

# Ultra Brightness AMBER LED Lamp

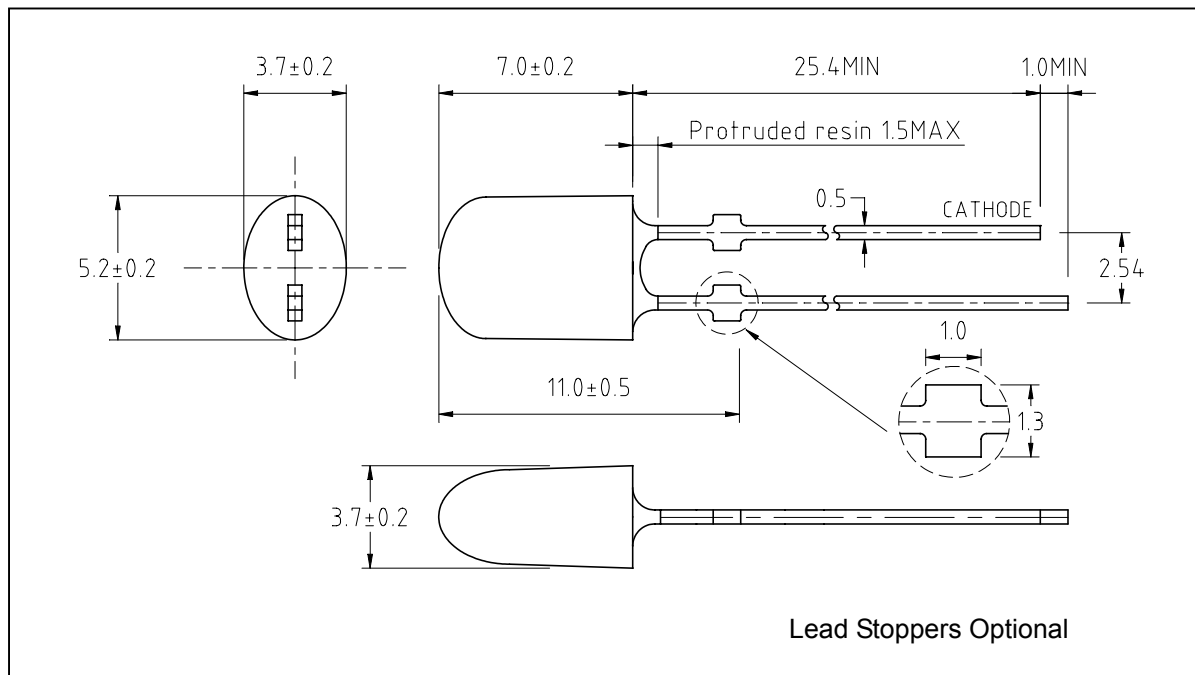
5mm Oval Precision Through-Hole Package

## PL-LSAM5VC1M series



FEATURES	APPLICATIONS
<ul style="list-style-type: none"><li>• Super luminosity Yellow-Amber 592nm LED</li><li>• TS AlInGaP/GaP die.</li><li>• 5.2mm X 3.7mm Oval Precision Package.</li><li>• Lightly Milky Diffused Lens for better contrast.</li><li>• Wide viewing angles (110°(H) / 40° (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>• Full Color RGB Video Displays</li><li>• VMS.</li><li>• Back or Side lighting.</li><li>• Automotive.</li></ul>

### PACKAGE OUTLINE DIMENSIONS:



#### NOTES:

1. All dimensions are in millimeters.
2. Tolerance is ±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 RATINGS (at $T_A = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Continuous Forward Current	$I_F$	50	mA
Peak Forward Current (1/10 Duty Cycle, 0.1msec Pulse width)	$I_{Fp}$	100	mA
Power Dissipation	$P_d$	120	mW
Forward Voltage	$V_f$	2.4	V
Derating Factor	$D_F$	0.4	mA / $^\circ\text{C}$
Reverse Voltage	$V_R$	5.0	V
Operating Temperature	$T_{opr}$	-30 to +80	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 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	$I_F = 20\text{ mA}$ $V_F$		1.9	2.40	V
Luminous Intensity	$I_F = 20\text{ mA}$ $I_v$	580	700	850	mcd
Dominant Wavelength	$I_F = 20\text{ mA}$ $\lambda_d$	590	592	595	nm
Spectrum Radiation Bandwidth	$I_F = 20\text{ mA}$ $\Delta\lambda$		19		nm
Reverse Current	$V_R = 5\text{ V}$ $I_R$			50	$\mu\text{A}$
Viewing Angle Major Axis X	$2\theta_{1/2}$		110		deg
Viewing Angle Minor Axis Y	$2\theta_{1/2}$		40		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° 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 +/- 10%.
- Dominant wavelength is derived from the 1931 CIE 2° 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.

