



DESCRIPTION

Luminous Egress Path Marking Class D according to the ISO 17398 and DIN 67510.

According to NFPA 101 Luminous Egress Path Marking should be used.

Implaser LLL strips and signs are linear photoluminescent products that are used to indicate escape routes in a continuous way, without any interruption and that allow us to see them even in areas with smoke. Thanks to their easy installation in floors, walls and stairs, they make possible the signalisation of evacuation routes throughout the main route.

In their diverse forms, this security element is also used for informing of danger or prohibition when entering in a determined area, delimitation of areas on floor, such as the security lines on platform edges or signalisation of work places with high level of staff and machinery movement.

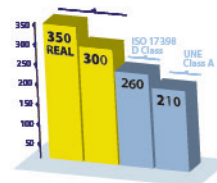
Their installation is suitable for private and public places (shopping malls, hotels, airports, hospitals, stations, etc.) due to their high abrasion resistance.

PRODUCT IDENTIFICATION



GENERAL CHARACTERISTICS

Time	Minimum values guaranteed by Implaser	ISO 17398 / PSPA D Class Values
10 minutos:	300 mcd/m ²	260 mcd/m ²
60 minutos	40 mcd/m ²	35 mcd/m ²
Decay time	3.500 minutes	-



GENERAL CHARACTERISTICS

Base material (standard):

- White semi-rigid polymer with shiny surface.
- Insignificant water absorption (0,04±0,01)%
- Self-extinguishable class M1
- Non-toxic

Other base materials:

- Aluminium 1 mm thickness

Photoluminescent product:

- Composed of inert photoluminescent pigments SrAl₂O₄:EuDy
- Unlimited photoluminescent cycles of charge and discharge.

External protection: *

- Protection against UV rays (it does not blacken with sunlight)
- Antigrffiti covering
- Antislip and antiwear

Adhesive (Optional): *

- 3M acrylic double sided with high performance 9088
- Adherence of 15N/cm (FTM1)
- Temperature resistance till 95°C
- 205 micron thickness

Final thickness: *

- Between 0,6 and 1,5 mm depending on model.

* See specific characteristic according to uses.

SPECIFIC CHARACTERISTICS ACCORDING TO USES

LLL Photoluminescent strips for floors and descendant stairs:

- They all include a 3M adhesive sheet at the back that allows their easy installation.
- Antislip surface with a high abrasion resistance
- The thickness of the base material is 0,5 mm.

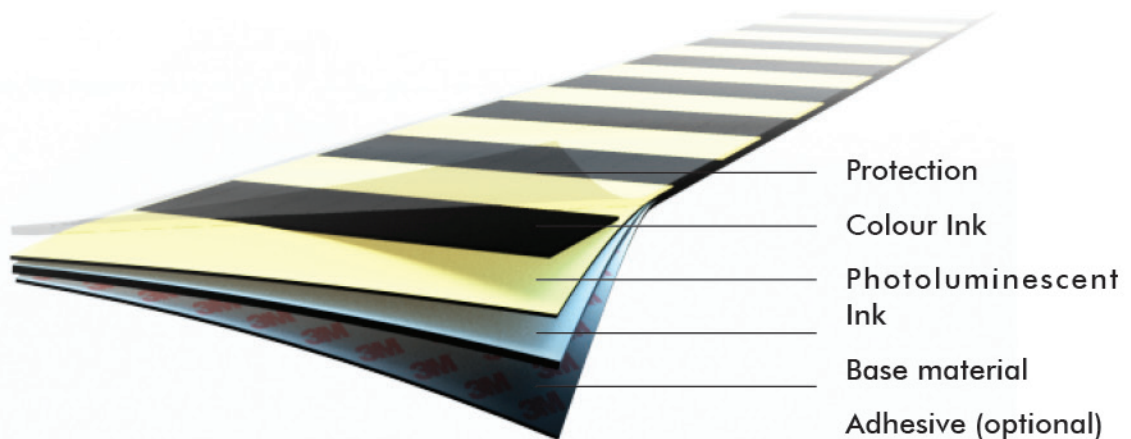
LLL Photoluminescent strips for walls and ascendant stairs:

- 3M adhesive option, depending on the installation in aluminium slat.
- Antigrffiti protection option that allows easy cleaning
- The thickness of the base material can be 0,5 mm or 0,7 mm.

