857MOD	25 W DALI*	33-48V	≥80	2400	5700 K	≥95

* FOR DALI PRODUCTS, DRIVER TO BE ORDERED SEPARATELY, DALI Driver 25 W- DALIDRIVER25 WD

Driver code: LSSCRX1957 for 21 W / 25 W (1-10V), LSSCRX1837 for 21 W / 25 W

IS 15885 (Part 2/Sec 13)



R-85000612



Deep recessed antiglare LED downlight for general and accent lighting. The premium white reflector matches the ceiling and accentuates the architecture of the area without compromising the light output.

ARDOR

PRODUCT SPECIFICATIONS

Features & Benefits

- Best In Class LED with high lumen package
- Highly efficient heat chamber
- Superior quality white reflector technology
- Deep Recessed LED downlight
- Ideal for glare control with high lumen output
- Available in 24 W and 35 W
- No UV & IR radiations
- Environment-friendly as it does not contain mercury
- Operating temperature: -10° C to +45° C
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

White powder coated, elegantly designed pressure die-cast aluminium heat sink for efficient heat dissipation & white finish ABS ring for holding the diffuser.

Light source

High efficiency long life SMD LED mounted on MCPCB with high LED efficacy of ≥ 140 lm/W used to enhance the lumen output.

Optics

Deep Recessed High quality polycarbonate diffuser alongwith white reflector for glare-free uniform light distribution (For detailed

photometric data, please refer LM79 report & IES file).

Electronic driver

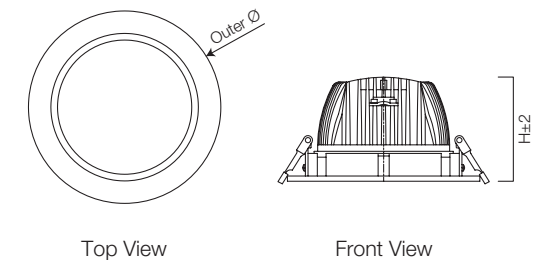
Powered by an independent electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other reliability tests as per IS:15885 Part 2/ Sec 13.

Mounting

Fixing into false ceiling by means of 2 nos. SS springs/ clips provided. For details refer installation instructions.



TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size Ø (mm)
24 W	185	90	180
35 W	219	98	210

All dimensions are in mm
Tolerance: ± 5 mm

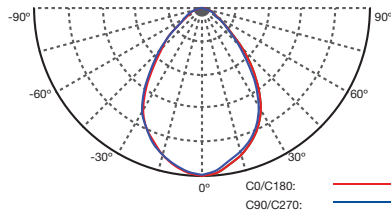
APPLICATIONS

- Retail stores/Hypermarkets
- Hotel Lobbies/Waiting areas
- Restaurants
- Corporate offices
- Museums
- High End Residences
- Airport Lounges



Green LED | 24 W / 35 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA (DRIVER TO BE ORDERED SEPARATELY DETAIL GIVEN BELLOW)

Description	System Power	Voltage (V DC)	CRI	Beam Angle	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
ARDORDLR24WLED830MODWHT	24 W	45	≥80	100°	2300	3000 K	≥90
ARDORDLR24WLED840MODWHT	24 W	45	≥80	100°	2350	4000 K	≥95
ARDORDLR24WLED857MODWHT	24 W	45	≥80	100°	2400	5700 K	≥100
ARDORDLR35WLED830MODWHT	35 W	30	≥80	100°	3400	3000 K	≥90
ARDORDLR35WLED840MODWHT	35 W	30	≥80	100°	3450	4000 K	≥95
ARDORDLR35WLED857MODWHT	35 W	30	≥80	100°	3500	5700 K	≥100

Driver code: LEDDRIVER24WS for 24 W, LEDDRIVER35WS for 35 W

Ordering :- Module + Driver

IS 15885 (Part 2/Sec 13)



R-85000612



Havells Endura HO is a range of LED downlights designed to replace conventional CFL fixture luminaire solutions. With its IP44 rating, the range is perfect for corridors, WCs, high public circulation areas and reception areas.



ENDURA HO

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

Elegantly designed pressure die-cast aluminium heat sink for efficient heat dissipation is white powder coated after phosphochromate treatment.

Light Source

High efficiency long life SMD LED module is mounted on MCPCB and lumen efficacy of ≥ 140 lm/W to enhance the lumen output.

Reflector

Mirror finish anodized reflector with facets for uniform light distribution.

Optics

Polycarbonate, UV stabilized diffuser in opal finish for glare-free uniform light distribution.

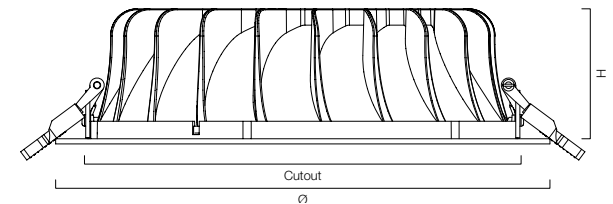
Electronic driver

Powered by an independent electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other reliability tests as per IS:15885 Part 2/ Sec 13.

Mounting

Fixing into false ceiling by means of 2 nos. SS springs/ clips provided as per instructions.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size Ø (mm)
12 W	165	45	145
15 W	195	55	175
21 W	220	60	205
25 W	240	65	225

All dimensions are in mm
Tolerance: ± 5 mm

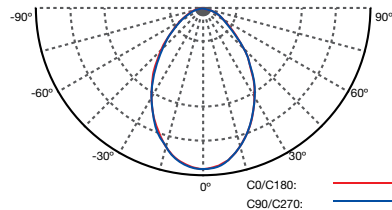
APPLICATIONS

- Retail Stores
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices



Green LED | 12 W / 15 W / 21 W / 25 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V Dc)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
ENDURAHODLR12WLED830MOD	12 W	18-45	≥80	1200	3000 K	≥100
ENDURAHODLR12WLED840MOD	12 W	18-45	≥80	1200	4000 K	≥100
ENDURAHODLR12WLED857MOD	12 W	18-45	≥80	1260	5700 K	≥105
ENDURAHODLR15WLED830MOD	15 W	18-45	≥80	1500	3000 K	≥100
ENDURAHODLR15WLED840MOD	15 W	18-45	≥80	1500	4000 K	≥100
ENDURAHODLR15WLED857MOD	15 W	18-45	≥80	1575	5700 K	≥105
ENDURAHODLR21WLED830MOD	21 W	34-48	≥80	2100	3000 K	≥100
ENDURAHODLR21WLED840MOD	21 W	34-48	≥80	2100	4000 K	≥100
ENDURAHODLR21WLED857MOD	21 W	34-48	≥80	2205	5700 K	≥105
ENDURAHODLR25WLED830MOD	25 W	34-48	≥80	2500	3000 K	≥100
ENDURAHODLR25WLED840MOD	25 W	34-48	≥80	2500	4000 K	≥100
ENDURAHODLR25WLED857MOD	25 W	34-48	≥80	2625	5700 K	≥105

Driver code: SCRX1906 for 12W, SCRX1906 for 15 W. SCRX1880for 21, SCRX1880 for 25 W

IS 15885 (Part 2/Sec 13)



The Edgepro range of Slim-Fit low profile downlights are engineered to deliver superior light output and uniformity utilising the latest edge-lit LED technology. At only 25mm deep including bracket, they are an ideal solution where ceiling voids are limited but high lumen output is required



EDGEPRO ROUND

PRODUCT SPECIFICATIONS

Features & Benefits

- Ideally suitable for office lighting, showrooms, high-end residences
- Energy efficient and low heat dissipation.
- Quick installation, easy to install.
- No UV & IR.
- Working temperature -10° C to 45° C
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

Round aluminium Powder coated white with Pressure Die cast housing.

Light source

High efficiency long life LED package with efficacy of ≥ 100 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance polystyrene opal diffuser for glare-free symmetric light distribution (for detailed photometric data, please refer LM79 report & IES file).

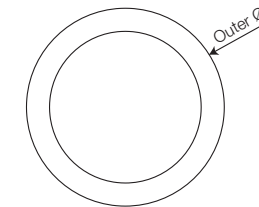
Electronic driver

Powered by an independent Isolated, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other reliability tests as per IS:15885 Part 2/Sec 13.

Mounting

Suitable for recessed mounting with Grid & POP ceiling.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size Ø (mm)
6 W	120	25	105
12 W	172	25	160
15 W	190	25	180
18 W	225	25	210

All dimensions are in mm
Tolerance: ± 5 mm

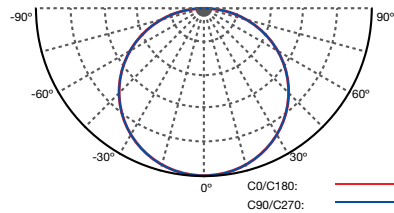
APPLICATIONS

- Residences
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices



Green LED | 6 W / 12 W / 15 W / 18 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
EDGEPRORDDL6WLED840S	6 W	240	≥80	≥570	4000 K	≥95
EDGEPRORDDL6WLED857S	6 W	240	≥80	≥600	5700 K	≥100
EDGEPRORDDL12WLED840S	12 W	240	≥80	≥1140	4000 K	≥95
EDGEPRORDDL12WLED857S	12 W	240	≥80	≥1200	5700 K	≥100
EDGEPRORDDL15WLED840S	15 W	240	≥80	≥1425	4000 K	≥95
EDGEPRORDDL15WLED857S	15 W	240	≥80	≥1500	5700 K	≥100
EDGEPRORDDL18WLED840S	18 W	240	≥80	≥1710	4000 K	≥95
EDGEPRORDDL18WLED857S	18 W	240	≥80	≥1800	5700 K	≥100

Driver code: LSSLNW0020 for 6 W, LSSLNW0021 for 12 W, LSSLNW0022 for 15 W / 18 W

IS 15885 (Part 2/Sec 13)



The Edgepro range of Slim-Fit low profile downlights are engineered to deliver superior light output and uniformity utilising the latest edge-lit LED technology. At only 25mm deep including bracket, they are an ideal solution where ceiling voids are limited but high lumen output is required



EDGEPRO SQUARE

PRODUCT SPECIFICATIONS

Features & Benefits

- Ideally suitable for office lighting, showrooms, high-end residences
- Energy efficient and low heat dissipation.
- Quick installation, easy to install.
- No UV & IR.
- Working temperature -10° C to 45° C
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours

Housing & Finish

Square aluminium Powder coated white with Pressure Die cast housing.

Light source

High efficiency long life LED package with efficacy of ≥ 100 lm/W and viewing angle of 120° to ensure better uniformity.

Optics

High transmittance polystyrene opal diffuser for glare-free symmetric light distribution (for detailed photometric data, please refer LM79 report & IES files).

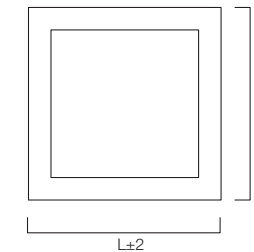
Electronic driver

Powered by an independent Isolated, SELV Output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other reliability tests as per IS:15885 Part 2/Sec 13.

Mounting

Suitable for recessed mounting with Grid & POP ceiling.

