PERMALIGHT®

SINCE 1988 Permalight

UL 1994 Listed
Code Compliant
Photoluminescent Egress Path Markings
per IBC & IFC



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In 1994, following the first terrorist bomb attack in the World Trade Center basement parking garage, the Port Authority of New York and New Jersey installed **PERMALIGHT®** photoluminescent markings on the steps, landings and handrail top bars of their emergency staircases.

During the September 11, 2001 World Trade Center New York City evacuation, 33% of survivors in World Trade Center Tower 1 and 17% of survivors in World Trade Center Tower 2 were aided by the PERMALIGHT® photoluminescent markings on the steps, landings and handrails.

See the National Institute of Standards and Technology study: https://www.nist.gov/topics/disaster-failure-studies/world-trade-center-disaster-study

Based on the NIST findings, the New York City Department of Buildings developed a range of improvements, enforced by **Local Law 26 of 2004**, which included **MEA**-listed photoluminescent exit path markings for existing high-rise office buildings.

<u>Click here</u> for our Local Law 26/ NYC MEA-certified Exit Path Markings PDF catalog

Since then, both NFPA (National Fire Protection Association) and ICC (International Code Council) have added photoluminescent egress path markings to their domestic codes.

From January 2015 on, New York City has **Local Law 141** as its new building code with certain NYC specific requirements for NYC photoluminescent egress path markings.

<u>Click here</u> for our Local Law 141 compliant photoluminescent egress path markings product line with NYC required Labeling for NYC new high-rise construction / major alterations PDF catalog.

This IBC/ IFC compliance Catalog introduces you to the PERMALIGHT® UL 1994 listed Photoluminescent Egress Path Markings for nationwide use (except NYC).

Follow the lead of the code-writing organizations and improve life safety in your buildings, using PERMALIGHT® UL1994-listed photoluminescent egress path markings. Take precautions now; once the emergency occurs, it's too late. Contact our customer service team for a complimentary consultation, more detailed product information, or for a customized price quote. You may place your order by phone, email, or online at www.AmericanPermalight.com

Your PERMAliGHT. Team

In 2014, PERMALIGHT® Photoluminescent Exit Path Markings were again installed at the World Trade Center site in Lower Manhattan: in the emergency staircases of One World Trade Center (formerly dubbed "Freedom Tower").





International Building Code and International Fire Code

ICC (International Code Council) is a US membership association committed to fire prevention, building safety and energy efficiency. ICC develops a wide range of codes and standards used to construct residential and commercial buildings, including homes and schools. These I-Codes (International Codes) enable safety, health and welfare for people at home, at school, in the workplace and in public assemblies. Most US states, counties and cities choose the I-codes for their building safety. Fifty states and the District of Columbia have adopted the I-Codes at the state or jurisdictional level. Federal agencies including the Architect of the Capitol, General Services Administration, National Park Service, Department of State, U.S. Forest Service and the Veterans Administration also enforce the I-Codes. The Department of Defense references the International Building Code for constructing military facilities, including those that house U.S. troops, domestically and abroad.

Every three years, an updated version of the I-Codes gets published. The 2009 edition of the IBC – International Building Code and 2009 IFC – International Fire Code contained

significant code additions relating to increased safety in the means of egress. These improvements were confirmed in the 2012, 2015 and 2018 IBC and IFC requirements.

- IBC addresses construction and design of new buildings and major renovations
- IFC addresses completed, existing buildings

IBC / IFC Means of Egress Regulations

In Chapter 10: Means of Egress, the IBC and IFC require luminous egress path markings in all assembly, business, educational, institutional/hospital, mercantile and hotel/motel buildings having occupied floors located more than 75 feet above the lowest level of fire department vehicle access. The requirements are in Section 1024 of the 2009 and 2012 IBC, and in Section 1025 of the 2015 and 2018 IBC. Luminous markings are required in all exit enclosures on the steps, landings, handrails, as perimeter demarcation lines, on obstacles and doors from exit enclosures. The IBC and IFC requirements are enforced by building inspectors and fire code officials.

