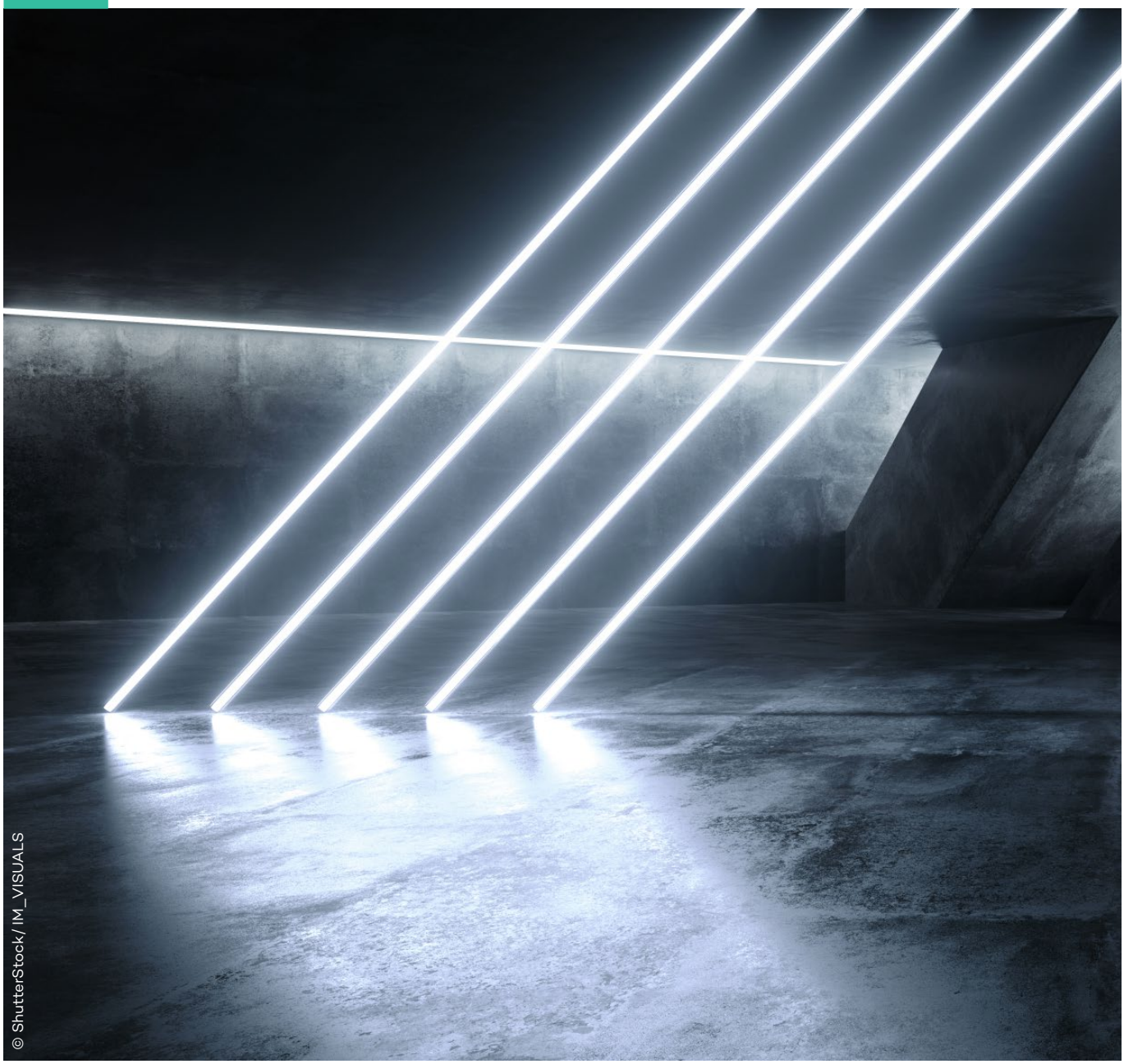