TECHNICAL DRAWING



System Power	Dimension (lxw)	Height h (mm)	Cutout Size l x w (mm)
6 W	120 x 120	25	105 x 105
12 W	172 x 172	25	160 x 160
15 W	190 x 190	25	180 x 180
18 W	225 x 225	25	210 x 210

All dimensions are in mm
Tolerance: ± 5 mm

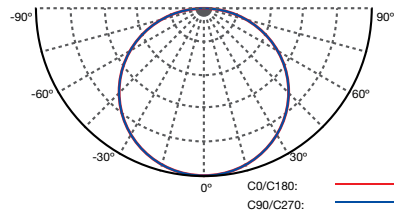
APPLICATIONS

- Residences
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices



Green LED | 6 W / 12 W / 15 W / 18 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
EDGEPROSQDLR6 WLED840S	6 W	240	≥80	≥570	4000 K	≥95
EDGEPROSQDLR6 WLED857S	6 W	240	≥80	≥600	5700 K	≥100
EDGEPROSQDLR12 WLED840S	12 W	240	≥80	≥1140	4000 K	≥95
EDGEPROSQDLR12 WLED857S	12 W	240	≥80	≥1200	5700 K	≥100
EDGEPROSQDLR15 WLED840S	15 W	240	≥80	≥1425	4000 K	≥95
EDGEPROSQDLR15 WLED857S	15 W	240	≥80	≥1500	5700 K	≥100
EDGEPROSQDLR18 WLED840S	18 W	240	≥80	≥1710	4000 K	≥95
EDGEPROSQDLR18 WLED857S	18 W	240	≥80	≥1800	5700 K	≥100

Driver code: LSSLNW0020 for 6 W, LSSLNW0021 for 12 W, LSSLNW0022 for 15 W / 18 W

IS 15885 (Part 2/Sec 13)



Surface mounted downlight with white powder coated polycarbonate housing and pressure die-cast heat sink having high efficiency.



INTEGRA NEO SURFACE

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours

Housing & Finish

Pressure die-cast aluminium heat sink for effective thermal management, sturdiness and excellent corrosion resistant fitted in white finish polycarbonate housing.

Light Source

High efficiency long life SMD LED module is mounted on MCPCB with lumen efficacy of ≥ 140 lm/W to enhance the lumen output.

Optics

PC diffuser in opal finish for glare-free uniform light distribution alongwith PC reflector in white finish to enhance the lumen output of the fixture (For detailed photometric data, please refer LM79 report & IES file).

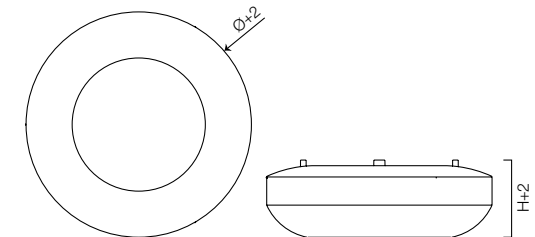
Electronic driver

Powered by an integral electronic driver in PC housing (SMPS based constant current supply) with Output Short-Circuit Protection, Surge Voltage Protection and other safety tests as per IS15885 Part2/Sec13.

Mounting

Back polycarbonate mounting plate is fixed to the wall/ceiling by 2 holes of $\text{Ø}3.5$ mm provided in it at a center distance of 100 mm and then fixture is fit to the mounting plate by rotating in anti-clockwise direction.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)
10 W	200	68.5
15 W	200	68.5

All dimensions are in mm
Tolerance: ± 5 mm

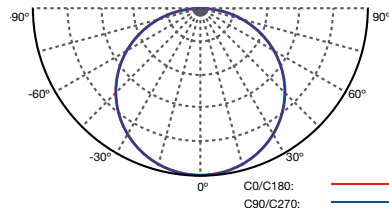
APPLICATIONS

- Corporate offices
- Banks & ATM outlets
- Software development centers
- Modern work spaces
- Showrooms



Green LED | 10 W / 15 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
INTEGRANEOSURFACEDLS10WLED830S	10 W	240	≥80	800	3000 K	≥80
INTEGRANEOSURFACEDLS10WLED840S	10 W	240	≥80	850	4000 K	≥85
INTEGRANEOSURFACEDLS10WLED857S	10 W	240	≥80	1000	5700 K	≥100
INTEGRANEOSURFACEDLS15WLED830S	15 W	240	≥80	1280	3000 K	≥85
INTEGRANEOSURFACEDLS15WLED840S	15 W	240	≥80	1350	4000 K	≥90
INTEGRANEOSURFACEDLS15WLED857S	15 W	240	≥80	1500	5700 K	≥100

Driver code : SCR2088 for 10 W, LSSCR2092 for 15 W

IS 10322 (Part 5/Sec 1) 2012



R-8400019



Surface mounted LED Downlighters with white powder coated aluminium housing with integrated electronic driver.



ENDURA NEO DL SURFACE

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

Spun aluminium housing & spun CRCA sheet steel mounting plate, white powder coated after phosphochromate treatment.

Light Source

High efficiency long life LED package in integral module with lumen efficacy of ≥ 140 lm/W and viewing angle of 120° to ensure better uniformity.

Reflector

The circular housing white painted inside also act as reflector.

Optics

High quality methacrylate opal diffuser & CRCA white powder coated outer ring to give glare-free uniform light distribution (For detailed photometric data, please refer LM79 report & IES file).

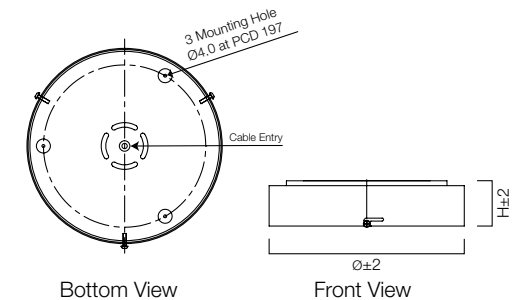
Electronic driver

Powered by an independent isolated, SELV output electronic driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other safety tests as per IS:15885 Part 2/Sec 13.

Mounting

Fixing into ceiling by means of 3 nos. holes provided in the fixture.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)
15 W	234	57
21 W	234	57

All dimensions are in mm
Tolerance: ± 5 mm

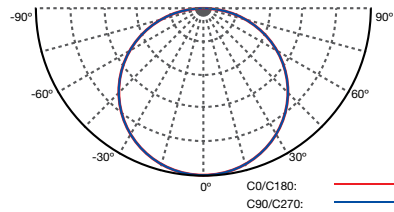
APPLICATIONS

- Retail Stores
- Restaurants
- Hotel lobbies / Waiting areas
- Modern gyms / Spa
- Corporate offices



Green LED | 15 W / 21 W | Life 50000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
ENDURANEOSURFACEDLS15WLED857S	15 W	240	≥80	1350	5700 K	≥90
ENDURANEOSURFACEDLS18WLED857S	18 W	240	≥80	1800	5700 K	≥100
ENDURANEOSURFACEDLS21WLED857S	21 W	240	≥80	2100	5700 K	≥100

Driver code: LHGDADAFCA1015 for 15 W, CELDO0049 for 18 W & 21 W

IS 10322 (Part 5/Sec 1) 2012



R-84000019



A minimalistic & versatile lighting source that offers a wide range of application with different aperture for same lamp unit. The lamp is deep recessed into the fixture to provide a glarefree solution.



SPIRIT

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in low ceiling areas
- 15° elbow tilt
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperature
- Operating temperature: -10° C to +45° C
- Driver DC Voltage: 36 V
- Average LED life $L_{70}B_{50}$: 50000 hours

Housing & Finish

Aluminum extrusion fin in black colour for efficient heat dissipation with magnetic aperture attachments options and White powder coated optical compartment.

Light Source

High efficiency long life COB LED. Lumen efficacy of LED

≥ 130 lm/W with viewing angle 120° to ensure better uniformity of light distribution.

Optics

Faceted PC metalized reflector used for uniform light distribution with clear glass for uniform light. Various apertures options like narrow, oval, D, Symmetric and Asymmetric apertures are available (For detailed Photometric data, please refer LM79 report & IES file).

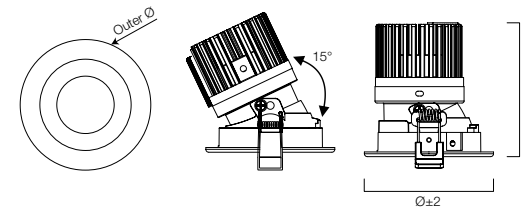
Electronic driver

Powered by an Independent electronic driver in white polycarbonate housing. (SMPS based constant current supply) with Output Short Circuit Protection, Surge Voltage Protection and other safety tests as per IS 15885 Part 2/Sec 13.

Mounting

Fixing into false ceiling by means of 2 nos. SS springs/ clips provided. For details refer installation instructions.

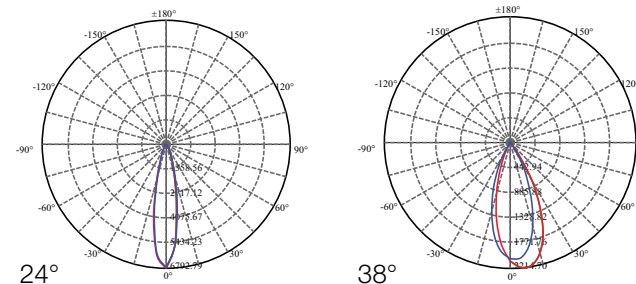
TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size Ø (mm)
10 W	85	85	80
15 W	105	85	100

All dimensions are in mm
Tolerance: ± 5 mm

PHOTOMETRIC DATA



APPLICATIONS

- Hotel lobbies / Waiting areas
- Restaurants
- Corporate Offices
- Museums
- High End Residences
- Airport Lounges



Green LED | 10 W / 15 W | Life 50000 hours | High Efficiency

ACCESSORIES

Product Name	Ordering Code
RD-D for 10 W	SPIRITATTACHMENTRD-DDL10 WWHT
RD-Oval for 10 W	SPIRITATTA CHMENTRD-OVALDL10 WWHT
RD-O for 10 W	SPIRITATTA CHMENTRD-ODL10 WWHT
RD-SYM for 10 W	SPIRITATTA CHMENTRD-SYMDL10 WWHT
RD-ASYM for 10 W	SPIRITATTA CHMENTRD-ASYMDL10 WWHT
SQ-O for 10 W	SPIRITATTA CHMENTSQ-ODL10 WWHT
RD-D for 15 W	SPIRITATTA CHMENTRD-DDL15 WWHT
RD-Oval for 15 W	SPIRITATTA CHMENTRD-OVALDL15 WWHT
RD-O for 15 W	SPIRITATTA CHMENTRD-ODL15 WWHT
RD-SYM for 15 W	SPIRITATTA CHMENTRD-SYMDL15 WWHT
RD-ASYM for 15 W	SPIRITATTA CHMENTRD-ASYMDL15 WWHT
SQ-O for 15 W	SPIRITATTA CHMENTSQ-ODL15 WWHT

TECHNICAL DATA (DRIVER TO BE ORDERED SEPARATELY, DETAIL GIVEN BELOW)

Description	System Power	Voltage (V DC)	Beam Angle	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
SPIRITLAMPUNITDLR10WLED827MOD24D	10 W	36	24°	800	2700K	≥80
SPIRITLAMPUNITDLR10WLED840MOD24D	10 W	36	24°	850	4000 K	≥80
SPIRITLAMPUNITDLR10WLED827MOD38D	10 W	36	40°	800	2700K	≥80
SPIRITLAMPUNITDLR10WLED840MOD38D	10 W	36	40°	850	4000 K	≥80
SPIRITLAMPUNITDLR15WLED827MOD24D	15 W	36	24°	975	2700K	≥80
SPIRITLAMPUNITDLR15WLED840MOD24D	15 W	36	24°	1050	4000 K	≥80
SPIRITLAMPUNITDLR15WLED827MOD38D	15 W	36	38°	975	2700K	≥80
SPIRITLAMPUNITDLR15WLED840MOD38D	15 W	36	38°	1050	4000 K	≥80

Driver code : LEDDRIVER10 WS for 10 W and LEDDRIVER15 WS for 15 W. Ordering: Lamp unit + Driver + Attachment



Attachment RD-D



Attachment RD-Oval



Attachment RD-O



Attachment RD-ASYM



Attachment RD-SYM



Attachment SQ-O

Recess mounting downlighter with pressure die-cast aluminium housing & high power COB LED used as Light Source.



