

Product Information

PLEXIGLAS® LED 0V200

Product Profile:

PLEXIGLAS® LED white 0V200 is characterized by diffuse scattering of light, based on PLEXIGLAS® 7N, PLEXIGLAS® 7H, PLEXIGLAS® 8N or PLEXIGLAS® Resist zk6BR.

In addition to the known attributes of PLEXIGLAS® base molding compound

- very good weather durability
- high hardness of the surface and scratch resistance

has PLEXIGLAS® LED white 0V200 the specific nature of a very even light distribution and high transmission values when backlit with intense LED – this is demonstrated at low distance between cover and LED light source as well as with optimized material thickness of the component.

Application:

The coloring of PLEXIGLAS® LED white 0V200 in the respective base molding compound is appropriate for injection molding, extrusion und injection blow molding for manufacturing molded parts for lighting applications with LED back lighting.

Examples:

Light covers, LED-lighting rails, bulbs, facade lighting and lighting switches

Processing:

In regards to manufacturing the remarks in the product information of base molding compounds should be considered.

Physical Form / Packaging:

PLEXIGLAS® LED white 0V200 can be supplied in any base molding compound, when obtaining a certain minimum amount, as pellets of uniform size in a two layered 25 kg Polyethylen bag, further packaging upon request.

Order example:

PLEXIGLAS® LED zk6BR white 0V200

Goniometer:

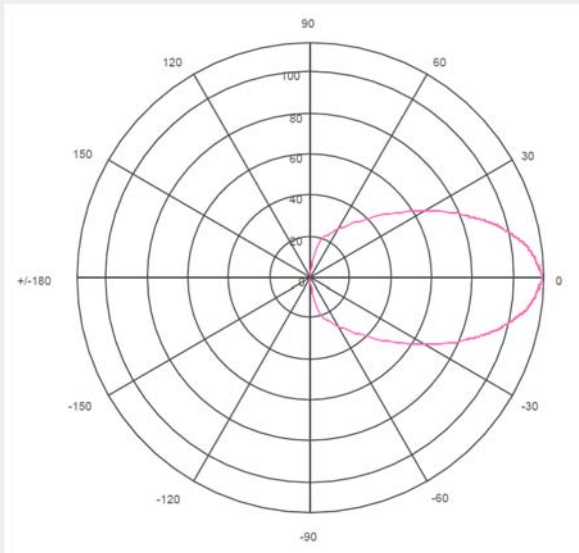
Half-value angle and scattering power to the goniometer for PLEXIGLAS® LED white 0V200 in thicknesses:

Properties

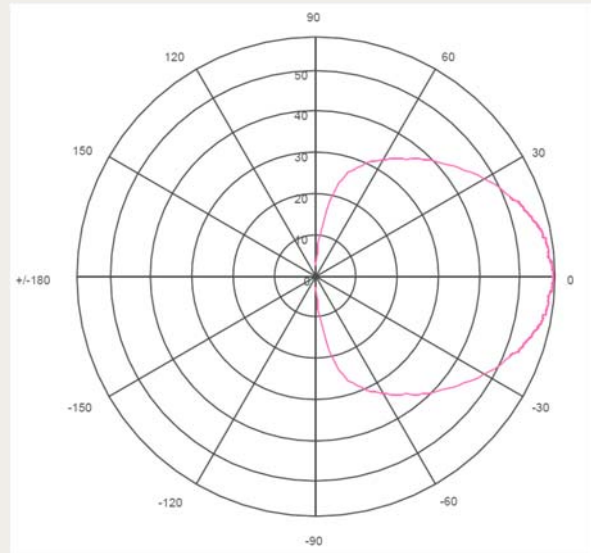
	Parameter	Unit	Standard	Material thickness			
				1 mm	2 mm	3 mm	4 mm
Light transmission	Varian Cary 5000, D 65	%	ISO 13468-2	73	55	45	38
Half-Value Angle		°	DIN 5036	37	68	73	74
Scattering power			DIN 5036	0.46	0.66	0.76	0.81
Max. luminance		cd/m ²		114	58	44	36

Goniometer polar diagrams:

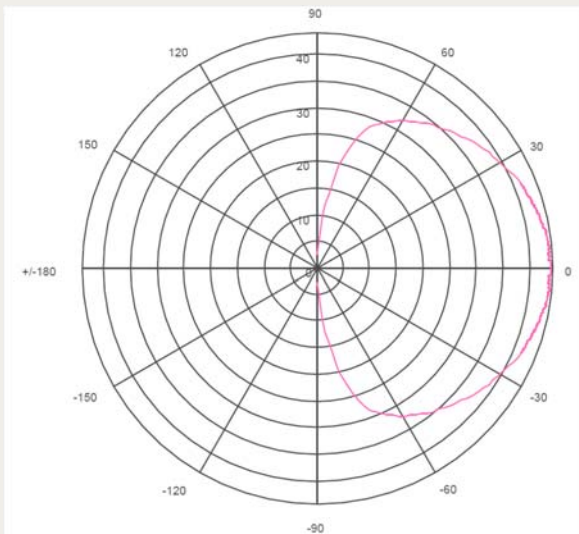
Luminance [cd/m^2] as a function of the measured angle [$^\circ$] of PLEXIGLAS® LED white 0V200.