You can check the specific characteristics of each model in the catalogue.

STANDARDS AND LEGISLATION THAT COMPLIES

- **UNE 23033-1:1981**
Fire safety. Signalling.
- **UNE 23034:1988**
Fire safety. Safety signs. Evacuation routes.
- **UNE 23035:2003**
Fire safety. Photoluminescent signs.
- **UNE 1115:1985**
Security signs and colours.
- **UNE 53127:2002**
Cellular plastics. Determination of combustion characteristics of test tubes in horizontal position subjected to a small flame.
- **UNE-ENV 12633:03**
Method for the determination of the resistance to slipping of polished and unpolished pavements.
- **RD 485/1997**
About security signs.
- **RD 486/1997**
About security at work places.
- **RD 685/2006**
About security at road tunnels
- **CTE y RSCIEI**
Regulation about fire safety in industrial buildings.
- **UL 1994**
Luminous Egress Path Marking Systems.



FULFILLED TESTS INDICATED IN UNE 23035/7 AND CTE

Toxicity and composition: Material Science Institute from Aragón (ICMA)

Saline fog test: AIDO Optics Laboratory (ENAC certification nº112/LC257)

Luminescence: AIDO Optics Laboratory (ENAC certification nº112/LC257)

Self-extinguishing characteristics: AFITI-LICOF (ENAC certification nº41/LE104 and nº41/LE204)

Slipping: AIDICO CERTIFICATION (ENAC certification nº13/LE351)

Wearing: CIDETEC (ENAC certification nºER-1985/2006)

INSTALLATION AND OPERATING INSTRUCTIONS

They should be installed in lighting areas. A sign installed in a low illuminated area will not work properly.

According to UL 1994, the minimum stable stimulation that photoluminescent products need for a correct working is 10,8 lux for fluorescent or LED lamps, as illumination density on the product surface. The control of the ambient illumination should be restricted to authorized personnel. The system it is not totally reliable if the ambient illumination is less than 10,8 lux.

The tapes have great flexibility, but they should be kept in a straight position at any time. If bended in excess, the base material and adhesive can be z.

The photoluminescent strips are manufactured with a standard size of 1 meter length (100 cm). To be adapted to the requirements of the installation, it is recommended to cut them with a lever shears.

VERY IMPORTANT: Dust, oils, roughness... will cause that photoluminescent tapes do not work properly, as these elements will decrease the adhesion properties of the tape on the surface. Check that the surface has the suitable characteristics before the installation.

The 3M adhesive that is included in these strips is not foamed, so it will not absorb possible surface irregularities. If the surface has small imperfections it is recommended to use foamed adhesives.

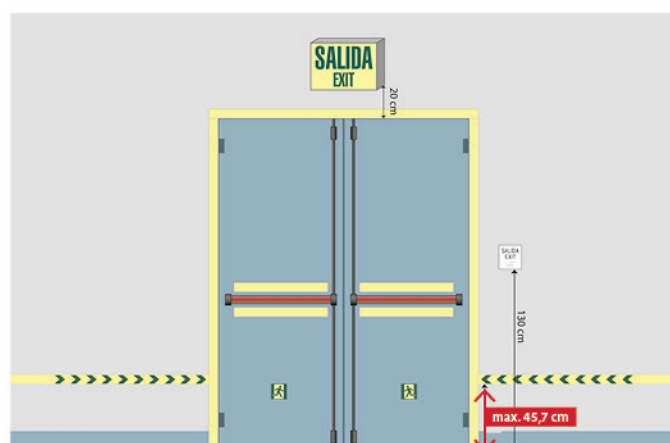
Once the surface is prepared, remove the film at the back, put the strip on the suitable position and press carefully.

If the strip does not include 3M adhesive and you want to use other type of adhesives, use neutral silicone or not damaging adhesive products for the base material.

