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## MODEL NO: PL1230XX Series

SUBJECT: **AVAGO TECHNOLOGIES™ LEDs 1W – Lens Coupling - Output Luminous Intensity Measurement**

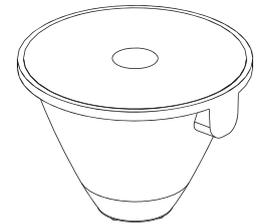


### PL1230xx Series

- NJC Technology
- High efficiency
- No vibration problems
- Free testing

### Typical applications are

- Architectural lighting
- Lamps
- Street lights
- Most applications where a compact light source is required



### DESCRIPTION:

Verification of Luminous Intensity with coupling conditions between Khatod Optoelectronic srl lenses and AVAGO™ LEDs 1W White cod. ASMT-AW00-NRS00 Cat. S2 Bin W0.

### REPORT:

From 1 m ± 0,02 distance, we have measured Luminous Intensity emitted by LED. Such measurements have been repeated with the same test conditions but coupling LEDs to the lens Khatod cod. PL123006, PL123025 and PL123040.

### MEASURED DATA:

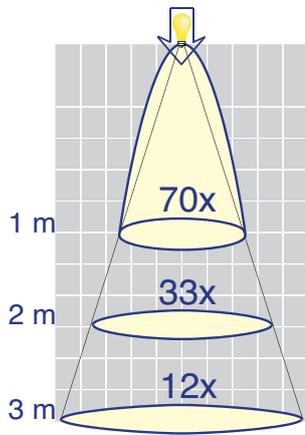
Column 1 shows p/n of the Lenses, column 2 shows Luminous Intensity detected measuring LEDs without lens, column 3 shows Luminous Intensity detected on LEDs coupled with lens, column 4 shows the difference (X\*) between col. 2 and col. 3

Lens Type	LED Lux from 1 Mt (ftc From 1 Mt)	LED + lens Lux from 1Mt (ftc From 1 Mt)	X*
PL123006 (10°)	17,6 (1,62 ftc)	1238 (114,26 ftc)	70
PL123025 (25°)	17,6 (1,62 ftc)	202 (18,64 ftc)	11
PL123040 (40°)	17,6 (1,62 ftc)	168 (15,50 ftc)	9

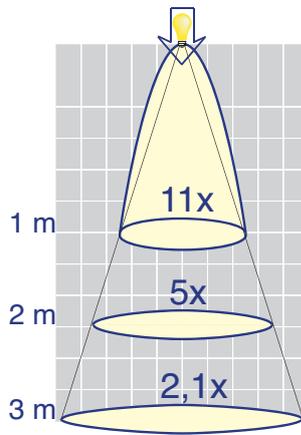
Test carried out after 5 min. of operation of the LED to 350 mA ~ , local power source **GOSSON KONSTANTER** mod 3226-K118  
Measurements carried out with Luxometer mod LUX-1337 of **ISO-TEC** and **MINOLTA** mod LS – 150

\* X is the value of the measurement of the brightness of the LED at 1 meter distance, without optic devices in front of the LED.

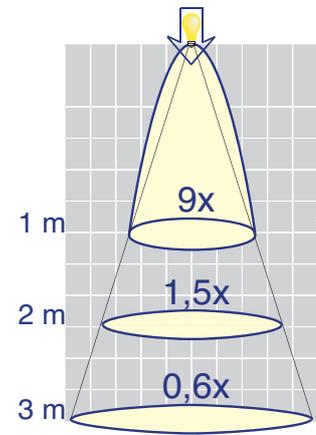
## Illuminance chart white LED



PL123006 (10°)



PL123025LSD (25°)



PL123040 (40°)

\* X is the value of the measurement of the brightness of the LED at 1 meter distance, without optic devices in front of the LED.