SPARKLE PRO FIXED

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Average LED life $L_{70}B_{50}$: 35000 hours

Housing & Finish

Grey powder coated, elegantly designed pressure die-cast aluminium housing / heat sink for efficient heat dissipation & white finish PDC ring for holding the diffuser..

Light Source

High efficiency long life COB LED mounted on MCPCB. Lumen efficacy of LED ≥ 130 lm/W with viewing angle 120° to ensure better uniformity of light distribution.

Optics

High purity faceted PC metalized glossy reflector to enhance the lumen output of the fixture (For detailed photometric data, please refer LM79 report & IES file).

Diffuser

High quality PMMA diffuser in clear finish for uniform light distribution.

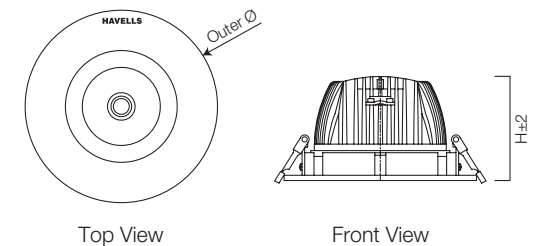
Electronic driver

Powered by an independent, isolated, SELV output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge Voltage protection & other safety test as per IS:15885 Part 2/Sec 13.

Mounting

Fixed into false ceiling with 2 nos MS spring clamps provided with the fixture.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size Ø (mm)
8 W	90	60	80
12 W	120	65	105
20 W	150	75	130
30 W	200	95	185
45 W	230	110	215

All dimensions are in mm
Tolerance: ± 5 mm

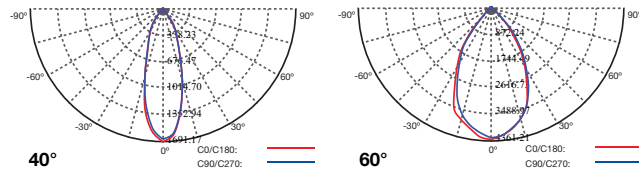
APPLICATIONS

- Showrooms
- Restaurants
- Hotel Lobbies
- Offices
- High End Residences
- Airport Lounges



Green LED | 8 W / 12 W / 20 W / 30 W / 45 W | Life 35000 hours | High Efficiency

POLAR DIAGRAM



IS 15885 (Part 2/Sec 13)



R-XXXXXXXX



TECHNICAL DATA (DRIVER TO BE ORDERED SEPARATELY, DETAIL GIVEN BELOW)

Description	System Power	Voltage (V DC)	Beam Angle	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
SPARKLEPROFIXDLR8W830MOD	8 W	20	40°	720	3000 K	≥90
SPARKLEPROFIXDLR8W840MOD	8 W	20	40°	760	4000 K	≥95
SPARKLEPROFIXDLR8W857MOD	8 W	20	40°	800	5700 K	≥100
SPARKLEPROFIXDLR12W830MOD	12 W	36	40°	1080	3000 K	≥90
SPARKLEPROFIXDLR12W840MOD	12 W	36	40°	1140	4000 K	≥95
SPARKLEPROFIXDLR12W857MOD	12 W	36	40°	1200	5700 K	≥100
SPARKLEPROFIXDLR20W830MOD	20 W	36	40°	1800	3000 K	≥90
SPARKLEPROFIXDLR20W840MOD	20 W	36	40°	1900	4000 K	≥95
SPARKLEPROFIXDLR20W857MOD	20 W	36	40°	2000	5700 K	≥100
SPARKLEPROFIXDLR30W830MOD	30 W	36	40°	2700	3000 K	≥90
SPARKLEPROFIXDLR30W840MOD	30 W	36	40°	2850	4000 K	≥95
SPARKLEPROFIXDLR30W857MOD	30 W	36	40°	3000	5700 K	≥100
SPARKLEPROFIXDLR45W830MOD	45 W	36	60°	4050	3000 K	≥90
SPARKLEPROFIXDLR45W840MOD	45 W	36	60°	4275	4000 K	≥95
SPARKLEPROFIXDLR45W857MOD	45 W	36	60°	4500	5700 K	≥100

Driver code : LEDDRIVER8 WS for 8 W, LEDDRIVER12 WS for 12 W, LEDDRIVER20 WS for 20 W, LEDDRIVER30 WS for 30 W, LEDDRIVER45 WS for 45 W

Ordering :- Module + Driver

Recess mounted adjustable LED downlights made of extruded Aluminium housing and high power LED as a Light Source.



SPARKLE PRO ADJUSTABLE

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to + 45° C
- Average LED life $L_{70, B_{50}}$: 35000 hours

Housing & Finish

Grey powder coated, elegantly designed pressure die-cast aluminium housing / heat sink for efficient heat dissipation & white finish PDC ring for holding the diffuser. Swivels 15° Vertical.

Light Source

High efficiency long life COB LED mounted on MCPCB. Lumen efficacy of LED >130 lm/W with viewing angle 120° to ensure better uniformity of light distribution.

Optics

High purity faceted PC metalized glossy reflector to enhance the lumen output of the fixture (For detailed photometric data, please refer LM79 report & IES file).

Cover

High quality Clear glass for uniform light distribution.

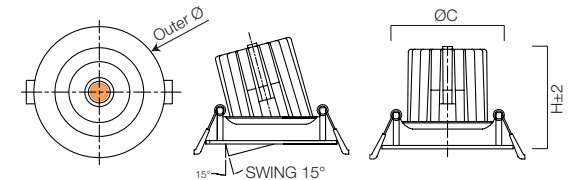
Electronic driver

Powered by an independent, isolated, SELV output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge Voltage protection & other safety tests as per IS:15885 Part 2/Sec 13.

Mounting

Fixed into false ceiling with 2 nos MS spring clamps provided with the fixture.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size Ø (mm)
8 W	80	55	75
12 W	95	70	85
20 W	125	90	120
30 W	160	98	150

All dimensions are in mm
Tolerance: ± 5 mm

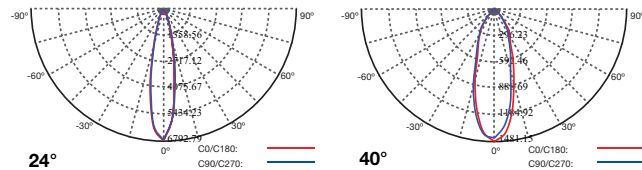
APPLICATIONS

- Showrooms
- Restaurants
- Hotel Lobbies
- Offices
- High End Residences
- Airport Lounges



Green LED | 8 W / 12 W / 20 W / 30 W | Life 35000 hours | High Efficiency

POLAR DIAGRAM



IS 15885 (Part 2/Sec 13)



R-XXXXXXXX



TECHNICAL DATA (DRIVER TO BE ORDERED SEPARATELY, DETAIL GIVEN BELOW)

Description	System Power	Voltage (V DC)	Beam Angle	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
SPARKLEPROADJDLR8W830MOD40D	8 W	20	40°	720	3000 K	≥90
SPARKLEPROADJDLR8W840MOD40D	8 W	20	40°	760	4000 K	≥95
SPARKLEPROADJDLR8W857MOD40D	8 W	20	40°	800	6000K	≥100
SPARKLEPROADJDLR12W830MOD40D	12 W	36	40°	1080	3000 K	≥90
SPARKLEPROADJDLR12W840MOD40D	12 W	36	40°	1140	4000 K	≥95
SPARKLEPROADJDLR12W857MOD40D	12 W	36	40°	1200	6000K	≥100
SPARKLEPROADJDLR20W830MOD40D	20 W	36	40°	2000	3000 K	≥100
SPARKLEPROADJDLR20W840MOD40D	20 W	36	40°	2100	4000 K	≥105
SPARKLEPROADJDLR20W857MOD40D	20 W	36	40°	2200	6000K	≥110
SPARKLEPROADJDLR30W830MOD40D	30 W	36	40°	3000	3000 K	≥100
SPARKLEPROADJDLR30W840MOD40D	30 W	36	40°	3100	4000 K	≥105
SPARKLEPROADJDLR30W857MOD40D	30 W	36	40°	3300	6000K	≥110

Driver code : LEDDRIVER8 WS for 8 W, LEDDRIVER12 WS for 12 W, LEDDRIVER20 WS for 20 W, LEDDRIVER30 WS for 30 W

24° on request in 24° on request in 20 W / 30 W

Ordering :- Module + Driver

Recess mounted LED wall washers, tilted 70° outwards and swivels 350° to offer best illumination on the wall and retail displays.



SPARKLE PRO SNOOT

PRODUCT SPECIFICATIONS

Features & Benefits

- Adjustable LED directional spotlight with high efficiency light output.
- Tilted 70° outwards and swivels 350°
- Low power consumption and ideal for retail application
- Delivers high brightness & excellent illumination on wall and retail displays
- No harmful UV & IR Radiation
- Environment-friendly as it does not contain mercury
- Instant light with low running temperature
- Average LED life $L_{70}B_{50}$: 35000 hours

Housing & Finish

Grey powder coated, elegantly designed pressure die-cast aluminium housing / heat sink for efficient heat dissipation & white finish PDC ring for holding the diffuser. Swivels 15° Vertical.

Light Source

High efficiency long life COB LED mounted on MCPCB. Lumen efficacy of LED >130 lm/W with viewing angle 120° to ensure better uniformity of light distribution.

Optics

High purity faceted PC metalized glossy reflector to enhance the lumen output of the fixture (For detailed photometric data, please refer LM79 report & IES file).

Cover

High quality Clear glass for uniform light distribution.

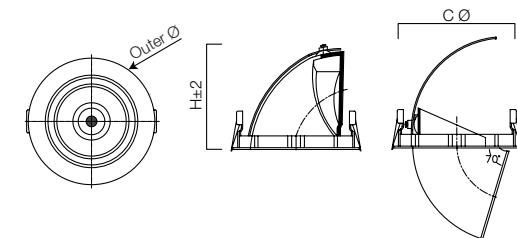
Electronic driver

Powered by an independent, isolated, SELV output electronic LED driver (SMPS based constant current supply) with Output Short-circuit protection, Surge Voltage protection & other safety tests as per IS:15885 Part 2/Sec 13.

Mounting

Fixed into false ceiling with 2 nos MS spring clamps provided with the fixture.

