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MODEL NO: PLJT20

SUBJECT: LED 1-3-5W – Lens-diffuser Coupling - Output Luminous Intensity Measurement

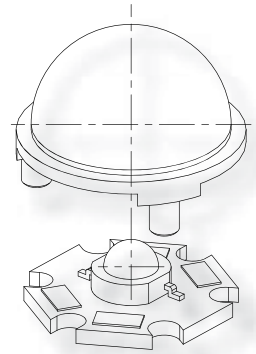


PLJT20

- High diffusion
- No vibration problems
- Standard for Star LED
- Color: White Milk

Typical applications are

- Architectural lighting
- Step-marker
- Signalling
- All the applications where power diffused lighting signalling is requested.



DESCRIPTION:

Verification of Luminous Intensity in coupling conditions between Khatod lenses and 1W White LEDs.

REPORT:

PLJT20 is a special lens whose visual capacity achieves 170° on horizontal plane by creating a side view effect. PLJT20 diffuses the Power LED light as a real diffuser and not as a simple dot of light. The lens gives the light a full side view effect with a great light uniformity.

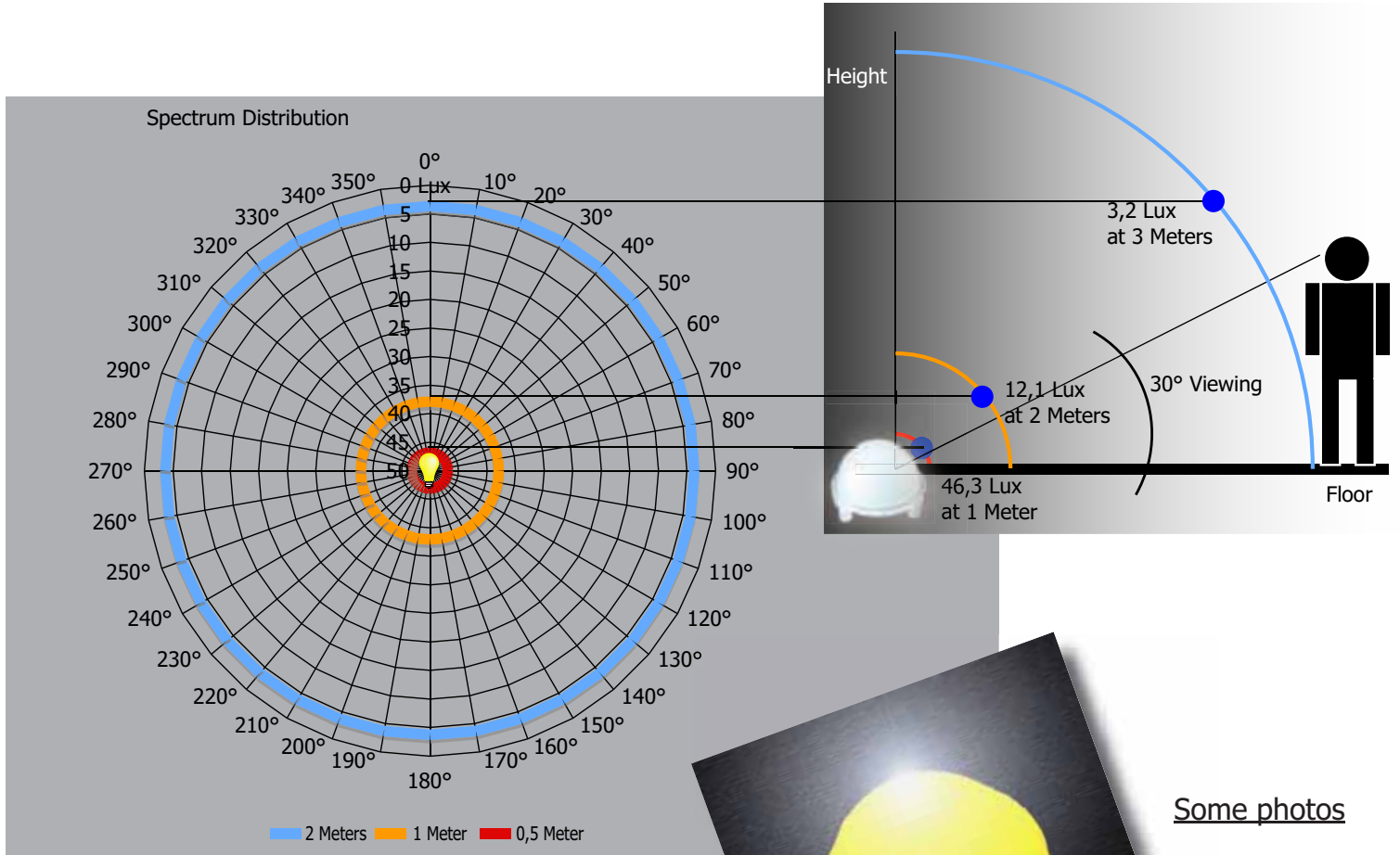
The following measurements have been taken by using a standard white power LED at 0,5 m - 1 m - 2 m distance.

