

Data Sheet

Customer: _____

Part No: **CL-SP192RGB-02(2mA)** _____

Sample No: _____

Description: _____

Item No: _____

Customer			
Check	Inspection	Approval	Date



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE DEVICES

Features

- _1.6mmx0.8mm SMT LED,0.70mm THICKNESS.
- _LOW POWER CONSUMPTION.
- _WIDE VIEWING ANGLE.
- _IDEAL FOR BACKLIGHT AND INDICATOR.
- _VARIOUS COLORS AND LENS TYPES AVAILABLE.
- _PACKAGE : 4000PCS / REEL.
- _RoHS COMPLIANT.

Description

The Blue source color devices are made with GaN on Sapphire Light Emitting Diode.

The Green source color devices are made with InGaN on SiC Light Emitting Diode.

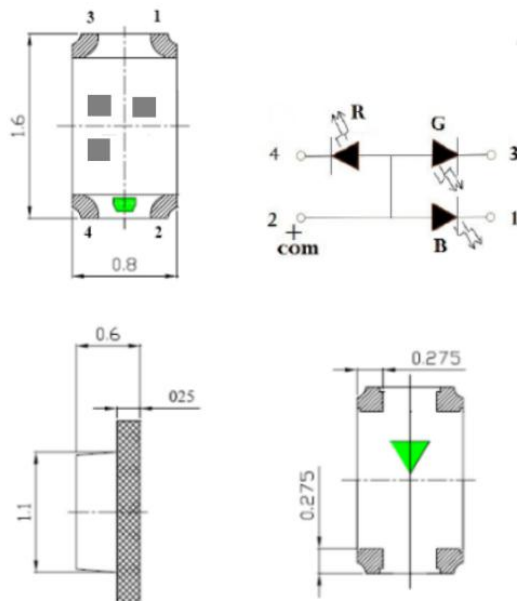
The Hyper Orange source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

Static electricity and surge damage the LEDS.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.1 (0.004") unless otherwise noted.
3. Specifications are subject to change without notice.

SP192RGB-02(2mA)

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 2mA		Viewing Angle
			Min.	MAX.	2 θ 1/2
CL-SP192RGB-02	BLUE (GaN)	WATER CLEAR	11.5	22.5	120
	GREEN (InGaN)		57	90	
	RED (InGaAlP)		11.5	22.5	

Note:

1. $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Electrical / Optical Characteristics at T_A=25°C