TECHNICAL DRAWING



System Power	Dia Ø (mm)	Height h (mm)	Cutout Size Ø (mm)
20 W	150	140	140
30 W	185	170	175

All dimensions are in mm
Tolerance: ± 5 mm

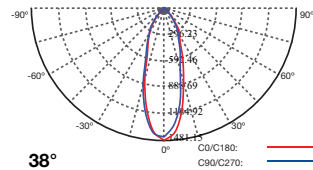
APPLICATIONS

- Showrooms
- Restaurants
- Hotel Lobbies
- Offices
- High End Residences
- Airport Lounges



Green LED | 20 W / 30 W | Life 35000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA (DRIVER TO BE ORDERED SEPARATELY, DETAIL GIVEN BELOW)

Description	System Power	Voltage (V DC)	Beam Angle	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
SPARKLEPROSNOOTDLR20WLED830MOD38D	20 W	36	38°	2000	3000 K	≥90
SPARKLEPROSNOOTDLR20WLED840MOD38D	20 W	36	38°	2050	4000 K	≥95
SPARKLEPROSNOOTDLR20WLED857MOD38D	20 W	36	38°	2100	5700 K	≥100
SPARKLEPROSNOOTDLR30WLED830MOD38D	30 W	36	38°	2700	3000 K	≥90
SPARKLEPROSNOOTDLR30WLED840MOD38D	30 W	36	38°	2850	4000 K	≥95
SPARKLEPROSNOOTDLR30WLED857MOD38D	30 W	36	38°	3000	5700 K	≥100

Driver code : LEDDRIVER20 WS for 20 W, LEDDRIVER30 WS for 30 W.

24° on request in 24° on request in 20 W / 30 W

Ordering :- Module + Driver

IS 15885 (Part 2/Sec 13)





Battens



Basic all purpose surface and wall mounted LED batten with polycarbonate housing & integrated electronic driver.



LUMILINE

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10°C to $+45^{\circ}\text{C}$
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 35000 hours

Housing & cover

Made of ultra slim co-extruded polycarbonate channel with housing part in white finish & diffuser part in reeded opal finish.

Light source

High efficiency long life LED with lumen efficacy of 130 lm/W with viewing angle of 120° .

End caps

White finish ABS end caps with decorative circular coloured polycarbonate cap snap fitted on the

end cap to enhance the aesthetic of the fixture. These end caps are snap-fitted to the fixture.

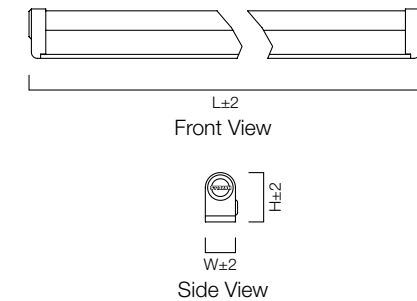
Electronic Driver

Integral electronic driver (SMPS based constant current output) with lower THD, Output short circuit protection/Open circuit protection, Surge Voltage Protection and other Safety tests as per IS15885 Part 2/ Sec 13.

Mounting

Can be fixed directly into the wall/ ceiling by mounting SS clips provided with the fixture.

TECHNICAL DRAWING



Wattage	Length l (mm)	Width w (mm)	Height h (mm)
9 W	600	25	40
18 W	1150	25	40
20 W	1150	25	40

All dimensions are in mm
Tolerance: ± 5 mm

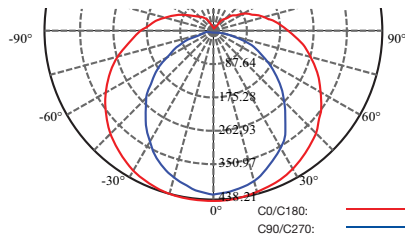
APPLICATIONS

- Residences
- Showrooms
- Cove lighting
- Hospital premises
- Educational institutions
- Corridors



Green LED | 9 W / 18 W / 20 W | Life 25000 hours | HighEfficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
LUMILINEBS9WLED830SPCWH	9 W	240	≥80	860	3000 K	≥95
LUMILINEBS9WLED840SPCWH	9 W	240	≥80	910	4000 K	≥100
LUMILINEBS9WLED865SPCWH	9 W	240	≥80	950	6500 K	≥105
LUMILINEBS18WLED830SPCWH	18 W	240	≥80	1625	3000 K	≥90
LUMILINEBS18WLED840SPCWH	18 W	240	≥80	1710	4000 K	≥95
LUMILINEBS18WLED865SPCWH	18 W	240	≥80	1810	6500 K	≥100
LUMILINEBS20WLED830SPCWH	20 W	240	≥80	1805	3000 K	≥90
LUMILINEBS20WLED840SPCWH	20 W	240	≥80	1910	4000 K	≥95
LUMILINEBS20WLED865SPCWH	20 W	240	≥80	2010	6500 K	≥100

IS 10322 (Part 5/Sec 1) 2012



Surface and wall mounted LED batten, extruded aluminium housing provided for efficient heat dissipation with polycarbonate diffuser & integrated electronic driver.



ENDURA LINEAR NEO

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing

Epoxy powder coated white extruded aluminium channel housing for efficient heat dissipation.

Light source

High efficiency long life LED chips with lumen efficacy of 125lm/W with a viewing angle of 120° to ensure better lumen output.

Diffuser

Milky white, special polycarbonate diffuser, for glare-free efficient light distribution.

End caps

Elegantly designed white coloured ABS end caps to enhance the aesthetic view of the fixture.

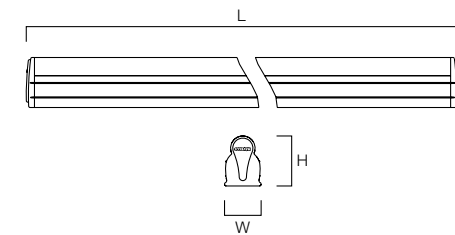
Electronic Driver

Powered by an integral electronic driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other safety tests as per IS:15885 Part 2/Sec 13.

Mounting

Can be fixed directly into the wall/ ceiling by mounting SS clips provided with the fixture.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Suspension Wire Distance (d)
10 W	581	25	35	At Centre
20 W	1144	25	35	At Centre
22 W	1144	25	35	At Centre

All dimensions are in mm
Tolerance: ± 5 mm

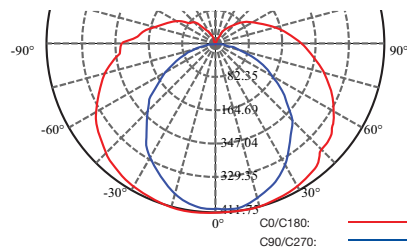
APPLICATIONS

- Residences
- Showrooms
- Cove lighting
- Hospital premises
- Educational institutions
- Corridors
- Under shelf applications



Green LED | 10 W / 20 W / 22 W | Life 35000 hours | High Efficiency

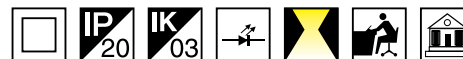
POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
ENDURALINEARNEOBS10WLED830SPCWH	10 W	240	≥80	850	3000 K	≥85
ENDURALINEARNEOBS10WLED840SPCWH	10 W	240	≥80	900	4000 K	≥90
ENDURALINEARNEOBS10WLED865SPCWH	10 W	240	≥80	950	5700 K	≥95
ENDURALINEARNEOBS20WLED830SPCWH	20 W	240	≥80	1800	3000 K	≥90
ENDURALINEARNEOBS20WLED840SPCWH	20 W	240	≥80	1900	4000 K	≥95
ENDURALINEARNEOBS20WLED865SPCWH	20 W	240	≥80	2000	5700 K	>100
ENDURALINEARNEOBS22WLED830SPCWH	22 W	240	≥80	1800	3000 K	≥80
ENDURALINEARNEOBS22WLED840SPCWH	22 W	240	≥80	1900	4000 K	≥85
ENDURALINEARNEOBS22WLED865SPCWH	22 W	240	≥80	2000	5700 K	>90

Driver code: LSSCRX1762 for 10 W, LSSCRX1763 for 20 W, LSSCRX1763 for 22 W.



Specifications are subject to change without prior notice due to continuous up-gradation of technology.

IS 10322 (Part 5/Sec 1) 2012



R-8400019

Stout LED is a complete range of LED battens to replace traditional T8 battens (600mm & 1200mm). The range is perfect for lighting large areas such as corridors, warehouses & general purpose spaces.



STOUT PLUS

PRODUCT SPECIFICATIONS

Features & Benefits

- Delivers excellent illumination & comfort in high ceiling areas
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing

Epoxy powder coated white CRCA housing for efficient heat dissipation.

Light source

High efficiency long life LED chips with $R_a > 80$ & lumen efficacy of 125lm/W with a viewing angle of 120° to ensure better lumen output (For detailed photometric data, please refer LM79 report & IES file).

Diffuser

Milky white, polycarbonate diffuser, for glare-free efficient light distribution.

End caps

Elegantly designed white coloured ABS end caps to enhance the aesthetic view of the fixture.

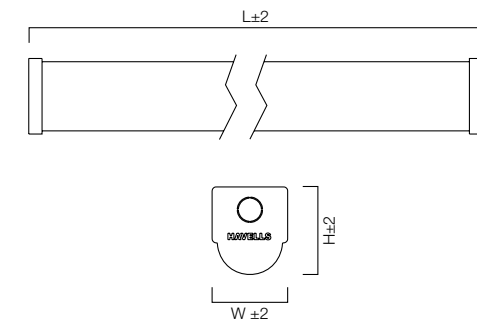
Electronic Driver

Powered by an Integral electronic driver (SMPS based constant current supply) with Output Short-circuit protection, Surge protection & other safety tests as per IS:15885 Part 2/Sec 13.

Mounting

Can be fixed directly into the wall/ ceiling by mounting SS clips provided with the fixture.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)	Suspention Wire Distance (d)
20 W	605	65.5	76	At Centre
40 W	1205	65.5	76	At Centre

All dimensions are in mm
Tolerance: ± 5 mm

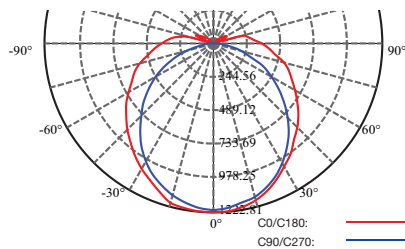
APPLICATIONS

- Industries
- Showrooms
- Parking
- Hospital premises
- Educational institutions
- Corridors



Green LED | 20 W / 40 W | Life 35000 hours | High Efficiency

POLAR DIAGRAM

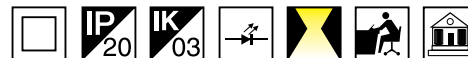


TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
STOUTPLUS600BS20WLED840SPCWH	20 W	240	≥80	2000	4000 K	≥100
STOUTPLUS600BS20WLED857SPCWH	20 W	240	≥80	2100	5700 K	≥105
STOUTPLUS1200BS40WLED840SPCWH	40 W	240	≥80	3800	4000 K	≥90
STOUTPLUS1200BS40WLED857SPCWH	40 W	240	≥80	4000	5700 K	≥95

Driver code: LSSCRX2303 for 20 W, LSSCRX2308 for 40 W.

IS 10322 (Part 5/Sec 1) 2012



General purpose industrial compact batten suitable for single or twin LED Tubelight with integral LED driver, available in single / double side connection options.



REGAL BATTEN LED

PRODUCT SPECIFICATIONS

Housing & Cover

Housing & cover made up of CRCA sheet steel. Cover is fixed to the housing by means of 2 nos. bolt with engineering plastic head.

Finish

Epoxy powder coated white after phosphochromate treatment.

