



Cool | Bright | High | Sky



## Bright System Solutions

Whether in the architectural or decorative area of public, commercial or private environments – it's always about creating the perfect combination of function and aesthetics through an ideal lighting arrangement. Depending on the desired effect, wide diffusion or pinpoint highlights might be required – or even both. Concepts for energy-efficient lighting of buildings must take structural factors into account. They demand system solutions that create a uniform unit through efficient light diffusion.

The Makrolon® DX product range offers designers the flexibility to showcase challenging lighting concepts easily and systematically: long, narrow ceiling lights, big or small distances between bulb and covering, or the use of a large number of LEDs are the biggest challenges to uniform light diffusion. Brightness, combined with wide or low diffusion of light or anti-glare control – depending on the system design, the specific sheet types guarantee the functions desired.

Further surface properties are available for specific applications.

**Ask us for more information.**

**Comprehensive Lighting Solutions**

**for Bright Spirits.**





# Makrolon® DX

## The Perfect Combination of Brightness with Uniform Lighting

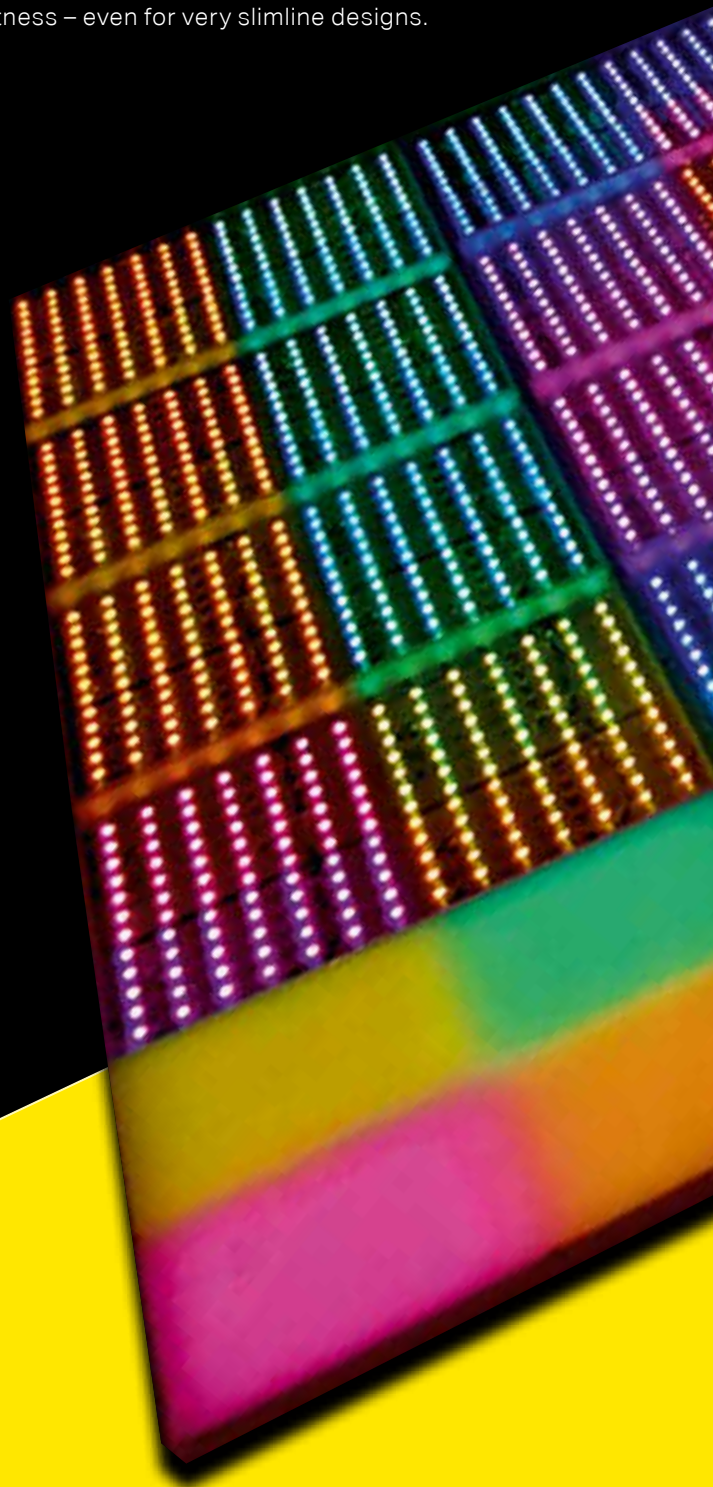
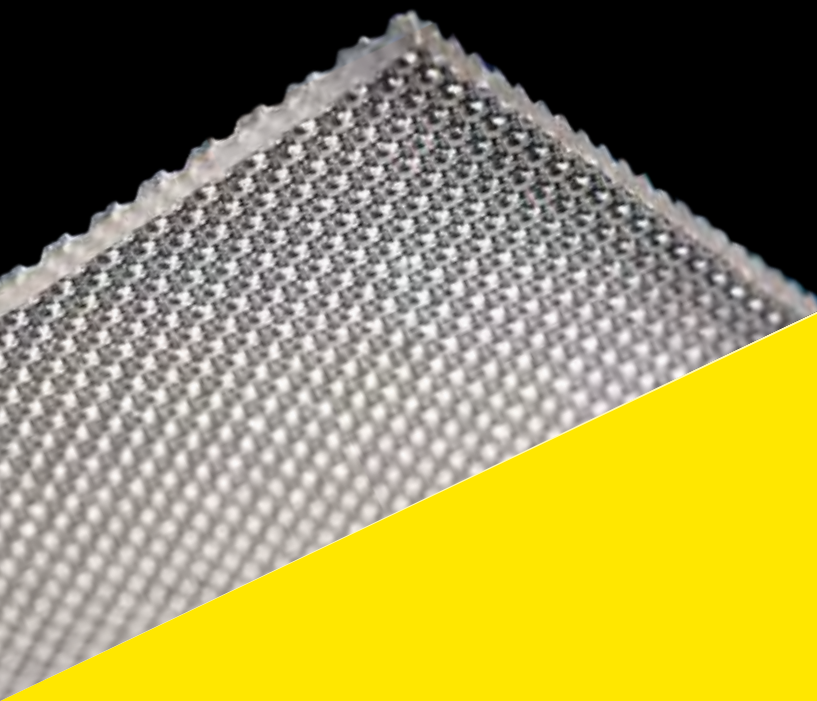
### Atmosphere + Design = Emotion

