

## PLEXIGLAS® EndLighten rods

### Product description

#### Product

Comparable with PLEXIGLAS® EndLighten Sheets, PLEXIGLAS® EndLighten rods are light-diffusing extruded rods with uniformly bright surfaces. Illuminated by a LED light at one or both ends of the rod, the light disperses throughout the rod (Figure 1), whereas conventional PLEXIGLAS® Rods glow only at one end.

#### Application

PLEXIGLAS® EndLighten rods are suitable for many applications. Whether it is a lamp or light guide or an illuminated handrail, PLEXIGLAS® EndLighten rod will bring luminance to your next project. With easy formability e.g. into letters without compromising its functionality.



Figure 1: One illuminated side of a PLEXIGLAS® EndLighten rod, 20 mm outer diameter with LED light (3x1.5 Volt AAA batteries). The opposite end of the rod is e.g. laminated with a mirror film to reflect the light. The reflector could also be a bright white PLEXIGLAS®.



Figure 2: Two-sided lighting of a PLEXIGLAS® EndLighten rod, 20 mm outer diameter with LED light (3x1.5 Volt AAA batteries).

## Our Range

PLEXIGLAS® EndLighten	Outer diameter available from stock	Recommended lamp spacing for Illumination on both sides
PLEXIGLAS® EndLighten rod ON001 L	20 mm 40 mm	Up to 600 mm Up to 500mm
PLEXIGLAS® EndLighten rod ON002 XL	20 mm 40 mm	600 - 1300 mm 500 - 1100mm

PLEXIGLAS® EndLighten rods are available from stock as 20 mm and 40 mm outer diameter with 2000 mm length.

All diameters of the extruded PLEXIGLAS® rods are available as PLEXIGLAS® EndLighten rods based on minimum order quantity.



Figure 3: One illuminated side of a PLEXIGLAS® EndLighten rod, 20 mm outer diameter with blue LED, OSRAM DX1-B2-L12W. The opposite end of the rod is laminated with a mirror film. Used PLEXIGLAS® sheet: PLEXIGLAS® Fluorescent 5C50, 3 mm.

### Operating Principle and Construction

PLEXIGLAS® EndLighten contains embedded colorless diffuser particles in the acrylic rod, which cause the light to diffuse forwards. The propagation direction of the light entering the sheet is changed by scattering in such a manner that the total reflection on the surface is reduced and the light exits at small angles to the rod surface. This effect produces a uniformly bright surface.

### Advantages of smooth, glossy edges for edge lighting

To minimize scattering loss when beaming in the light, the roughness on the edge surface is smoothed by diamond milling or flame polishing. The smooth glossy edge reduces scattering losses by as much as 6% compared to a saw edge.

## Processing

PLEXIGLAS® EndLighten rods may be processed following the same working practices that apply to traditional, extruded PLEXIGLAS® rods.

## Matting

It is possible to matt the surface of PLEXIGLAS® EndLighten rods through sandblasting or matt lacquer. However this can lead to irregular lighting and a decreasing in luminance as the rough surface disperses the light.

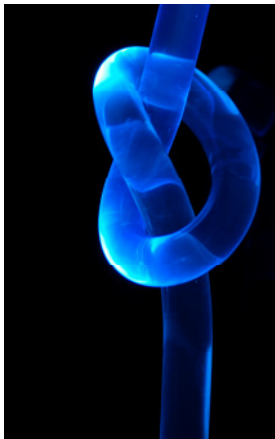


Figure 4: One illuminated side of a PLEXIGLAS® EndLighten rod, 20 mm with RGB LED light (3x1.5 Volt AAA batteries). The opposite end of the rod is laminated with a mirror film.

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