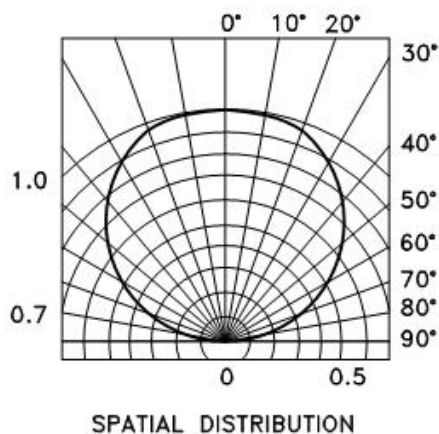
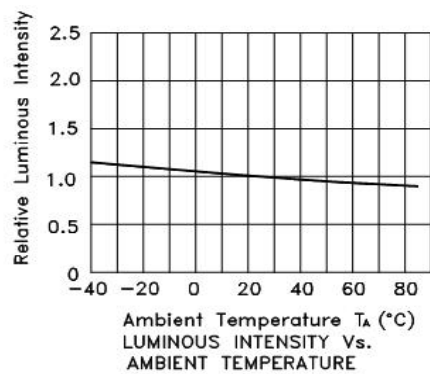
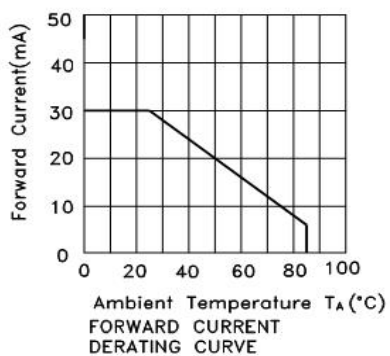
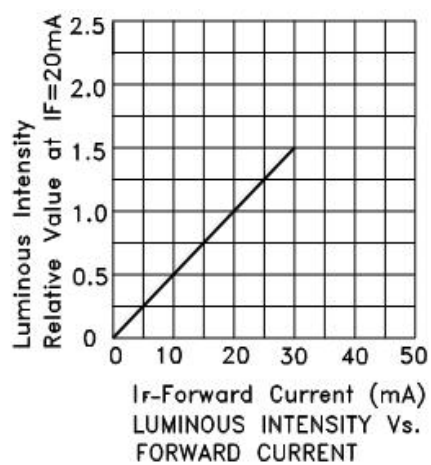
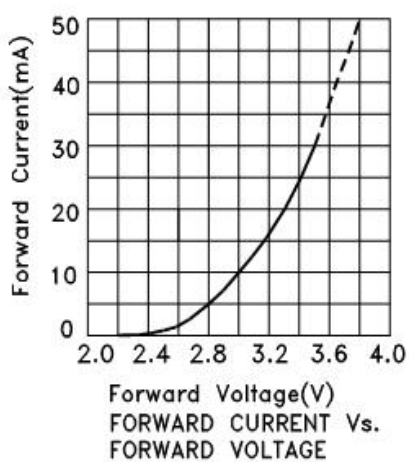
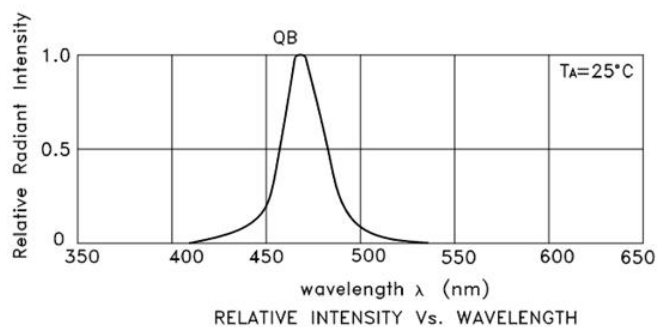
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	Blue Green Red			nm	IF=2mA
λ_D	Dominant Wavelength	Blue Green Red	464 516 617	474 524 625	nm	IF=2mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Blue Green Red	25 38 20		nm	IF=2mA
C	Capacitance	Blue Green Red	100 45 25		pF	V _F =0V;f=1MHz
V _F	Forward Voltage	Blue Green Red	2.4 2.4 1.7	3.1 3.0 2.1	V	IF=2mA
I _R	Reverse Current	Blue Green Red		5 5 5	uA	V _R = 5V

