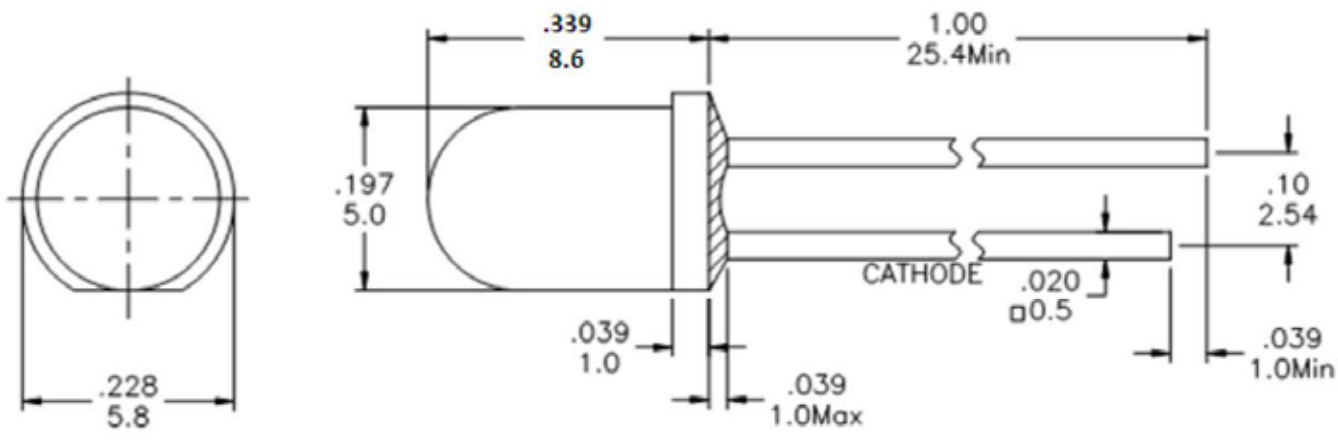


SPECIFICATIONS **CL5002D**

OUTLINES DIMENSIONS



The technical drawing shows the following dimensions:

- Top View:** Diameter is $.228$ (5.8).
- Side View:**
 - Overall length: 1.00 (25.4Min)
 - Distance from lens to chip: $.339$ (8.6)
 - Chip diameter: $.197$ (5.0)
 - Chip thickness: $.039$ (1.0)
 - Distance from chip to cathode: $.039$ (1.0Max)
 - Cathode diameter: $.020$ ($\varnothing 0.5$)
 - Distance from cathode to lead: $.039$ (1.0Min)
 - Lead diameter: $.10$ (2.54)

Notes:

1. All Dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CL5002D	InGaAlP	Orange	Orange Diffused	50°



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ABSOLUTE MAXIMUM RATINGS
(TA=25°C)

Parameter	Symbol	Max Rating	Unit
Power Dissipation	PD	84	mW
Pulse Current Forward Current	IFP	100	mA
Continuous Forward Current	IF	30	mA
Reverse Voltage	VR	5	V
Operating Temperature Range	TOPR	-40~+80	°C
Storage Temperature Range	TSTG	-40~+100	°C
IFP = Pulse Width ≤ 10 ms, Duty Ratio ≤ 1/10. Soldering Condition: 260 °C/ 5sec			

OPTICAL-ELECTRICAL CHARACTERISTICS
(TA=25°C)

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	IV	IF = 20mA	320	560	-	mcd
Forward Voltage	VF	IF = 10mA	-	2.0	2.6	V
Reverse Leakage Current	IR	VR = 5V	-	-	50	µA
Viewing Angle	2θ1/2	IF = 20mA	-	50	-	deg
Dominant Wavelength	λD	IF = 10mA	-	605	-	nm

*Tolerance of viewing angle: -10 / +5 deg.



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OPTICAL CHARACTERISTIC CURVES

