

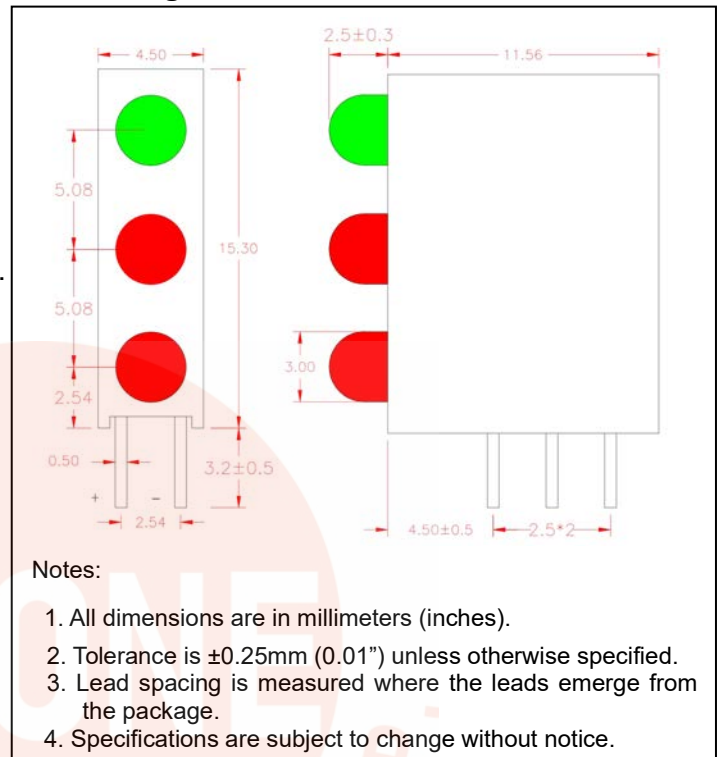
● **Features:**

1. Chip material: GaPGaP (Green)
and GaPGaP (Red)
2. Emitted color : Green and Red
3. Lens Appearance : Green Diffused
and Red 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($T_a=25^\circ\text{C}$)**

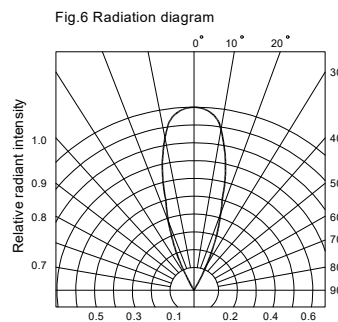
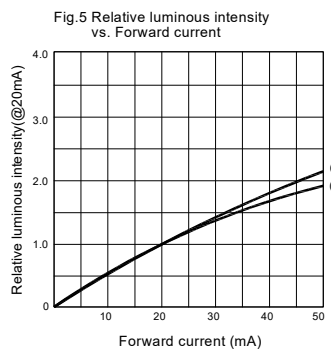
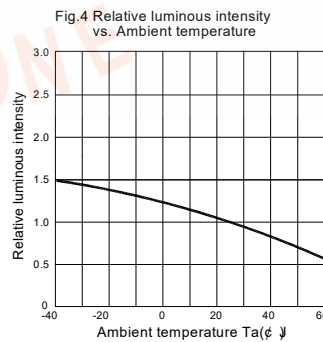
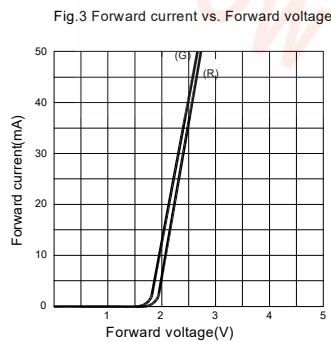
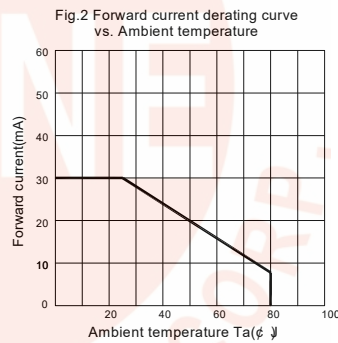
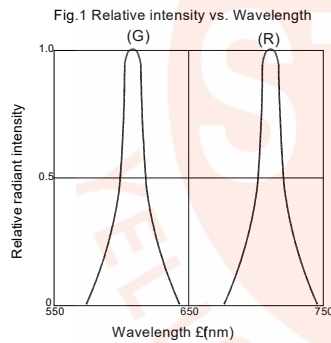
Parameter	Symbol	Green	Red	Unit
Power Dissipation	P_d	80	80	mW
Forward Current	I_F	30	30	mA
Peak Forward Current ^{*1}	I_{FP}	150	150	mA
Reverse Voltage	V_R	5		V
Operating Temperature	T_{opr}	$-40^\circ\text{C} \sim 85^\circ\text{C}$		
Storage Temperature	T_{stg}	$-40^\circ\text{C} \sim 100^\circ\text{C}$		
Soldering Temperature	T_{sol}	260°C max(for 5 seconds)		
Hand Soldering Temperature	T_{sol}	350°C max(for 3 seconds)		