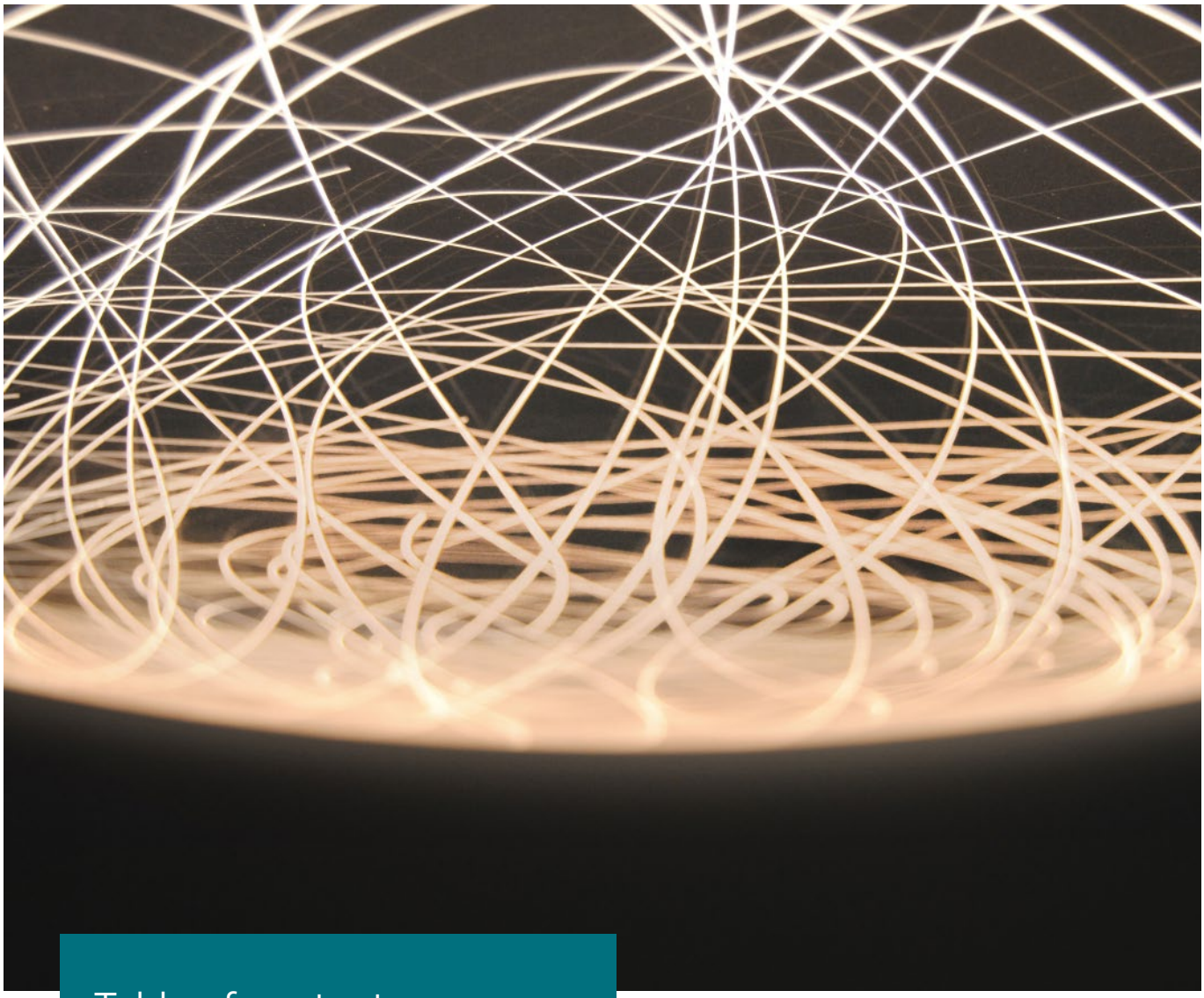
PLEXIGLAS®