Surroundings and lighting creates atmosphere. Whether it's cool, bright or calm – depending on the requirements of the space, various lighting conditions often need to be considered in an environment. Achieving all of this with a glare-free effect, high levels of light transmission and pleasant light diffusion poses new challenges for planners and designers time and time again.

With the right range of solid diffuser sheets, Exolon Group offers bright and brilliant solutions – ideal for use in LED technology. Whether it's lighting concepts for offices, retail, industry or private households – with the advanced diffusion technology of the Makrolon® DX product range, even the most demanding spatial concepts can be created with ease.

Makrolon® DX brings colour into play and into the light! Without colour displacement, the LED colour temperature can be harnessed to its full potential. In this case, the high efficiency is retained in light transmission – for impressive, uniform lighting conditions with LED. Hotspots disappear when light transmission is high for high and consistent brightness – even for very slimline designs.

**Cool, Bright, High or Sky –  
an Atmospheric Feeling.**



	DX Cool	DX Bright	DX High	DX Sky	TP <sub>A</sub>
Dimensions (mm)	2050 x 1250	2050 x 1250	2050 x 1250	3050 x 1560	2050 x 1250
Available sheet thickness (mm)	1.5 / 2 / 3	1.5 / 2 / 3	1.5 / 2 / 3	1,5	2
Light transmission T <sub>Des</sub> (%)	65 / 64 / 64	74 / 75 / 76	84 / 84 / 84	90	76
Half-power angle $\gamma$	76° / 78° / 75°	49° / 45° / 40°	21.5° / 23.5° / 20°	21,5°	34°

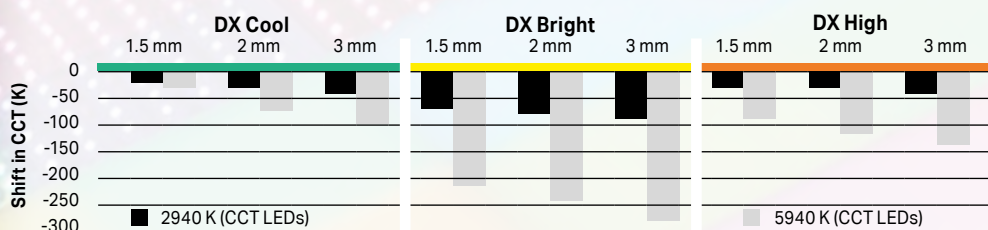
## Makrolon® DX Solutions

The Makrolon® DX product range is available in different variants. The standard versions of DX Cool, DX Bright and DX High have one glossy and one matte surface. This prevents the reflection of light coming in from outside.