### Test conditions:

Test current: 350 mA / LED

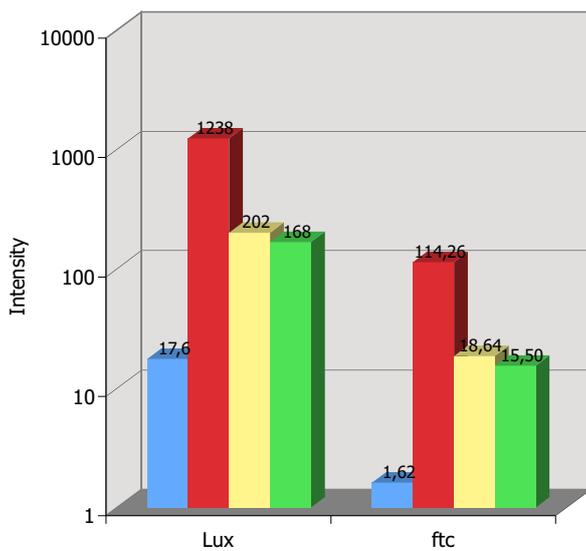
Room Luminous Intensity : 0 Lumen

Room Temperature: 22° C

LED temperature after 10 min. : ~ 42 °C

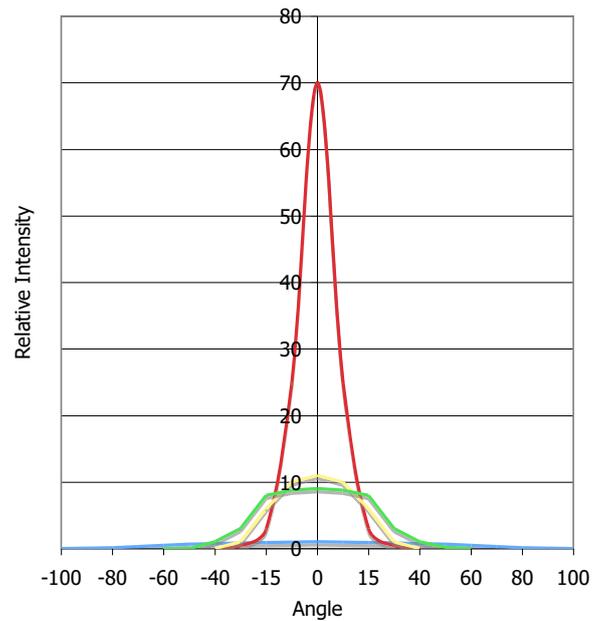
The diagram demonstrates the performance of the Khatod optoelectronic lenses

Intensity to 1 Meter



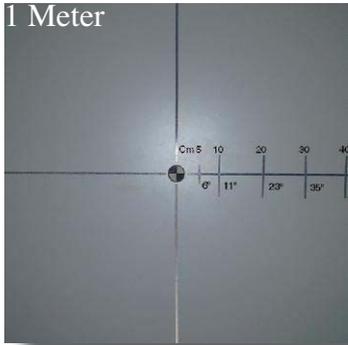
■ ONLY LED ■ PL123006 ■ PL123025 ■ PL123040

Spectrum Distribution

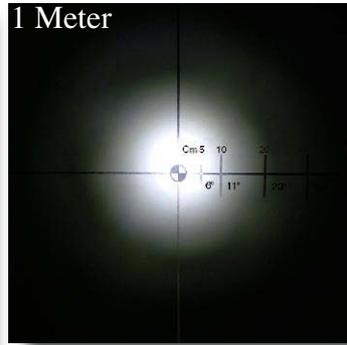


— ONLY LED — PL123006 — PL123025 — PL123040

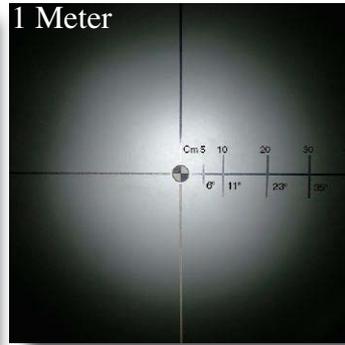
Photos:



