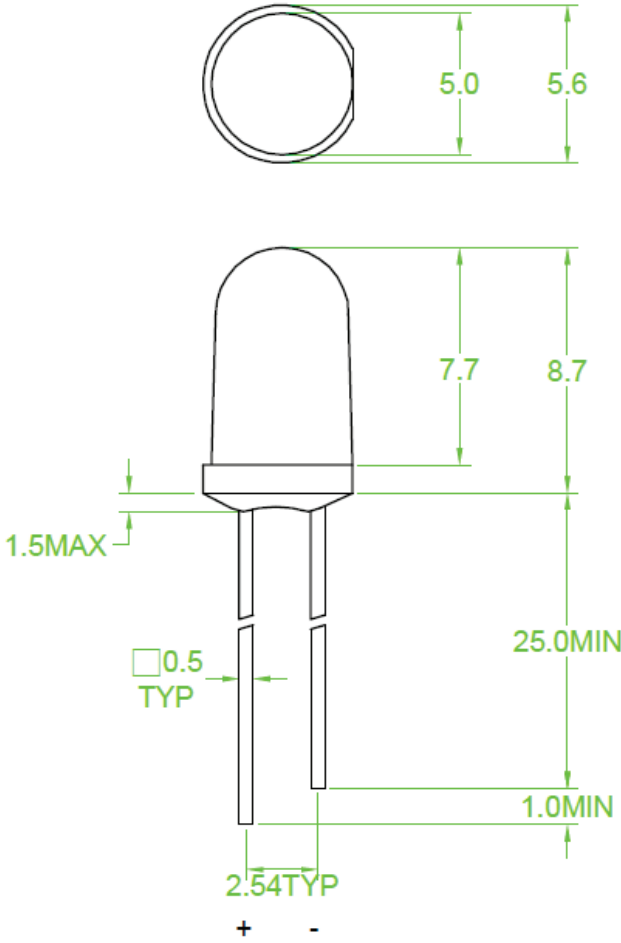


**SPECIFICATIONS** **CL5004C-12D**
**OUTLINES DIMENSIONS**
**DESCRIPTION**

- Super bright LED Lamp
- Round Type
- T1-3/4 (5mm) Diameter
- Lens Color: Water Clear
- With Flange
- Solder leads without stand-off



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
CL5004C-12D	InGaAlP	Orange	Water Clear	12°



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**ABSOLUTE MAXIMUM RATINGS**
**(TA=25°C)**

Parameter	Symbol	Max Rating	Unit
Power Dissipation	PD	120	mW
Pulse Current Forward Current	IFP	90	mA
Continuous Forward Current	IF	50	mA
Reverse Voltage	VR	5	V
Operating Temperature Range	TOPR	-40~+85	°C
Storage Temperature Range	TSTG	-40~+110	°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	21000	32000	-	mcd
Forward Voltage	VF	IF = 20mA	-	2.2	2.6	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	µA
Viewing Angle	2θ1/2	IF = 20mA	-	12	-	deg
Dominant Wavelength	λD	IF = 20mA	-	605	-	nm

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



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## OPTICAL CHARACTERISTIC CURVES