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

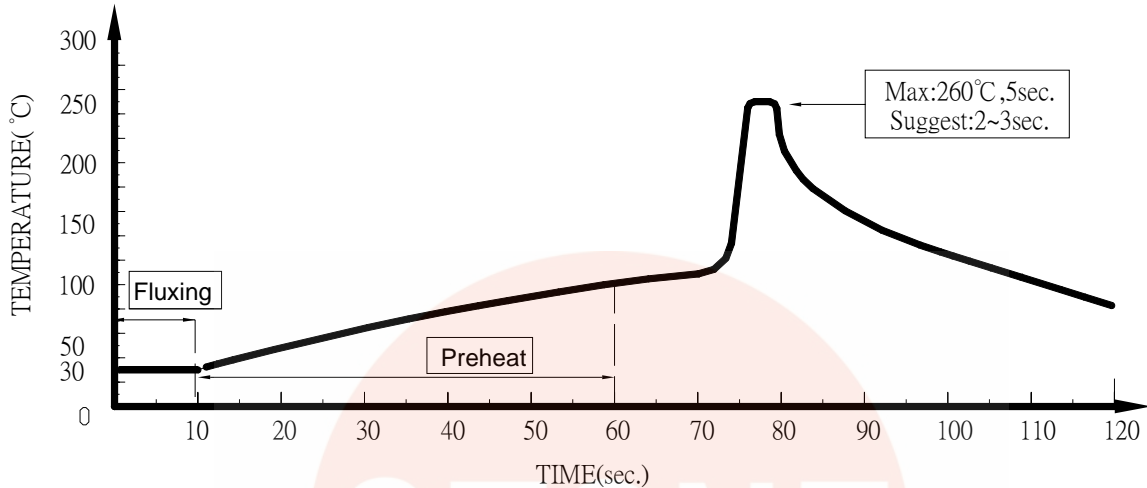
● **Electrical and optical characteristics(Ta=25°C)**

Parameter	Symbol	Condition	Color	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=20\text{mA}$	Green Red	1.8 1.8	- -	2.6 2.4	V
Luminous Intensity	I_v	$I_F=20\text{mA}$	Green Red	40 1.0	- -	80 10	mcd
Reverse Current	I_R	$V_R=5\text{V}$	Green Red	- -	- -	100	μA
Peak Wave Length	λ_p	$I_F=20\text{mA}$	Green Red	- -	570 700	-	nm
Dominant Wave Length	λ_d	$I_F=20\text{mA}$	Green Red	565 630	- -	575 650	nm
Spectral Line Half-width	$\Delta\lambda$	$I_F=20\text{mA}$	Green Red	- -	30 35	-	nm
Viewing Angle	$2\theta_{1/2}$	$I_F=20\text{mA}$	Green Red	- -	35 50	-	deg

● **Typical electro-optical characteristics curves**



● 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.

