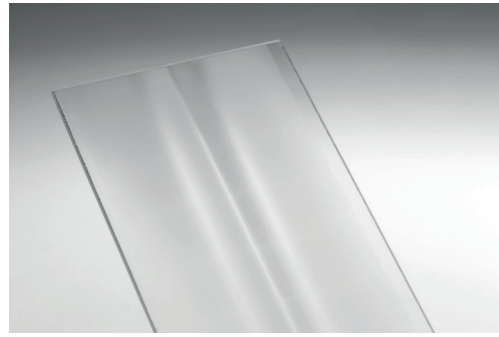


User Guide

Nano-diffuser



Diffuser with opto-mechanical structures is used to change light distribution from a light source to exactly defined distribution which is needed for specific application. Transmission of diffuser with structures is in a range of 95-97 %. Available distribution which are provided by diffusers with opto-mechanical nanostructures are: double asymmetric, medium wide, deep and asymmetric. Optical system must be designed in according to fig.1. LED position **must be** exactly in the middle of diffuser and distance of the top of the LED **has to be** 10 mm from the structured side.

Fig.1
Scheme of optical system.

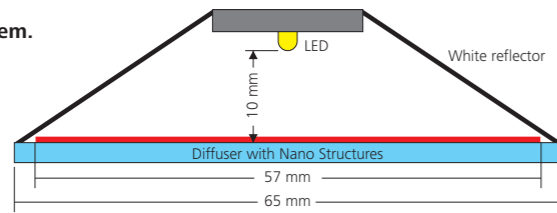


Fig.2
Fixing surfaces.

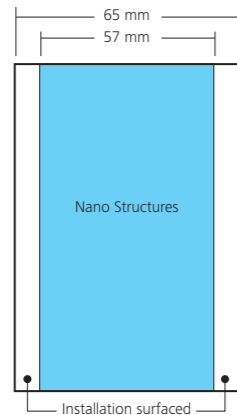
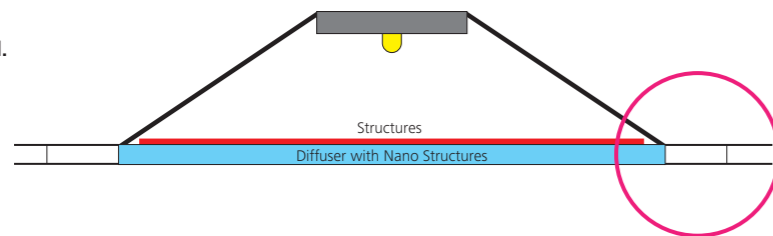


Fig.3
Fixing detail.



It is recommended to use a high reflective white material with good specular part of reflection to achieve highest internal reflection (MCPET, White reflective foil or equivalent).

Nano - structures are applied on a PMMA plastic sheet in a dimension of 65 mm. Diffuser should be placed in an optical system in a position where the structured side is inside of the optical system. This placement will avoid scratches on a structured side (fig.1). For assembling is recommended to use a gloves.

Diffuser has a surfaces which can be used for installation and fixing in a luminaire (fig.2).

Fixing points should not be in a structured area otherwise distribution curve will be not achieved (fig.3).

LIDC with standard placement (distance 10 mm)

Different Distribution Curves

Diffusers with opto - mechanical structures are able to provide different distributions curves due to the principle how the structures were designed according to the different focal point. With double asymmetrical distribution we are able to create additional 2 distributions: Medium Wide and different shape of Double Asymmetric Type II.

How to create Medium Wide distribution curve: distance between Nano diffuser and LED has to be 5 mm.

How to create Double Asymmetric Type II distribution curve: distance between Nano diffuser and LED has to be 15 mm.

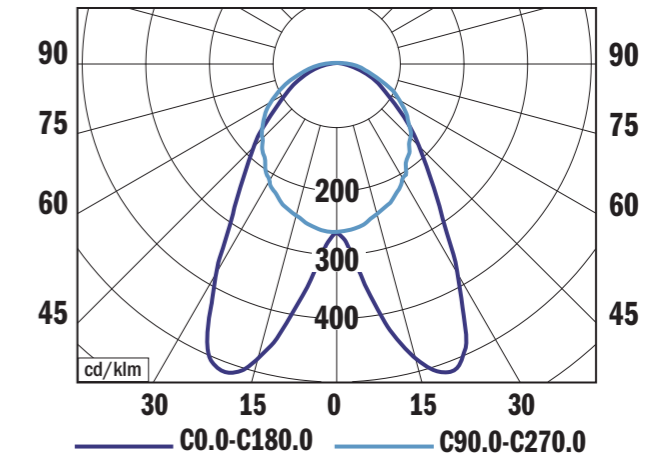


Fig.4
Double Asymmetric

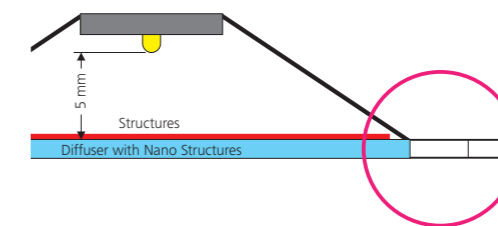


Fig.5
Scheme of optical system for Medium Wide distribution.

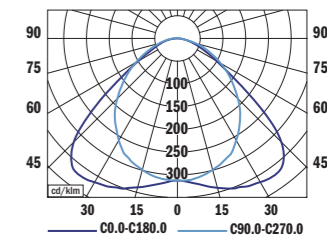


Fig.6
Medium Wide distribution curve.

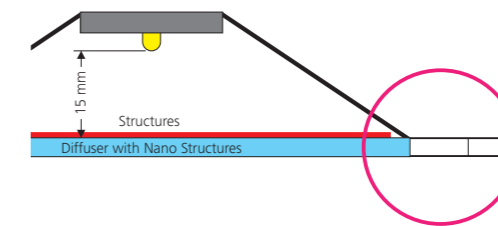


Fig.7
Scheme of optical system for Double Asymmetric Type II distribution curve

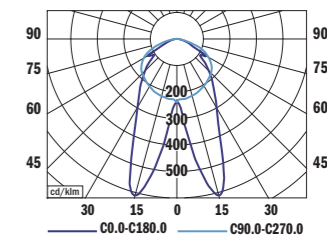


Fig.8
Double asymmetric type II.

iLumTech[™]
i n n o v a t i o n a h e a d

iLumTech industries, s. r. o.
Čáčovská cesta 2709/4
Senica 905 01
Slovakia

Email: info@ilumtech.eu
www.ilumtech.eu