PLEXIGLAS®
for Luminaires



POLYVANTIS



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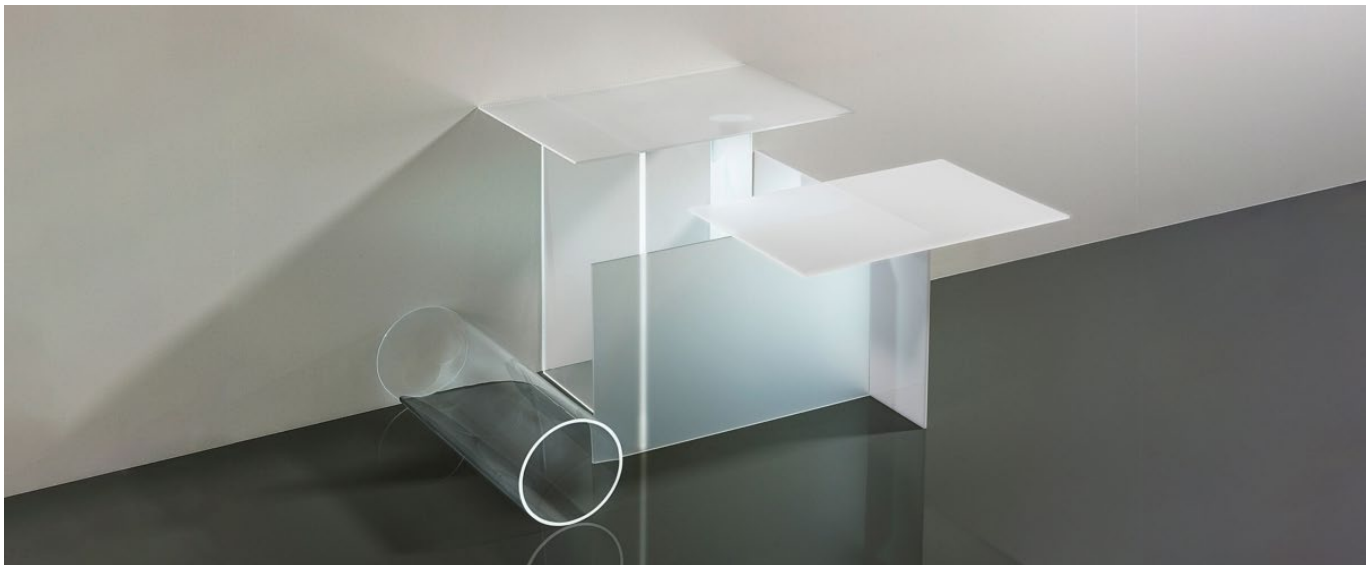
Discover PLEXIGLAS® – The Original!

This is exactly what makes the branded acrylic glass from POLYVANTIS stand out from every other acrylic glass in the world. PLEXIGLAS® is the original. It was invented in 1933. With a pioneering spirit, a passion for innovation and decades of experience, this original transparent sheet has evolved into an entire product family. PLEXIGLAS® is available in satin, dyed and light-scattering variants, for example, as well as with various surfaces and an array of functional properties.

Allow yourself to be inspired by the diverse options for sensational surface lights, extraordinary design lights and light covers for individual lighting situations!



Available forms:

- Solid sheets and blocks
- Tubes and rods
- Multi-skin and corrugated sheets
- Films

Ideal properties for custom design:

- High quality optics thanks to excellent transparency and vibrancy
- Variety of shapes and colors
- Surfaces from high-gloss to matte-satin
- Light-scattering, light-conducting or highly transparent
- Low weight
- Resistant to breaking
- Easy to process
- Durability
- UV resistance

- **PLEXIGLAS® GS/XT**
- **PLEXIGLAS® LED for Backlighting**
- **PLEXIGLAS® LED for Edge Lighting**
- **PLEXIGLAS® Satinice**
- **PLEXIGLAS® Resist**
- **PLEXIGLAS® Tubes and Rods**

PLEXIGLAS® for luminaires Transparent. Diverse. Durable.

A brand for many demands

Light is not always just light. Sometimes it has to simply provide brightness in a purely functional fashion, at other times it must create a special atmosphere. Whatever the use, lamps and luminaires depend on light-scattering and light-guiding materials which turn light into lighting. The diverse portfolio of PLEXIGLAS® is ideally suited for combinations with light.

Conducts light to where it is needed

PLEXIGLAS® is one of the most transparent materials available. This means that light can pass through the material almost unhindered — an optimal property for light guides. But PLEXIGLAS® can do much more: Through embedded diffuser particles, it distributes light homogeneously or selectively distributes it by means of incorporated structures.