Absolute Maximum Ratings at T_A=25°C

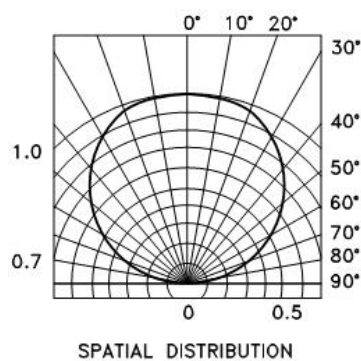
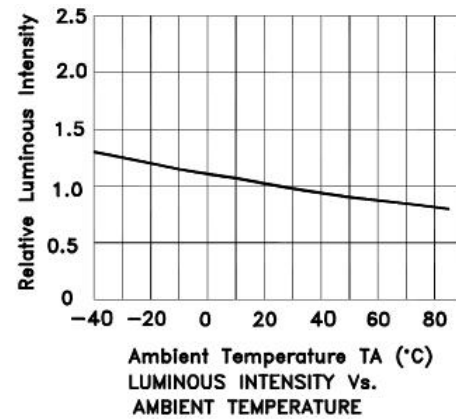
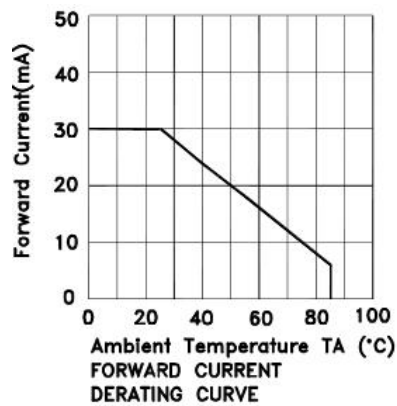
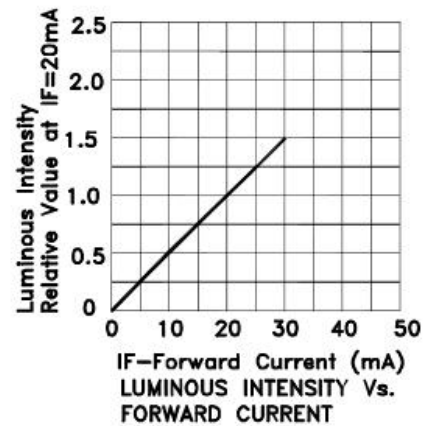
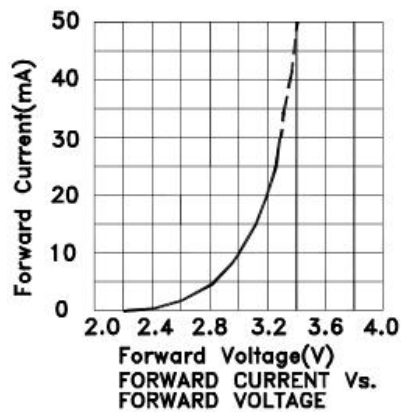
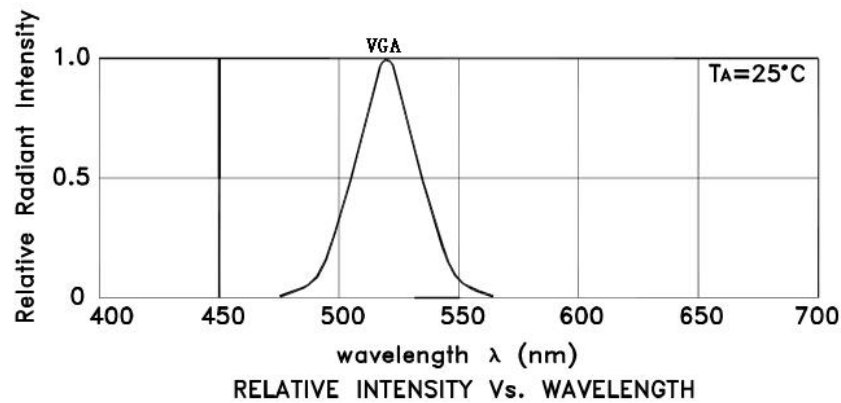
Parameter	Blue	Green	Red	Units
Power dissipation	135	135	75	mW
DC Forward Current	30	30	30	mA
Peak Forward Current [1]	140	140	140	mA
Reverse Voltage	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C			

Note:

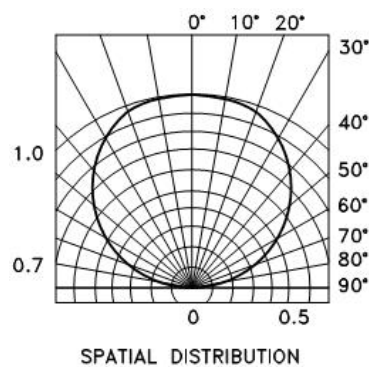
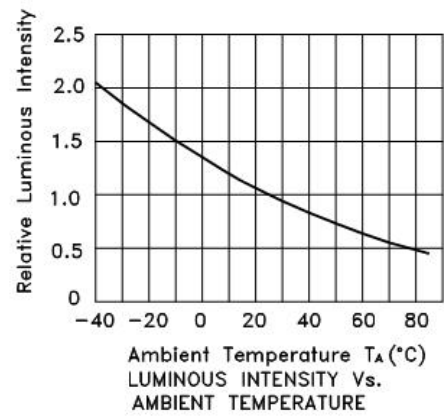
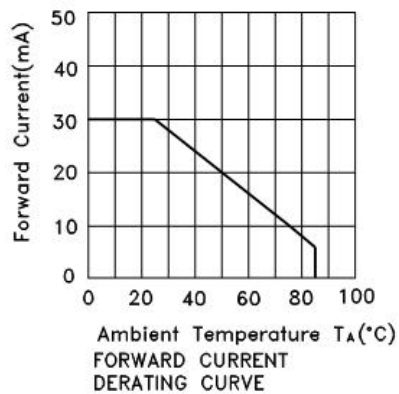
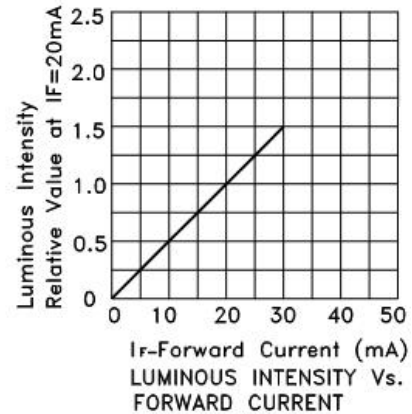
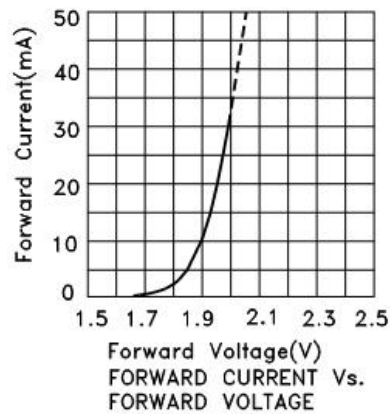
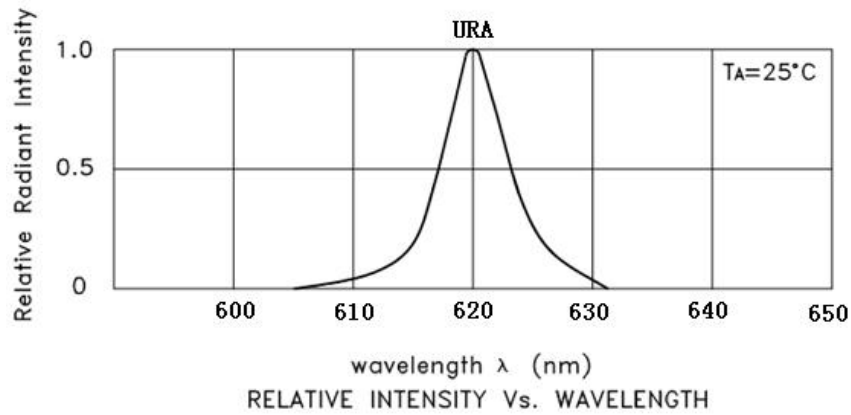
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