2009 + 2012 IBC General Information | Section 1025 in 2015 and 2018 Editions

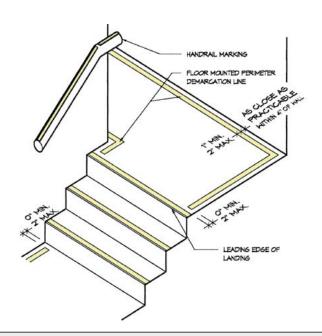
SECTION 1024 LUMINOUS EGRESS PATH MARKINGS

1024.1 General. Approved luminous egress path markings delineating

the exit path shall be provided in buildings of **Groups A, B, E, I, M and R-1** having occupied floors located more than **75 feet (22860 mm)** above the lowest level of fire department vehicle access in accordance with Sections 1024.1 through 1024.5.

Exceptions:

- Luminous egress path markings shall not be required on the level of exit discharge in lobbies that serve as part of the exit path in accordance with Section 1027.1, Exception 1.
- Luminous egress path markings shall not be required in areas of open parking garages that serve as part of the exit path in accordance with Section 1027.1, Exception 3.



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LEED, the Leadership in Energy and Environmental Design Green Building Rating System™ is the nationally accepted benchmark for the design, construction and operation of high performance green buildings. Please visit: www.usgbc.org

Possible LEED project credits are categories EA1, MR4 and ID1.1.

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Photoluminescent requirements per IBC / IFC

Occupancy types

- A = Assembly (gathering places for civic, social or religious functions)
- **B** = **Business** (bank, civic administration, professional services)
- E = Educational (through 12th grade)
- I = Institutional (places where people are cared for, ranging from hospitals, assisted living to prisons)
- M = Mercantile (display of merchandise, e.g. department stores)
- R1 = Hotel/Motel



» Steps

Marking applied to horizontal leading edge Page 5



» Obstacles

within the egress path Page 7



» Landings

Marking consistent with step marking





» Directional Signs

Page 8



» Handrails

Marking on top of handrails

Page 6



» Doors

Door frames Door hardware

Page 9



» Perimeter

Demarcation lines

Page 6 + 7



» Floor Identification Signs

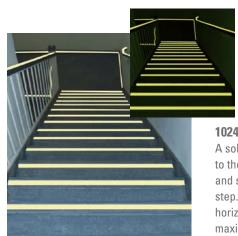
Page 10

You will find extracts from the 2009 and 2012 IBC - International Building Code requirements on the following pages.

The 2009 IFC - International Fire Code requirements for Luminous Egress Path Markings are covered by Section 4604.2.

For a complete set of IBC and IFC code requirements, please visit the International Code Council website: http://www.iccsafe.org

Section 1024.2 Markings within exit enclosures: 1024.2.1 Steps and 1024.2.2 Landings



Egress path markings shall be provided in exit enclosures, including vertical exit enclosures and exit passageways, in accordance with Sections 1024.2.1 through 1024.2.6.

1024.2.1 Steps.

A solid and continuous strip shall be applied to the horizontal leading edge of each step and shall extend for the full length of each step. Outlining strips shall have a minimum horizontal width of 1 inch (25 mm) and a maximum width of 2 inches (51 mm). The

leading edge of the strip shall be placed at a maximum of ½ inch (13 mm) from the leading edge of the step and the strip shall overlap the leading edge of the step by not more than ½ inch (13 mm) down the vertical face of the step. **Exception:** The minimum width of 1 inch (25 mm) shall not apply to outlining strips listed in accordance with UL 1994.

1024.2.2 Landings.

The leading edge of landings shall be marked with a strip consistent with the dimensional requirements for steps.