MEASURED DATA:

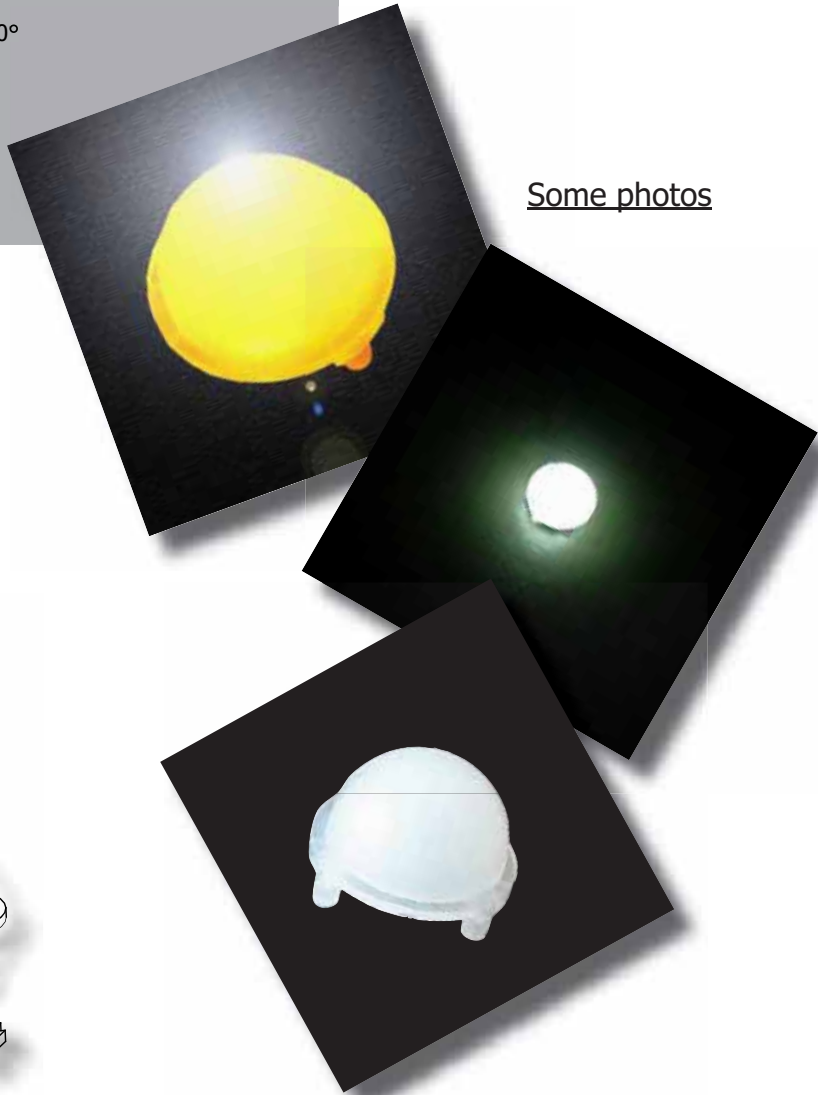
Column 1 shows p/n of the Lenses, column 2 shows Luminous Intensity detected measuring LEDs without lens, column 3 shows Luminous Intensity detected on LEDs coupled with lens, column 4 shows the difference (X*) between col. 2 and col. 3

Lens Diffuser PLJT20	Lux from 0,5 Mt (ftc from 0,5 Mt)	Lux from 1 Mt (ftc from 1 Mt)	Lux from 2 Mt (ftc from 2 Mt)
Lux (ftc)	46,3 (4,30 ftc)	12,1 (1.12 ftc)	3,2 (0,29 ftc)
Test carried out after 5 min. of operation of the LED to 350 mA ~ , local power source GOSSEN KONSTANTER mod 3226-K118 Measurements carried out with Luxometer mod LUX-1337 of ISO-TEC and MINOLTA mod LS – 150 * X is the value of the measurement of the LED brightness at 1 meter distance, without optic devices applied to the LED.			