Easily to shape

But light conduction and light scattering are not the only arguments in favor of PLEXIGLAS®, when it comes to designing luminaires. The diverse portfolio of branded acrylic glass offers a wide range of colors and geometries.

PLEXIGLAS® is very formable whilst retaining its photometric properties. It thus combines extraordinary design with excellent functionality.

Extremely durable

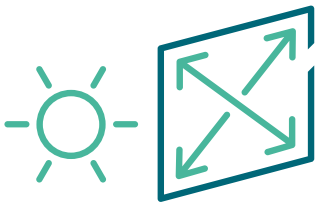
Lamp components made of PLEXIGLAS® retain their excellent quality over a long period of time. This is because the material is resistant to UV rays and is therefore optimally protected against color changes and surface damage even under extreme climatic conditions.

Simultaneously proven and innovative

Thanks to these versatile properties, PLEXIGLAS® has proven itself in lighting applications. Over the years, the portfolio has consistently grown in line with the innovations of the light technology and is also suitable for the requirements of the latest generation of LEDs, for example.

Read more about the lighting properties of PLEXIGLAS® on page 6.

PLEXIGLAS® and light: The optimal combination

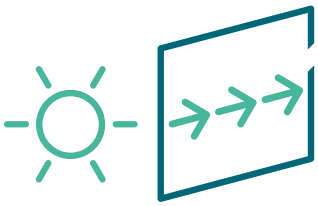


Light scattering
PLEXIGLAS® scatters light evenly when backlit

Depending on the application, PLEXIGLAS® enables even light diffusion in backlighting by means of different methods.

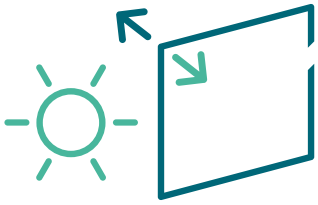
The material can be equipped with special diffuser particles that refract the light and thus illuminate even large areas in a uniform manner. In the white and colored translucent versions, the diffuser particles ensure an even lighting effect.

Alternatively, light scattering can also be achieved via surface structures.



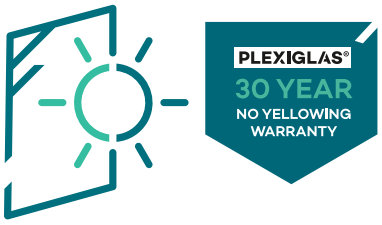
Light guiding
PLEXIGLAS® lets light pass unhindered

Thanks to their high transparency, clear PLEXIGLAS® sheets that are smooth on both sides, or PLEXIGLAS® rods with glossy surfaces, allow light to pass unhindered. The material therefore absorbs almost no visible light. This makes PLEXIGLAS® an optimal light guide.



Transparency
PLEXIGLAS® is more transparent than glass

The transparency — or light transmittance — of a material indicates the proportion of vertically incident light rays that it transmits. For applications in combination with light, PLEXIGLAS® is available in both transparent and translucent grades, each with a different degree of light transmittance. This depends on the type of material and the thickness of the sheet. The colorless, transparent PLEXIGLAS® products have the highest transmittance of up to 92 percent. This value is only reduced by the physically induced reflection loss of 4 percent each on the light entry and exit surfaces. PLEXIGLAS® is therefore one of the most transparent materials available.



Weather resistance
PLEXIGLAS® is durable

PLEXIGLAS® consists entirely of extremely strong and UV-stable molecules. The special NATURALLY UV-STABLE technology stabilizes PLEXIGLAS® completely from the inside out. As a result, the entire sheet is UV-stable, will not yellow and retains its excellent light transmittance. We guarantee these qualities for virtually all colorless, transparent solid sheets, multi-skin sheets, corrugated sheets, blocks, tubes and rods sold under the PLEXIGLAS® brand.

