TECHNICAL DATA SHEET
LLL SIGN SYSTEM
(LOW LOCATION LIGHTING)

Manufacturer: IMPLASER 99 S.L.L.
Pol. Borao Norte, nave 5A Alfajarín (Zaragoza)

DESCRIPTION

LLL Photoluminescent strip Class D according to the ISO 17398 and DIN 67510.

According to ISO 16069 - Safety Way Guidance System (SWGS) - Photoluminescent Safety Signs at Low Level 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.

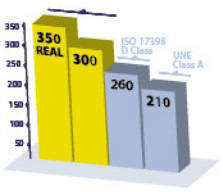
Their installation is suitable for private and public places (shopping malls, hotels, airports, hospitals, stations, etc.) due to their high abrasion resistance.

PRODUCT IDENTIFICATION

AENOR SEÑALIZACIÓN LUMINISCENTE
IMPLASER A 300
300 / 40 - 3500
K-W UNE 23035 D≤10m
2014/02 L.000000

GENERAL CHARACTERISTICS

Time	Minimum values guaranteed by Implaser	Valores de UNE 23.035-4 (2003) A Class Values	ISO 17398 / PSPA D Class Values
10 minutos:	300 mcd/m2	210 mcd/m2	260 mcd/m2
60 minutos	40 mcd/m2	29 mcd/m2	35 mcd/m2
Decay time	3.500 minutes	3.000 minutes	-



IMPLASER 99, S.L.L.
NIF-ESB 50776947
Photoluminescent
Safety Signs & Products

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Polígono Industrial Borao Norte, nave 5A
50172 - Alfajarín (ZARAGOZA) - ESPAÑA
(0034) 902 18 20 22
(0034) 976 45 50 88

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)
- Antigraffiti 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.

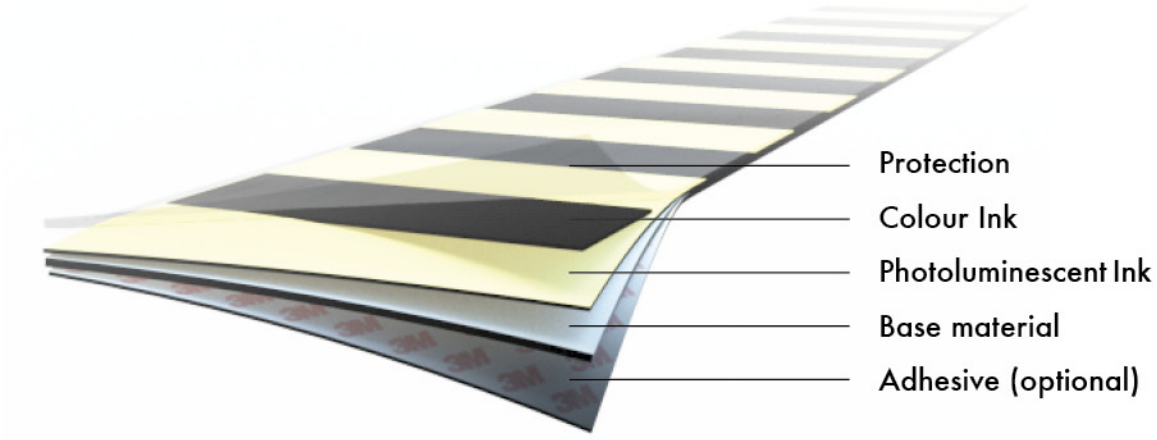
LLL Photoluminescent strips for walls and ascendant stairs:

- 3M adhesive option, depending on the installation in aluminium slat.
- Antigraffiti 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.



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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

They should be installed in directly affected either by solar lighting or artificial light areas. A sign installed in a low illuminated area will not work properly.

According to UNE 23035, the minimum stable stimulation that photoluminescent products need for a correct working is 25 lux for discharge lamps, as illumination density on the product surface.

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 damaged.

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.

INSTALLATION ACCORDING TO USES

LLL STRIPS FOR FLOORS AND DESCENDANT STAIRS:
Once the surface is prepared, remove the film at the back, put the strip on the suitable position and press carefully.

LLL STRIPS FOR WALLS, ASCENDANT STAIRS AND TURNSTILES:
In case of adhesive strips, follow the previous indications (strips for floors and descendant stairs). 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).

STORAGE, CLEANING AND CONSERVATION

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.

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