

L120-0CW-30D-LL

Cool White

3mm, Flanged Cylindrical, 5.3mm Height
30° viewing angle

DWG BY:
LL / GP
03-30-09

CHK BY:
PL
03-30-09

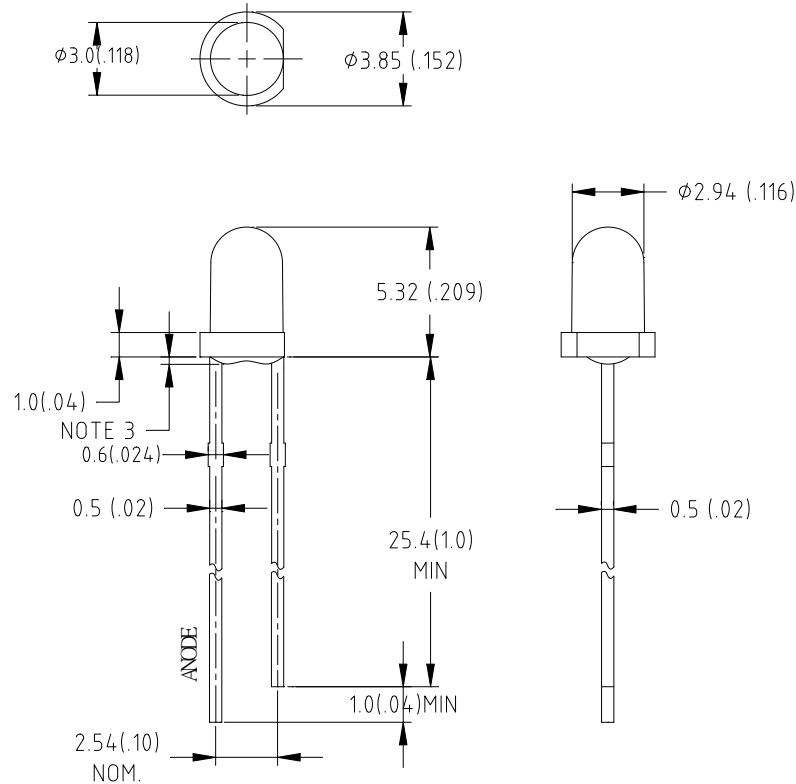
REVISION LTR: -

03-30-09

Features:

- ◆ High intensity
- ◆ Standard 3mm diameter package
- ◆ Tinned plated copper leads
- ◆ Pb-free

Package Dimensions:



| Chip Material | Lens Color | Emission Color |
|---------------|-------------|----------------|
| InGaN | Water Clear | Cool White |

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 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 damages the LED. It is recommended to use a wrist band 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) | 600 | V |
| Operating Temperature Range | -20°C to +80°C | |
| Storage Temperature Range | -30°C to +100°C | |
| Lead Soldering Temperature[4mm(.157") From Body] | 280°C for 5 Seconds | |

Electrical Optical Characteristics at Ta=25°C

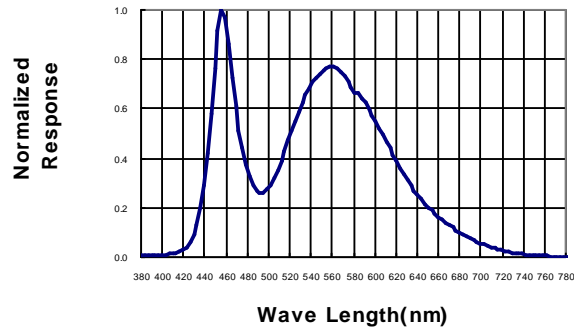
| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Condition |
|-----------------------|-------------------|------|--------|------|-------|-------------------------------|
| Luminous Intensity | I _v | 4700 | 7000 | --- | mcd | I _F =20mA (Note 1) |
| Viewing Angle | 2θ _{1/2} | --- | 30 | --- | Deg | Note 2 |
| Forward Voltage | V _F | --- | 3.4 | 3.8 | V | I _F =20mA |
| Reverse Current | I _R | --- | --- | 10 | μA | V _R =5V |
| SCP | --- | --- | 0.30 | --- | --- | I _F =20mA |
| Lumens | --- | --- | 4.0 | --- | lm | I _F =20mA |
| Radiant Intensity | --- | --- | 23,000 | --- | μW/sr | I _F =20mA |
| Color Rendering Index | CRI | 79 | --- | 83 | --- | --- |