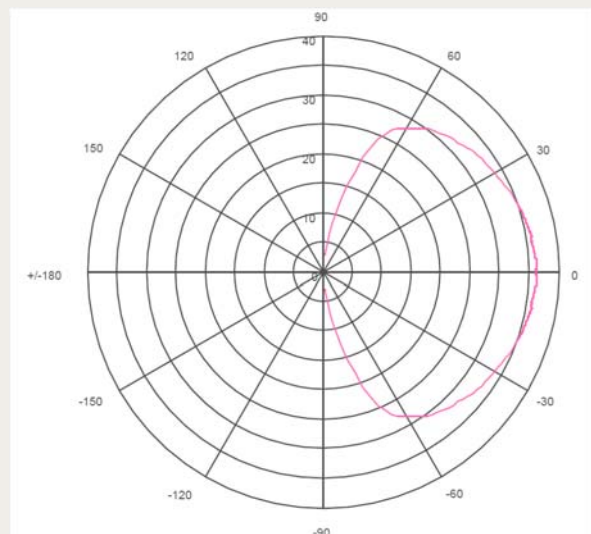
Material thickness 1 mm



Material thickness 2 mm



Material thickness 3 mm



Material thickness 4 mm

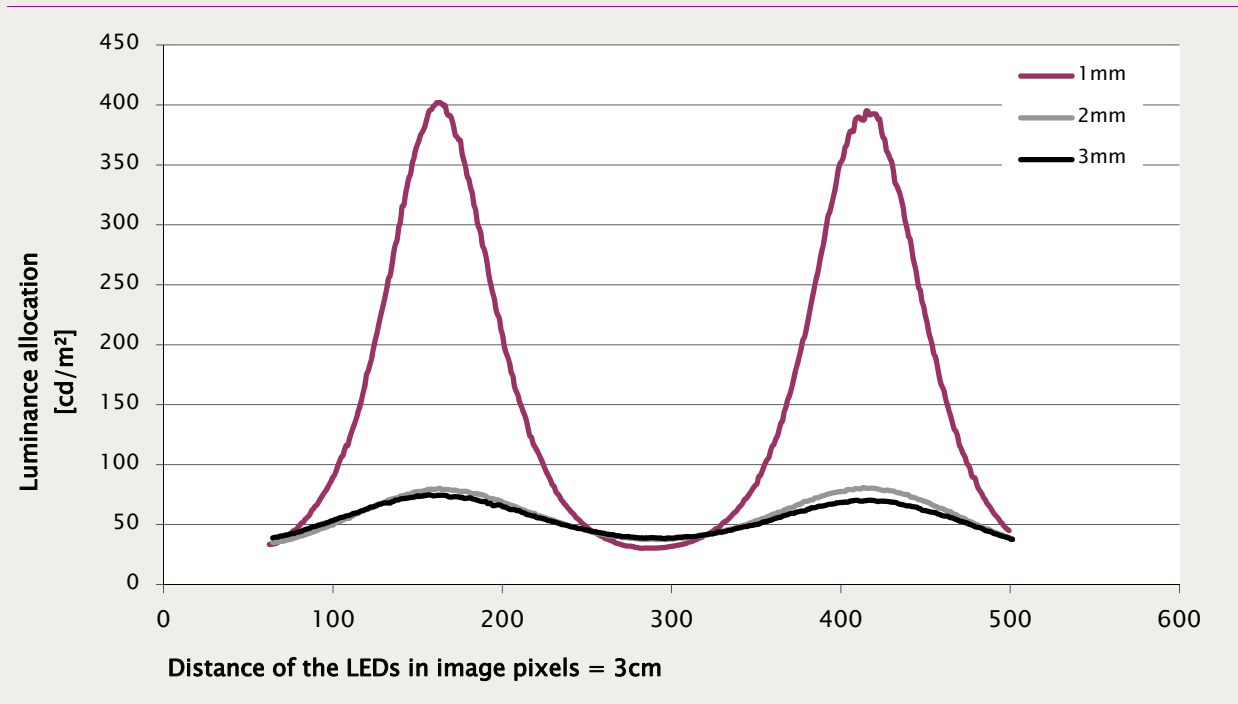
Light distribution with LED backlighting

Distance of the molding of PLEXIGLAS® LED white 0V200 to the LED rear lighting is **5 mm**.