PERMALIGHT® Step and Landing Markings, Floor-mounted Demarcation Markings



	Model No.	Item No.	Dimensions	Description LISTED
Panalich as and	CC-ALU	83-60207	1" x 48"	Photoluminescent aluminum* strip with foamy adhesive backing. (* Not a thin, flimsy foil but a durable, semi-stiff aluminum metal). Floor-suitability tested by Underwriters Laboratories Inc.
	CC-AST CC-AST CC-AST CC-AST	83-1780 83-1780L 83-0780 83-0780L	1" x 52 ft. 1" x 79 ft. 2" x 52 ft. 2" x 79 ft.	Photoluminescent anti-slip tape with self-adhesive backing. Slightly structured anti-slip surface. Floor-suitability tested by Underwriters Laboratories Inc.
	CC-NOSING	83-40447L	2-5/8" x 1-1/8" x 48"	90° angled aluminum stair nosing (silver-color anodized) with photoluminescent, anti-slip gritty aluminum strip and black, anti-slip gritty insert. Floor-suitability tested by Underwriters Laboratories Inc. Custom-lengths available – Call us!

The right accessories are important for durable, fast and efficient installations. Here are the most important ones at a glance.....



3M Safety-Walk™ Primer 901

One quart covers approximately 35 square feet.

Description	Size	Item No.
Primer	1 Quart	83-0781



Edge Sealing Acrylic Lacquer, This 0.528 pint (250 ml) bottle yields approx. 150 linear feet.

Description Size Item No.

Acrylic Lacquer 0.528 pint 83-0783

Pressure roller

To firmly press-apply self-adhesive tapes for a firm bond:

1-3/4" Roller Width

Description

Item No.

86-7006

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1024.2.3 Handrails



All handrails and handrail extensions shall be marked with a solid and continuous strip having a minimum width of 1 inch (25 mm). The strip shall be placed on the top surface of the handrail for the entire length of the handrail, including extensions and newel post caps. Where handrails or handrail extensions bend or turn corners, the strip shall not have a gap of more than 4 inches (102 mm).

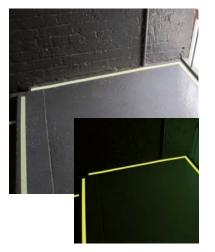
Exception: The minimum width of 1 inch (25 mm) shall not apply to outlining strips listed in accordance with UL 1994.



PERMALIGHT® handrail markings

Model No.	Item No.	Dimensions	Description	STED
CC-TAPE	82-40708	1" x 82 ft.	Photoluminescent polyester tape self-adhesive backing	
CC-TAPE	82-40708L	1" x 164 ft.	Photoluminescent polyester tape self-adhesive backing	
CC-TAPE	82-40709	2" x 82 ft.	Photoluminescent polyester tape self-adhesive backing	
CC-TAPE	82-40709L	2" x 164 ft.	Photoluminescent polyester tape self-adhesive backing	

1024.2.4.1 Floor-mounted demarcation lines



1024.2.4 Perimeter demarcation lines.

Stair landings and other floor areas within exit enclosures, with the exception of the sides of steps, shall be provided with solid and continuous demarcation lines on the floor or on the walls or a combination of both. The strips shall be 1 to 2 inches (25 mm to 51 mm) wide with interruptions not exceeding 4 inches (102 mm). **Exception:** The minimum width of 1 inch (25 mm) shall not apply to outlining strips listed in accordance with UL 1994.

1024.2.4.1 Floor-mounted demarcation lines. Perimeter demarcation lines shall be placed

within 4 inches (102 mm) of the wall and shall extend to within 2 inches (51 mm) of the markings on the leading edge of landings. The demarcation lines shall continue across the floor in front of all doors.

Exception: Demarcation lines shall not extend in front of exit doors that lead out of an exit

enclosure and through which occupants must travel to complete the exit path.



PERMALIGHT® floor-mounted demarcation markings

Model No.	Item No.	Dimensions	Description	LISTED
CC-ALU	83-60207	1" x 48"	Photoluminescent aluminum* strip with foamy adhesive backing. (* Not a thin, flimsy foil but a durable, semi-stiff aluminum metal).	
CC-AST CC-AST CC-AST CC-AST	83-1780 83-1780L 83-0780 83-0780L	1" x 52 ft. 1" x 79 ft. 2" x 52 ft. 2" x 79 ft.	Photoluminescent anti-slip tape with self-adhesive backing. Slightly structured anti-slip surface. Floor-suitability tested by Underwriters Laboratories Inc.	