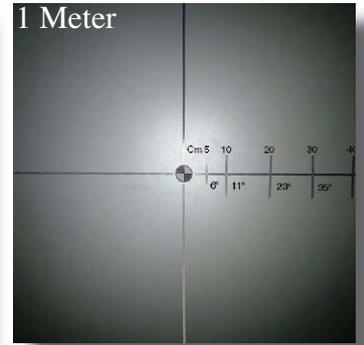
LED



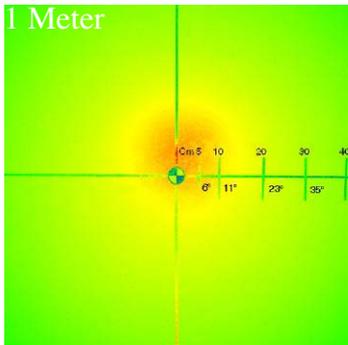
PL123006 (10°)



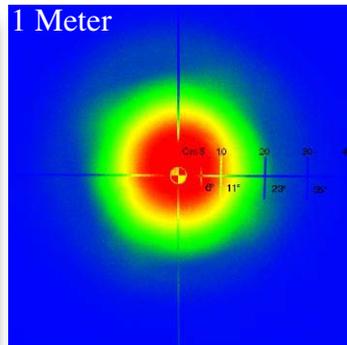
PL123025 (25°)



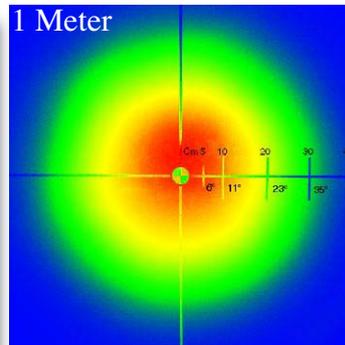
PL123040 (40°)



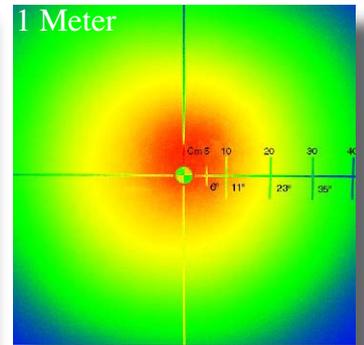
LED  
Spectro Metric Analysis



PL123006 (10°)  
Spectro Metric Analysis

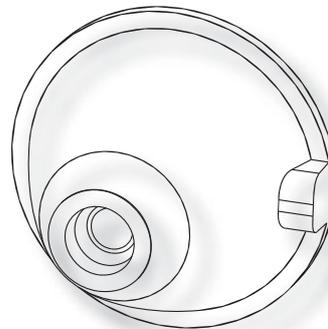
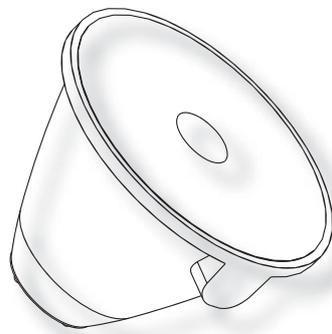