Fig1. Relative Luminous Intensity Vs. Forward Current

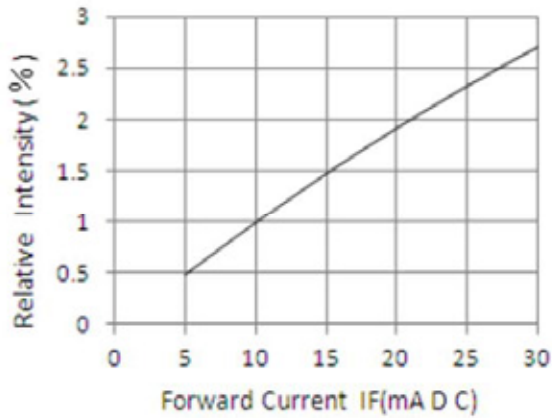


Fig2. Forward Current Vs. Forward Voltage

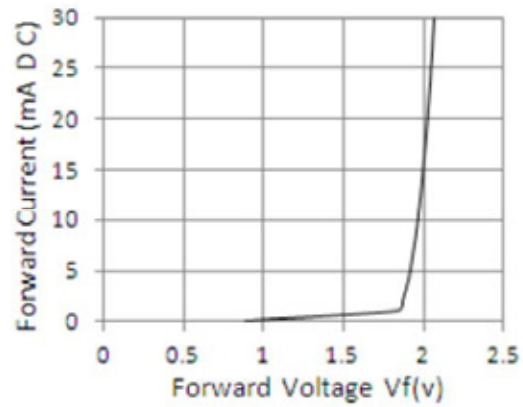


Fig3. Relative Intensity Vs. Wavelength

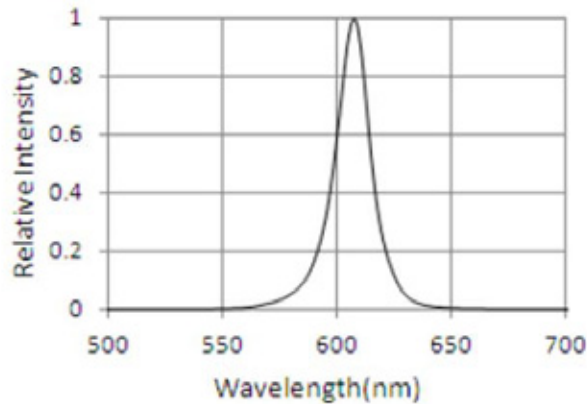
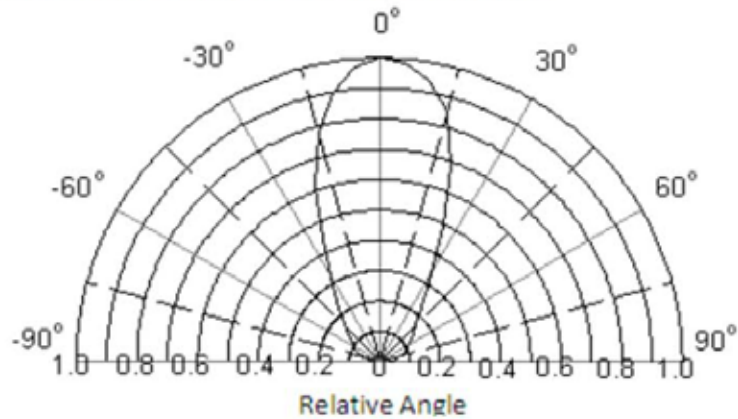


Fig.4 Relative Luminous Intensity Vs. Radiation Angle



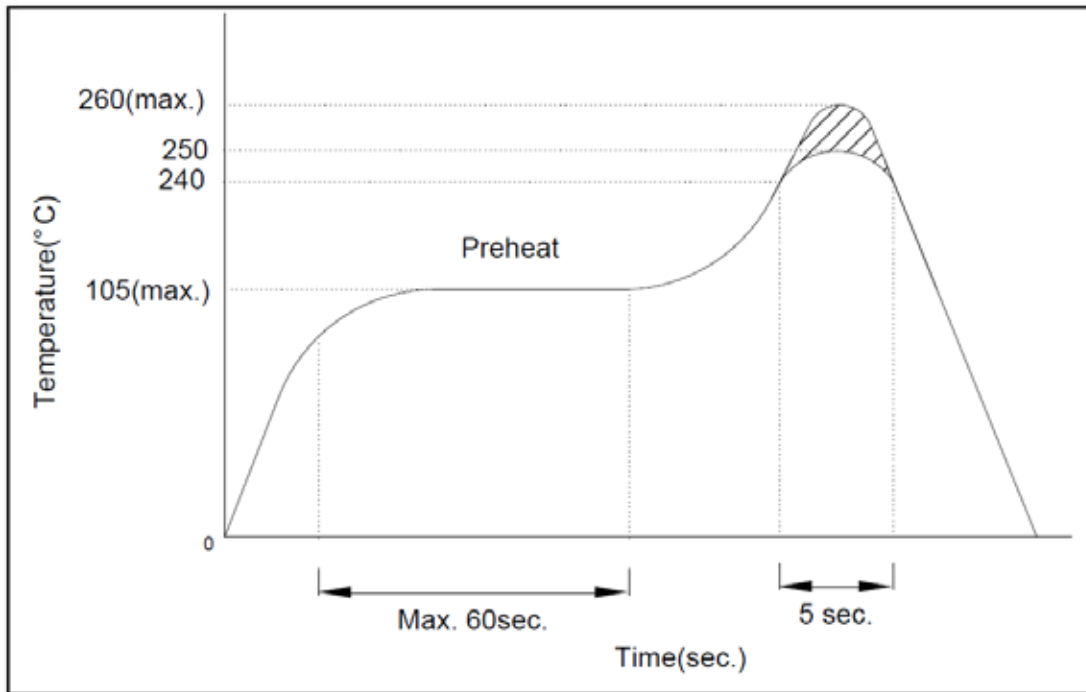
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SOLDERING CONDITIONS – LAMP TYPE LED

1. Recommended soldering conditions

1.1 Wave soldering:

Basic SPEC. is ≤ 5 sec. when 260°C . If temperature is higher, time should be shorter
 (+ $10^{\circ}\text{C} \rightarrow -1$ sec)



1.2 Soldering iron:

Power dissipation of iron should be smaller than 15W and temperature should be controllable. Surface temperature of iron tip should be under 230°C , soldering time ≤ 3 sec.

2. Static Electricity

2.1 Static electricity or surge voltage damages LEDs.

It is recommended that a wrist band or an anti-electrostatic glove should be used when handling the LEDs.

2.2 All devices, equipment and machinery must be properly grounded. It is recommended that measures be taken against surge voltage for the equipment that mounts the LEDs.



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