



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Via Monfalcone 41  
20092 Cinisello Balsamo (Milano) – Italy  
Tel. +39 0266013695 – Fax +39 0266013500

USA Division  
**Khatod Optoelectronic USA**  
1033 Lenape Road - West Chester, PA 19382  
Phone: +1 484 947 9006 – Fax: +1 610 696 8035

## MODEL NO: PLJT50 - PLJT51

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

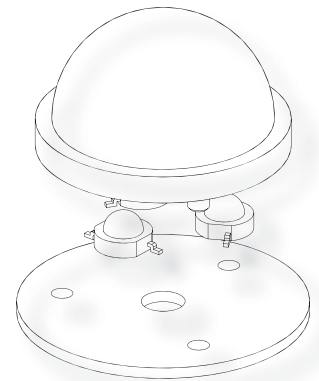


### PLJT50 - PLJT51

- High diffusion
- No vibration problems
- 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:

PLJT50 - PLJT51 is a special lens whose visual capacity achieves 170° on horizontal plane by creating a side view effect. PLJT50 - PLJT51 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 LEDs at 0,5 m - 1 m - 2 m distance.

### MEASURED DATA:

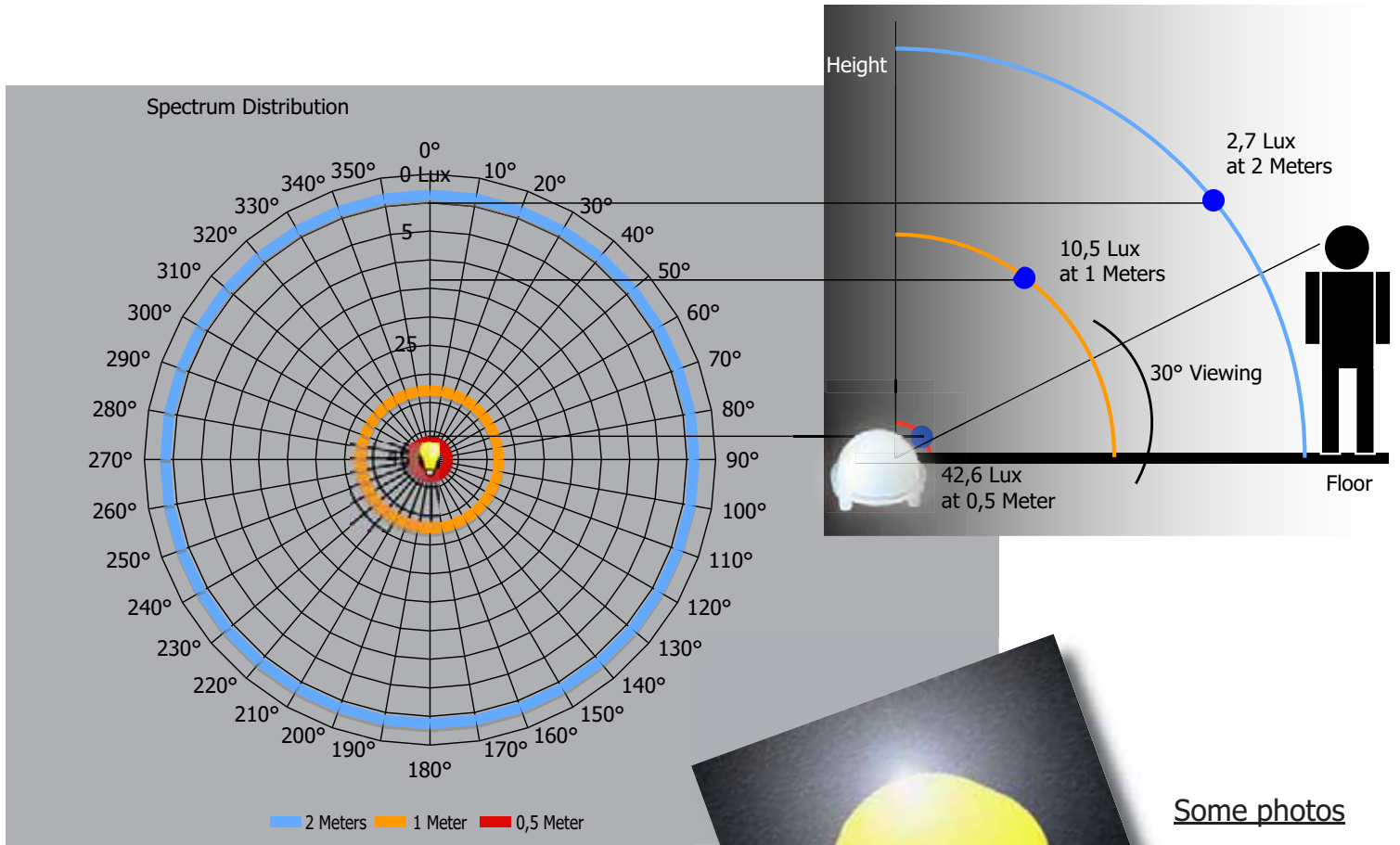
Column 1 shows p/n of the Lenses, column 2 shows Luminous Intensity detected measuring LEDs without lens, column 3 shows Luminous Intensity detected on LEDs coupled with lens, column 4 shows the difference (X\*) between col. 2 and col. 3

