KHATOD®
Optical Solutions for LED Lighting

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# Test Report

Number: 170000002919

Optics: PL1672NA

Source: NICHIA NCSW219BT-V1(Rnn)

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# 1 Light Source Model

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Lens / Reflector Model | - | PL1672NA | - |
| Material (More info on page 8) | - | PMMA | - |
| Dimensions | - | See page 7 | - |
| Source Model | - | NICHIA NCSW219BT-V1(Rnn) | - |
| Number of Sources | $N$ | 1 | - |
| Power Supply Type | - | ISO TECH ISP3303 | - |
| Driver Type | - | - | - |
| Driving Voltage | $V_F$ | - | V |
| Driving Current | $I_F$ | - | mA |
| Nominal Flux | $\Phi$ | 153×1 | lm |

# 2 Measurement Setup

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Operator | - | Simone Bassi | - |
| Goniophotometer Type | - | KLX12M | - |
| Measurement Distance | $z$ | 5 | m |
| Room Temperature | $T$ | 25 | °C |
| Date | - | 2017-Nov-07 | - |

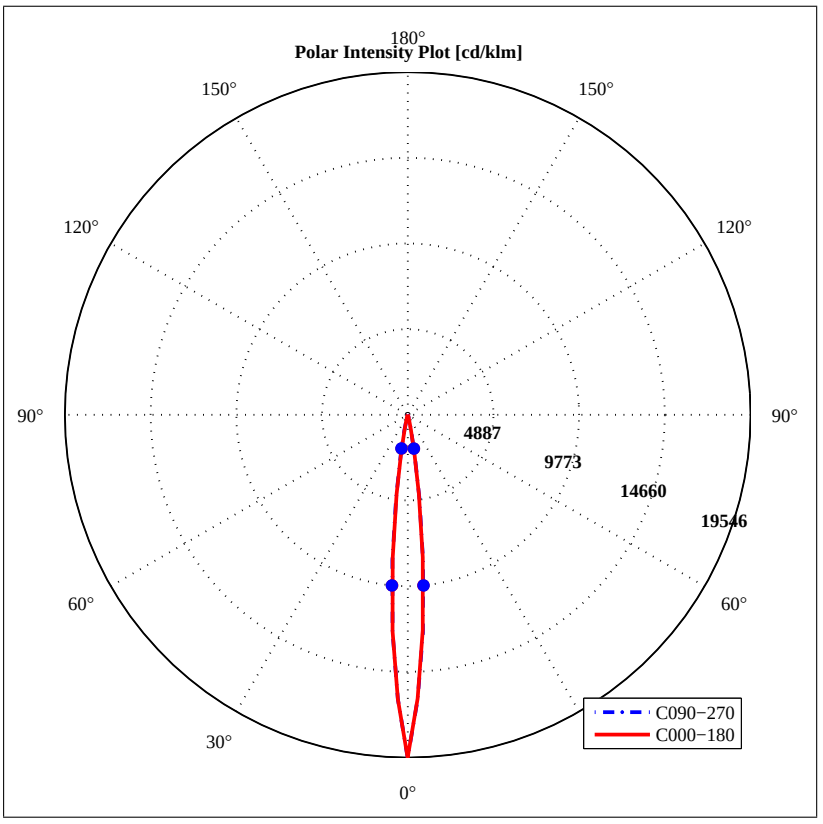
# 3 Results

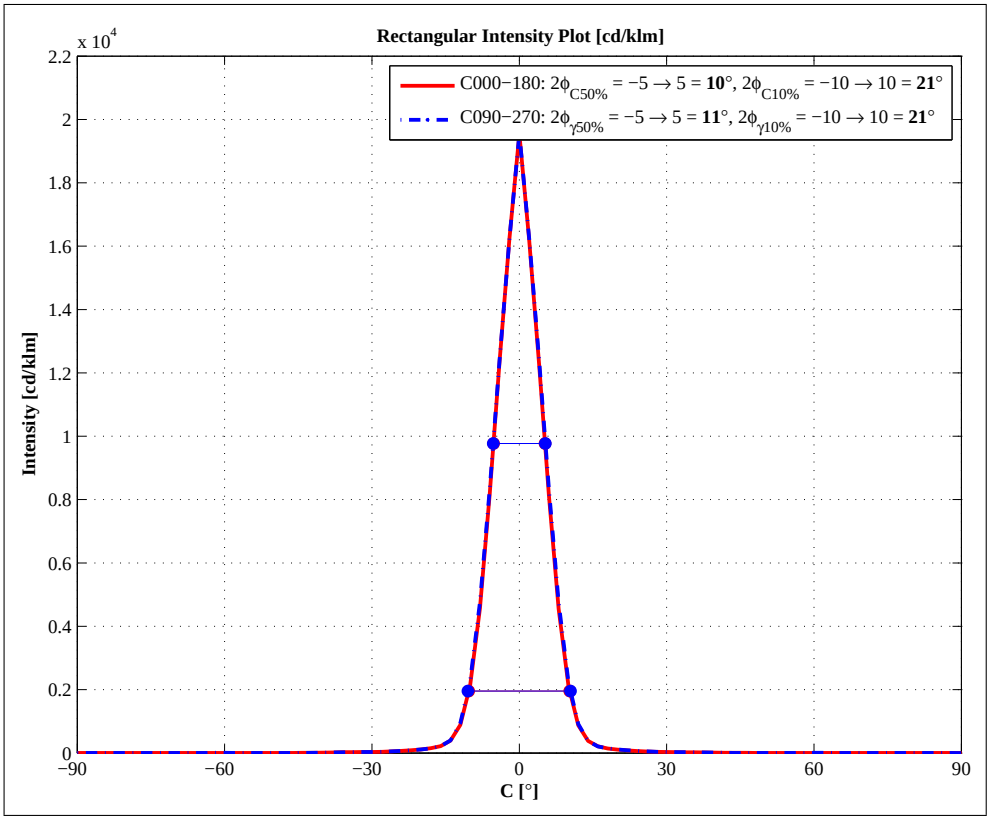
| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Total Flux | $\Phi$ | 153 | lm |
| Max Intensity | $I_{max}$ | 2991 | cd |
| Max Illuminance at 5 m | $E_{max}$ | 120 | lx |
| C-Viewing Angle at 50%$I_{max}$ | $2\varphi_C$ | 10 | ° |
| γ-Viewing Angle at 50%$I_{max}$ | $2\varphi_\gamma$ | 11 | ° |
| C-Viewing Angle at 10%$I_{max}$ | $2\varphi_{C10\%}$ | 21 | ° |
| γ-Viewing Angle at 10%$I_{max}$ | $2\varphi_{\gamma 10\%}$ | 21 | ° |
| General Optical Measurement Tolerance | - | ±10% | - |

NOTES:

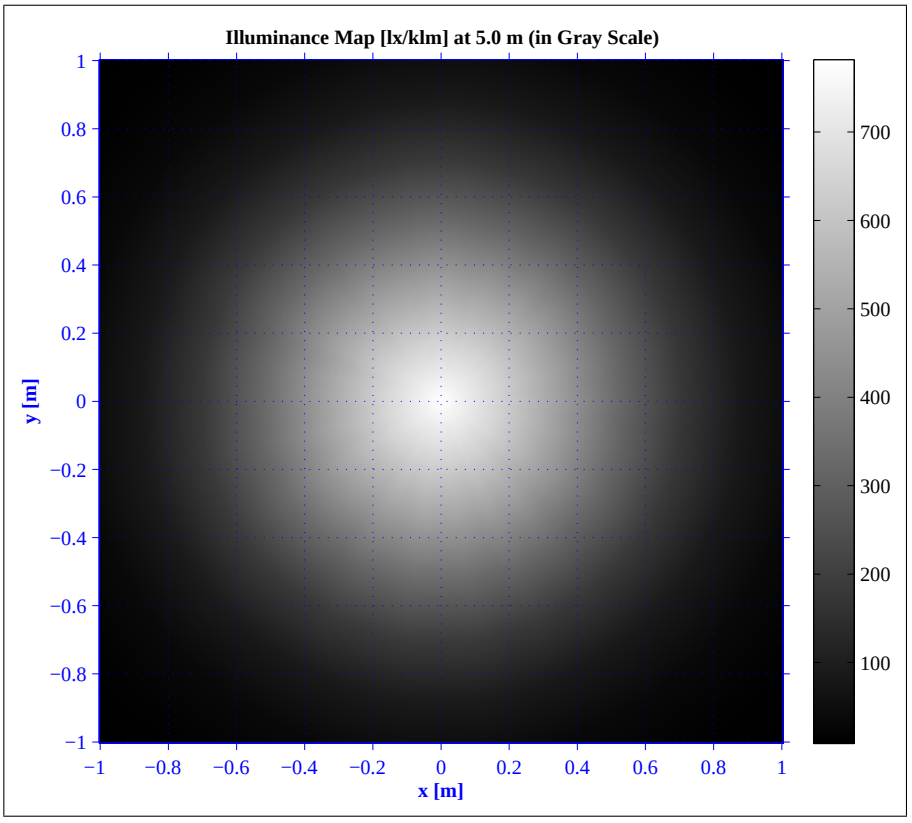
- Intensity ($I$) and illuminance ($E$) data are normalized by 1000 lm