Light source

Complete internal wiring suitable for retrofit LED tubelight with single / double side connections.

* LED Tube Light Data Sheet (Supply connection on opposite side)

LED Tube Light Data Sheet (Supply connection on one side)

Lamp holders

Push fit type white polycarbonate housing and ABS rotor with corrosion resistant brass contacts.

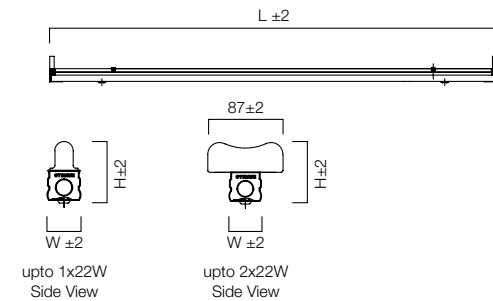
Optics

White power coated CRCA sheet used as Reflector.

Mounting

On ceiling/ wall with screws at a distance of 900 mm, suspend by 2 nos. Ø19 mm conduit pipe at a distance of 600 mm or with chains at a distance of 700 mm.

TECHNICAL DRAWING



Lamp	Length l (mm)	Width w (mm)	Height h (mm)
T8	1224	38	68
T5	1174	38	70

APPLICATIONS

- Schools
- Lobbies
- Residences
- Industrial bays
- Railway platforms
- Godowns/ garages



Green
LED

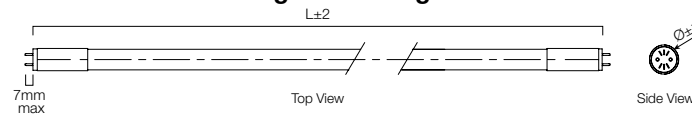
TECHNICAL DATA

Description	Voltage (V)	Lamp	Lamp Holder
REGALBATTENT8UPTO1X22WSSBSWH	250	upto 1x22 W LED T8	G 13
REGALBATTENT8UPTO2X22WSSBSWH	250	upto 1x22 W LED T8	G 13
REGALBATTENT8UPTO1X22WDSBSWH	250	upto 2x22 W LED T8	G 13
REGALBATTENT8UPTO2X22WDSBSWH	250	upto 2x22 W LED T8	G 13
REGALBATTENT5UPTO1X18WDSBSWH	250	upto 1x18 W LED T5	G 13

LED Tube Light supply connection on opposite side

Universal batten for T5 and T8 lamps.

Dimensional Drawing for Tube light





Lamps



Ultra bright LED polycarbonate Tubelight with <20% THD with very high efficacy suited for installation in existing T8 tubelight with G13 lamp holders to give glare-free light.



PHOTON ULTRA TUBELIGHT

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance .
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

Elegantly designed polycarbonate housing in opal finish to provide glare-free uniform light distribution.

Light source

High efficiency long life SMD LED module with lumen efficacy of 140 lm/W to enhance the lumen output.

End Caps

High quality polycarbonate end caps in white finish are snap fitted to the housing.

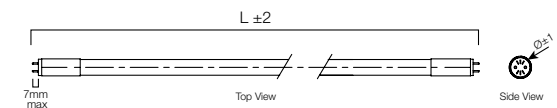
Electronic driver

Powered by a integral electronic driver (SMPS based constant current supply) with Output Short-Circuit Protection, Surge Voltage Protection upto 4kV and other safety test as per IS15885 Part2/Sec13.

Mounting

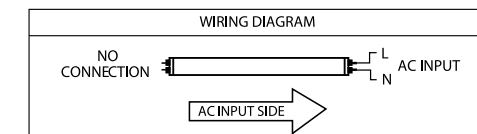
Direct installed in existing T8/T12 FTL conventional lighting fixtures, refer wiring diagram for proper installation.

TECHNICAL DRAWING



System Power	Length l (mm)	Ø (mm)
10 W	600	28.5
13 W	1200	28.5
15 W	1200	28.5
18 W	1200	28.5
20 W	1200	28.5

All dimensions are in mm
Tolerance: ± 5 mm



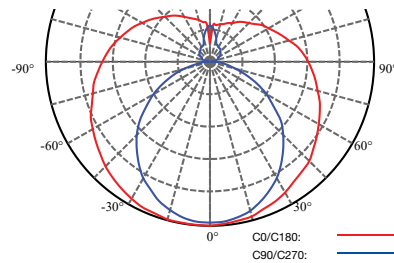
APPLICATIONS

- Corporate offices
- Shopping Malls
- Restaurants
- Hotels
- Educational Facilities
- Parkings



Green LED | 10 W / 13 W / 15 W / 18 W / 20 W | Life 25000 hours | HighEfficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lamp Holder	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
PHOTONULTRAT8603SSTL10 WLED865SPC	10 W	240	≥80	G 13	1100	6500 K	>110
PHOTONULTRAT81213SSTL13 WLED865SPC	13 W	240	≥80	G 13	1600	6500 K	>120
PHOTONULTRAT81213SSTL15 WLED865SPC	15 W	240	≥80	G 13	1800	6500 K	>120
PHOTONULTRAT81213SSTL18 WLED865SPC	18 W	240	≥80	G 13	2100	6500 K	>110
PHOTONULTRAT81213SSTL20 WLED865SPC	20 W	240	≥80	G 13	2150	6500 K	>105



Ultra bright LED polycarbonate tubelight with <10% THD with very high efficacy suited for installation in existing T8 tubelight luminaire with G13 lamp holders.



PHOTON ULTRA PLUS TUBELIGHT

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance .
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70}B_{50}$: 50000 hours

Housing & Finish

Elegantly designed polycarbonate housing in opal finish to provide glare-free uniform light distribution.

Light source

High efficiency long life SMD LED module with lumen efficacy of 140 lm/W to enhance the lumen output.

End Caps

High quality polycarbonate end caps in white finish are snap fitted to the housing.

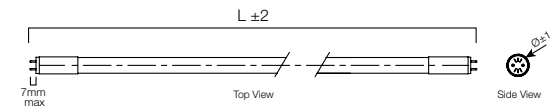
Electronic driver

Powered by an integral electronic driver (SMPS based constant current supply) with Output Short-Circuit Protection, Surge Voltage Protection upto 4kV and other safety tests as per IS15885 Part2/Sec13.

Mounting

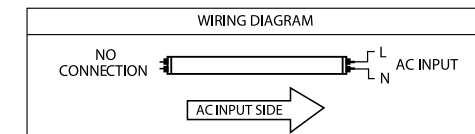
Direct installed in existing T8/T12 FTL conventional lighting fixtures, refer wiring diagram for proper installation.

TECHNICAL DRAWING



System Power	Length l (mm)	Ø (mm)
10 W	600	28.5
13 W	1200	28.5
15 W	1200	28.5
18 W	1200	28.5
20 W	1200	28.5

All dimensions are in mm
Tolerance: ± 5 mm



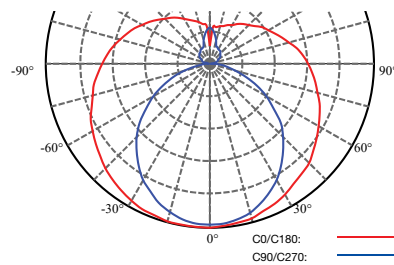
APPLICATIONS

- Corporate offices
- Shopping Malls
- Restaurants
- Hotels
- Educational Facilities
- Parkings



Green LED | 10 W / 13 W / 15 W / 18 W / 20 W | Life 35000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lamp Holder	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
PHOTONULTRA+T8603SSTL10WLED865SPC	10 W	240	≥80	G 13	1100	6500 K	>110
PHOTONULTRA+T81213SSTL13WLED865SPC	13 W	240	≥80	G 13	1600	6500 K	>120
PHOTONULTRA+T81213SSTL15WLED865SPC	15 W	240	≥80	G 13	1800	6500 K	>120
PHOTONULTRA+T81213SSTL18WLED865SPC	18 W	240	≥80	G 13	2100	6500 K	>110
PHOTONULTRA+T81213SSTL20WLED865SPC	20 W	240	≥80	G 13	2150	6500 K	>105



Ultra bright LED Tubelight (opposite side connections) with very high efficacy suited for installation in existing tubelight G13 lamp holders to give glare free light.



CRYSTAL GLASS LED TUBELIGHT

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance .
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

Soda Glass Tube coated with water based silicon adhesive to provide glare free uniform light distribution.

End Caps

High quality polycarbonate end caps in white finish are snap fitted to the housing.

Light source

High efficiency long life SMD LED module is mounted on MCPCB with lumen efficacy of 140 lm/W to enhance the lumen output.

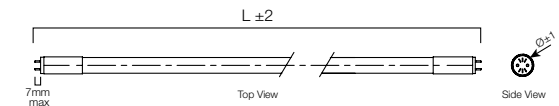
Electronic driver

Powered by a integral electronic driver (SMPS based constant current supply) with Output Short-Circuit Protection, Surge Voltage Protection upto 3kV and other reliability test as per IS15885 Part2/Sec13.

Mounting

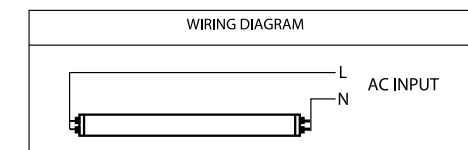
Direct installed in existing T8/T12 FTL conventional lighting fixtures, refer wiring diagram for proper installation.

TECHNICAL DRAWING



System Power	Length l (mm)	Dia Ø (mm)
13 W /15 W /18 W /20 W	1200	28.5

All dimensions are in mm
Tolerance: ± 5 mm



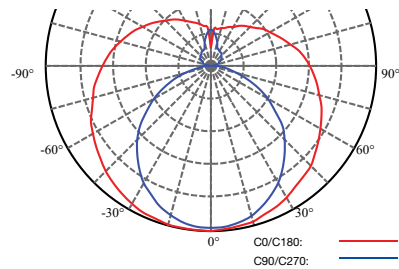
APPLICATIONS

- Corporate offices
- Shopping Malls
- Restaurants
- Hotels
- Educational Facility
- Parkings



Green LED | 13 W / 15 W / 18 W / 20 W | Life 25000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lamp Holder	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
CRYSTALT81213DSTL13WLED865SGLASS	13 W	240	≥80	G 13	1400	6500 K	>107
CRYSTALT81213DSTL15WLED865SGLASS	15 W	240	≥80	G 13	1575	6500 K	>105
CRYSTALT81213DSTL18WLED865SGLASS	18 W	240	≥80	G 13	1900	6500 K	>105
CRYSTALT81213DSTL20WLED865SGLASS	20 W	240	≥80	G 13	2050	6500 K	>105



Ultra bright LED Tubelight (opposite side connection with external LED driver) with very high efficacy suited for installation in existing tubelight G5 lamp holders to give glare free light.



TITANIA SLEEK NEW T5 TUBELIGHT

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10°C to $+45^{\circ}\text{C}$
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

Elegantly designed aluminium heat sink for efficient heat dissipation mated with high efficacy polycarbonate diffuser to provide glare-free uniform light distribution.

Light source

High efficiency long life SMD LED module is mounted on MCPCB with lumen efficacy of 140 lm/W to enhance the lumen output.

End Caps

High quality polycarbonate end caps in white finish are snap fitted to the housing.

