

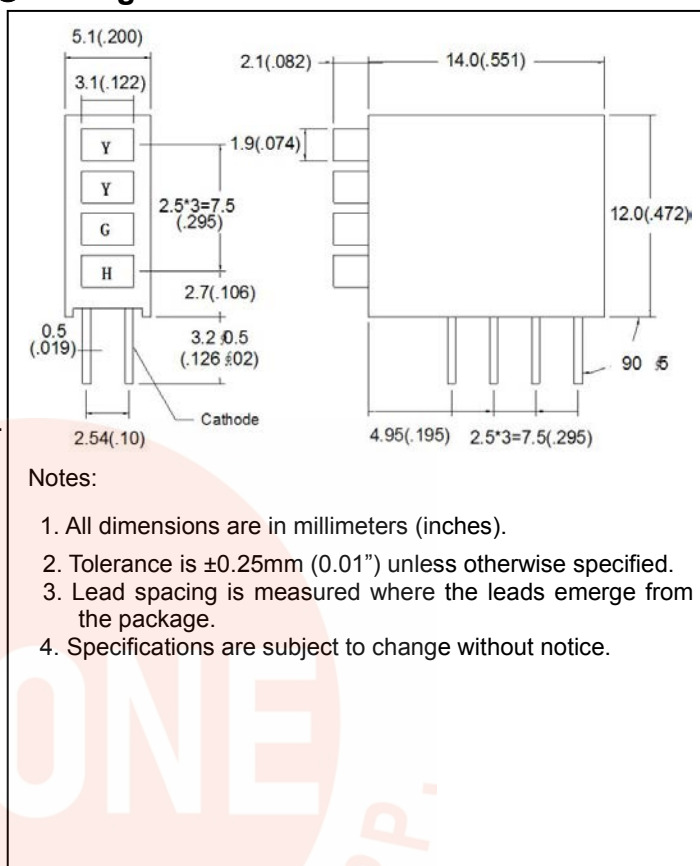
● Features:

1. Chip material: GaP/GaP(Red)
and GaAsP/GaP (Yellow)
and GaP/GaP(Green)
2. Emitted color : Red and Yellow
and Green
3. Lens Appearance : Green Diffused
and Red Diffused
and Yellow Diffused
4. Designed for ease in circuit board assembly.
5. Black case enhance contrast ratio.
6. Solid state light source.
7. Reliable and rugged.
8. This product don't contained restriction
substance, compliance RoHS standard.

● Applications:

1. TV set
2. Monitor
3. Telephone
4. Computer
5. Circuit board

● Package dimensions



● Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Green	Red	Unit
Power Dissipation	Pd	80	80	mW
Forward Current	I _F	30	30	mA
Peak Forward Current*1	I _{FP}	150	150	mA
Reverse Voltage	V _R	5		V
Operating Temperature	Topr	-40°C~85°C		
Storage Temperature	Tstg	-40°C~100°C		
Soldering Temperature	Tsol	260°C max(for 5 seconds)		
Hand Soldering Temperature	Tsol	350°C max(for 3 seconds)		

*1Condition for I_{FP} is pulse of 1/10 duty and 0.1msec width.

● Electrical and optical characteristics(Ta=25°C)

Parameter	Symbol	Condition	Color	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=20\text{mA}$	Green Red Yellow	-	2.2 2.3	2.6 2.6	V
Luminous Intensity	I_v	$I_F=20\text{mA}$	Green Red Yellow	-	40 3.5 30	-	mcd
Reverse Current	I_R	$V_R=5\text{V}$	Green Red Yellow	-	-	100	μA
Peak Wave Length	λ_p	$I_F=20\text{mA}$	Green Red Yellow	-	568 700 585	-	nm
Dominant Wave Length	λ_d	$I_F=20\text{mA}$	Green Red Yellow	560 - 582	650	576 - 595	nm
Spectral Line Half-width	$\Delta\lambda$	$I_F=20\text{mA}$	Green Red Yellow	-	30 45 35	-	nm
Viewing Angle	$2\theta_{1/2}$	$I_F=20\text{mA}$	Green Red Yellow	-	35	-	deg