### Optionally available product versions are as follows:

- **UV** model is UV-resistant outdoors, with a 10-year warranty on weather resistance.
- **AR** model has a hard coating that increases chemical resistance and protects against scratches and abrasion.
- **FR** model for fireproof solutions: our flame-retardant FR product type, developed for areas such as mass transportation.
- **TP<sub>A</sub>** model for particular building specifications in UK: the highly flame-retardant product type **UK TP<sub>A</sub>** with 2 mm sheet thickness.

Upon request and depending on volume, we will be pleased to meet your requirements with other dimensions and combinations such as glossy surfaces on both sides.



## Colour-true Light Transmission

All products in the Makrolon® DX range are radiant through their high colour fastness. Thanks to the synthesis of our special ultra-transparent polycarbonate raw material with diffusion additives, the light colour created remains constantly radiant even on emission. The ideal lighting solution for adjustable cool/warm white and RGB-coloured LEDs.

Light Comfort and Safety –  
with Makrolon® DX Diffuser Sheets



# The Makrolon® DX Range

## Makrolon® DX Cool – white & translucent

DX Cool is an impressive bright, white, translucent solid sheet with a cool and fresh colour impression – even for switched-off LEDs. DX is one of the first diffuser sheets in the LED coverage field and has already delighted many users. DX Cool is the white diffuser sheet with the highest hiding power and has one matte and one bright surface.

## Makrolon® DX Bright – opal white & widely diffused

DX Bright is an opal white, translucent solid sheet with a matte and bright surface. Added scattering pigments create a balance between light diffusion and penetrability which is 74% for this type. DX Bright boasts the best balance between light transmission and hotspot lamination.

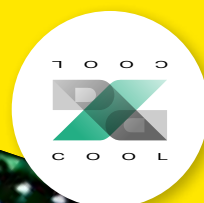
## Makrolon® DX High – opal white & for highlights

DX High is another opal white, translucent solid sheet with a matte and bright surface. Special diffusion material ensures lower light diffusion than in the DX Bright. Yet it also boasts more targeted lighting and increased translucence of 84%. DX High is the most efficient of our white diffuser sheets with respect to light transmission with sufficient coverage.

## Makrolon® DX Sky\* – transparent & bright

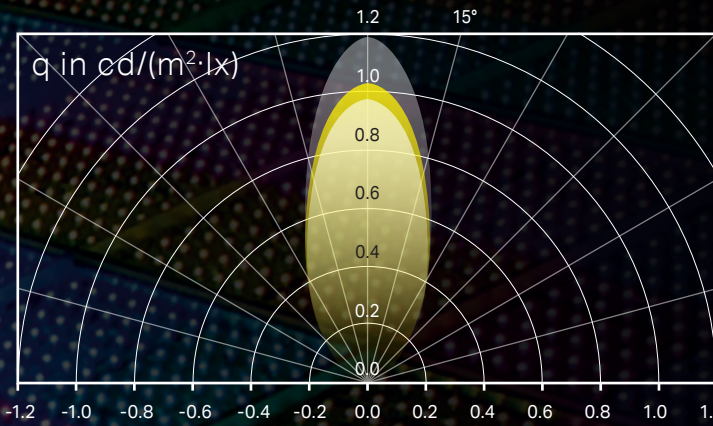
DX Sky is a colourless, translucent solid sheet with a micro-structure applied to one side. It combines maximum brightness with light management by LED-based lights and has a uniform light-emitting surface with excellent anti-glare properties.