1024.2.4.2 Wall-mounted demarcation lines and 1024.2.4.3 Transition

1024.2.4.2 Wall-mounted demarcation lines.

Perimeter demarcation lines shall be placed on the wall with the bottom edge of the strip no more than 4 inches (102 mm) above the finished floor. At the top or bottom of the stairs, demarcation lines shall drop



vertically to the floor within 2 inches (51 mm) of the step or landing edge. Demarcation lines on walls shall transition vertically to the floor and then extend across the floor where a line on the floor is the only

practical method of outlining the path. Where the wall line is broken by a door, demarcation lines on walls shall continue across the face of the door or transition to the floor and extend across the floor in front of such door. **Exception:** Demarcation lines shall not extend in front of exit doors that lead out of an exit enclosure and through which occupants must travel to complete the exit path.

1024.2.4.3 Transition.

Where a wall-mounted demarcation line transitions to a floormounted demarcation line, or vice versa, the wall-mounted demarcation line shall drop vertically to the floor to meet a complementary extension of the floor-mounted demarcation line, thus forming a continuous marking.

	Model No.	Item No.	Dimensions	Description	LISTED
	CC-TAPE CC-TAPE CC-TAPE CC-TAPE	82-40708 82-40708L 82-40709 82-40709L	1" x 82 ft. 1" x 164 ft. 2" x 82 ft. 2" x 164 ft.	Photoluminescent polyeste self-adhesive backing	r tape
Permilichi es sozor	CC-ALU	83-60207	1" x 48"	Photoluminescent aluminur strip with foamy adhesive b (* Not a thin, flimsy foil but a durable, semi-stiff aluminur	acking. a

1024.2.5 Obstacles



1024.2.5 Obstacles.

Obstacles at or below 6 feet 6 inches (1981 mm) in height and projecting more than 4 inches (102 mm) into the egress path shall be outlined with markings no less than 1 inch (25 mm) in width comprised of a pattern of alternating equal bands, of luminescent luminous material and black, with the alternating bands no more than 2 inches (51

mm) thick and angled at 45 degrees (0.79 rad). Obstacles shall include, but are not limited to, standpipes, hose cabinets, wall projections and restricted height areas. However, such markings shall not conceal any required information or indicators including, but not limited to, instructions to occupants for the use of standpipes.

PERMALIGHT® obstacle markings

Model No.	Item No.	Dimensions	Description	LISTED
CC-TAPE	82-44151	1" x 82 feet	Photoluminescent / Contrast black obstacle marking polyester thin tape with self-adhesive backing	
CC-TAPE	82-441511	1" x 164 feet	Photoluminescent / Contrast black obstacle marking polyester thin tane with self-adhesive backing	



1024.2.6 Doors from exit enclosures and 1024.2.6.1 Emergency exit symbol

1024.2.6 Doors from exit enclosures.

Doors through which occupants within an exit enclosure must pass in order to complete the exit path shall be provided with markings complying with Sections 1024.2.6.1 through 1024.2.6.3.

1024.2.6.1 Emergency exit symbol.

The doors shall be identified by a low-location luminous emergency exit symbol complying with NFPA 170. The exit symbol shall be a minimum of 4 inches (102 mm) in height and shall be mounted on the door, centered horizontally, with the top of the symbol no higher than 18 inches (457 mm) above the finished floor.

Emergency Exit Symbols on Doors from Exit Enclosures



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Model No.	item ivo.	Material	Dimensions
CC-ALU	86-42867F	aluminum, self-adhesive	5-3/4" x 5-3/4"
CC-ALU	86-42887F	aluminum, self-adhesive	7-7/8" x 7-7/8"



Model No.	Item No.	Material	Dimensions
CC-ALU	86-42947F	aluminum, self-adhesive	5-3/4" x 5-3/4"
CC-ALU	86-42967F	aluminum, self-adhesive	7- ⁷ /8" x 7- ⁷ /8"

Directional Signage

Combine one running man symbol from above door signs with one of these arrows to create directional signage. With only 4 symbols, you can mark any direction of your egress path. Just place one running man sign with one arrow on a landing wall or on a basement wall pointing up to the ground floor. The arrows can be turned, so that each possible direction can be indicated.

