



## PLEXIGLAS® LED for backlighting, color-changing

### Product

These translucent cast sheets were specially developed for backlighting with LEDs. PLEXIGLAS® LED (color-changing) is black or grey in daylight. When the lighting is switched on at night, the sign glows brightly in the color of the LEDs and changes color from black to white, for instance.

Particularly in illuminated signs, store fixtures and exhibition booths, the combination of LEDs with PLEXIGLAS® LED offers maximum efficiency and superior lighting technology.

Advertising messages often glow 24 hours a day, which is why energy-saving construction is becoming increasingly important. Illuminated signs with PLEXIGLAS® LED, backlit with modern LED technology, consume less energy than conventional fluorescent and neon tubes and also require much less maintenance. The full potential of LEDs can only be harnessed using the right material. PLEXIGLAS® LED for backlighting is specially designed for use in illuminated signs with LEDs.

### Properties

In addition to the well-known and proven properties of PLEXIGLAS®, such as:

- extremely high weather resistance,
- ease of fabrication,
- 100% recyclability,

PLEXIGLAS® LED offers the following special features:

- it changes color when backlit: grade 9H04 SC, for example, is black in daylight and glows in the color of the LEDs at night (usually white). For example if red LED are used, the color changes from black in daylight to red at night. (see Fig. 1)

### Applications

These properties make PLEXIGLAS® LED specially suitable for:

- Illuminated signs: especially when the chosen corporate colors are black or grey, companies want their signs to change to a brilliant white that stands out against the dark night sky (see Fig. 2).
- Exhibition booths, store fixtures: printing on the reverse adds further eye-catching and fade-out effects, depending on the backlighting.
- Special-effect luminous walls in architecture

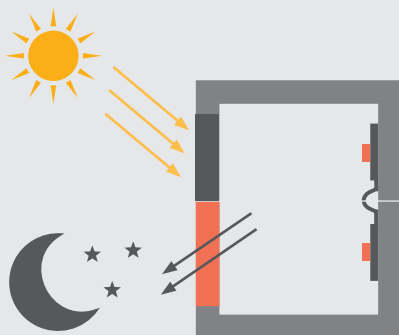


Fig. 1: Outline of color change principle



Fig. 2: Daytime and nighttime effect

### Machining




PLEXIGLAS® LED can be machined just like standard PLEXIGLAS® GS. The following Guidelines for Workshop Practice are available for PLEXIGLAS®:

- Machining PLEXIGLAS® (Ref. No. 311-1)
- Forming PLEXIGLAS® (Ref. No. 311-2)
- Joining PLEXIGLAS® (Ref. No. 311-3)
- Fabricating Tips for PLEXIGLAS® Solid Sheet (Ref. No. 311-5)

“SC” products have a satin surface on one side and promote light diffusion. The satin side is usually installed facing inwards.

### Physical forms

PLEXIGLAS® LED is available in the following colors:

| PLEXIGLAS® LED |         |   |                   |
|----------------|---------|---|-------------------|
| Color          | Grade   | Color   | Transmission TD65 |
| Black&White II | 9H04 SC |  | 18 %              |
| Black&White I  | 7H25    |  | 13 %              |
| Grey&White     | 7H01 SC |  | 21 %              |

You can find the available sizes and thicknesses in the PLEXIGLAS® Sales Handbook.

**Röhm GmbH**  
Acrylic Products

Riedbahnstraße 70  
64331 Weiterstadt  
Germany

[www.plexiglas.de](http://www.plexiglas.de)  
[www.roehm.com](http://www.roehm.com)

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