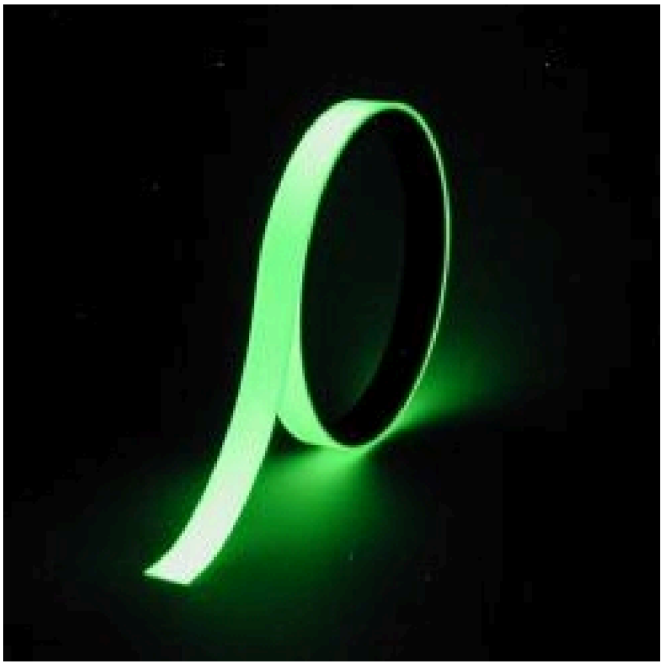
TECHNICAL SPECIFICATIONS

Product Name	LLL ADHESIVE PHOTOLUMINESCENT TAPE 3M ADHESIVE – CLASS C - ARCO IRIS				
Brand/Manufacturer	Arco Iris		Part Number	LLL-3M	**LLL EQUIPMENT**
Author	TM	Edition	04/01/24	Document No.	

A.1 EQUIPMENT DESCRIPTION

Description	Photoluminescent safety and signage tape for guiding people to safety. In the event of an unexpected power outage, this photoluminescent device provides quick and easy guidance to emergency exits.
Composition	PVC vinyl Photoluminescent adhesive with 3M® 300SLE adhesive
Dimensions **Thickness**	All dimensions, from 2.5 cm to 100 cm in width, from 1 m to 25 m in length. 0.25 to 0.35 mm
Weight per m^2	0.77 kg
Permanent color - **Excitation** - **Emission**	 Yellowish white or White (W) Yellow-green (K)
Storage - **Temperature** - **Guidelines**	 5 to 15°C Always store upright
Printing	Screen-printed with high-quality, UV-resistant matte inks, guaranteed for 5 years.

Photos of the equipment



A.2 PHOTOLUMINESCENT CHARACTERISTICS

PHOTOLUMINESCENT PVC VINYL ADHESIVE				
Test Results		**Class C**		
Reference illuminance conditions			**Luminance in mcd/m²**	
Lamp type	**Lux**	**Duration**	**10 min**	**60** min
500 W *D65*Xenon lamp	1,000.00	5 min	211.00	30.00
Extinction (0.3 mcd/m²)			2,100.00	
Useful Illumination Conditions *representing common scenarios for the use of photoluminescent products,*			**Luminance Rendering** *in mcd/m²*	
Lamp type	**Lux**	**Duration**	**10 min**	**60** min
500 W *D65*Xenon lamp	200.00	20 min	-	-
Cool White Fluorescent Lamp, 4000K, 36W	25.00	15 min	77.43	10.00
Warm White Fluorescent Lamp, 3000K, 58W / 840	25.00	15 min	-	-
Standard halogen lamp			-	-
LED *or other* lighting			-	-
(metal halide) high-pressure discharge lamps *or other*			-	-
Marking	ARCO IRIS Class C: 211/30-2000-K-W			

The photoluminescent characteristics are determined by laboratory measurements. They comply with the standard and are validated by a test report in accordance with DIN 67 510, Part 1.
This product is classified as LLL photoluminescent equipment and is therefore subject to additional requirements and testing: See A.9)