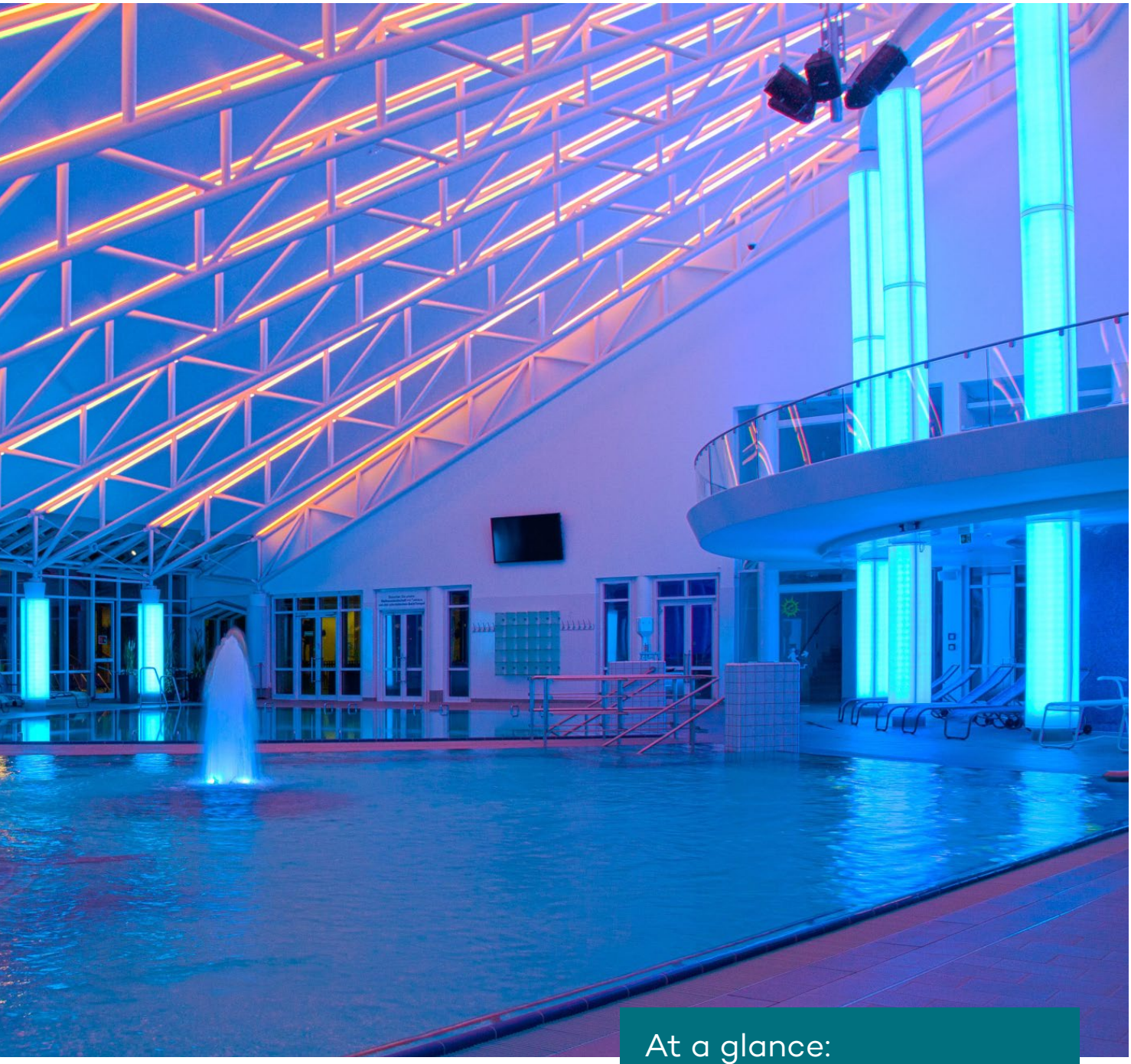
PLEXIGLAS® GS/XT

PLEXIGLAS® LED for Edge Lighting

Surface light
Light scattering. Large format. Flexible.

PLEXIGLAS® for ultra-flat design

Large, homogeneously illuminated surfaces create atmosphere and give rooms and objects a unique character. They are a visually attractive alternative to conventional fluorescent tubes for functional lighting in offices, retail or commercial areas. These light panels also provide pleasant, glare-free lighting. PLEXIGLAS® can thus be used to create large elements that light up on one or both sides, or illuminated ceilings with extremely shallow installation depths.