Electronic driver

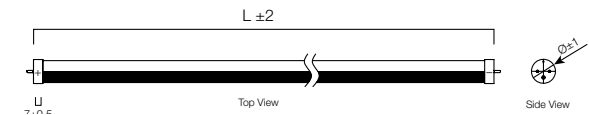
Independent, external electronic driver in ABS housing (SMPS based constant current supply), THD <20%.

Warning : Do not connect AC mains directly to the LED tube pins. Always use LED driver supplied along with the LED tube.

Mounting

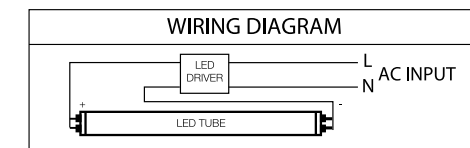
Direct installed in existing T5 FTL conventional lighting fixtures, refer wiring diagram for proper installation.

TECHNICAL DRAWING



System Power	Length l (mm)	Dia Ø (mm)
9 W	549	16
18 W	1149	16

All dimensions are in mm
Tolerance: ± 5 mm



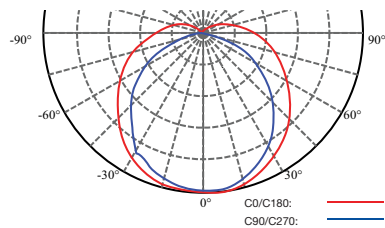
APPLICATIONS

- Corporate offices
- Shopping Malls
- Restaurants
- Hotels
- Educational Facilities
- Parkings



Green LED | 9 W / 18 W | Life 35000 hours | HighEfficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lamp Holder	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
TITANIASLEEKT5549DSTL9WLED865SPC	9 W	240	≥80	G 5	855	6500 K	>95
TITANIASLEEKT51149DSTL18WLED865SPC	18 W	240	≥80	G 5	1920	6500 K	>106

Driver code: LSSLOX0228 for 9 W, LSSLOX0156 for 18 W.

IS 15885 (Part 2/Sec 13)



Ultra bright LED Tubelight (single side connection) with very high efficacy suited for installation in existing tubelight luminaire with G13 lamp holders.



TITANIA NEO LED TUBELIGHT

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

Elegantly designed polycarbonate housing in opal finish with integrated AL-heat sink to provide glare free uniform light distribution.

Light source

High efficiency long life SMD LED module with lumen efficacy of 140 lm/W to enhance the lumen output.

End Caps

High quality polycarbonate end caps in white finish are snap fitted to the housing.

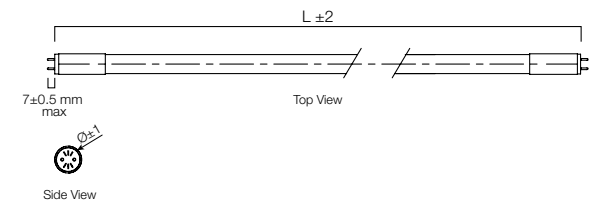
Electronic driver

Powered by a integral electronic driver (SMPS based constant current supply) with Output Short-Circuit Protection, Surge Voltage Protection upto 3kV and other safety test as per IS15885 Part2/Sec13.

Mounting

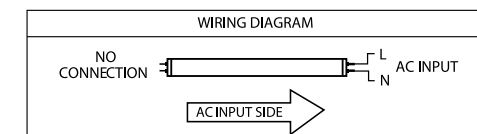
Direct installed in existing T8/T12 FTL conventional lighting fixtures, refer wiring diagram for proper installation.

TECHNICAL DRAWING



System Power	Length l (mm)	Dia Ø (mm)
18 W	1200	28
20 W	1200	28

All dimensions are in mm
Tolerance: ± 5 mm



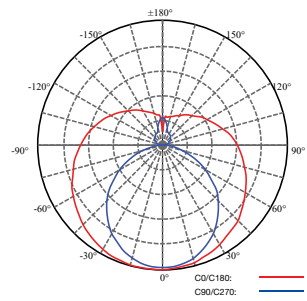
APPLICATIONS

- Corporate offices
- Shopping Malls
- Restaurants
- Hotels
- Educational Facility
- Parkings



Green LED | 18 W / 20 W | Life 35000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lamp Holder	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
TITANIANEOT81213SSTL18WLED865SPC	18 W	240	≥80	G 13	1900	6500 K	>105
TITANIANEOT81213SSTL20WLED865SPC	20 W	240	≥80	G 13	2100	6500 K	>105

IS 15885 (Part 2/Sec 13)



Ultra bright LED Tubelight (opposite side connections) with very high efficacy suited for installation in existing tubelight G5 lamp holders to give glare free light.



CRYSTAL SLEEK GLASS T5 LED TUBELIGHT

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance
- Long life & photobiologically safe LED's
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10° C to +45° C
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 35000 hours

Housing & Finish

Translucent PC film inside Transparent Glass to provide glare free uniform light distribution.

Light source

High efficiency long life SMD LED module is mounted on MCPCB with lumen efficacy of 130 lm/W to enhance the lumen output.

End Caps

High quality polycarbonate end caps in white finish are snap fitted to the housing.

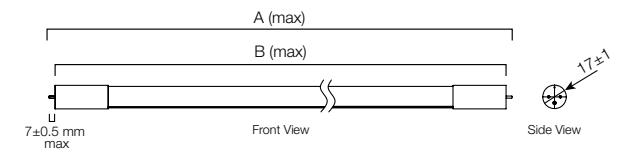
Electronic driver

Powered by a integral electronic driver (SMPS based constant current supply) with Output Short-Circuit Protection, Surge Voltage Protection upto 2.5kV and other reliability test as per IS15885 Part2/Sec13.

Mounting

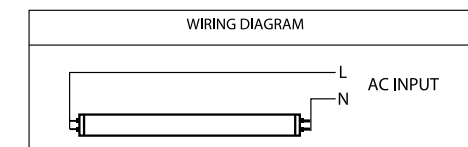
Direct installed in existing T5 conventional lighting fixtures, refer wiring diagram for proper installation.

TECHNICAL DRAWING



System Power	Length l (mm)	Dia Ø (mm)
9 W	549	16
18 W	1149	16

All dimensions are in mm
Tolerance: ± 5 mm



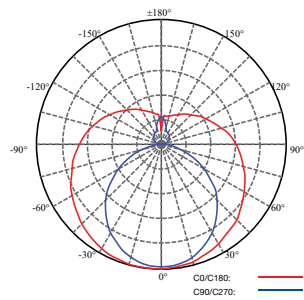
APPLICATIONS

- Corporate offices
- Shopping Malls
- Restaurants
- Hotels
- Educational Facilities
- Parkings



Green LED | 8 W / 16 W | Life 25000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lamp Holder	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
CRYSTAL 549T5DSTL8WLED865SGLASS	8 W	240	≥80	G 5	800	6500 K	>100
CRYSTAL 1149T5DSTL16WLED865SGLASS	16 W	240	≥80	G 5	1840	6500 K	>115



Ultra bright LED PL-L with very high efficacy suited for installation in existing 2G11 lamp holders to give glare-free light.



PHOTON ULTRA PL-L

PRODUCT SPECIFICATIONS

Features & Benefits

- Excellent efficacy & performance
- Long life & photobiologically safe LEDs
- High performance electronic driver ensures zero maintenance
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10°C to $+45^{\circ}\text{C}$
- Operating voltage range: 140 V - 270 V
- Average LED life $L_{70B_{50}}$: 50000 hours

Housing & Finish

Elegantly designed aluminium heat sink for effective thermal management, sturdiness & excellent corrosion resistant.

Light source

High efficiency long life SMD LED module with lumen efficacy of 130 lm/W to enhance the lumen output.

End Caps

White finish ABS end caps screwd to the heat sink on both sides of the fixture to enhance the aesthetics of the tubelight.

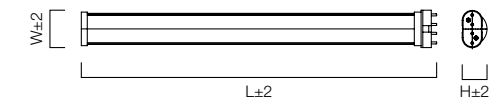
Electronic driver

Powered by an integral electronic driver (SMPS based constant current supply) with Output Short-Circuit Protection, Surge Voltage Protection upto 3Kv and other safety tests as per IS15885 Part2/Sec13.

Mounting

Installed in into existing PL-L fixtures with 2G11 lamp holders, refer wiring diagram for proper installation.

TECHNICAL DRAWING



System Power	Length l (mm)	Width w (mm)	Height h (mm)
9 W	222	44	29
18 W	419	44	29

All dimensions are in mm
Tolerance: ± 5 mm

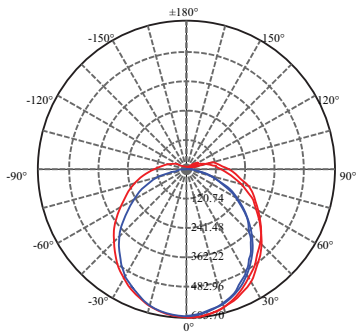
APPLICATIONS

- Corporate offices
- Shopping Malls
- Restaurants
- Hotels
- Educational Facilities
- Parkings



Green LED | 9 W / 18 W | Life 35000 hours | High Efficiency

POLAR DIAGRAM



TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Lamp Holder	Lumen (lm)	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
PHOTONULTRAPLL222TL9WLED865SPC	9 W	240	≥80	2G11	900	6500 K	>100
PHOTONULTRAPLL419TL18WLED865SPC	18 W	240	≥80	2G11	1950	6500 K	>105



Flexible LED strip uses high brightness SMD LED as the light source for indoor application only. It is highly suitable for cove-lighting, decorative lighting, etc.



LED FLEXISTRIP - IP20

PRODUCT SPECIFICATIONS

Features & Benefits

- Shape for different requirements
- Light weight
- Long lifespan
- Safety input voltage for LED module
- No harmful UV & IR radiations
- Environment-friendly as it does not contain Mercury
- Instant light with low running temperatures
- Operating temperature: -10°C to $+45^{\circ}\text{C}$
- Operating voltage range: 140 V - 270 V
- Average LED life L_{70B50} : 30000 hours

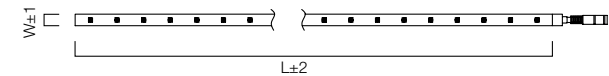
Housing

Flexible PCB, Dual layers, (5000 x 10 x 2) mm
Cable: Dual wires: red and black color single sided tape is used at the back of the strip to mount it

Electronic Driver

Powered by a separate, replaceable, constant voltage electronic driver, Output Short-Circuit Protection and other safety tests as per IS 15885 Part 2 / Sec 13.

TECHNICAL DRAWING



All dimensions are in mm
Tolerance: ± 5 mm

System Power	Width h (mm)	Length l (mm)
24 W / 55 W	8	5 m.

Note : Recommended only for indoor applications.