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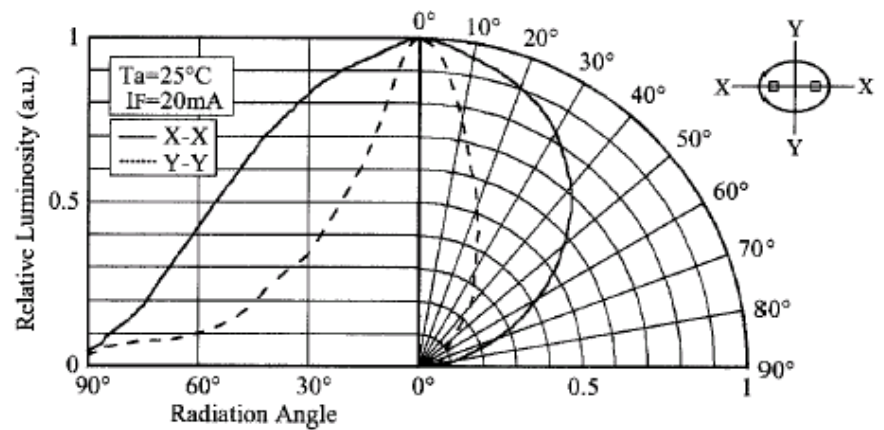


### LUMINOUS INTENSITY RANKS (mcd at 20mA)

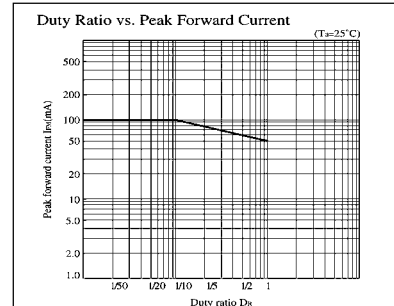
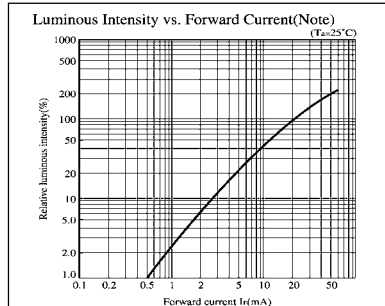
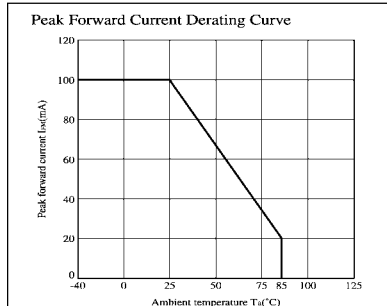
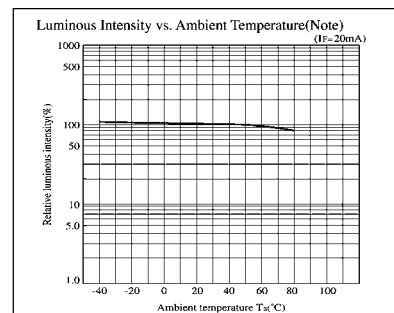
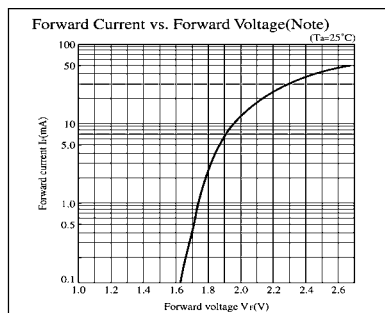
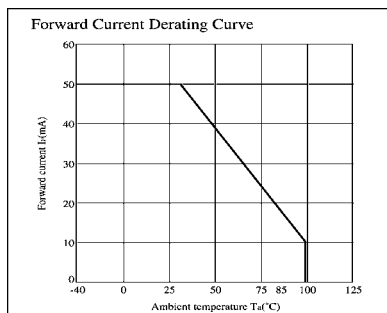
Rank	Min	Max
M	520	680
N	680	880

Percentage of each Bin (Rank) supplied is dependent on production yield thus cannot be guaranteed.

### BEAM RADIATION PATTERNS



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



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### PRODUCT CODE BREAKDOWN