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At a glance:

- Optimal light diffusion for flat designs without hotspots
- Large sheet sizes and rods for light in all dimensions
- Long-lasting quality and color stability thanks to UV stability

PLEXIGLAS® for edge lighting

In general, two variants are suitable to be used as edge-lit light panels. PLEXIGLAS® LED for edge lighting is crystal clear and transparent when not illuminated. Special diffuser particles in the material ensure that light entering via the edge is distributed as evenly as possible over the entire component. PLEXIGLAS® GS or PLEXIGLAS® XT, in contrast, extract light provided via the edge through applied structures – either across the entire surface or at targeted individual spots – which creates an impressive illusion of an object made of light floating in the room. These structures are created by laser engraving or by printing.

Lamp covers
Uniform. Glare-free. Pleasant.

PLEXIGLAS® prevents differences in brightness

LEDs have now largely eclipsed other light sources. This has increased the lighting industry's demands on covers, as LEDs create points of light which must be distributed evenly and uniformly and no hotspots should be visible. PLEXIGLAS® LED for backlighting brings out the best in the internal light emitting diodes: a pleasant and soft lighting without visible hotspots.

At a glance:

- Pleasant, soft and clearly diffused light without hotspots
- Variants ranging from transparent to translucent
- Excellent anti-glare effect due to structured variants

- **PLEXIGLAS® GS/XT**
- **PLEXIGLAS® LED for Backlighting**
- **PLEXIGLAS® Satinice**
- **PLEXIGLAS® Textures for Luminaires**

PLEXIGLAS® is extremely versatile

In its basic form, PLEXIGLAS® is color-neutral. This property allows the material to be dyed in almost any shade of white or any other color and modified in many different ways. Different degrees of light transmission and scattering levels enable customized lighting applications.

Pleasant lighting thanks to PLEXIGLAS®

Diffuse light-diffusing luminaire covers, for example made of PLEXIGLAS® Satinice, also reduce disturbing reflections thanks to their matte surface. PLEXIGLAS® Textures for luminaires 0A000 SL offers even better glare control, especially at workplaces. It has been optimized for edge-lit LED ceiling light systems.

- **PLEXIGLAS® GS/XT**
- **PLEXIGLAS® LED for Backlighting**
- **PLEXIGLAS® LED for Edge Lighting**
- **PLEXIGLAS® Satinice**
- **PLEXIGLAS® Textures**
- **PLEXIGLAS® Tubes and Rods**

Design lights Individual. Diverse. Inspiring.

At a glance:

- Wide variety of colors and surface finishes
- Different functional properties
- Excellent light conductivity for free-floating objects made of light

PLEXIGLAS® sets the tone

Whether imaginative lamp housings or designs that bring the light itself to the fore, PLEXIGLAS® is the ideal material for designing with light, shape and color.

PLEXIGLAS® creates freedom for ideas

PLEXIGLAS® sheets, tubes and rods are available in a wide range of white tones and colors, as well as surfaces and featuring various functional properties. Our brand acrylic glass therefore offers a lot of inspiration for decorative luminaires.

PLEXIGLAS® is what turns light into luminaires

When light is to be the focus and not the lamp, it is PLEXIGLAS® that impresses thanks to its light-conducting properties. For example, light is only emitted from the engraved areas and turns into a free-floating, illuminated object. The light source itself is virtually invisible.

Street lighting
Individual. Striking. High-quality.

At a glance:

- Versatile, modern designs thanks to various length formats and diameters
- Evocative ambient lighting thanks to transparent or translucent material
- Long-lasting, optically unchanged components thanks to the material's inherent UV protection

- **PLEXIGLAS® GS/XT**
- **PLEXIGLAS® Satinice**
- **PLEXIGLAS® Textures**
- **PLEXIGLAS® Tubes**

PLEXIGLAS® creates space for ideas

Light not only accentuates rooms – the same applies to public places, walkways and streets, where illumination is far more than a pure functional aspect. Street lights provide an atmosphere for walkways, as well as orientation. PLEXIGLAS® tubes can be used to design impressive street lights, such as bollard lights or mast top lights that enhance the cityscape.

PLEXIGLAS® is always a good fit

Every location has its own requirements for light quality, size and design. PLEXIGLAS® tubes enable these requirements to be met, as they are available in various lengths and diameters and differing levels of transparency. For example, diffuse light-scattering materials spread a more discreet light, while transparent materials create an elegant effect with their high-quality appearance.