PL123025 (25°)  
Spectro Metric Analysis

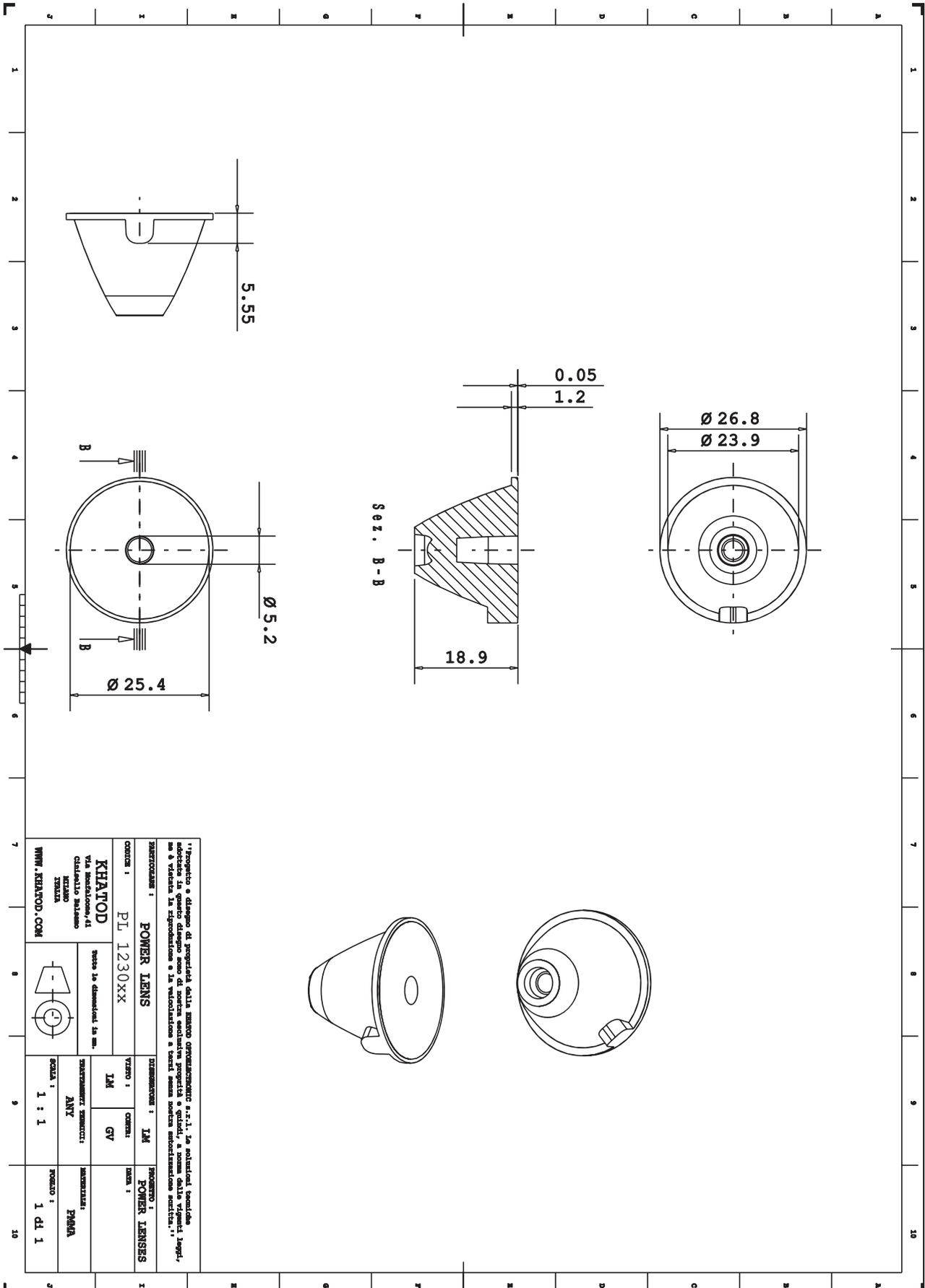


PL123040 (40°)  
Spectro Metric Analysis

Measurements carried out with Luxometer mod LUX-1337. Room Luminous Intensity: 0 Lumen. Foto Machine mod. Fujifilm S7000



Drawing.



## Lens characteristics

Parameter	Symbol	Rating	Unit
Lens Materiel	PMMA Optics	--	--
Holder materiel	--	--	--
Operating Temperature	Topr	-40 to +85	°C
Storage Temperature	Tstg	-40 to +85	°C
Average transmittance in visible spectrum (400 – 700nm) >90% as measured using 3mm thick Optical Grade PMMA			

## LED characteristics

For technical specification on LEDs please refer to the AVAGO TECHNOLOGIES™ LEDs datasheet or visit [www.avagotech.com](http://www.avagotech.com)

## 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.

## **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 LENSES

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