

L200-0PB-30D

465nm Super Blue 5mm LEDs
30° viewing angle

DWG BY:
LL / JAG
05-08-06

CHK BY:
PL
06-05-06

QA:
GZ
06-07-06

MFG:
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— — —

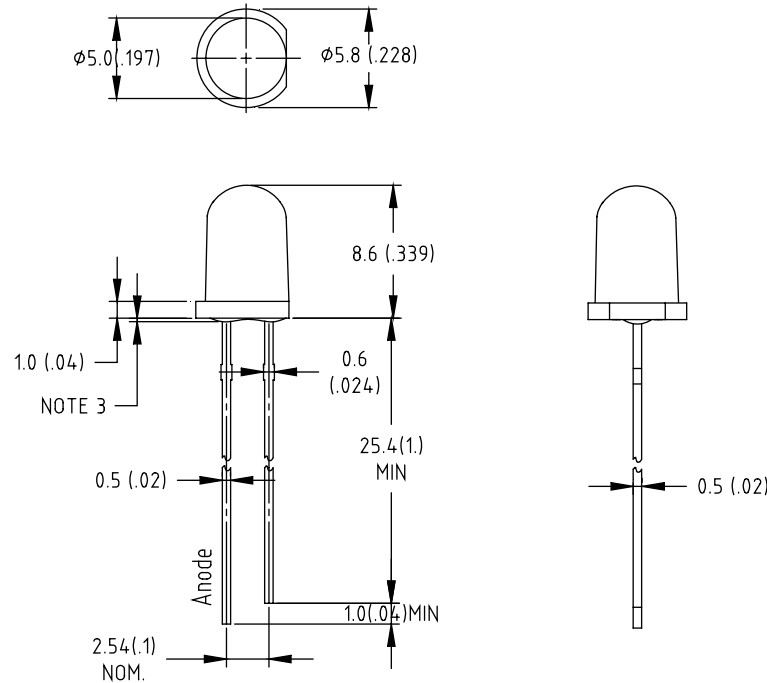
REVISION LTR: -
05-08-06

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| Part No. | L200-0PB-30D | DWG NO. | DSDC0399 | Page | 1 of 4 |
|----------|--------------|---------|----------|------|--------|

Features:

- High intensity
- Standard 5mm diameter package
- Tinned leads
- Pb-free

Package Dimensions:



| Part Number | Chip Material | Lens Color | Emission Color |
|-------------------|---------------|-------------|-------------------|
| LL-50ABC2L-040/S1 | InGaN | Water Clear | Super Bright Blue |

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (.010") unless otherwise noted.
3. Protruded resin under flange is 1.0mm (.04") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.
6. Precautions for ESD: Static electricity and surge can damage the LED. It is recommended to use a wristband or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

Absolute Maximum Ratings at Ta=25°C

| Parameter | MAX. | Unit |
|---|---------------------|-------|
| Power Dissipation | 80 | mW |
| Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width) | 100 | mA |
| Continuous Forward Current | 20 | mA |
| Derating Linear From 50°C | 0.4 | mA/°C |
| Reverse Voltage | 5 | V |
| Electrostatic Discharge (ESD) | 150 | V |
| Operating Temperature Range | -30°C to +80°C | |
| Storage Temperature Range | -40°C to +100°C | |
| Lead Soldering Temperature [4mm (.157") From Body] | 260°C for 5 Seconds | |

Electrical Optical Characteristics at Ta=25°C

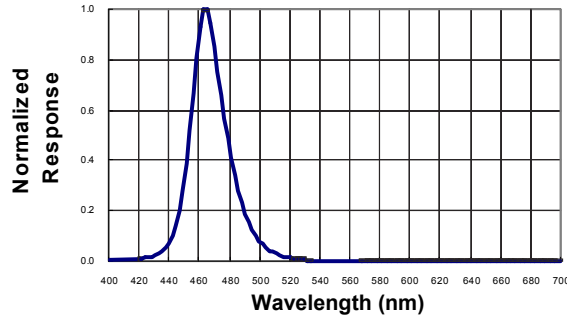
| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Condition |
|--------------------------|-----------------|------|------|------|---------------|----------------------------|
| Luminous Intensity | I_V | 2000 | 3500 | --- | mcd | $I_F=20\text{mA}$ (Note 1) |
| Viewing Angle | $2\theta_{1/2}$ | 23 | 26 | 30 | Deg | (Note 2) |
| Peak Emission Wavelength | λ_p | 462 | 464 | 467 | nm | $I_F=20\text{mA}$ |
| Dominant Wavelength | λ_d | 466 | 468 | 470 | nm | $I_F=20\text{mA}$ (Note 3) |
| Spectral Line Half-Width | $\Delta\lambda$ | --- | 25 | --- | nm | $I_F=20\text{mA}$ |
| Forward Voltage | V_F | --- | 3.2 | 4.0 | V | $I_F=20\text{mA}$ |
| Reverse Current | I_R | --- | --- | 50 | μA | $V_R=5\text{V}$ |
| SCP | --- | --- | TBD | --- | cd | $I_F=20\text{mA}$ |
| Lumens | --- | --- | TBD | --- | lm | $I_F=20\text{mA}$ |
| Radiant Intensity | --- | --- | 54 | --- | mW/sr | $I_F=20\text{mA}$ |
| Chromaticity Coordinates | x: 0.13 y: 0.06 | | | | | $I_F=20\text{mA}$ |

Notes:

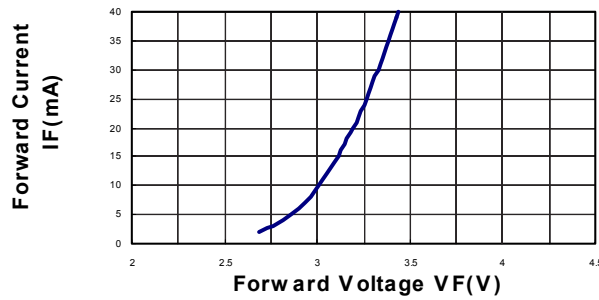
- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- The dominant wavelength (λ_d) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
- Forward voltage measurement allowance is $\pm 0.1\text{V}$
- Luminous Intensity Measurement Allowance is $\pm 10\%$.

Typical Electrical / Optical Characteristics Curves
 (25°C Ambient Temperature Unless Otherwise Noted)

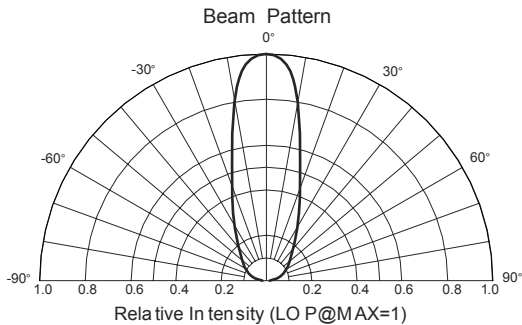
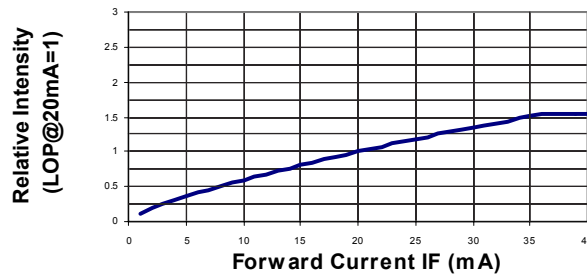
Spectral Radiance (Peak @ 465 nm)



Forward Current vs Forward Voltage



Relative Luminous Intensity vs Forward Current



Forward Current Derating Curve