A.3 RESISTANCE CHARACTERISTICS

Lifespan	Our photoluminescent products are known for their durability (phosphorescence lifespan of 10 to 20 years), with no decline in performance
Fire Resistance	NF EN 45545-2: 2020 Fire protection in rail vehicles Classification: HL3 for Requirement R3 applied to 1.9 mm steel Test standards ; ISO 5659-2 Smoke opacity—passed ; EN 17084 Method 1 Smoke toxicity—passed ; ISO 5658-2 Critical flux at vertical extinction—passed
Weather resistance	*(NF EN ISO 4892-2 - NF-ISO4892-2 (1303))*: Excellent weather resistance (heat, rain, frost) and UV resistance*.
Water resistance	Completely waterproof product *(NF-NFX08-050-2 5.3.3)*
Abrasion resistance	*(NF EN ISO 7784-3)*: Excellent resistance: Slight scuffing and no loss of mass after testing.
Salt spray test	*(NF EN ISO 9227, NF-NFENISO9227)*: No degradation of the photoluminescent portion: Compliant
Resistance to cleaning	*(NF EN ISO 105-X12)*: Excellent resistance to washing and detergents.
Tear resistance	*(NF X 08-050-1)*: Good peel strength (F (N)/ 23.5 ± 5.2 / FP (N/cm) 9.4 ± 2.1 (Where F: Peel strength in Newtons / FP: Peel strength per 1 cm width in Newtons per centimeter)
Our adhesives have undergone all of the above tests (test reports are available upon request)	

A.4 APPLICATION RECOMMENDATIONS	
Substrate Preparation	The substrate must be sound, clean, and properly prepared according to its condition (deoxidized, degreased, dried, and dust-free).
Application	On smooth surfaces. Peel off the protective liner from the adhesive side, then apply by pressing firmly on the product and the substrate. Do not stretch during application. Place the tape, then press down. A 24-hour curing period may be necessary depending on the surface texture.
Where to install?	Refer to the layout plan for photoluminescent equipment. or refer to the “Installation and Spacing” sheet.
Installation Method	Attach using the adhesive on the back. Can be glued or screwed to the mounting surface.
Excitation Lighting	“Cool” light sources are recommended, with color temperatures ranging from 3,000 to 6,500 K (such as LED, metal halide, or fluorescent). Illuminance must not be less than 25 lux. Photoluminescent materials must always be placed as close as possible to light sources and never in shaded areas. See our document “Lighting Guide” for more details. Refer to the “Lighting” fact sheet.
Installation Temperature	10°C > Recommended installation temperature < 25°C
Maintenance	Photoluminescent products require no maintenance. Their performance should be checked regularly (see A.5)
Cleaning	Regular dusting is recommended to ensure optimal brightness. Clean with a mild detergent.

A.5 INSPECTION

The photoluminescence values for installed equipment must be checked regularly:

10 min	30 mcd/m² minimum
60 min	7 mcd/m² minimum

A.6 TOXICITY

Chemical characteristics: Non-radioactive, phosphorus-free, and lead-free.

Any necessary health and safety precautions: No specific precautions.

A.7 WASTE

Photoluminescent products at the end of their service life must be sent to recycling facilities.

A.8 APPROVAL AND PERFORMANCE WARRANTY

ARCO IRIS declares that the product complies with the French standards DIN 67510-4, NF X08-050-1/2/3, and ISO 17398/2004

The President: Guillaume PEREZ

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A.9 ADDITIONAL TESTS FOR LLL EQUIPMENT

The luminance levels during playback comply with and exceed the specifications given in Section 7.1.3 of standard NF X 08-050-1:

Additional luminance tests for photoluminescent guidance elements for LLL		
Excitation illuminance conditions	Cool white fluorescent lamp, 4000K, 36W, excitation at 25 lux for 15 minutes	
Photoluminescent devices	Luminance intensity in millicandela/m²	
	10 min	60 min
Standard NF X08:050-2: 2008	30	7
Arco Iris® - LLL	**295**	**36**