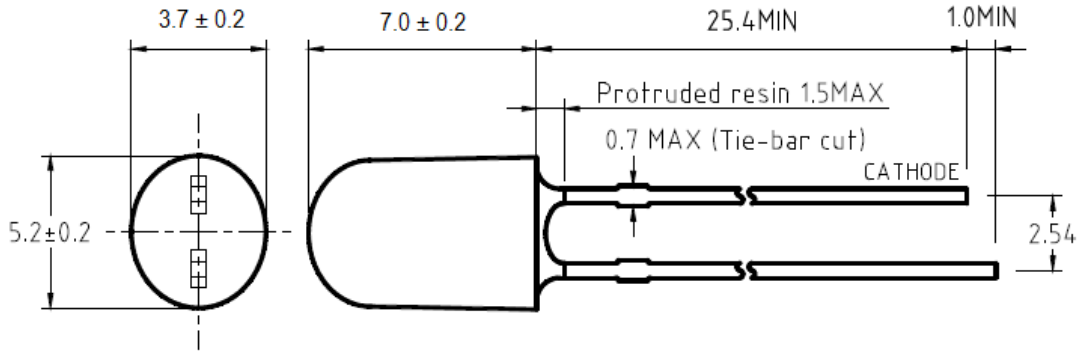


**SPECIFICATIONS** **CLV54GT2D-110**

### OUTLINES DIMENSIONS



Luminous Intensity Bin Table		
IF=20mA		
Rank Name	Min (mcd)	Max (mcd)
S	1900	2500
T	2500	3200
U	3200	4200

Color Bin Table		
IF=20mA		
Rank Name	Min (mcd)	Max (mcd)
1	515	520
2	520	525
3	525	530
4	530	535

\* Tolerance for each bin limit is  $\pm 1$ nm

\* Tolerance for each bin limit is  $\pm 15\%$

**Notes:**

1. All Dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25$ 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
CLV54GT2D-110	InGaN	True Green	Green Diffused	110/40°



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

Parameter	Symbol	Max Rating	Unit
Power Dissipation	$P_D$	114	mW
Pulse Current Forward Current	$I_{FP}$	100	mA
Continuous Forward Current	$I_F$	30	mA
Reverse Voltage	$V_R$	5.0	V
Operating Temperature Range	$T_{OPR}$	-30 ~ +85	°C
Storage Temperature Range	$T_{STG}$	-40 ~ +100	°C

 $I_{FP}$  = Pulse Width  $\leq$  10 ms, Duty Ratio  $\leq$  1/10.      Soldering Condition: 260 °C/ 5sec

**OPTICAL-ELECTRICAL CHARACTERISTICS**
**(TA=25°C)**

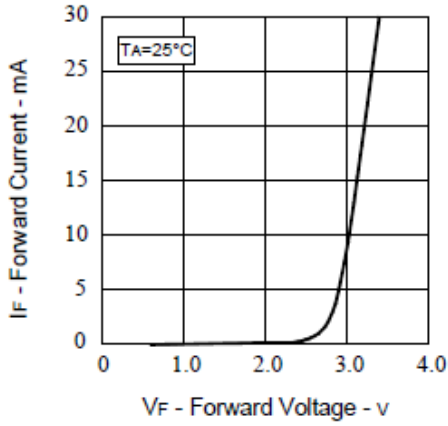
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Luminous Intensity	$I_v$	$I_F = 20\text{mA}$	1900	2500	4200	mcd
Forward Voltage	$V_F$	$I_F = 20\text{mA}$		3.2	3.8	V
Reverse Leakage Current	$I_R$	$V_R = 5\text{V}$			50	$\mu\text{A}$
Viewing Angle	$2\theta_{1/2}$	$I_F = 20\text{mA}$		110/40°		deg.
Peak Wavelength	$\lambda_P$	$I_F = 20\text{mA}$		518		nm
Dominant Wavelength	$\lambda_D$	$I_F = 20\text{mA}$	515	525	535	nm
Spectral Line half-width	$\Delta\lambda$	$I_F = 20\text{mA}$		30		nm

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

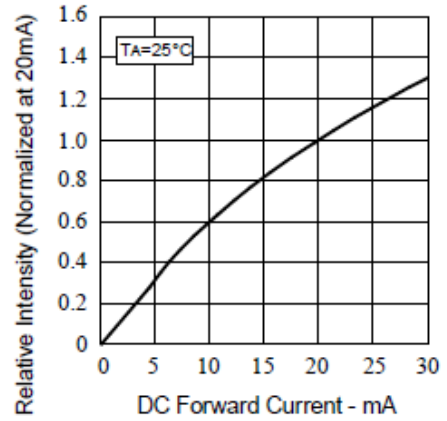

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## OPTICAL CHARACTERISTIC CURVES

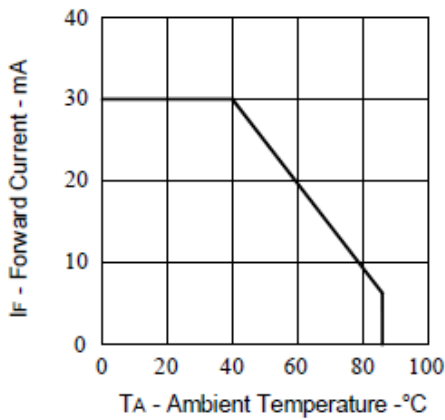
Forward Current vs. Forward Voltage



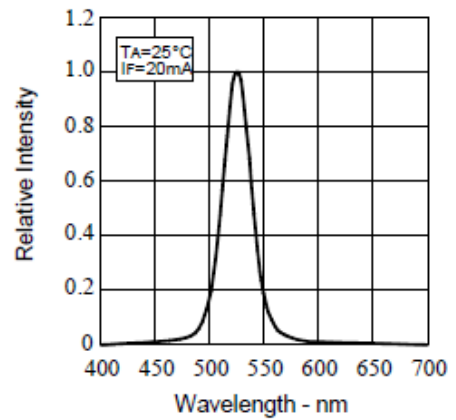
Relative Intensity vs. Forward Current



Forward Current vs. Ambient Temperature



Relative Intensity vs. Wavelength



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## SOLDERING CONDITIONS – LAMP TYPE LED

\* Solder the LED no closer than 3mm from the base of the epoxy bulb. Soldering beyond the base of the tie bar is recommended.

\* Recommended soldering conditions

Dip Soldering	
Pre-Heat	100 °C Max
Pre-Heat Time	60 Second Max
Solder Bath Temperature	260 °C Max
Dipping Time	5 Second Max
Dipping Position	No lower than 3mm from the base of the epoxy

Hand Soldering		
	3mm Series	Others
Temperature Soldering Time Position	300 °C Max 3 Second Max No closer than 3mm from the base of the epoxy	350 °C Max 3 Second Max No closer than 3mm from the base of the epoxy

\* Do not apply any stress to the lead. Particularly when heated.

\* The LED must not be repositioned after soldering.

\* After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature.

\* Direct soldering onto a PC board should be avoided. Mechanical stress to the resin may be caused by the PC board warping or from the clinching and cutting of the leadframes. When it is absolutely necessary, the LEDs may be mounted in this fashion, but, the user will assume responsibility for any problems. Direct soldering should only be done after testing has confirmed that no damage, such as wire bond failure or resin deterioration, will occur. LEDs should not be soldered directly to double sided PC boards because the heat will deteriorate the epoxy resin.

\* When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.

\* Cut the LED leadframes at room temperature. Cutting the leadframes at high temperature may cause LED failure.



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