Note:

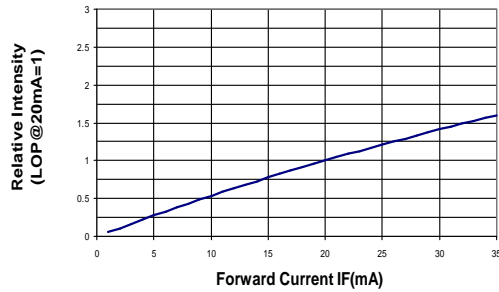
- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- θ_{1/2} is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- The dominant wavelength (λ_d) is derived from the CIE chromaticity diagram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

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

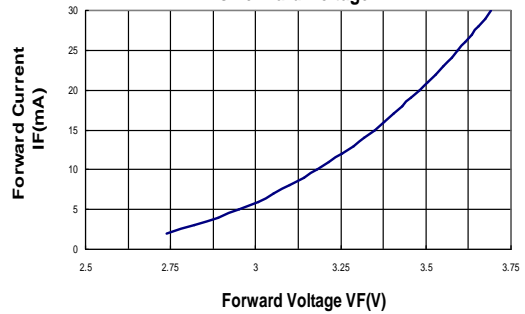
Spectral Radiance



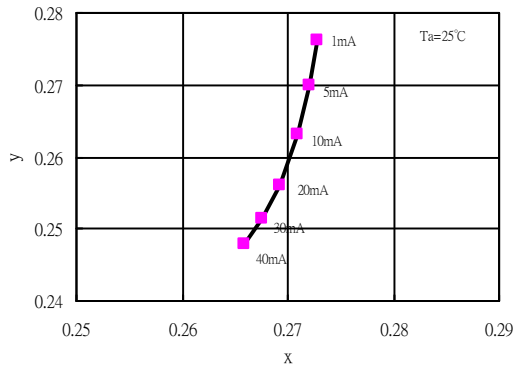
Relative Luminous Intensity vs Forward Current



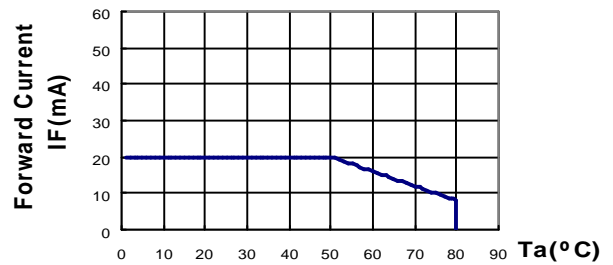
Forward Current vs Forward Voltage



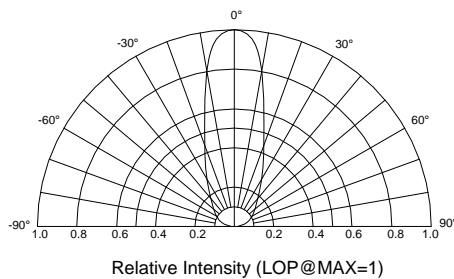
Forward Current VS. Chromatic coordinate