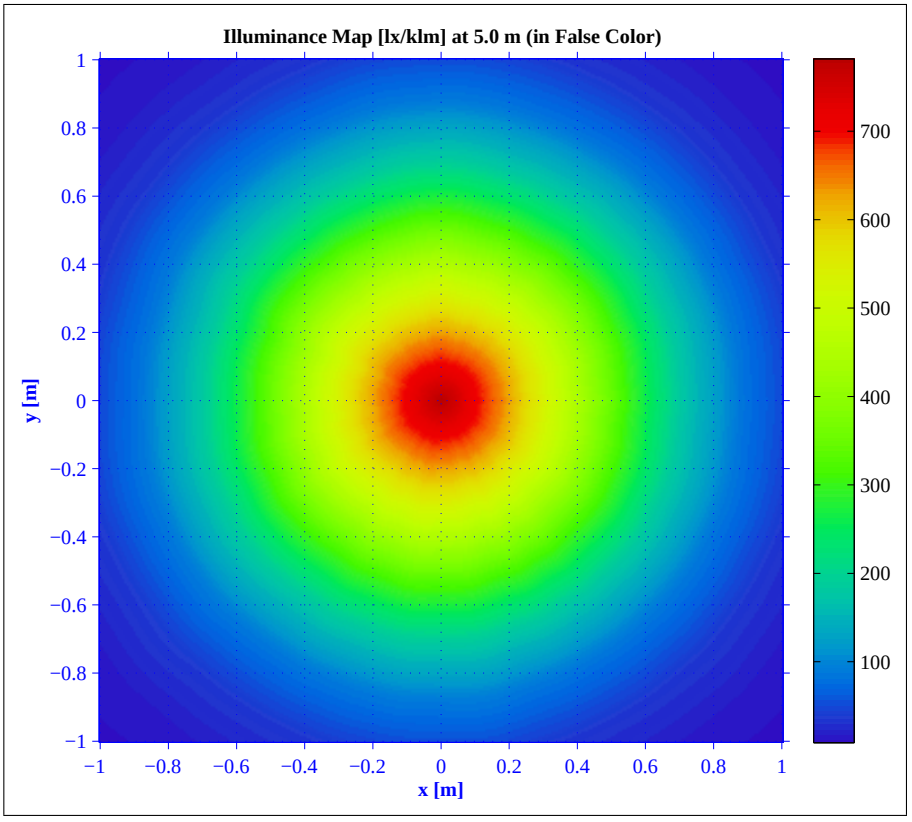
# 4 Intensity Plot



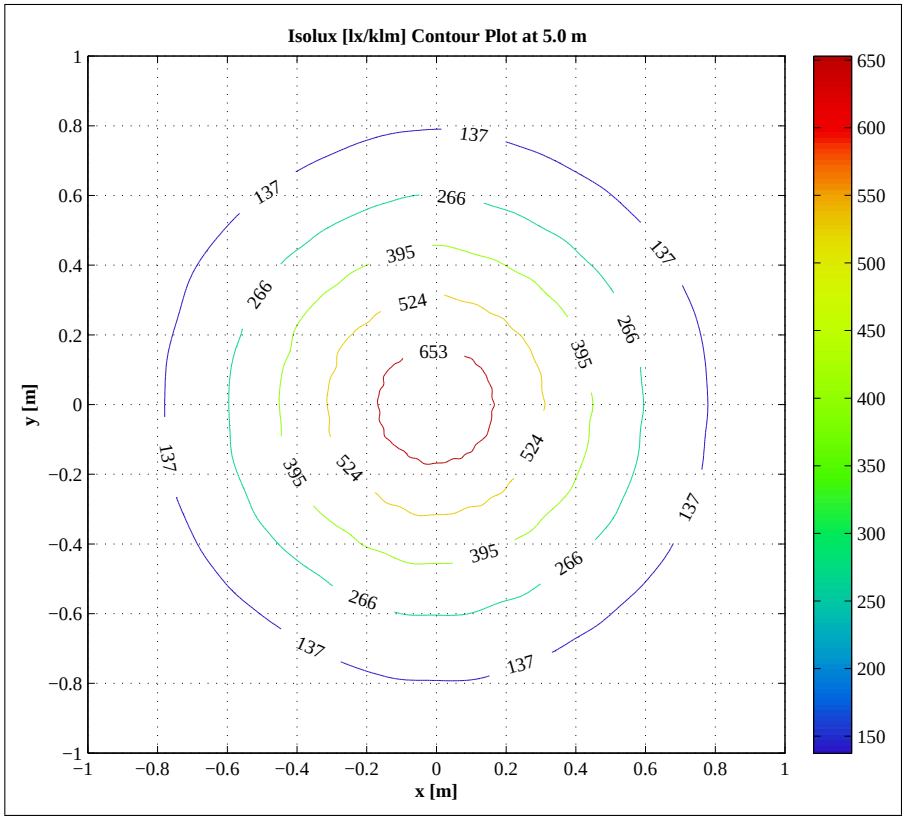



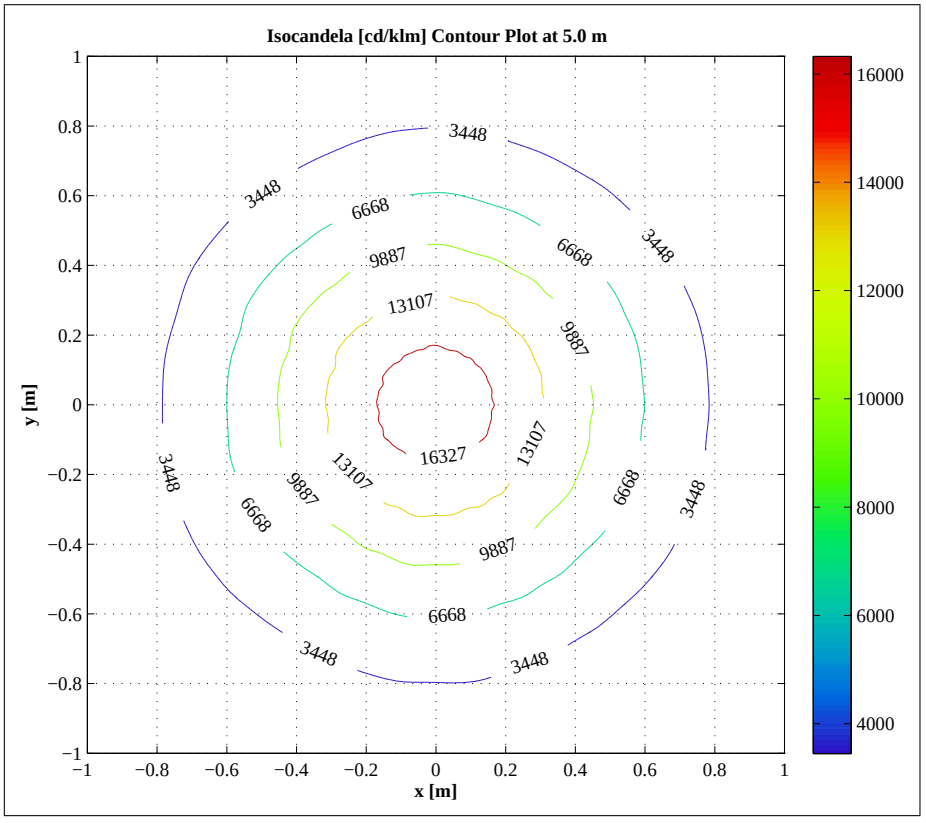
# 5 Illuminance Map



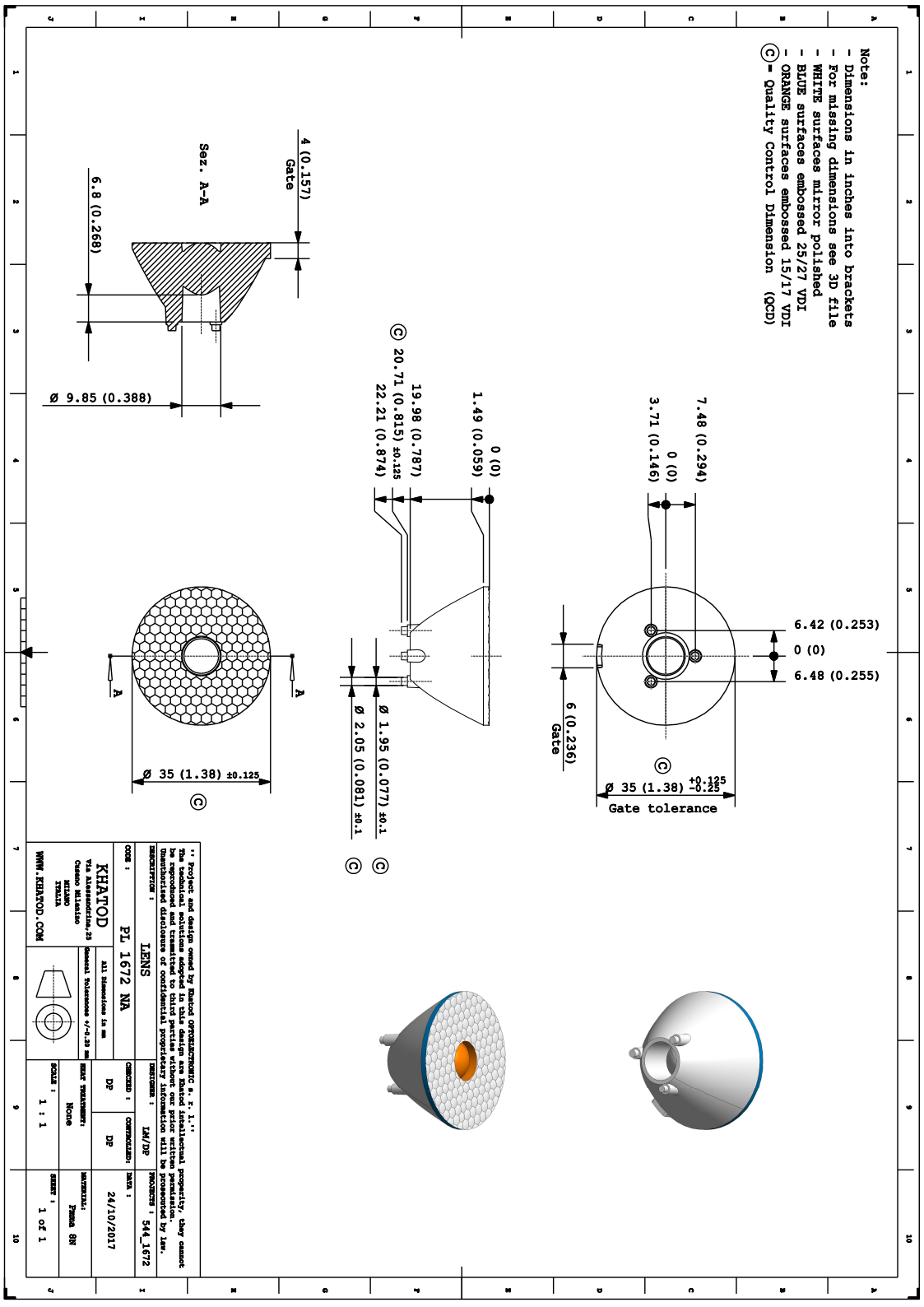



# 6 Isolux / Isocandela Plots



# 7 Drawing


Note:
- Dimensions in inches into brackets
- For missing dimensions see 3D file
- WHITE surfaces mirror polished
- BLUE surfaces embossed 25/27 VDI
- ORANGE surfaces embossed 15/17 VDI
Ⓒ= Quality Control Dimension (QCD)
Sez. A-A
4 (0.157)
Gate
6.8 (0.268)
Ø 9.85 (0.388)
Ø 35 (1.38) ±0.125
20.71 (0.815) ±0.125
22.21 (0.874)
19.98 (0.787)
1.49 (0.059)
0 (0)
Ø 2.05 (0.081) ±0.1
Ø 1.95 (0.077) ±0.1
7.48 (0.294)
3.71 (0.146)
0 (0)
6.42 (0.253)
0 (0)
6.48 (0.255)
6 (0.236)
Gate