Fig.1 Forward current vs. Forward Voltage

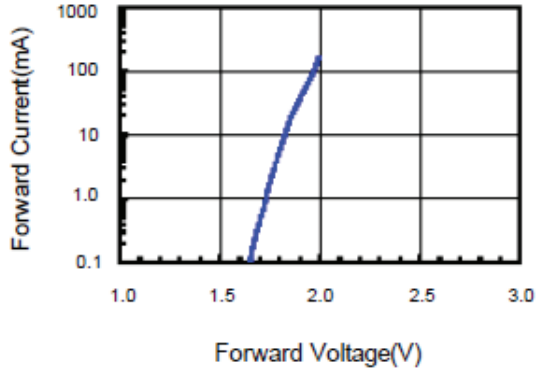


Fig.2 Relative Intensity vs. Forward Current

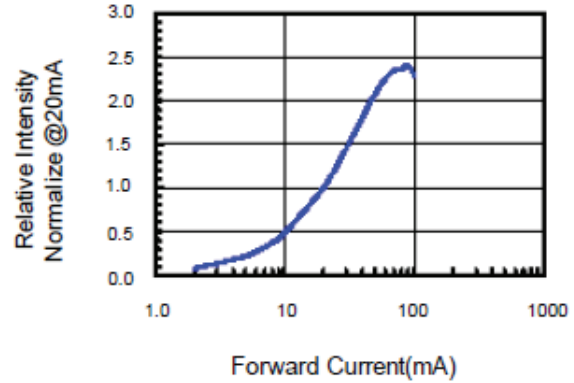


Fig.3 Forward Voltage vs. Temperature

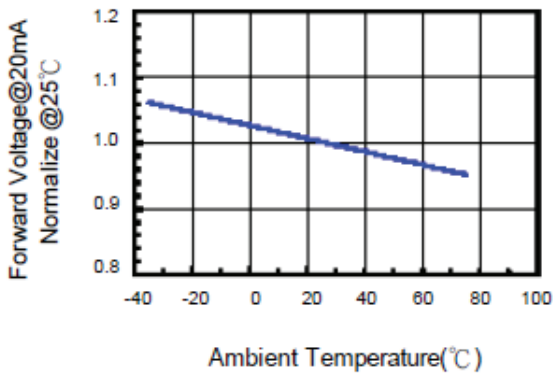


Fig.4 Relative Intensity vs. Temperature

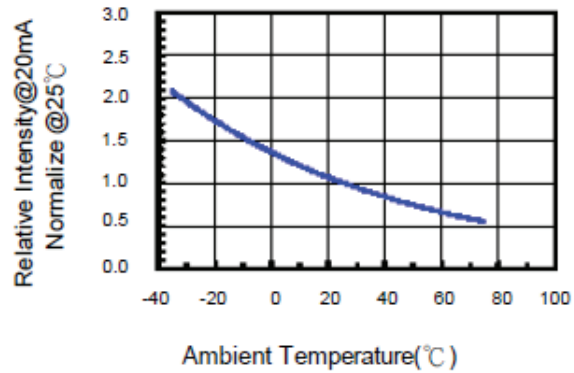
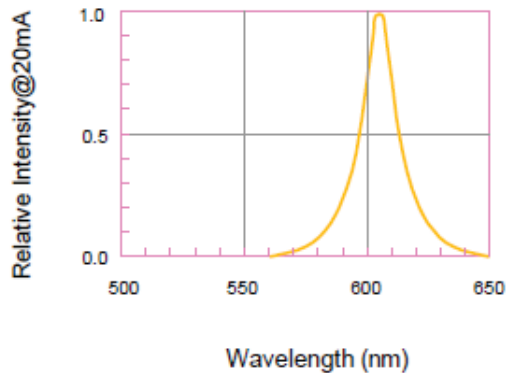


Fig.5 Relative Intensity vs. Wavelength



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## SOLDERING CONDITIONS – LAMP TYPE LED

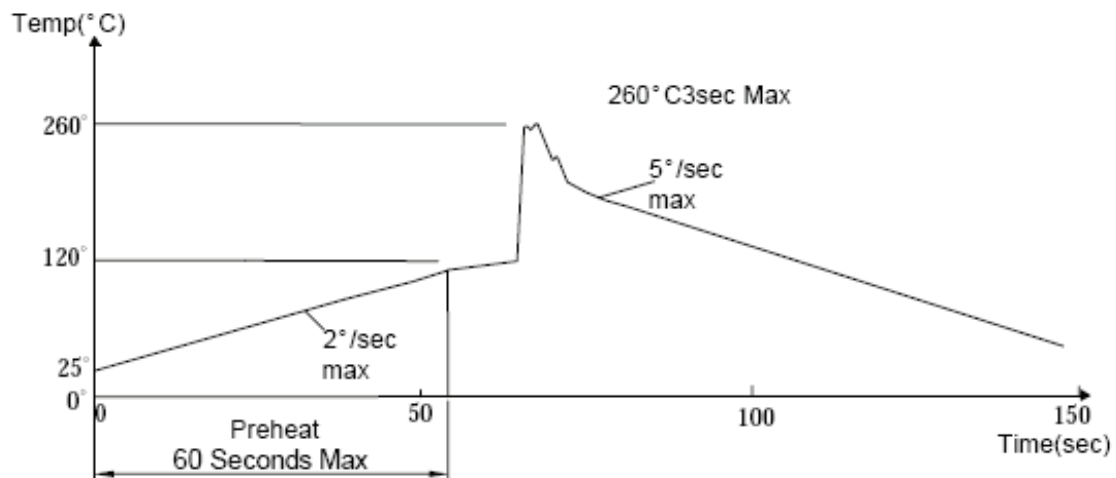
### SOLDERING CONDITION (Pb-Free)

#### 1. Iron:

Soldering Iron: 30W Max  
Temperature 350°C Max  
Soldering Time: 3 Seconds Max (One Time)  
Distance: 2mm Min (From solder joint to body)

#### 2. Wave Soldering Profile

Dip Soldering  
Preheat: 120°C Max  
Preheat time: 60 seconds Max  
Ramp-up  
2°C/sec (Max)  
Ramp-Down: -5°C/sec (Max)  
Solder Bath: 260°C Max  
Dipping Time: 3 seconds Max  
Distance: 2mm Min (from solder joint to body)



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