

# Ultra Brightness Cyan LED Lamp

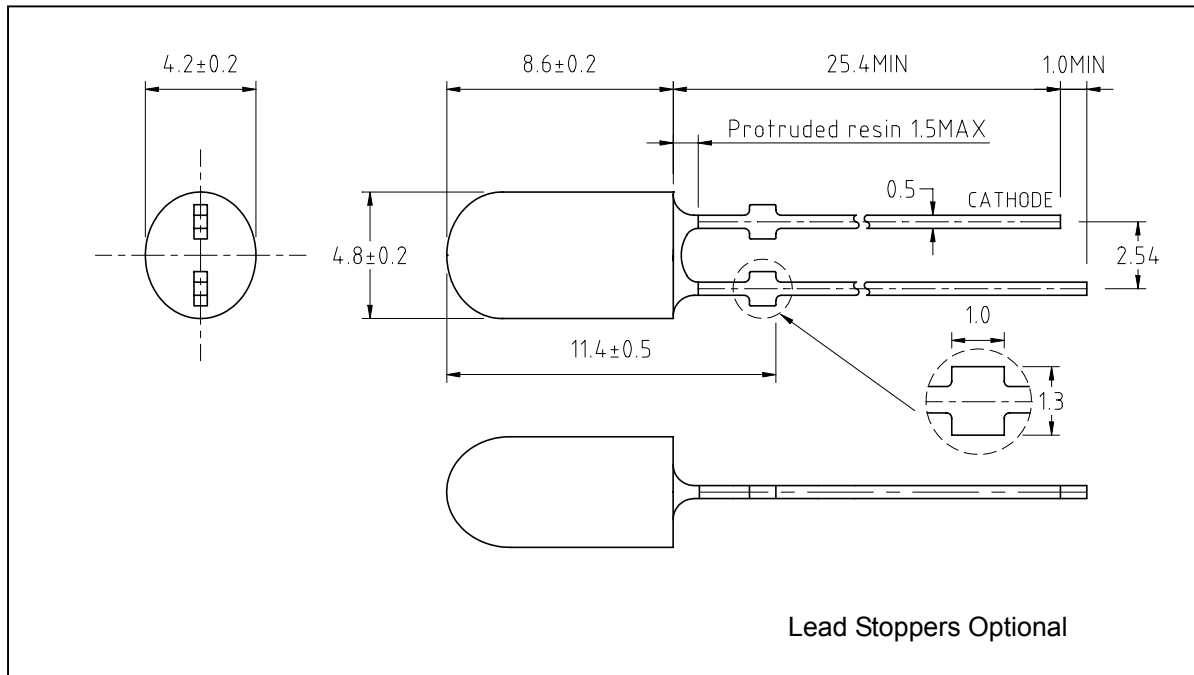
4mm Oval Precision Through-Hole Package

## PL-LUCY4V50D series



FEATURES	APPLICATIONS
<ul style="list-style-type: none"><li>• Super luminosity Cyan (500nm) LED</li><li>• InGaN / Sapphire die.</li><li>• 4.8mm X 4.2mm Oval Precision Package.</li><li>• Green Diffused Lens.</li><li>• Wide viewing angles (50°(H) / 20° (V).</li><li>• UV Resistant Epoxy for Outdoor use.</li></ul>	<ul style="list-style-type: none"><li>• Traffic Signals.</li><li>• Outdoor Score/Clock Boards</li><li>• Architectural Accent Lighting</li><li>• VMS.</li><li>• Back or Side lighting.</li></ul>

### PACKAGE OUTLINE DIMENSIONS:



#### NOTES:

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.25$  mm unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

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### ABSOLUTE MAXIMUM RATING (at $T_A = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Continuous Forward Current	$I_F$	30	mA
Peak Forward Current (1/16 Duty Cycle, 0.1msec Pulse width)	$I_{Fp}$	150	mA
Power Dissipation	$P_d$	120	mW
Forward Voltage	$V_f$	3.8	V
Derating Factor	$D_F$	0.4	mA / $^\circ\text{C}$
Reverse Voltage	$V_R$	5.0	V
Operating Temperature	$T_{opr}$	-25 to +85	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-35 to +100	$^\circ\text{C}$
Lead Soldering Temperature (1.6mm (0.063") from body)	260 $^\circ\text{C}$ for 5 seconds		

### ELECTRICAL / OPTICAL CHARACTERISTICS (at $T_A = 25^\circ\text{C}$ )

Parameter	Symbol	MIN	TYP	MAX	Unit
Forward Voltage	$I_F = 20\text{ mA}$ $V_F$		3.2	3.9	V
Luminous Intensity	$I_F = 20\text{ mA}$ $I_v$	1150	1600	2500	mcd
Dominant Wavelength	$I_F = 20\text{ mA}$ $\lambda_d$	490	500	510	nm
Spectrum Radiation Bandwidth	$I_F = 20\text{ mA}$ $\Delta\lambda$		30		nm
Reverse Current	$V_R = 5\text{ V}$ $I_R$			50	$\mu\text{A}$
Viewing Angle Major Axis X	$2\theta_{1/2}$		50		deg
Viewing Angle Minor Axis Y	$2\theta_{1/2}$		20		deg