APPLICATIONS

- Cove lighting
- Airport lounges
- Banks & ATM outlets
- Modern work spaces
- Software development centres



Green LED | 24 W / 55 W | Life 20000 hours | High Efficiency

TECHNICAL DATA

Description	System Power	Voltage (V)	CRI	Colour Temp. (CCT)	System Luminous Efficacy lm/ W
FLEXISTRIP205MTR24WLED830S	24 W	240	≥80	3000 K	-
FLEXISTRIP205MTR24WLED860S	24 W	240	≥80	6500 K	-
FLEXISTRIP205MTR55WLED830S	55 W	240	≥80	3000 K	-
FLEXISTRIP205MTR55WLED860S	55 W	240	≥80	6500 K	-

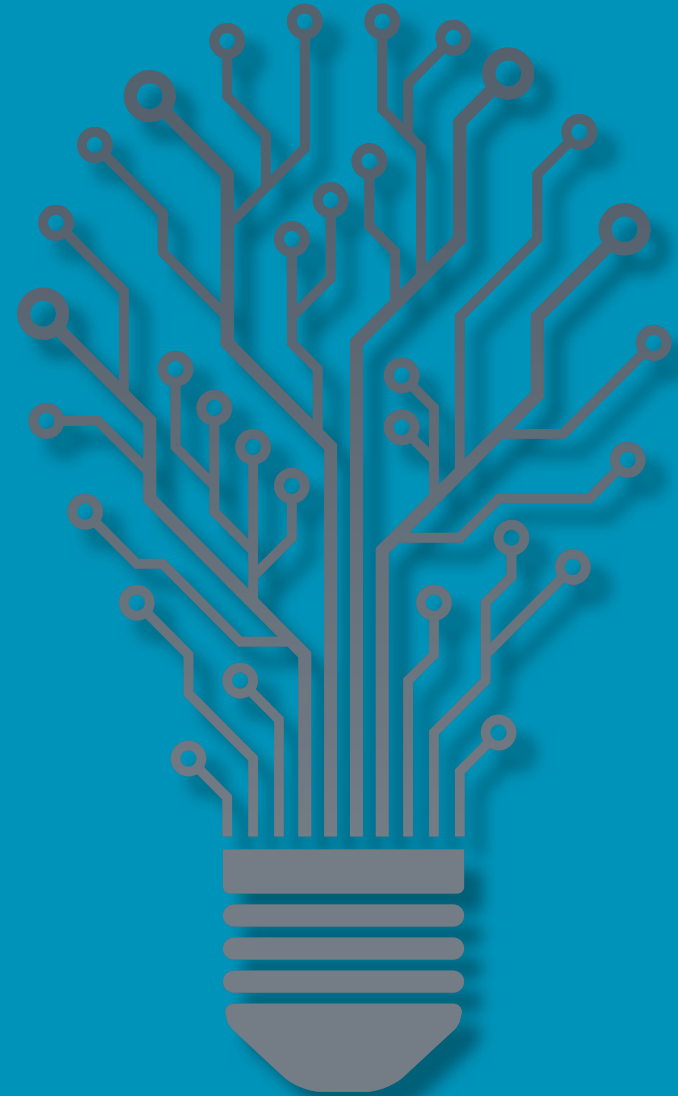
Driver code : LSSLOW0081 FOR 24 W, LSSLOW0083 FOR 55 W

IS 15885 (Part 2/Sec 13)





Technical Info



Technical information

Ballast lumen factor BLF (%)

Refers to the ratio of light output from the lamp on emergency operation to the nominal light output.

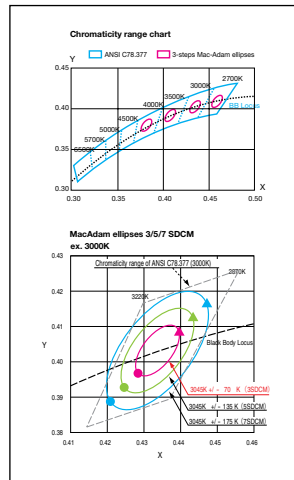
Beam Angle

Indicates how broadly the light is emitted from a reflector lamp. It can be thought of as an imaginary cone whose apex intersects the lamp face, and the breadth of the cone extends outwards to the point where luminous intensity has diminished to 50% of the centre beam value.

Binning

The term binning refers to the variations which occur within a single production batch of LED's such as chromaticity, lumen output and forward voltage. It is important that a specific bin has been identified and selected to ensure a uniform and constantly even lighting installation is achieved. If all the LED's were selected from one production batch and used in the same luminaire or installation, there would be a mix of colour temperatures and brightness levels. For the lighting manufacturer / designer binning is an essential part of LED specification.

MacAdam ellipses methodology was created in 1943 for mathematically constructing ellipses around target points, something which became very useful for the lamp industry. ANSI C78.377 is now the standard for chromaticity specified by the American National Standards Institute. ANSI recommends that lamp manufacturers stay within a "4-step" ellipse. This means that, given a certain target point on the CIE diagram, manufacturers are given a fairly wide range of perceptible differences.

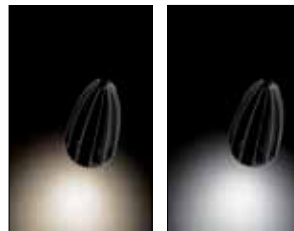


Candela (cd)

The unit of measurement for luminous intensity, which refers to the quantity of light emitted in a particular direction. The symbol is cd.

Colour Correlated Temperature (CCT)

An incandescent light bulb is very close to a perfect black-body radiator, so its colour temperature is basically the temperature of the filament. However many light sources, such as fluorescent tubes or high intensity discharge lamps, emit light by processes other than thermal radiation and therefore it is not possible to apply the black-body spectrum. For these light sources it is possible to assign what is known as a colour correlated temperature (CCT). The CCT is the colour temperature of a black-body (Planckian) radiator which most closely matches the colour of the light emitted from the lamp.

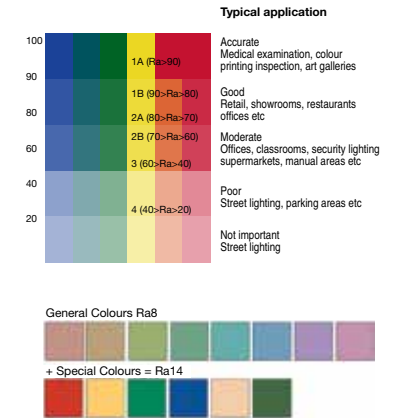


Warm White 3000 K Neutral White 4000 K

Colour Rendering Index (CRI)

The colour rendering of a light source is an indicator of its ability to realistically reproduce the colour of an object. The chart illustrates our ability to accurately determine colour depending on the colour rendering properties of the light source. The higher the colour rendering index (on a scale of 0 to 100) of the source the better our ability to perceive differences in colour, which is a considerable aid to highlighting fashion products and effective display of coloured artworks.

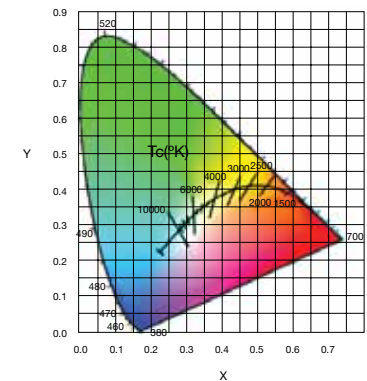
The CIE colour rendering index (CRI) is a method to determine how well a light source's illumination of eight standardised colour patches compares to the illumination provided by a reference source. At Ra (8) the perceived colour shift of eight reference colours is measured as a percentage and averaged to give one number. However it is currently understood that due to the spectral power distribution of LED's that instead of using the standard Ra8 it is important to include 7 additional colours which include red, yellow, blue & green and use Ra14 to ensure better results.



Colour Temperature

Colour temperature is a characteristic of visible light that plays a significant role in lighting applications. The colour temperature of a light source is the temperature of a perfect black-body radiator that radiates light of a similar appearance to that of the light source. The colour temperature is measured in units of absolute temperature; Kelvin (K).

Colour temperature works paradoxically to our cultural associations with colour, red as hot and blue as cold. On the black-body curve, blue occurs at higher temperatures than red. A good example is a candle which has a warm red orange appearance but in fact has a low Kelvin temperature, 1850K. Therefore higher colour temperatures (5000K more) are called cool colours (blueish white); lower colour temperatures (2700 – 3000 K) are called warm colours (yellowish white through red).



The Planckian locus shows the chromaticities of black-body light sources of various colour temperatures and lines of constant correlated colour temperature shown within the CIE chromaticity diagram

Technical information

Dimmability

The Havells lamps range includes Dimmable LEDs lamps. Most conventional dimmers have been designed for incandescent lamps and are therefore rated for higher minimum loads (W) than LED lamps consume. There may therefore be some restrictions in terms of functionality of dimmers with individual LEDs – but when more than one lamp is used to increase the total loading, dimming becomes easier. For full list of dimmer compatibility, please consult your local salesforce.

Drivers

Electronic devices that transform the high mains voltage into a constant current lower voltage for operating the LEDs. A miniature electronic driver is contained inside the base of each Havells LED lamp.

Glare

Discomfort glare is due to a high contrast between the source of light and the task. It is for that reason that luminance values are limited for certain tasks.

Heat Sink

A device used to conduct heat away from the LED sources and dissipate it to the surrounding air. The more efficiently an LED is cooled the greater its efficacy, light output and lifetime. Materials having excellent thermal properties and optimised cooling fin geometries are engineered into Havells lamps and luminaires to deliver the pinnacle of performance.

Infrared (IR) Radiation

Comprises electromagnetic waves in the spectral range between visible light and microwaves, which produce a heating effect when absorbed by materials. All lamps and luminaires produce infrared radiation, but the quantity emitted by LEDs is far lower than other technologies and this makes them ideal for reducing air conditioning load, as well as for the illumination of heat-sensitive goods.

Illuminance

This definition determines the amount of light that covers a surface. If Φ is the luminous flux and S is the area of the given surface then the illuminance E is determined by $E=\Phi/S$. The unit of illumination in SI system is lx, and in foot-pound system it is foot-candle. One lx is the illuminance of 1 m² surface area uniformly lighted by 1 lm of luminous flux.

Junction Temperature (Tj)

The temperature of the Junction of the LED die inside the LED lamp. Measuring the LED die temperature by direct mechanical means is difficult and may lead to erroneous results. It is recommended that the Tj is calculated with manufacturer's data through measurement of the temperature at the solder point (Tsp).

LED (Light Emitting Diode)

The semiconductor in the LEDs we provide emits blue light. The colour of the light ultimately depends on the phosphors used on the surface of the LED or lens.

Lens

An optical component having two refractive surfaces, at least one of which is either convex or concave. In LED lamps the function of a lens is to focus or disperse the light rays to achieve the desired beam angle or light distribution pattern.

Lifetime

LED lamps can have extremely long lives, however their light output diminishes as they age. They can carry on working until they are emitting less than 10% of their initial light output, but with so little light left they would be practically useless. Havells defines the lifetime of its LED lamps the same way as for other lamps: i.e. the burning hours until the light output has decreased to 70% of the initial value, or when 50% of a group of lamps will have failed – whichever is the soonest. The International Electrotechnical Commission (IEC) is currently preparing an international standard based on similar threshold values.

Light

Light Electromagnetic radiation with a wavelength between 380-780nm. Ultraviolet light has a wavelength of less than 380nm whilst infrared light's is greater than 720nm.

Lighting level

A measure of light falling on a particular point or surface. This unit is measured in lux.

Light output ratio (LOR)

The ratio of the luminaire light output to lamp light output. The efficiency of the luminaire.

Lumen (lm)

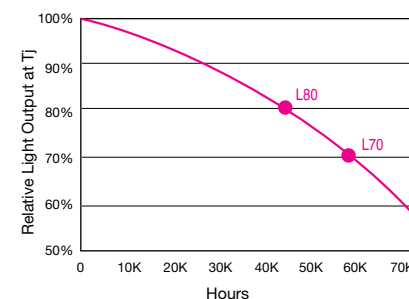
Unit of luminous flux used to describe a quantity of light emitted by a source.