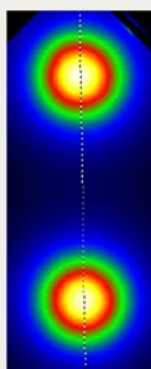
LED: OSRAM Diamond DRAGON LUW W5AP

Test setup: Evonik Industries AG

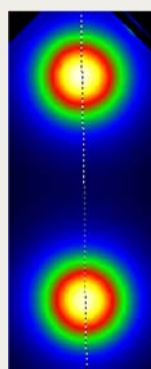
Luminance distribution measured in 1, 2 und 3 mm material thickness.



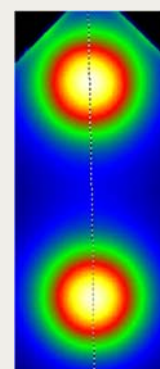
Luminance distribution in false color:



1 mm



2 mm

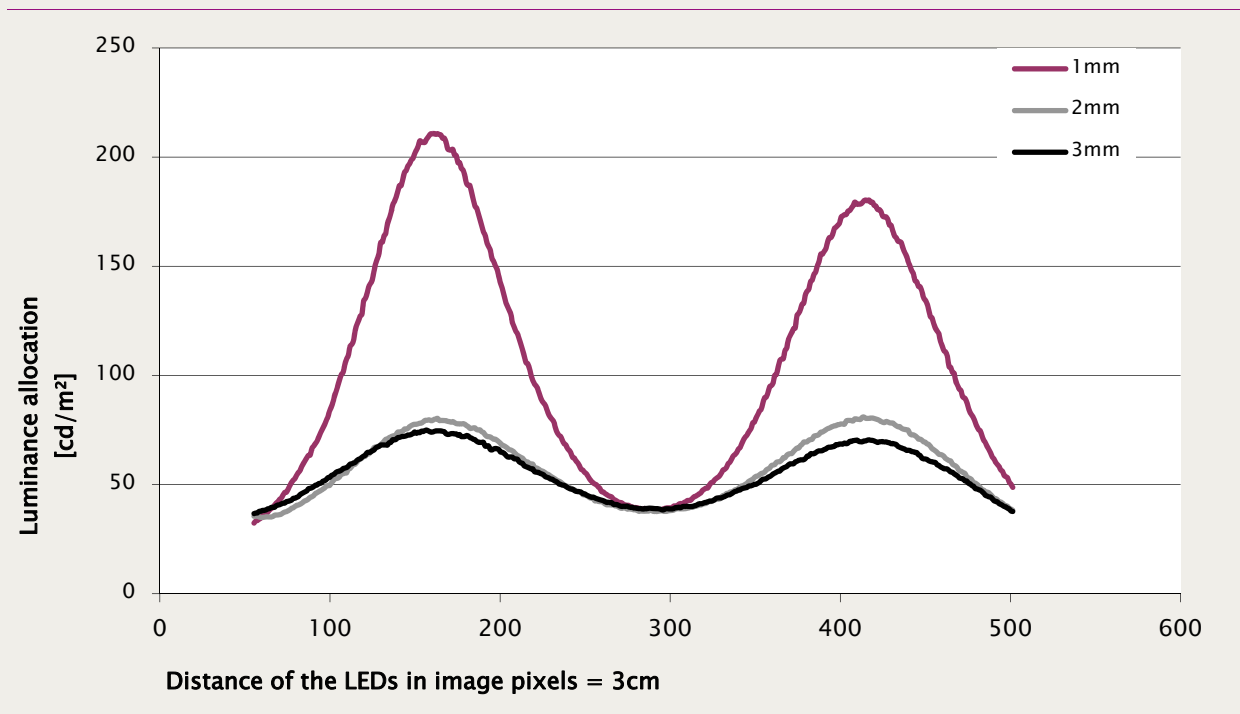


3 mm

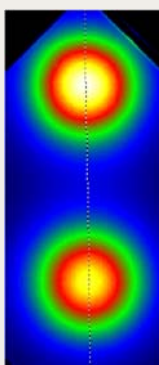
Light distribution with LED backlighting

Distance of the molding of PLEXIGLAS® LED white OV200 to the LED rear lighting is **10 mm**.

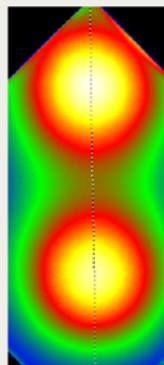
Luminance distribution measured in 1, 2 und 3 mm material thickness.



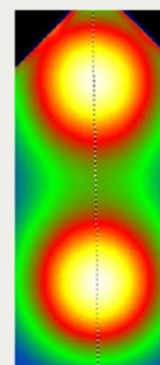
Luminance distribution in false color:



1 mm



2 mm



3 mm

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Evonik Performance Materials GmbH

Kirschenallee
64293 Darmstadt

plexiglas.polymers@evonik.com
www.plexiglas-polymers.de