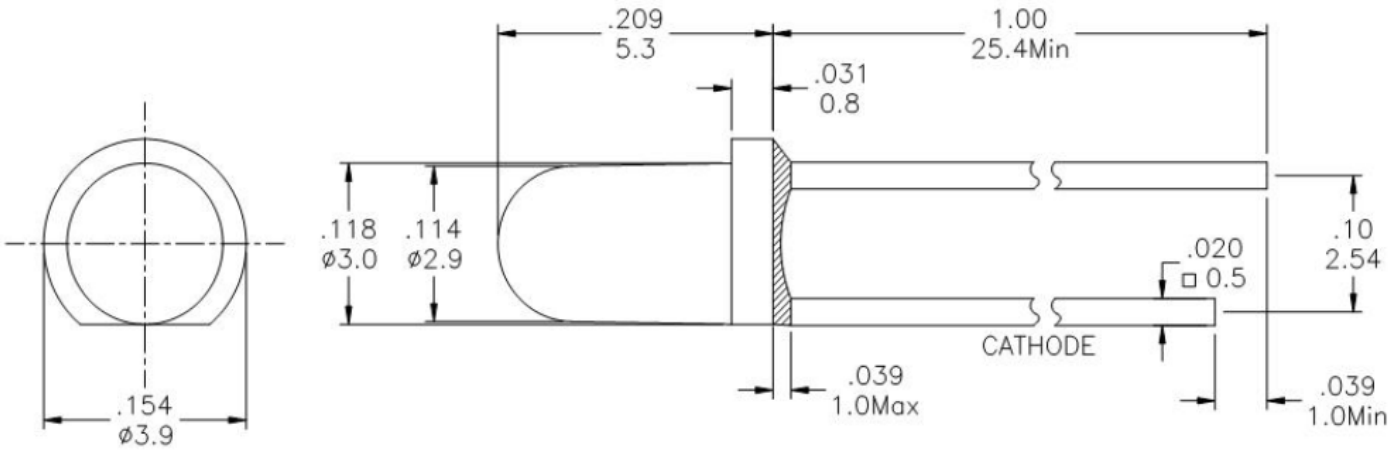


SPECIFICATIONS **CL30R2D**

OUTLINES DIMENSIONS



The technical drawing shows the following dimensions:

- Top View:**
 - Overall diameter: $\phi 3.9$ mm
 - Inner diameter: $\phi 2.9$ mm
 - Outer diameter of lens: $\phi 3.0$ mm
 - Radius of lens: $.114$ mm
 - Radius of chip area: $.118$ mm
 - Distance from center to chip edge: $.154$ mm
- Side View:**
 - Chip length: $.209$ mm (5.3 mil)
 - Chip thickness: $.031$ mm (0.8 mil)
 - Distance from chip to lens edge: 1.00 mm (25.4 mil Min)
 - Distance from chip to cathode: $.039$ mm (1.0 mil Max)
 - Distance from chip to cathode tip: $.020$ mm (0.5 mil)
 - Cathode width: $.10$ mm (2.54 mil)
 - Cathode thickness: $.039$ mm (1.0 mil Min)

Notes:

- All Dimensions are in millimeters (inches).
- Tolerance is ± 0.25 mm (0.01") unless otherwise noted.
- Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CL30R2D	InGaAlP	Red	Red Diffused	50°



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ABSOLUTE MAXIMUM RATINGS
(TA=25°C)

Parameter	Symbol	Max Rating	Unit
Power Dissipation	PD	72	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	140	320	-	mcd
Forward Voltage	VF	IF = 10mA	-	2.0	2.4	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	μA
Viewing Angle	2θ1/2	IF = 10mA	-	50	-	deg
Dominant Wavelength	λD	IF = 10mA	-	625	-	nm

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



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OPTICAL CHARACTERISTIC CURVES

