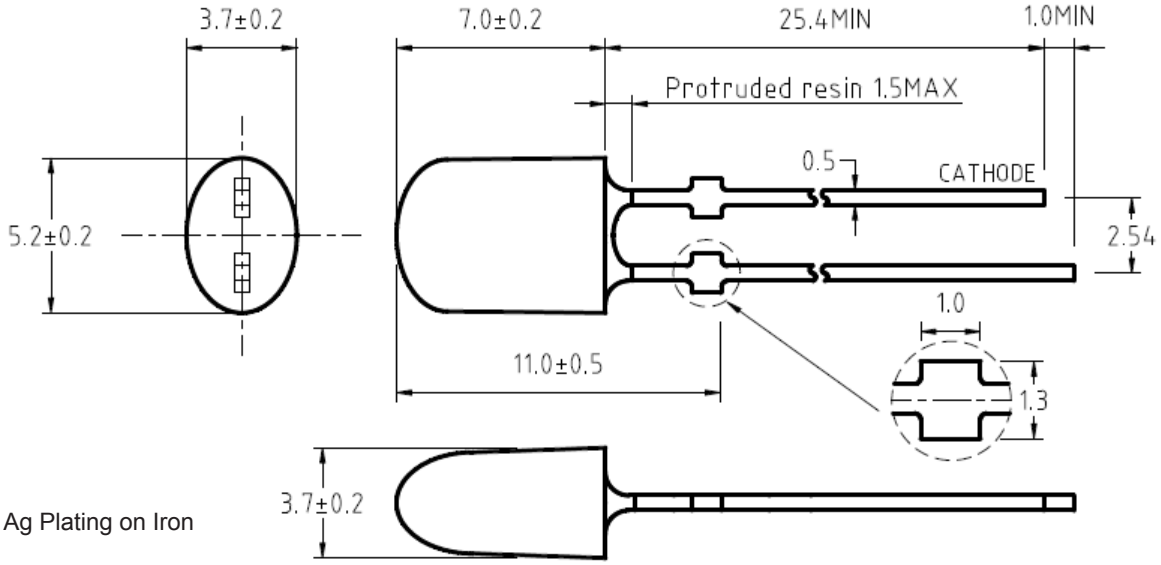
SPECIFICATION CLV54SB2DS-110

OUTLINES DIMENSIONS / Lamps with Standoffs



Lead Frame: Ag Plating on Iron

Notes:
1. All Dimensions are in millimeters (inches).
2. Tolerance is ± 0.25mm (0.01”) unless otherwise noted.
3. Specifications are subject to change without notice.

Luminous Intensity Bin Table

IF=20mA

Rank Name	Min (mcd)	Max (mcd)
L	400	520
M	520	680
N	680	880
P	880	1150

* Tolerance for each bin limit is ±15%

Color Bin Table

IF=20mA

Rank Name	Min (mcd)	Max (mcd)
1	460	465
2	465	470
3	470	475
4	475	480

* Tolerance for each bin limit is ± 1nm

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CLV54SB2DS-110	InGaN	Blue	Epoxy Resin	110/40°

RoHS Compliant Lead Free

ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: www.chromeled.com

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	50	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 ≤ 10 ms, Duty Ratio ≤1/10.	Soldering Condition: 260 °C/ 5sec		

*I_{FP} = Pulse Width ≤ 10ms, Duty Ratio ≤ 1/10

OPTICAL-ELECTRICAL CHARACTERISTICS (TA=25°C)

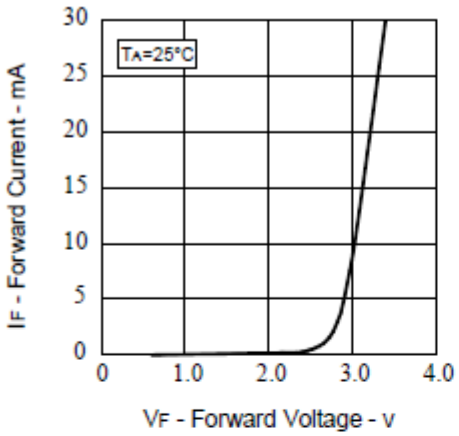
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Luminous Intensity	I_V	I_F = 20mA	400	600	1150	mcd
Forward Voltage	V_F	I_F = 20mA		3.2	3.8	V
Reverse Leakage Current	I_R	V_R = 5V			50	μA
Viewing Angle	2θ1/2	I_F = 20mA		110/40°		deg.
Peak Wavelength	λ_P	I_F = 20mA		465		nm
Dominant Wavelength	λ_D	I_F = 20mA	460	470	480	nm
Spectral Line half-width	$\Delta\lambda$	I_F = 20mA		20		nm

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

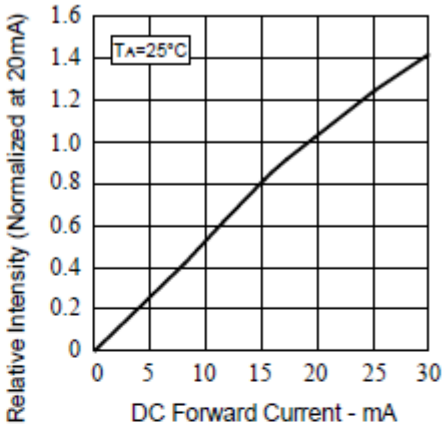
RoHS Compliant Lead Free

OPTICAL CHARACTERISTIC CURVES

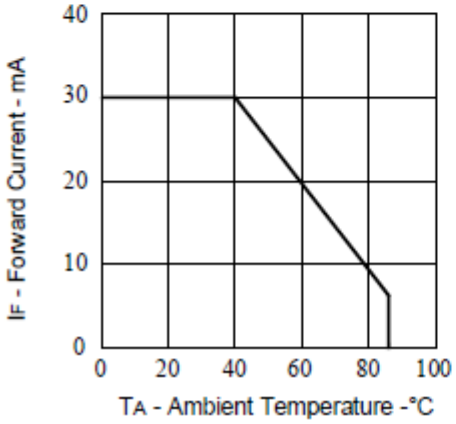
Forward Current vs.Forward Voltage



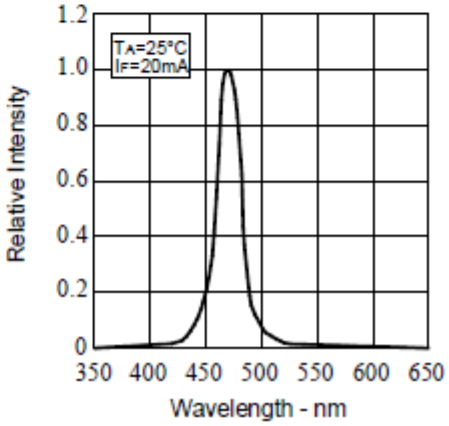
Relative Intensity vs.Forward Current



Forward Current vs.Ambient Temperature



Relative Intensity vs.Wavelength



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
Dippng 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.