The diagram shows the performance of Khatod lenses

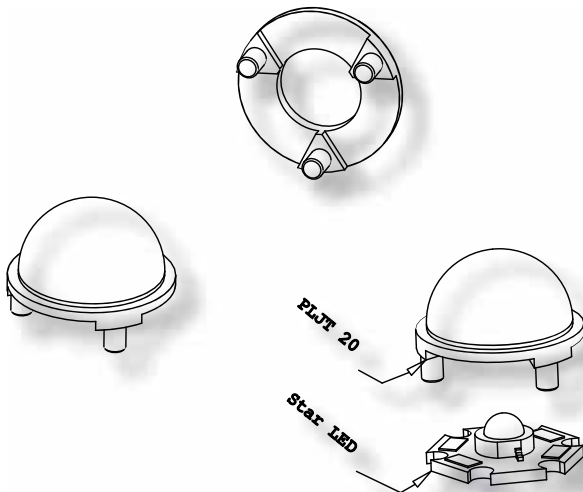


Some photos

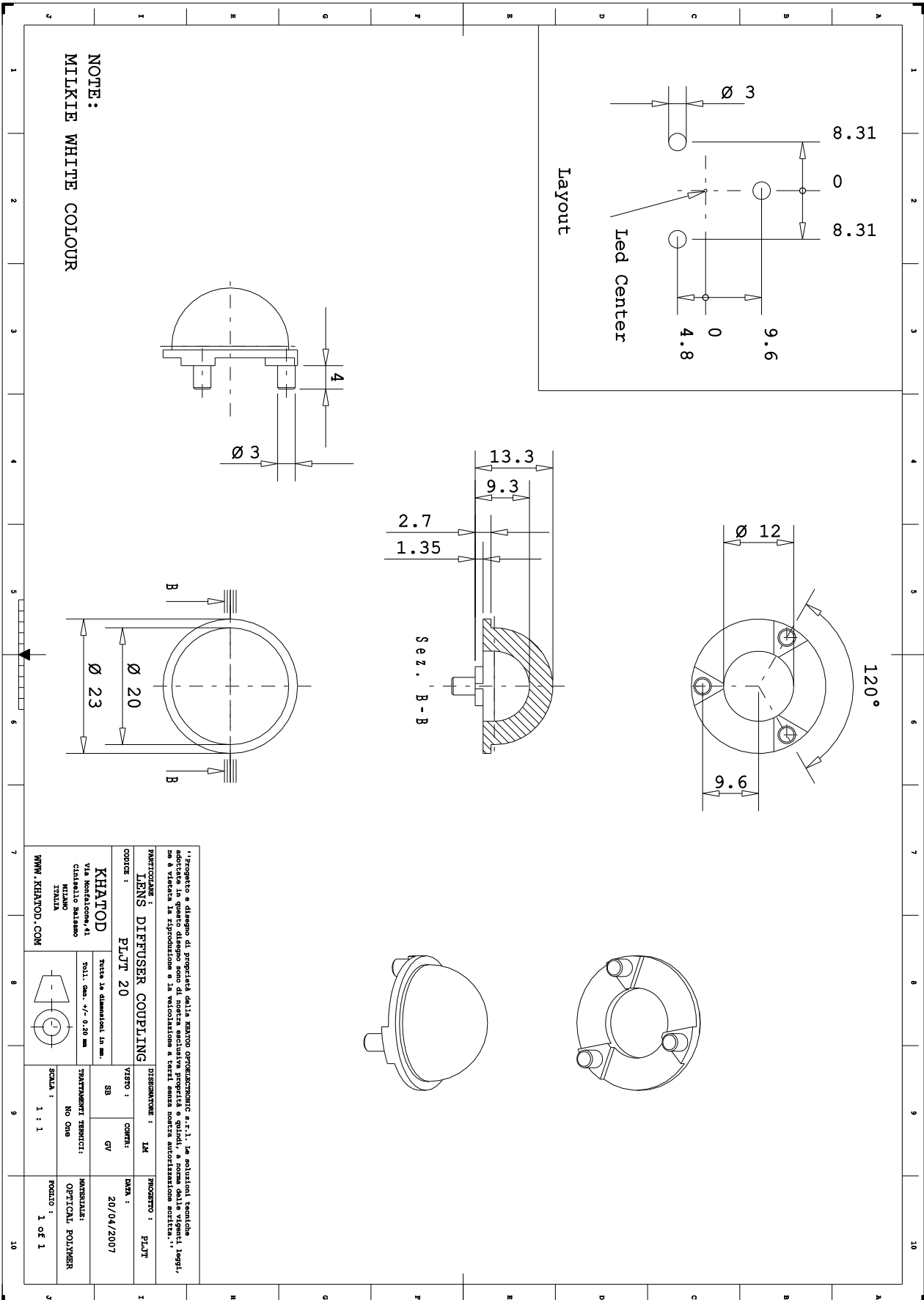


Test conditions:

- Test current: 350 mA / LED
- Room Luminous Intensity : 0 Lumen
- Room Temperature: 23° C
- LED temperature after 10 min. : ~ 42 °C



Drawing.



Lens characteristics

Parameter	Symbol	Rating	Unit
Lens Material	PC	--	--
Holder Material	--	--	--
Operating Temperature	Topr	-40 to +120	°C
Storage Temperature	Tstg	-40 to +120	°C
Average transmittance in visible spectrum (400 – 700nm) >90% as measured by using 3mm thick Optical Grade PC			

LED characteristics

• *Value is valid for any 1-3-5W lambertian LED.*

Notes:

Please note that flow lines and weld lines on the external surfaces of the lenses are acceptable if the optical performance of the lens is within the specification described in the section "OPTICAL CHARACTERISTICS"

- Should you require further information, please contact Khatod for advice.
- All lens testing must be subject to identical conditions as Khatod test condition.
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KHATOD LENS Use And Maintenance

- DO NOT HANDLE OR INSTALL LENSES WITHOUT WEARING GLOVES, SKIN OILS MAY DAMAGE LENS OR LIGHT TRANSMISSION
- CLEAN LENSES WITH MILD SOAP AND WATER AND A SOFT CLOTH
- DO NOT USE ANY COMMERCIAL CLEANING SOLVENTS ON THE LENSES

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