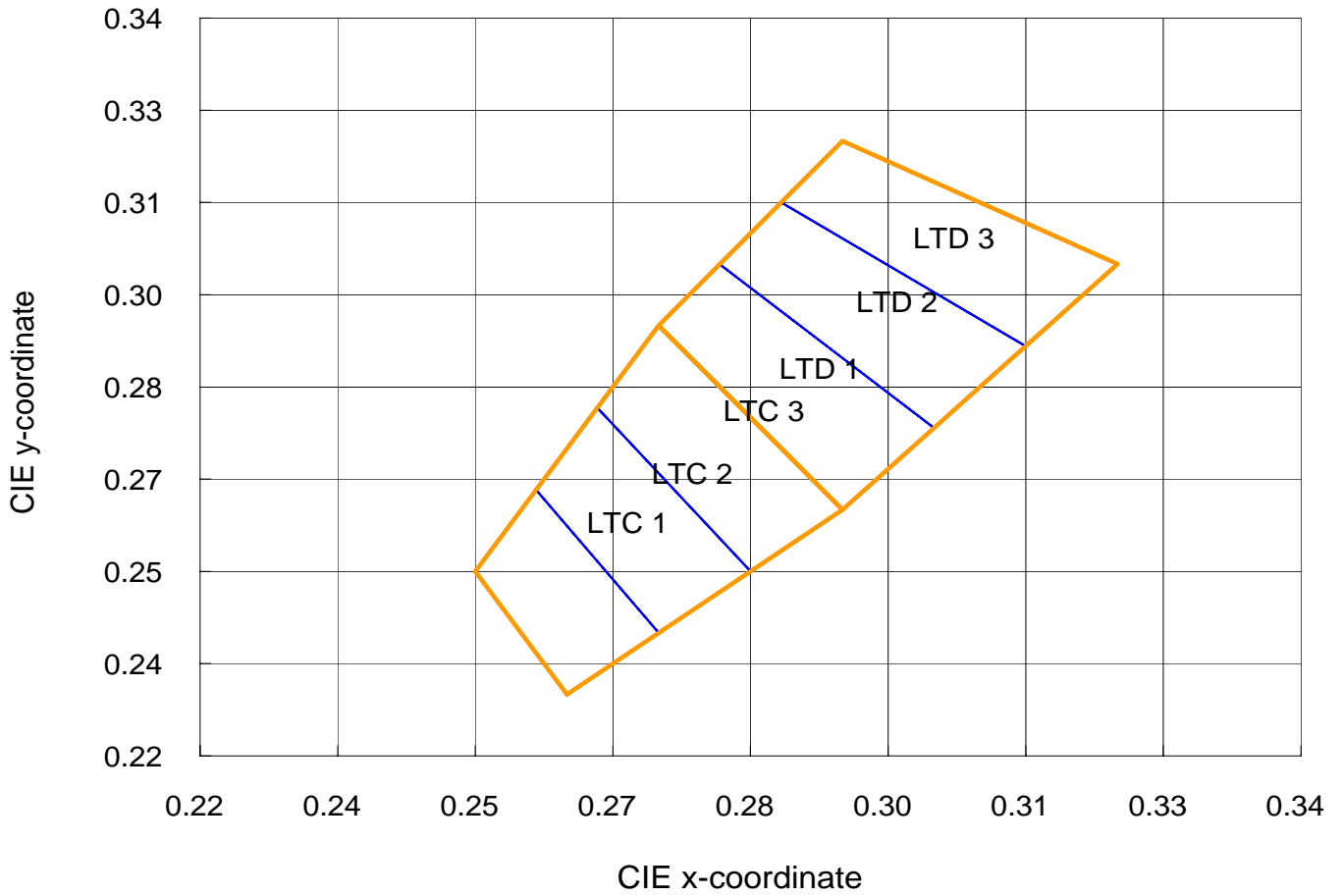
Forward Current Derating Curve



Beam Pattern



Color Bin Range



| Color Code | Bin Code | | | | | |
|------------|----------|---|-------|-------|-------|-------|
| OCW | LTC 1 | X | 0.260 | 0.270 | 0.257 | 0.250 |
| | | Y | 0.230 | 0.240 | 0.263 | 0.250 |
| | LTC 2 | X | 0.270 | 0.280 | 0.263 | 0.257 |
| | | Y | 0.240 | 0.250 | 0.277 | 0.263 |
| | LTC 3 | X | 0.280 | 0.290 | 0.270 | 0.263 |
| | | Y | 0.250 | 0.260 | 0.290 | 0.277 |
| | LTD 1 | X | 0.290 | 0.300 | 0.277 | 0.270 |
| | | Y | 0.260 | 0.273 | 0.300 | 0.290 |
| | LTD 2 | X | 0.300 | 0.310 | 0.283 | 0.277 |
| | | Y | 0.273 | 0.287 | 0.310 | 0.300 |
| | LTD 3 | X | 0.310 | 0.320 | 0.290 | 0.283 |
| | | Y | 0.287 | 0.300 | 0.320 | 0.310 |