● Typical Electro-Optical Characteristics Curves

Fig.1 Relative intensity vs. Wavelength

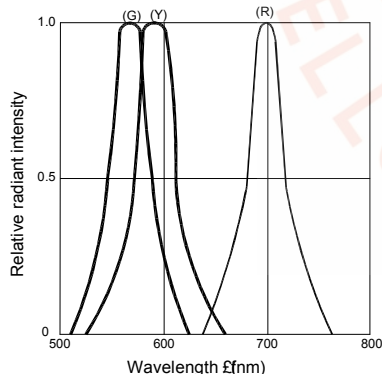


Fig.2 Forward current derating curve vs. Ambient temperature

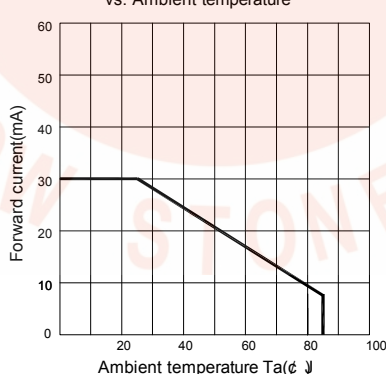


Fig.3 Forward current vs. Forward voltage

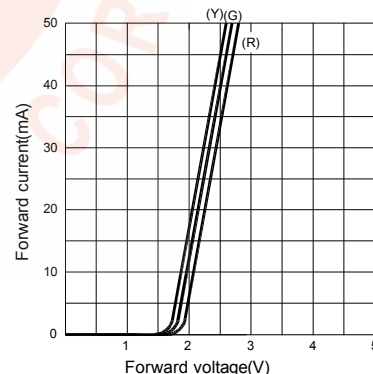


Fig.4 Relative luminous intensity vs. Ambient temperature

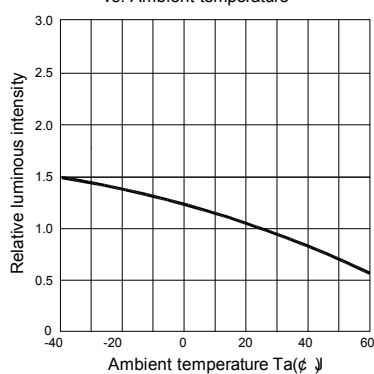


Fig.5 Relative luminous intensity vs. Forward current

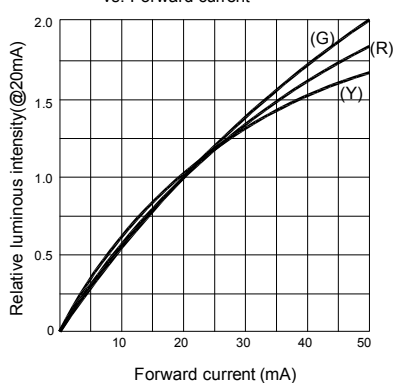
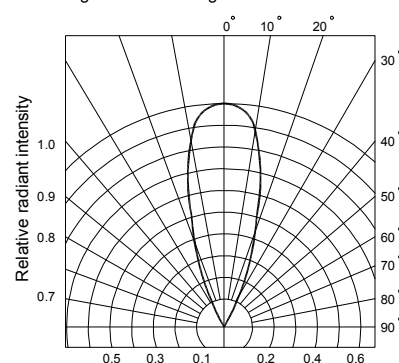
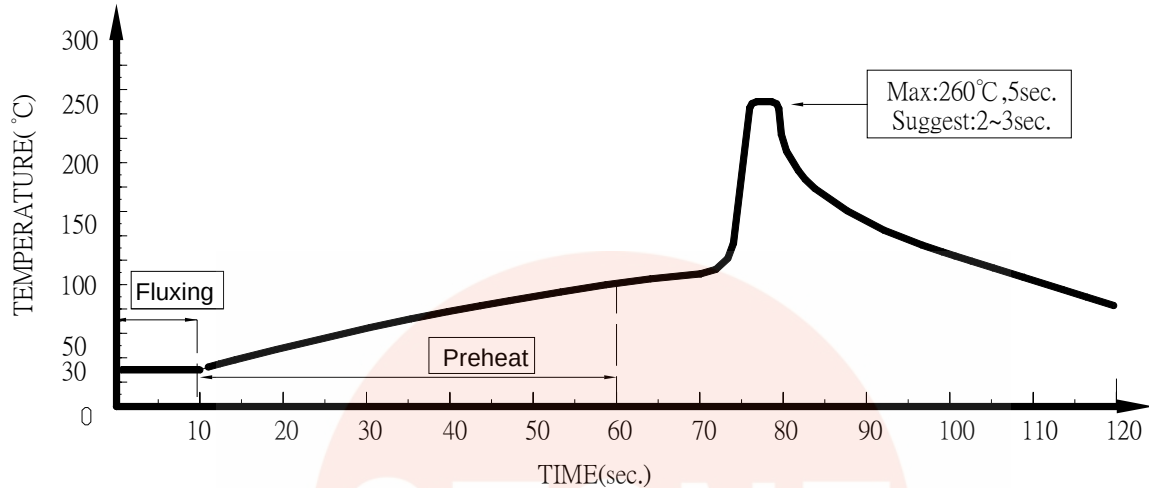


Fig.6 Radiation diagram



● Dip Soldering



1. Please avoid any external stress applied to the lead-frames and epoxy while the LEDs are at high temperature, especially during soldering
2. DIP soldering and hand soldering should not be done more than one time.
3. After soldering, avoid the epoxy lens from mechanical shock or vibration until the LEDs are back to room temperature.
4. Avoid rapid cooling during temperature ramp-down process
5. Although the soldering condition is recommended above, soldering at the lowest possible temperature is feasible for the LEDs

● IRON Soldering

A : Max : 350°C Within 3 sec. One time only.

B : For 3mm LED without flange, if the LED epoxy lays flat on the PCB, the welding condition is 350°C within 2 seconds, one time only.