| Lens Diffuser PLJT50 - PLJT51 | Lux from 0,5 Mt<br>(ftc from 0,5 Mt) | Lux from 1 Mt<br>(ftc from 1 Mt) | Lux from 2 Mt<br>(ftc from 2 Mt) |
|-------------------------------|--------------------------------------|----------------------------------|----------------------------------|
| Lux (ftc)                     | 42,6 (3,93 ftc)                      | 10,5 (0,97 ftc)                  | 2,7 (0,25 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

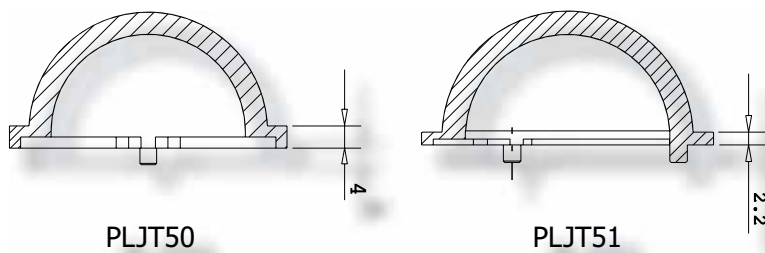


Some photos

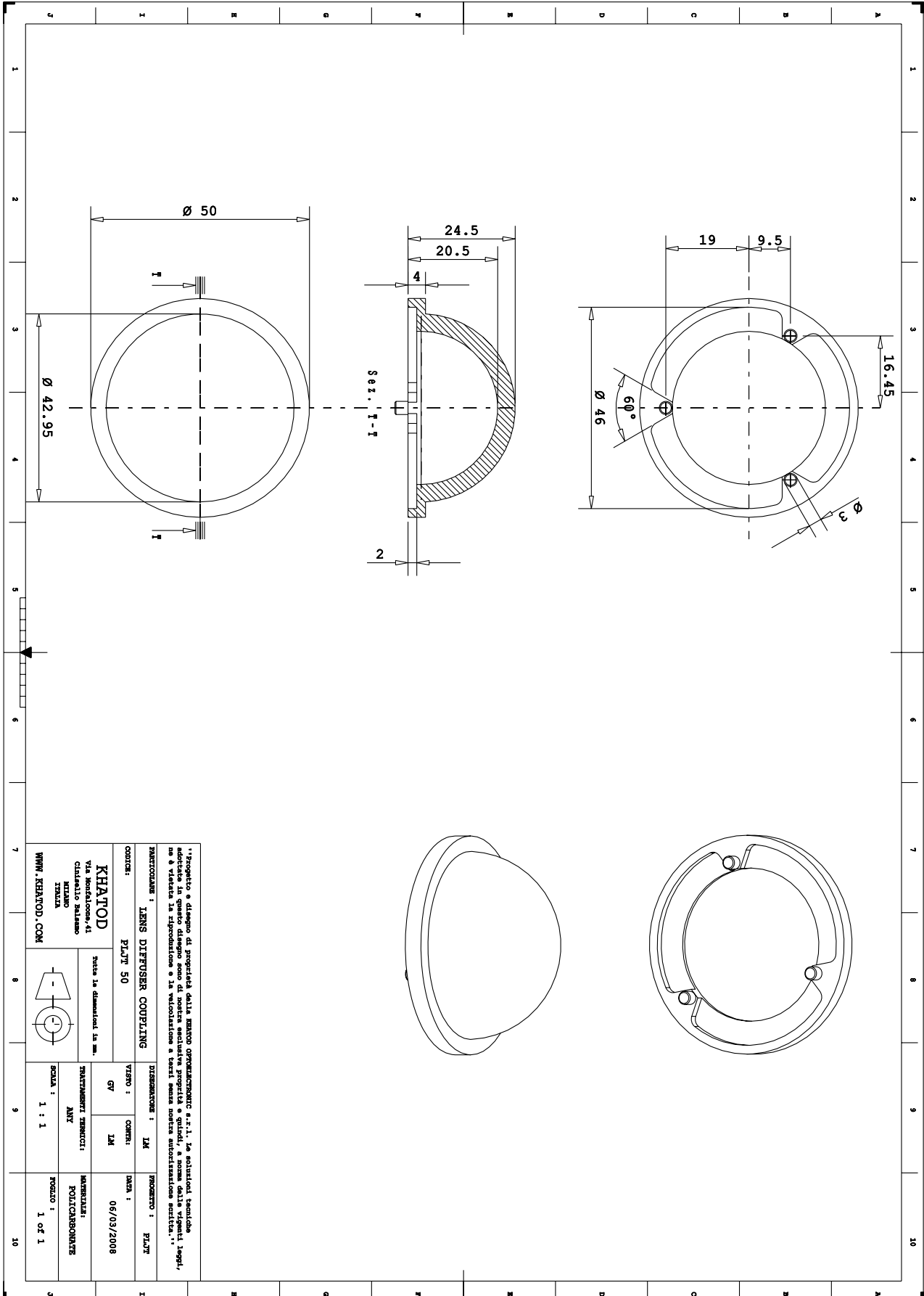
**Test conditions:**

Test current: 350 mA / LED  
 Room Luminous Intensity :0 Lumen  
 Room Temperature: 33° C  
 LED temperature after 10 min. : ~ 49 °C

**Differences between PLJT50 -PLJT51:**



Drawing.



''Proprietà e disegno di proprietà della KHATOD OPTOELECTRONIC s.r.l. In qualsiasi occasione aderisce in questo disegno sono di nostra esclusiva proprietà e quindi, a meno delle vigenti leggi, ne è vietata la riproduzione e la valorizzazione a terzi senza nostra autorizzazione scritta.''

|                            |  |                                       |  |   |  |
|----------------------------|--|---------------------------------------|--|---|--|
| <b>PRODOTTORE :</b> KHATOD |  | <b>DISTRIBUZIONE :</b> IM             |  | <b>PRODOTTO :</b> PLJT                  |  |
| <b>MODELLO :</b> PLJT 50   |  | <b>COMPLESSO :</b> IM                 |  | <b>DATA :</b> 06/03/2008                |  |
| <b>SCALE :</b> 1 : 1       |  | <b>TRATTAMENTI SUPERFICIALI :</b> ANX |  | <b>INSTRUMENTAZIONE :</b> POLYCONROUNTE |  |
| <b>PRODOTTO :</b> 1 of 1   |  |                                       |  |   |  |