Ø 35 (1.38) +0.125 -0.25
Gate tolerance
KHATOD
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Cassano Milanino
MILANO
ITALIA
WWW.KHATOD.COM
DESCRIPTION : LENS
CODE : PL 1672 NA
All Dimensions in mm
General Tolerances +/-0.20 mm
DRAWN : LM/DP
CHECKED : DP
CONTROLLED: DP
DATA : 24/10/2017
PROJECT : 544_1672
SCALE : 1 : 1
HEAT TREATMENT: None
MATERIAL: Perma SH
SHEET : 1 of 1

# 8 Materials

| Material | $T_{op}$ | $T_{stg}$ |
|---|---|---|
| PMMA | −40°···85°C | −40°···85°C |
| PMMA HT | −40°···110°C | −40°···85°C |
| PC | −40°···120°C | −40°···120°C |
| PC + Aluminum Coating with protective Clear Coat | −40°···120°C | −40°···120°C |
| APEC + Aluminum Coating with protective Clear Coat | −40°···180°C | −40°···180°C |
| ABS | −35°···70°C | −35°···70°C |
| SILICONE | −45°···150°C | −45°···150°C |

# 9 Use, Maintenance, and Disclaimer

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.

The optical values shown are the result of optical simulations carried out with ASAP and ZEMAX software systems. The optical simulations are carried out on the basis of the typical values provided in the LED manufacturers' official datasheets. The photometric analysis has been carried out on physical samples. On request, by supplying your PCB, we can provide the measurement photometric file.

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 Results on page 3. 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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