

TECHNICAL DATASHEET

VITROFLEX EXTRUDED PMMA LED

VITROFLEX EXTRUDED PMMA LED, are specially indicated sheets for optimal diffusion of LED lamps, avoiding the appearance of points of light without compromising the total transmission of light.

Unlike fluorescent or neon tubes, which have a dispersion angle of 360 °, LEDs have a much narrower angle (from 40 ° to 140 °, for example) and appear as small points of light. The VITROFLEX EXTRUDED PMMA LED sheet avoids this phenomenon known as "hot spots" and optimizes uniform diffusion without compromising light transmission.

The VITROFLEX EXTRUDED PMMA LED sheet allows designers to enjoy the benefits of LEDs and create elegant solutions that are economical and environmentally friendly, while improving intensity and color.

ADVANTAGES VITROFLEX EXTRUDED PMMA LED

- Good resistance.
- Accuracy in thickness.
- Free of halogens.
- Moldable.
- High diffusion with low light absorption.

TYPES AND FORMATS

Different thicknesses and sizes are available, the most common being 3050x2050mm. Special lengths can be made under request.

The color is usually opal white, although it can be customized to adjust the temperature of the light and color.

APPLICATION AREAS

- Lighting.
- Skylights.
- Tubes and bars.
- Glazing and protection.
- Closings.

TECHNICAL SPECIFICATION - VITROFLEX EXTRUDED PMMA LED

Properties	Value	Unit	Standard
Physical properties			
Density	1,20	g/cm ³	ISO 1183
Humidity absorption	0.3	%	ISO 62 (1)
Mechanical properties			
Tensile strength	72	MPa	ISO 527 -2
Traction elasticity module	3300	MPa	ISO 527-2
Elongation at break	4	%	ISO 527-2
Flexural modulus	3350	MPa	ISO 178
Módulo de resistencia	106	MPa	ISO 178
Flexural strength	117	MPa	ISO 304
Rockwell hardness	95		M scale
Impact resistance (Charpy without notched)	15	KJ/m ²	ISO 179/1fu
Impact resistance (Charpy with notched)	2	KJ/m ²	ISO 179/1eA
Impact resistance (Izod with notched)	1.5	KJ/m ²	ISO 180/1A
Thermal properties			
Linear thermal coefficient.(expansion 0-500 ° C)	65	µm/m°C	ISO11359-2
VICAT softening temperature	105	°C	ISO 306
Bending temperature under load (Method A, 1.8MPa)	95	°C	ISO 75-1
Thermal conductivity	0.19	W/mK	ASTM C177
Continuous service maximum temperature	70	°C	
Short period maximum temperature service	90	°C	
Minimum temperature	-40	°C	
Optical properties (for a colorless 3mm plate without light diffusion)			
Refractive index	1,49	-	ISO / R489
Light transmission (depending on the thickness)	92	%	ASTM D1003
Haze (3 mm clear sheet)	<1	%	
Electrical properties			
Dielectric constant (50Hz)	20-25	Kv/mm	DIN53483
Dissipation factor tanδ (100Hz)	3.7		DIN53483
Dissipation factor tanδ (1MHz)	0.04		DIN53483
Surface resistance	<10 ¹⁴	0hm	IEC60093
Volume resistance	<10 ¹⁵	0hm.cm	IEC60093
Fire resistance			
Construction (EU)	E	-	EN13501-1

The properties described here are typical values of the material. Polimer Tecnic is not responsible for the materials of a specific consignment to exactly match the given values, being able to carry out tests of that heading. The above information is based on our experience and is given in good faith. Due to some installation and processing factors that are beyond our knowledge and control, no guarantee is given regarding such information.