**CONDIZIONI :** PULTE 50

**TRATTAMENTI SUPERFICIALI :** ANX

**PRODOTTO :** 1 of 1

**INSTRUMENTAZIONE :** POLYCONROUNTE

**PRODOTTO :** 1 of 1

**CONDIZIONI :** PULTE 50

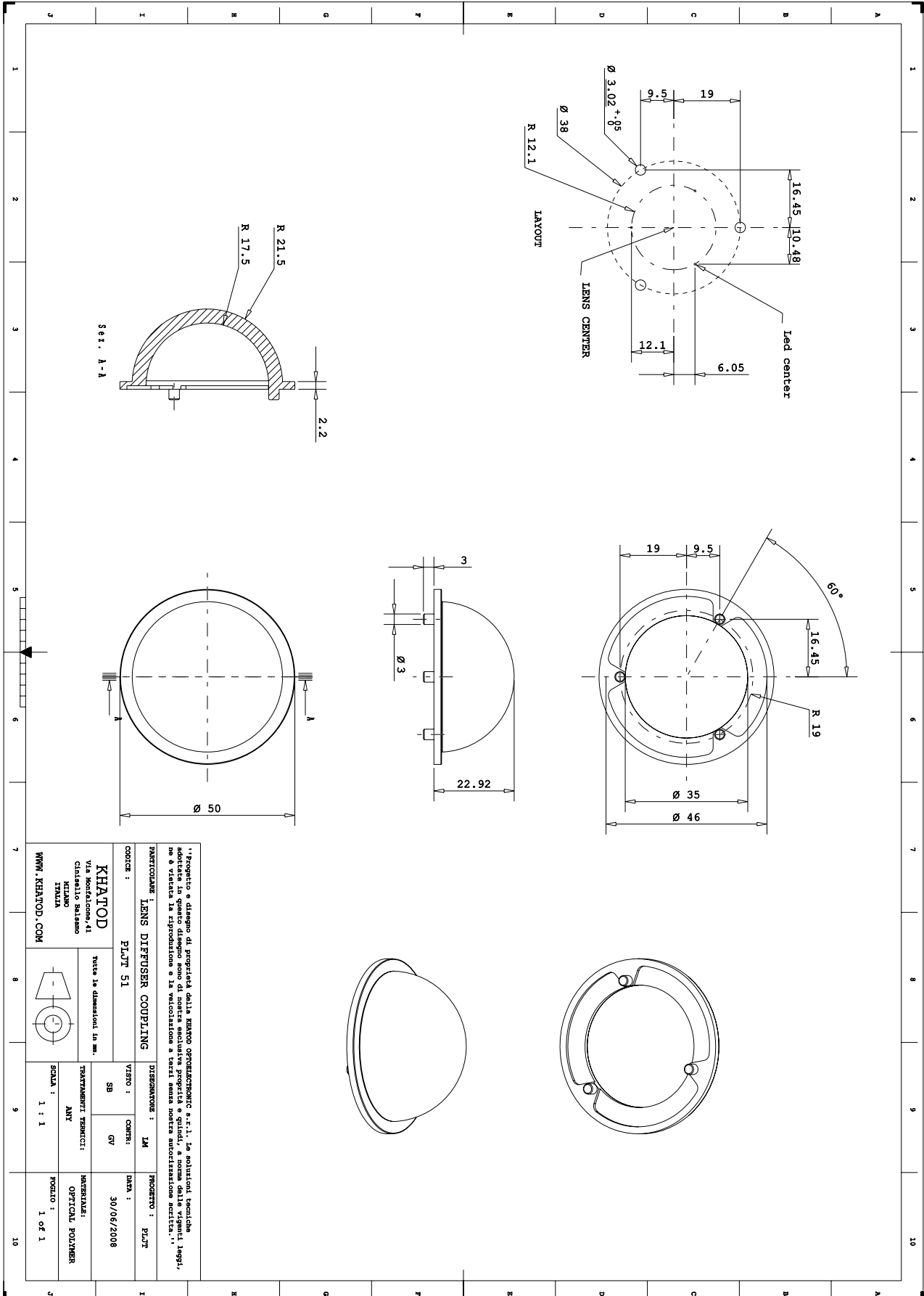
**TRATTAMENTI SUPERFICIALI :** ANX

**PRODOTTO :** 1 of 1

**INSTRUMENTAZIONE :** POLYCONROUNTE

**PRODOTTO :** 1 of 1

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.
- Published by Khatod optoelectronic srl - All the data contained in this document are the property of Khatod optoelectronic srl and may change without notice.

## 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



Khatod SRL, Milan, Italy, manufactures lenses for LEDs. Any other use of the lens shall void our liability and warranty. The lenses are an inert component to be used in the manufacture of various products. Our warranty and liability are limited only to the manufacture of the lens. You may not modify, copy, distribute reproduce, license or alter the lens and related materials of Khatod SRL. Khatod SRL does not warrant against damages or defects arising out of the use or misuse of the products; against defects or damage arising from improper installation, or against defects in the product or in its components. No warranty of any kind, expressed or implied, is made regarding the safety of the products. The entire risk as to the quality or performance of the product is with the buyer. In no event shall Khatod SRL or Khatod USA be liable for any direct, indirect, punitive, incidental, special, consequential damages, or any damages whatsoever arising out of or connected with the use or misuse of the product. Khatod SRL shall not have any obligation with respect to the product or any part thereof, whether based on contract, tort, strict liability or otherwise. Buyer assumes all risks and liability from use of the product. The laws of Milan, Italy govern this product warranty and liability and you hereby consent to the exclusive jurisdiction and venue of courts in Milan, Italy in all disputes arising out of or relating to the use of this product.