Fig 1. Forward Current vs. Forward Voltage

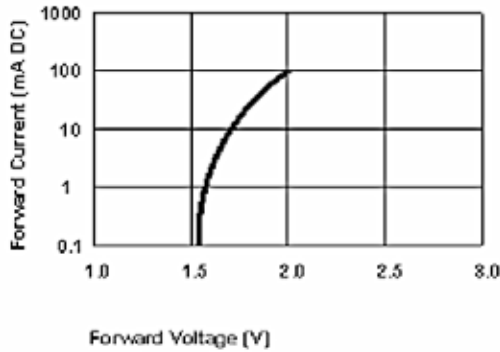


Fig 2. Relative Intensity vs. Forward Current

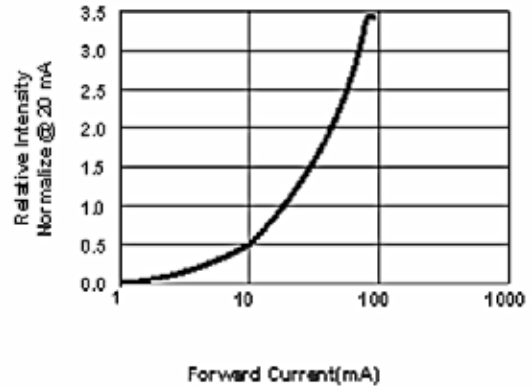


Fig 3. Forward Voltage vs. Temperature

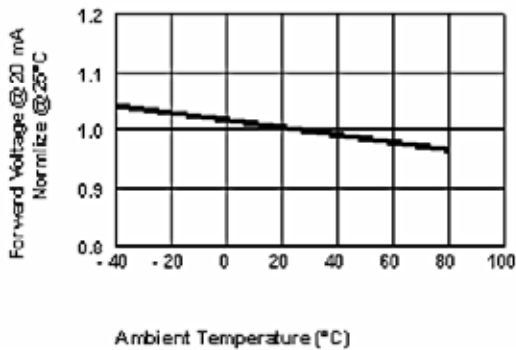


Fig 4. Relative Intensity vs. Temperature

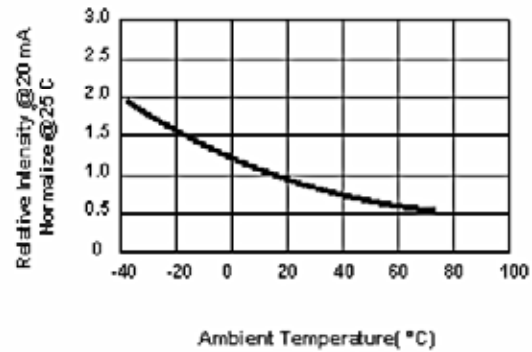


Fig 5. Relative Intensity Vs. Wavelength

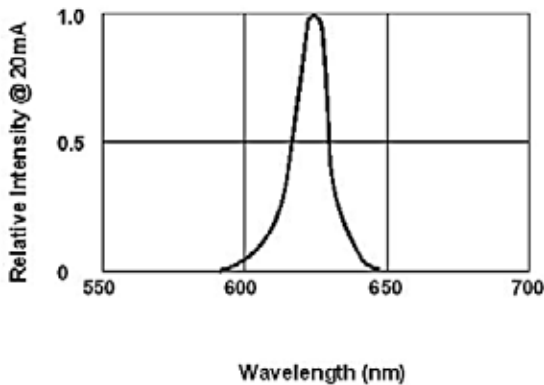
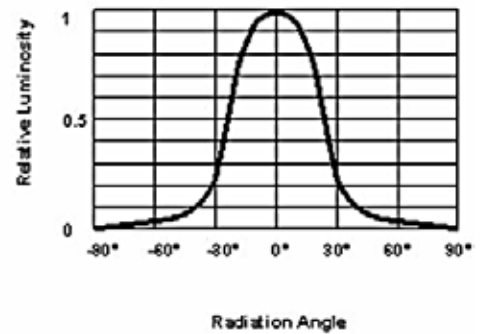


Fig 6. Radiation Diagram



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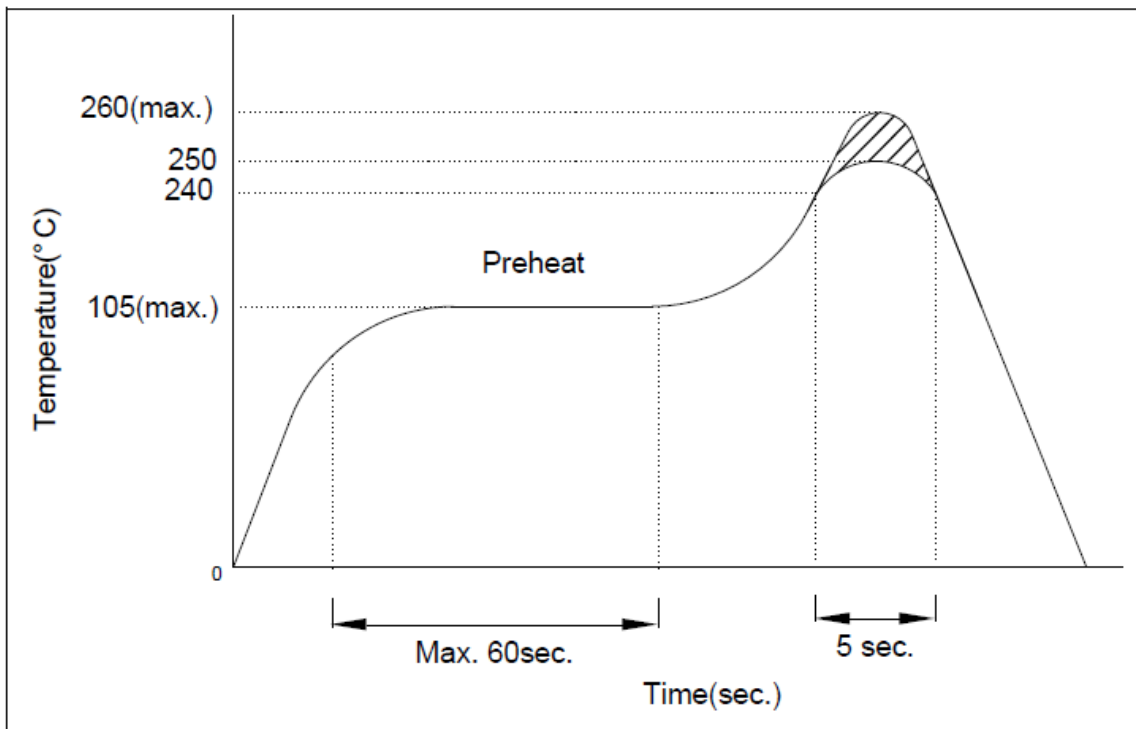
SOLDERING CONDITIONS – LAMP TYPE LED

PRECAUTION FOR USE

1. Recommended Soldering Condition

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. Electrostatic Discharge (ESD)

Static electricity or surge voltage will damage the LEDs.

Use of conductive wrist band or anti-electrostatic glove when handling these LEDs is recommended. All devices, equipment, work table, storage rack and machinery must be properly grounded.

In the events of manual working in process, make sure devices are well protected from ESD at all times.



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