Straight

Model No.	Item No.	Material	Dimensions
CC-ALU	86-43027F	aluminum, self-adhesive	5- ³ /4" x 5- ³ /4"
CC-ALU	86-43047F	aluminum, self-adhesive	7- ⁷ /8" x 7- ⁷ /8"



Model No.	Item No.	Material	Dimensions
CC-ALU	86-43107F	aluminum, self-adhesive	5-3/4" x 5-3/4"
CC-ALU	86-43127F	aluminum, self-adhesive	7- ⁷ /8" x 7- ⁷ /8"



Model No.	Item No.	Dimensions	Description
CC-ALU	600098IBC	5" x 5"	self-adhesive NO EXIT sign, aluminum

Contact us! Toll Free 888-737-6254

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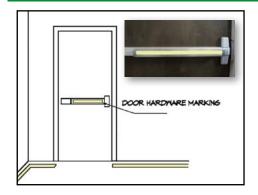
New York City Local Law 141 compliant UL1994-listed Photoluminescent Egress Path Markings

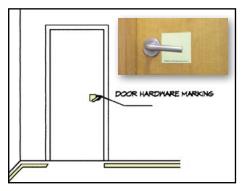
Contact us about the new NYC LL141 requirements that require each item to be labeled.

Call us toll free: 888-737-6254

Email us: info@AmericanPermalight.com

1024.2.6.2 Door hardware markings







1024.2.6.2 Door hardware markings.

Door hardware shall be marked with no less than 16 square inches (406 mm²) of luminous material. This marking shall be located behind, immediately adjacent to or on the door handle and/ or escutcheon. Where a panic bar is installed, such material shall be no less than 1 inch (25 mm) wide for the entire length of the actuating bar or touchpad.

Model No.	Item No.	Dimensions	Description	
CC-TAPE	82-40708	1" x 82 ft.	Photoluminescent polyester tape self-adhesive backing	
CC-TAPE	82-40708L	1" x 164 ft.	Photoluminescent polyester tape self-adhesive backing	
CC-TAPE	82-40709	2" x 82 ft.	Photoluminescent polyester tape self-adhesive backing	
CC-TAPE	82-40709L	2" x 164 ft.	Photoluminescent polyester tape self-adhesive backing	
CC-TAPE	82-60204	4" x 4"	Photoluminescent thin polyester sticker – door latch	
CC-RIGID	82-7748	4" x 4"	Photoluminescent rigid PVC, self-adhesive	

1024.2.6.3 Door frame markings

1024.2.6.3 Door frame markings.

The top and sides of the door frame shall be marked with a solid and continuous 1 inch to 2 inch (25 mm to 51 mm) wide strip. Where the door molding does not provide sufficient flat surface on which to locate the strip, the strip shall be permitted to be located on the wall surrounding the frame.

PERMALIGHT® door frame markings

			•	
Model No.	Item No.	Dimensions	Description	LISTED
CC-TAPE	82-40708	1" x 82 ft.	Photoluminescent polyester tape self-adhesive backing	l
CC-TAPE	82-40708L	1" x 164 ft.	Photoluminescent polyester tape self-adhesive backing	
CC-TAPE	82-40709	2" x 82 ft.	Photoluminescent polyester tape self-adhesive backing	
CC-TAPE	82-40709L	2" x 164 ft.	Photoluminescent polyester tape self-adhesive backing	
CC-ALU	83-60207	1" x 4 ft.	Photoluminescent aluminum strip with self adhesive ba	ckina



1024.3 Uniformity. Placement and dimensions of markings shall be consistent and uniform throughout the same exit enclosure.