#### GENERAL NOTES:

- Luminous Intensity ( $I_v$ ) is measured with a light sensor and filter combination (goniospectroradiometer) and is the Luminous Flux per unit solid angle (steradian) emitted by the LED lamp in the direction of the mechanical axis of the lamp and then weighed by the eye response curve (1931 CIE 2 $^\circ$  Observer Chromaticity Diagram).
- Luminous Intensity measurement uncertainty is +/- 15% due to test procedures and equipment variations.
- $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity. Tolerance +/- 3 $^\circ$ .
- Dominant wavelength is derived from the 1931 CIE 2 $^\circ$  Observer Chromaticity Diagram.
- Peak and Dominant wavelength measurement uncertainty is +/- 0.05 due to variations. Tolerance +/- 1nm.
- Caution for ESD: Static Electricity and surges can damage the LED. It is recommended using a wristband or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.
- Do not apply excess mechanical stress to the leads, especially when heated or while soldering.

# Ultra Brightness Cyan LED Lamp

4mm Oval Precision Through-Hole Package

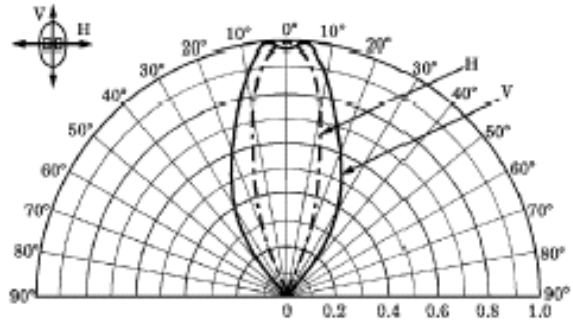
## PL-LUCY4V50D series



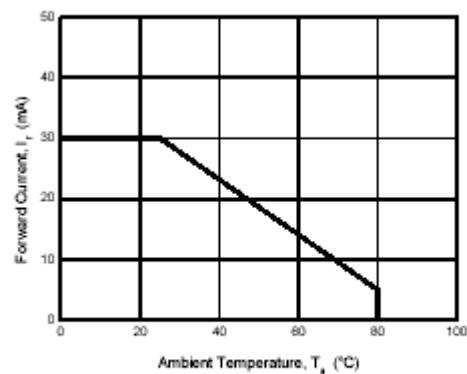
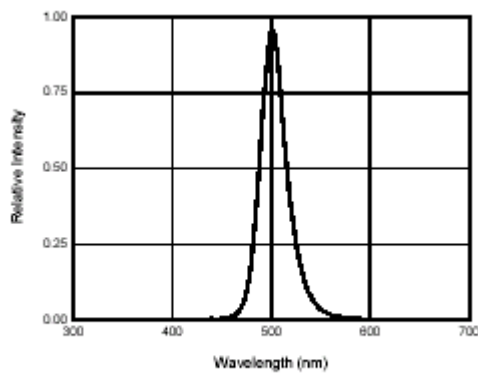
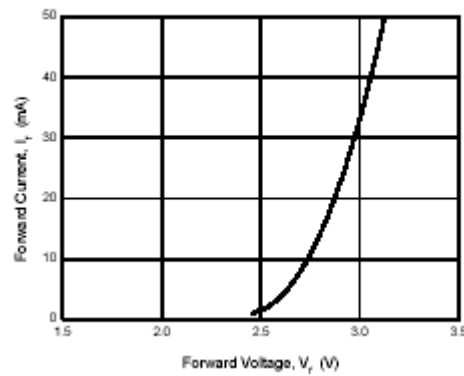
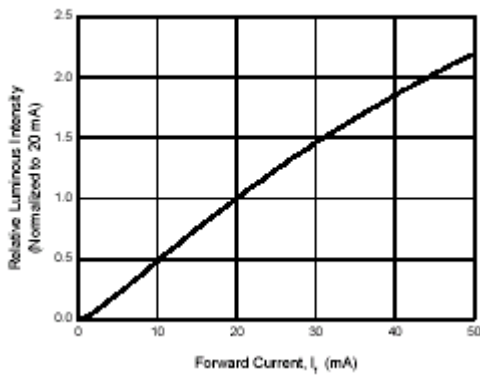
### LUMINOUS INTENSITY RANKS (mcd at 20mA)

Rank	Min	Max
Q	1150	1500
R	1500	1900
S	1900	2500

### BEAM RADIATION PATTERNS



### TYPICAL ELECTRICAL CHARACTERISTICS CURVES (at 20 mA DC / T<sub>A</sub> = 25°C)



# Ultra Brightness Cyan LED Lamp

4mm Oval Precision Through-Hole Package

## PL-LUCY4V50D series



### PRODUCT CODE BREAKDOWN