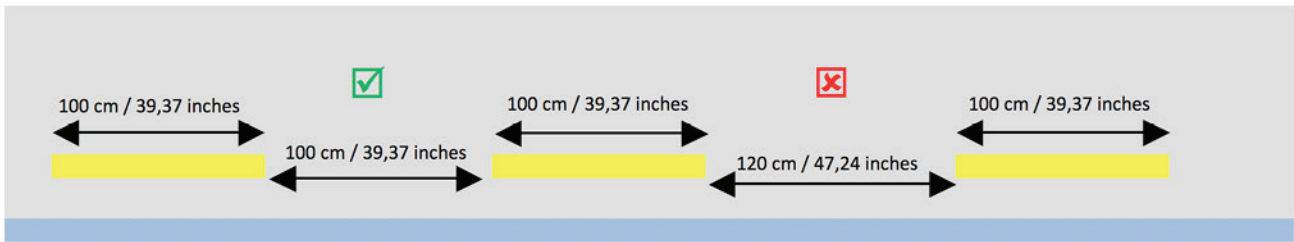
Nevertheless, strips are also suitable to be installed in aluminium slat (references LM300, LM301, LM302, LM303).

The following installation instructions illustrattes proper placement of the system with respect to mounting locations, space between luminous segments, changes in direction, doorways, etc.

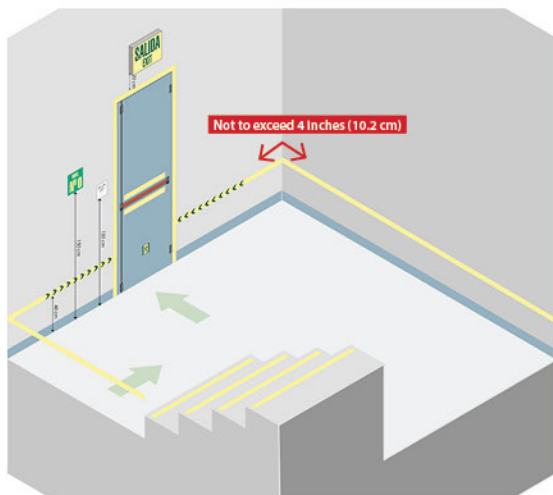
a) The mounting height of floor proximity path markers is to be in accordance with local and national codes but is not to exceed 18 inches (45.7 cm) above finished floor height.



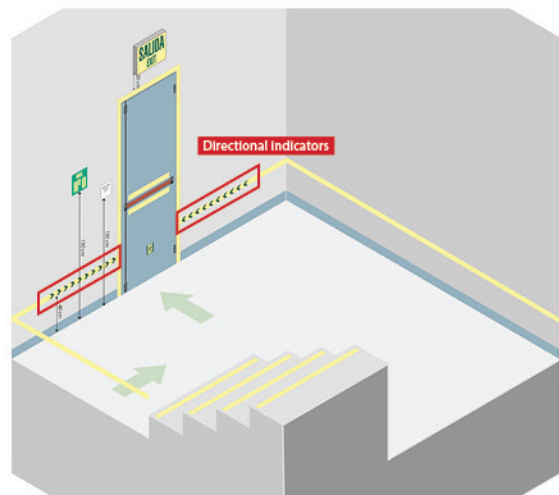
b) The maximum spacing between luminous segments is not to exceed 12 inches (30,5 cm) per inch of horizontal luminous length, or 44 inches (110 cm), whichever is less.



c) The spacing between the corner of a change in direction of the path of egress and the luminous segment is not to exceed 4 inches (10.2 cm).



d) Directional indicators (arrows or the like) are to be mounted at changes in direction and at locations intended to lead persons out of, or from entering a dead end corridor



STORAGE, CLEANING CONSERVATION AND MAINTENANCE

The working temperature should not be above 45°C. Higher temperatures can deform the base material.

The optimal temperature of storage will be between 15°C and 25°C, and with a humidity of 10/50%.

Cleaning methods: avoid applying abrasive products. It is recommended to clean them with water and neutral detergents.

100% reliable, maintenance is "free" for 10+ years.

Periodic inspections should be done according local or national codes. Be sure no markings has been removed, totally or partially, and surface is clean.