1024.4 Self-luminous and photoluminescent. Luminous egress path markings shall be permitted to be made of any material, including paint, provided that an electrical charge is not required to maintain the required luminance. Such materials shall include, but are not limited to, self-luminous materials and photoluminescent materials. Materials shall comply with either: 1. UL 1994; or 2. ASTM E2072, except that

the charging source shall be 1 foot-candle (11 lux) of fluorescent illumination for 60 minutes, and the minimum luminance shall be 30 millicandelas per square meter at 10 minutes and 5 millicandelas per square meter after 90 minutes.

1024.5 Illumination. Exit enclosures where photoluminescent exit path markings are installed shall be provided with the minimum means of egress illumination required by Section 1006 for at least 60 minutes prior to periods when the building is occupied.



Section 1022.8 Floor identification signs and 1022.8.1 Signage requirements



Section 1022.8 Floor identification signs

A sign shall be provided at each floor landing in exit enclosures connecting more than three stories designating the floor level, the terminus of the top and bottom of the exit enclosures and the identification of the stair or ramp. The signage shall also state the story of, and the direction to, the exit discharge and

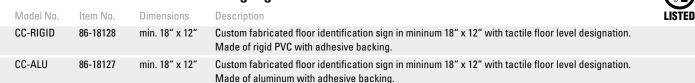
the availability of roof access from the enclosure for the fire department. The sign shall be located 5 feet (1524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions. Floor level identification signs in tactile characters complying with ICC A117.1 shall be located at each floor level landing adjacent to the door leading from the enclosure into the corridor to identify the floor level.

1022.8.1 Signage requirements

Stairway identification signs shall comply with all of the following requirements:

- The signs shall be a minimum size of 18 inches (457 mm) by 12 inches (305
- The letters designating the identification of the stair enclosure shall be a minimum of 1 ½ inches (38 mm) in height.
- The number designating the floor level shall be a minimum of 5 inches (127 mm) in height and located in the center of the sign.
- All other lettering and numbers shall be a minimum of 1 inch (25 mm) in height.
- Characters and their background shall have a nonglare finish. Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.
- When signs required by Section 1022.8 are installed in interior exit enclosures of buildings subject to Section 1024, the signs shall be made of the same materials as required by Section 1024.4.

PERMALIGHT® floor identification signage



PERMALIGHT® - Your Custom Signage Specialist

American PERMALIGHT®, Inc. can custom-produce photoluminescent signage

- » On various substrates (adhesive film, rigid PVC, aluminum)
- » In a range of luminance performances (from standard to high-performance power)
- » In a variety of contrast colors
- » With your site-specific text, in any language, with a graphic image of your choice





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Rigid PVC Self-adhesive Film

ADA Signs

Floor Identification Signs

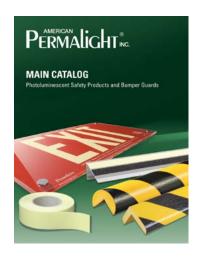
Aluminum



Click to download the catalog that addresses your safety marking needs

Different jurisdictions have specific photoluminescent safety requirements.

Please contact us to request the PDF catalog that addresses your specific marking needs.



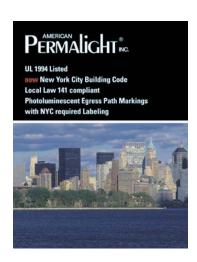
PERMALIGHT® Main Catalog

featuring our Photoluminescent Exit Signs, luminous Egress Path Markings and foamy cushioned Polyurethane Wall and Corner Guards



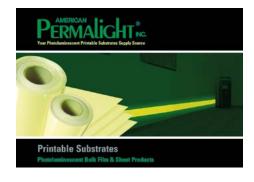
PERMALIGHT® NYC Local Law 26

Reference Standard RS 6-1 and RS 6-1A MEA-certified Photoluminescent Exit Path Markings with MEA-Labeling



PERMALIGHT® NYC Local Law 141

UL 1994 listed Photoluminescent Egress Path Markings with NYC-required UL 1994 labeling



PERMALIGHT® Photoluminescent Printable Substrates for sign making businesses

(ADA signage, digital/screen print, plotter cutting)



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