PLEXIGLAS® resists the sun

Streetlights are permanently exposed to the weather. PLEXIGLAS® ensures the components remain optically unchanged over extended periods of time thanks to the material's inherent UV protection: transparent stays transparent, white stays white – even after many years.

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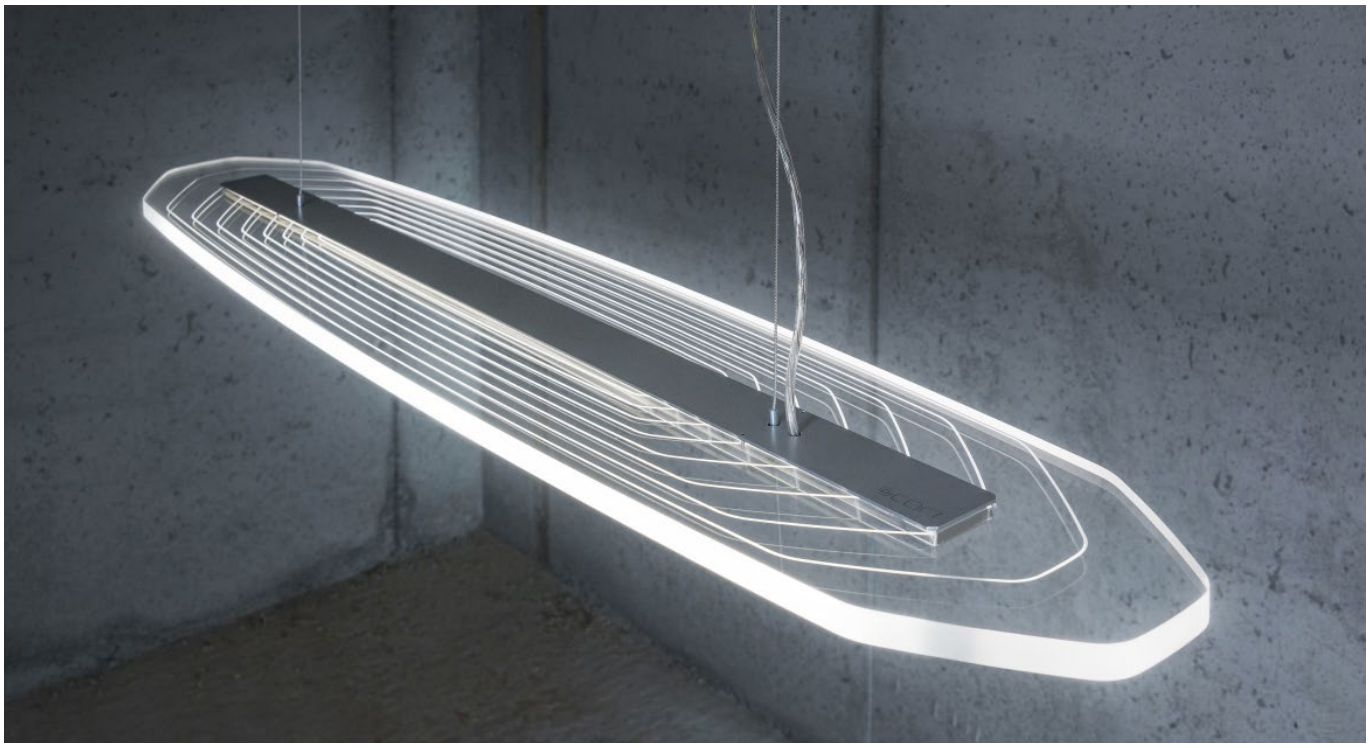

Products and applications

	Lamp covers	Surface light
PLEXIGLAS® GS/XT	•	•
PLEXIGLAS® LED for Edge Lighting		•
PLEXIGLAS® LED for Backlighting	•	
PLEXIGLAS® Satinice	•	
PLEXIGLAS® Textures	•	
PLEXIGLAS® Tubes and Rods		

Design lights	Street lighting
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® = registered trademark

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Ref. no. 511-3 04/24 (en)