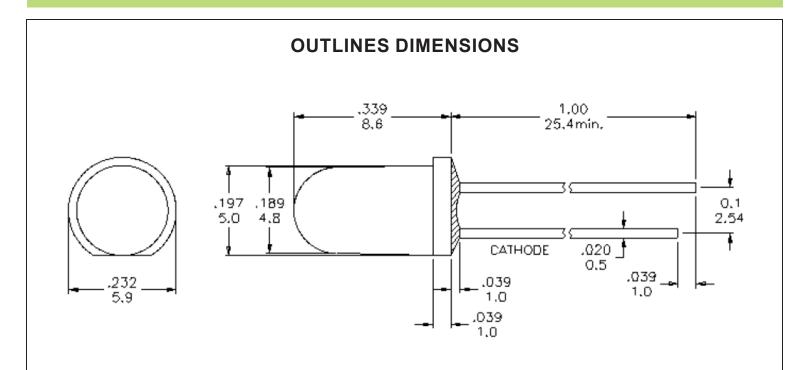


## SPECIFICATIONS CL50R2D



#### Notes:

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

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle	
CL50R2D	InGaAlP	Red	Red Diffused	45°	



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### **ABSOLUTE MAXIMUM RATINGS**

(TA=25°C)

Parameter	Symbol	Max Rating	Unit				
Power Dissipation	Pb	72	mW				
Pulse Current Forward Current	lFP	100	mA				
Continuous Forward Current	lF	30	mA				
Reverse Voltage	VR	5	V				
Operating Temperature Range	Topr	-40~+80	°C				
Storage Temperature Range	Тѕтс	-40~+100	°C				
IFP = Pulse Width ≤ 10 ms, Duty Ratio ≤1/10	= Pulse Width ≤ 10 ms, Duty Ratio ≤1/10. Soldering Condition: 260 °C/ 5sec						

## **OPTICAL-ELECTRICAL CHARACTERISTICS**

(TA=25°C)

Darameter	Symbol	Toot Condition	Value			Lloit
Parameter		Test Condition	Min	Тур	Max	Unit
Luminous Intensity	lv	I <sub>F</sub> = 20mA	250	400	-	mcd
Forward Voltage	VF	I⊧ = 10mA	-	2.0	2.4	V
Reverse Leakage Current	lR	V <sub>R</sub> = 5V	-	-	50	μΑ
Viewing Angle	201/2	I⊧ = 10mA	-	45	-	deg
Dominant Wavelength	λD	I⊧ = 10mA	-	632	-	nm

<sup>\*</sup>Tolerance of viewing angle: -10 / +5 deg.



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### **OPTICAL CHARACTERISTIC CURVES**

Fig 1. Forward Current vs. Forward Voltage

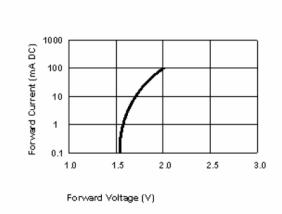


Fig 3. Forward Voltage vs. Temperature

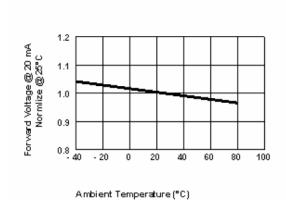


Fig5.Relative Intensity Vs.Wavelength

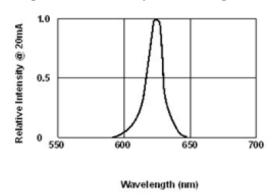


Fig 2. Relative Intensity vs. Forward Current

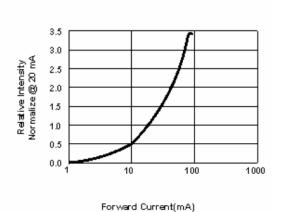


Fig 4. Relative Intensity vs.Temperature

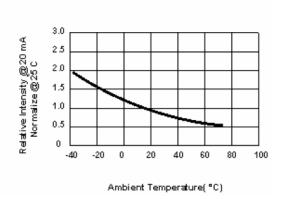
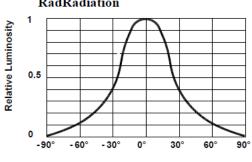


Fig6.Relative Luminous Intensity Vs.





Radiation Angle



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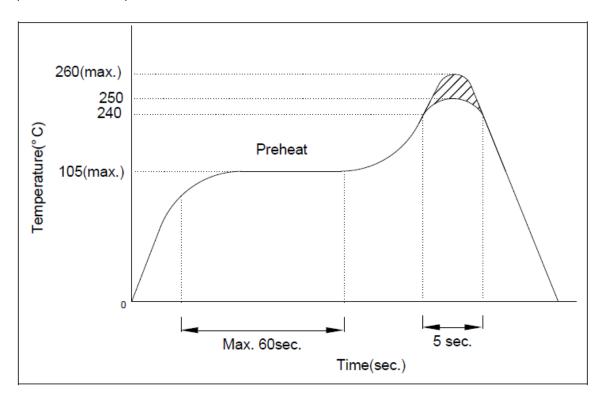
### **SOLDERING CONDITIONS – LAMP TYPE LED**

#### PRECAUTION FOR USE

#### Recommended Soldering Condition

# 1.1 Wave Soldering

Basic spec is  $\leq$  5 sec. when 260°C. If temperature is higher, time should be shorter (+10°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.