Lumen Maintenance

Rated Lumen Maintenance Life (Lxx): The elapsed operating time over which the LED light source will be the percentage, xx, of its initial light output.

- L80 = Time to 80% lumen maintenance, in hours
- L70 = Time to 70% lumen maintenance, in hours

For LED lamps and luminaires, lumen maintenance is often shown as curves of relative lumen output over time for the LED under various operating conditions, such as drive current and junction temperature.



Technical information

Luminance

The measure of brightness with which the eye perceives an illuminated surface from a certain direction. The luminous intensity per unit of visible surface of a light source (direct) or an illuminated surface (reflection). Luminance is indicated in candelas per square metre (cd/m²).

Luminous efficacy (lm/W)

Indicates how efficiently a light source converts electrical energy to light.

Luminous flux (lm)

The total light output of a light source measured in lumens.

Luminous intensity (cd)

The power of a source or illuminated surface to emit light in a particular direction, measured in candelas.

Lux (lux)

The unit of illuminance, equal to one lumen per square metre (lm/m²).

Illuminance cone

This shows beam angle and illuminance figures at different heights.

Polar curve

The graphic representation of the luminous intensity in different directions. If two curves are plotted, the distributions are in two vertical planes. They are absolute values.

Recycling

Havells Havells lamps and luminaires are extremely durable and do not contain any mercury, lead or other toxic metals. However because their drivers contain electronic components they must be disposed of as waste electrical and electronic equipment at the end of their life.

Reflector

An optical component having a reflective surface (the surface could be specular or diffusing depending on the job it is required to do) surface, which captures light rays from the source and bounces them back at a particular angle. Although more commonly used in incandescent and halogen lamps, some Havells LED lamps use reflectors to control their light instead of a lens.

Room index K

An index relating to the dimensions of a room influencing the amount of light emitted from the fitting onto the working surface.

$$K = \frac{a \times b}{h \times (a+b)}$$

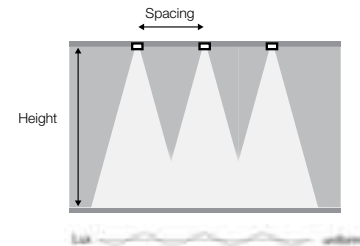
where: a = room length

b = room width

h = height between the luminaire and working surface

Spacing to height ratio (SHR)

Used to determine the maximum distance between luminaires. The ratio of the distance between adjacent luminaires to the distance between the luminaire plane and the horizontal working plane.



Switching Frequency

LED lamps cannot be switched on and off indefinitely, but are rated to tolerate an impressive 60,000 switching cycles or more.

Uniformity ratio of illuminance

This indicates the degree of evenness of the light on the working surface and is shown as a ratio of the minimum to the mean lighting level on a surface. It becomes less even as the uniformity decreases. Typically you want 0.7 as a min for most schemes.

Ultra Violet (UV) radiation

Comprises electromagnetic waves in the spectral range between visible light and X-rays, which are invisible to the human eye but essential for all life (delivered via natural sunlight). Small amounts of UV are emitted by many light sources (e.g. Halogen and Discharge) and over time will cause fading of coloured objects being illuminated. Havells Havells lamps and luminaires do not emit any UV radiation.

Utilisation factor

The ratio of the light flux which the reference surface receives to the total luminous flux. This is influenced by the shape of the room and selected luminaire and is expressed in the form of UF tables.

IP Ratings

Ingress protection ratings (IP)






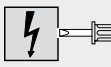

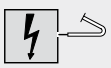






The resistive performance of fittings to solids and liquids is indicated by the IP (Ingress Protection) prefix followed by two numbers.

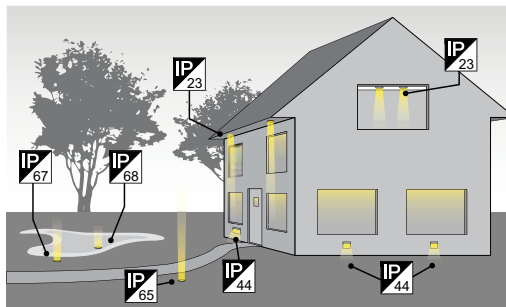
The first number indicates the measure of protection against the ingress of solids. For instance: 

The second number indicates the measure of protection against the ingress of liquids. For instance: 







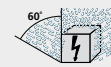





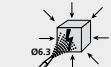




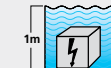




Ingress Protection (IP) Specification Guide

Protection against the ingress of solid objects

IP No.	Example	Protection against contact and ingress of objects	Tests	Symbol
		Protected against solid objects greater than 50mm ø	A large surface of the body, such as a hand (but no protection against deliberate access). Solid objects exceeding 50 mm in diameter.	
		Protected against solid objects greater than 12mm ø	Fingers or similar objects not exceeding 80 mm in length. Solid objects exceeding 12mm in diameter.	
		Protected against solid objects greater than 2.5mm ø	Tools, wires, etc., of diameter or thickness greater than 2.5mm. Solid objects exceeding 2.5mm in diameter.	
		Protected against solid objects greater than 1.0mm ø	Wires or strips of thickness greater than 1.0mm. Solid objects exceeding 1.0 mm in diameter.	
		Dust protected	Ingress of dust is not totally prevented but dust does not enter in sufficient quantity to interfere with satisfactory operation of the equipment.	
		Dust tight	No ingress of dust.	



Protection against the ingress of solid objects

IP No.	Example	Protection against contact and ingress of water	Tests	Symbol
		Protected against dripping water	Dripping water (vertically falling drops) shall have no harmful effect	
		Protected against dripping water when tilted up to 15°	Vertically dripping water shall have no harmful effect when the enclosure is tilted at any angle up to 15° from its normal position	
		Protected against spraying water	Water falling as a spray at an angle up to 60° from the vertical shall have no harmful effect	
		Protected against splashing water	Water splashed against the enclosure from any direction shall have no harmful effect	
		Protected against water jets	Water projected by a nozzle against the enclosure from any direction shall have no harmful effect	
		Protected against heavy seas	Water from heavy seas or water projected in powerful jets shall not enter the enclosure in harmful quantities	
		Protected against the effects of immersion	Ingress of water in a harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time	
		Protected against submersion	The equipment is suitable for continuous submersion in water under conditions which shall be specified by the manufacturer. NOTE Normally, this will mean that the equipment is hermetically sealed. However, with certain types of equipment, it can mean that water can enter but only in such a manner that it produces no harmful effects.	

IK ratings

Degree of Impact Protection EN62262.

IK rating system is an International classification showing degrees of protection provided by luminaires against external mechanical impacts.

Number	Measure of protection – impact energy (joules)	Test
	No protection to this standard -	
	0.15	0.20 kg impact
	0.20	0.20 kg impact
	0.35	0.20 kg impact
	0.50	0.20 kg impact
	0.70	0.20 kg impact
	1.00	0.50 kg impact from 200mm
	2.00	0.50 kg impact from 400mm
	5.00	1.70 kg impact from 295mm
	10.00	5.00 kg impact from 200mm
	20.00	5.00 kg impact from 400mm

When higher impact energy protection is required 50 joules is recommended.

Electrical protection

EN60598



Class I – Luminaire which relies on an earthed metal case to offer protection from live parts in case of failure.



Class II – Luminaire which relies on two layers of insulation to offer protection from live parts in case of failure.



Class III – Luminaire relies on protection against electrical shock relies on supply at safely extra-low (SELV) and in which voltages higher than those of SELV are not generated



Horizontal rotation



Vertical tilt



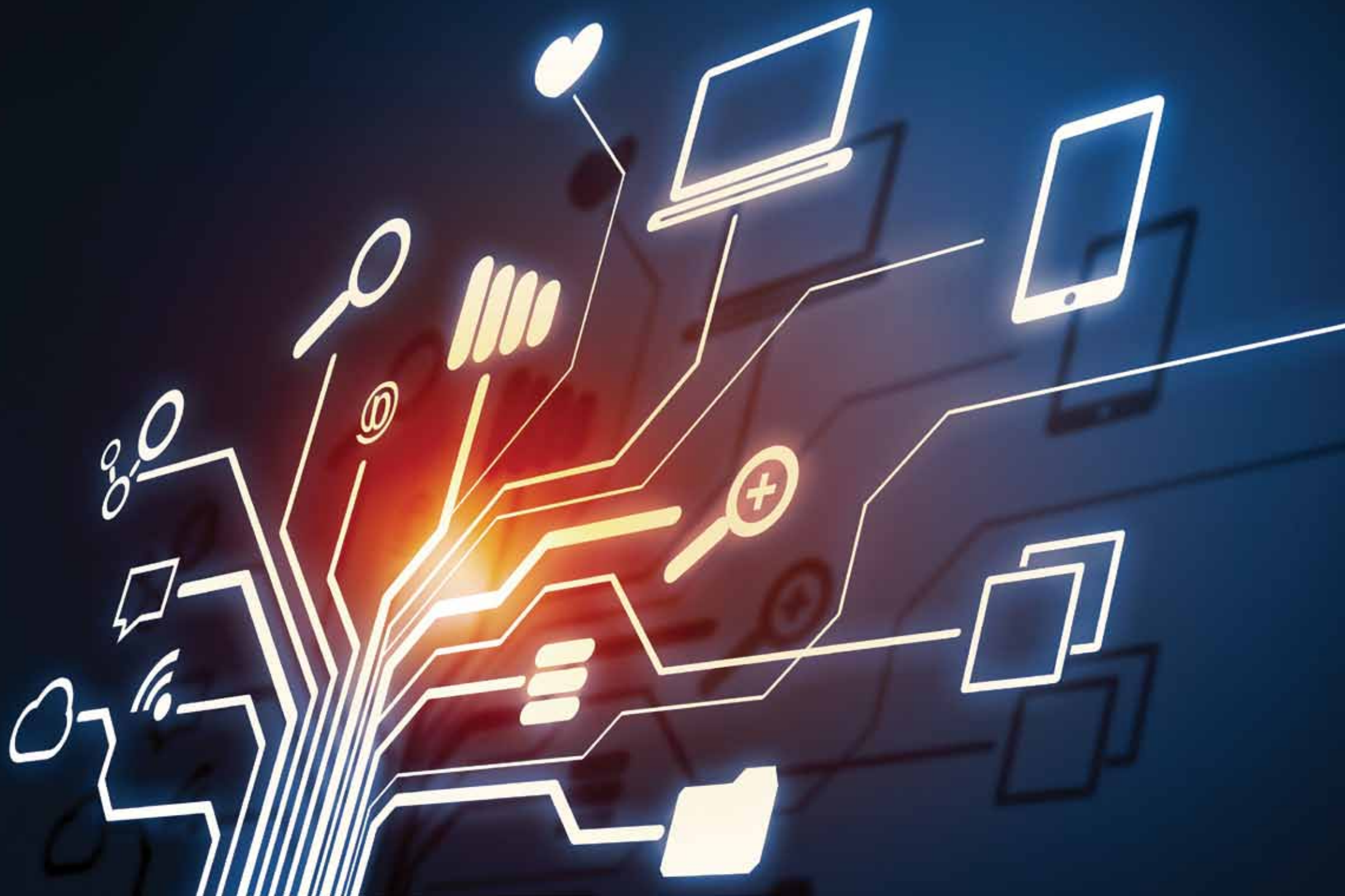
Ingress protection



Impact protection



RoHS compliant



*Actual products may vary in colour, design, description and colour combination etc.
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