\* separate documentation available



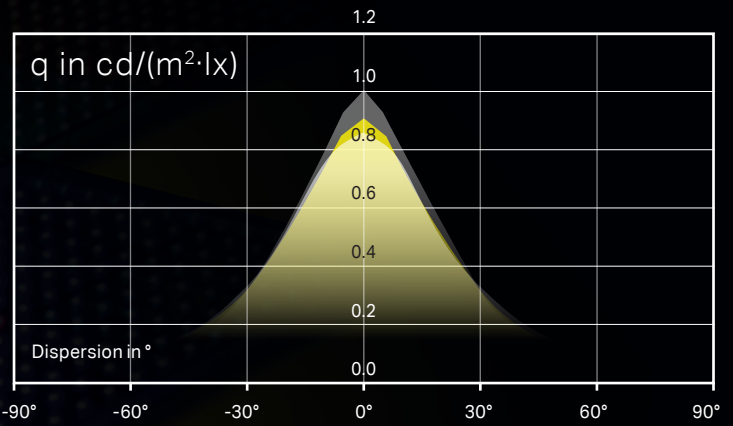
## Polar Diagrams Makrolon® DX High

■ 1.5 mm ■ 2 mm ■ 3 mm

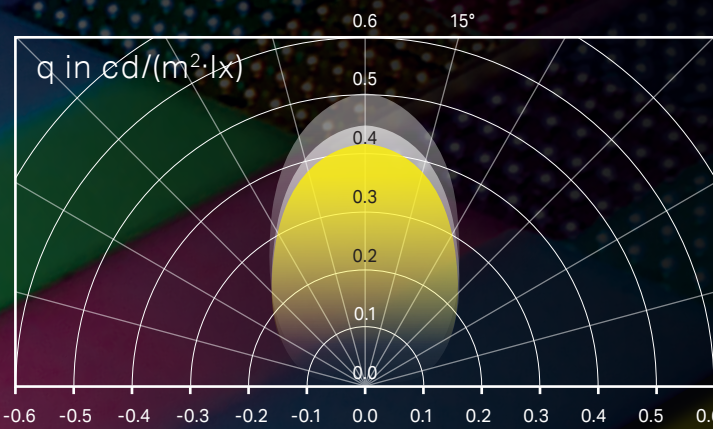


## Distribution of Luminance Makrolon® DX High

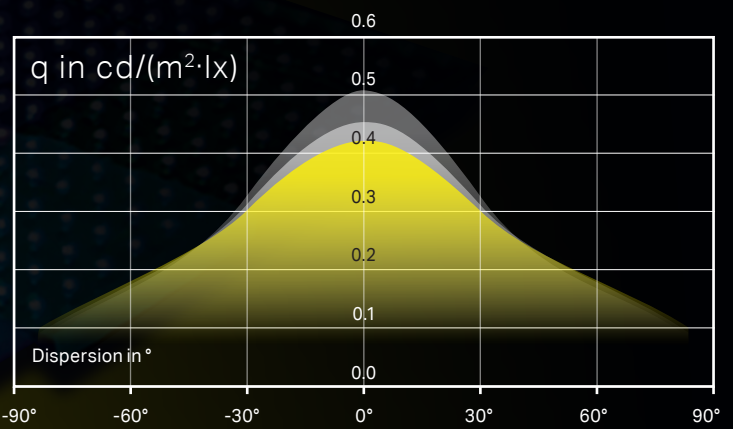
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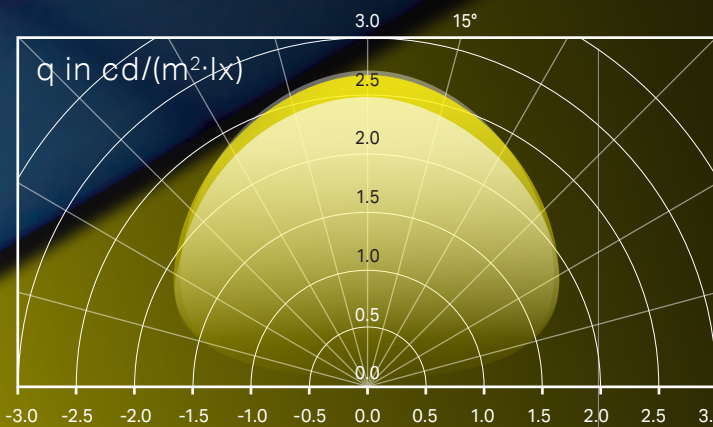
## Makrolon® DX Bright



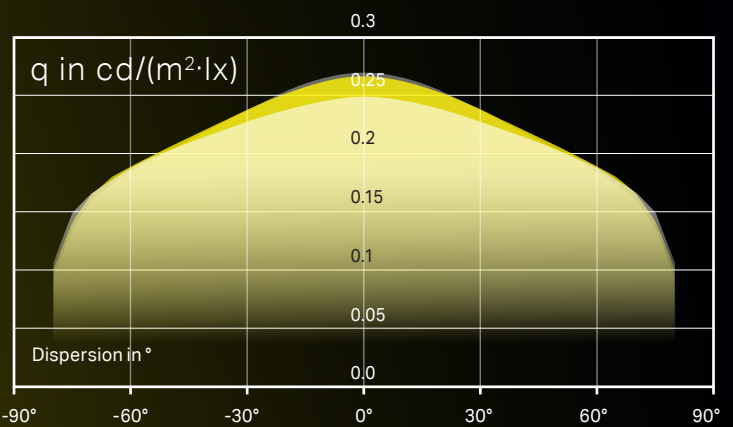
## Makrolon® DX Bright



## Makrolon® DX Cool



## Makrolon® DX Cool



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