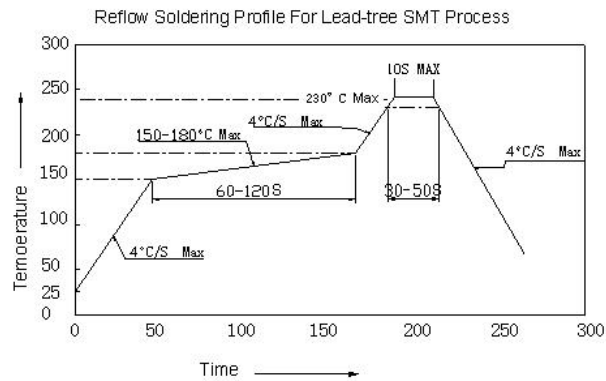
Blue


Green



Red

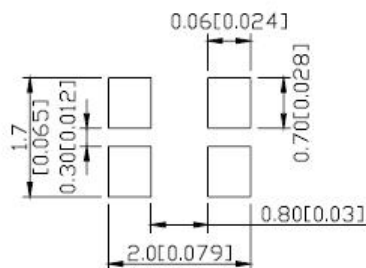



NOTES:

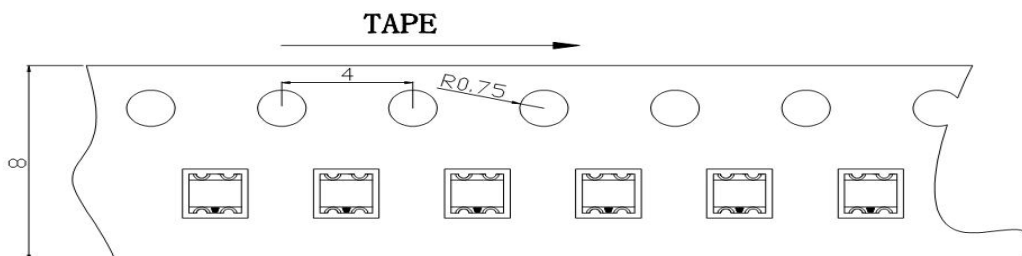
1. We recommend the reflow temperature 245° c(±5) The maximum soldering temperature should be limited to 260° c
2. Don't cause stress too the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 time or less.

Recommended Soldering Pattern

(Units : mm)


Tape Specifications

(Units : mm)



Package: 4000 pcs/reel

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity / luminous flux or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity / Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.