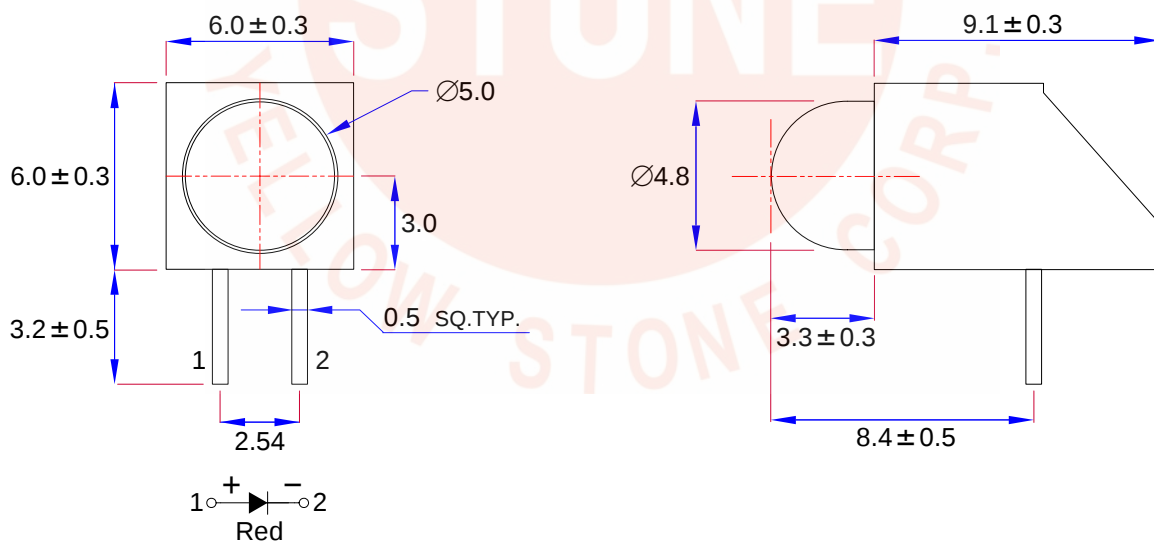


● Features:

1. Chip material: GaAsP/GaP
2. Emitted color : Hi-Eff Red
3. Lens Appearance : Red Diffused
4. Low power consumption.
5. High efficiency.
6. Versatile mounting on P.C. Board or panel.
7. Low current requirement.
8. 4.8mm diameter package
9. This product don't contained restriction substance, compliance RoHS standard.

● Package dimensions:



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 mm (0.01 "") unless otherwise specified.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.



● Absolute Maximum Ratings($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Rating	Unit
Power Dissipation	P_d	80	mW
Forward Current	I_F	30	mA
Peak Forward Current	I_{FP}	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)	

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

● Electrical and optical characteristics($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=10\text{mA}$	-	1.9	2.5	V
Luminous Intensity	I_v	$I_F=10\text{mA}$	-	35	-	mcd
Reverse Current	I_R	$V_R=5\text{V}$	-	-	100	μA
Peak Wave Length	λ_p	$I_F=10\text{mA}$	-	640	-	nm
Dominant Wave Length	λ_d	$I_F=10\text{mA}$	617	-	638	nm
Spectral Line Half-width	$\Delta\lambda$	$I_F=10\text{mA}$	-	45	-	nm
Viewing Angle	$2\theta_{1/2}$	$I_F=10\text{mA}$	-	40	-	deg

● Typical Electro-Optical Characteristics Curves

Fig.1 Relative intensity vs. Wavelength

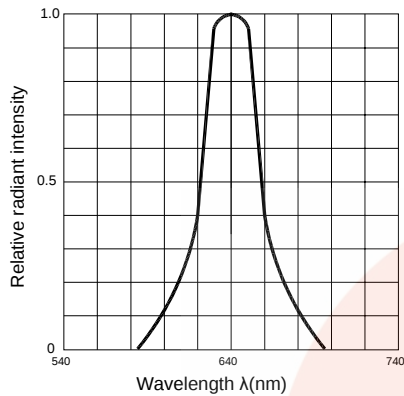


Fig.2 Forward current derating curve vs. Ambient temperature

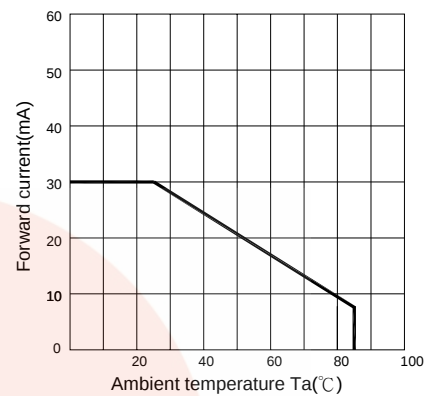


Fig.3 Forward current vs. Forward voltage

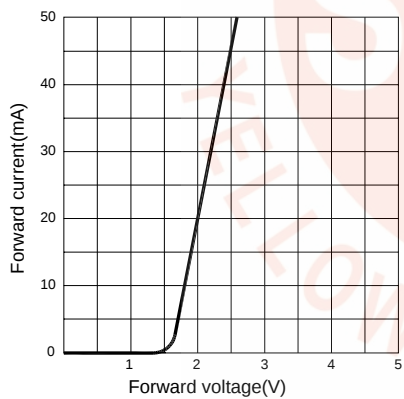


Fig.4 Relative luminous intensity vs. Ambient temperature

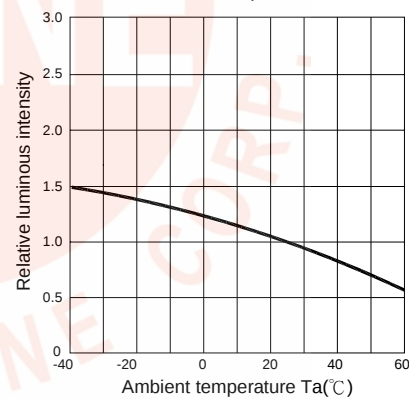


Fig.5 Relative luminous intensity vs. Forward current

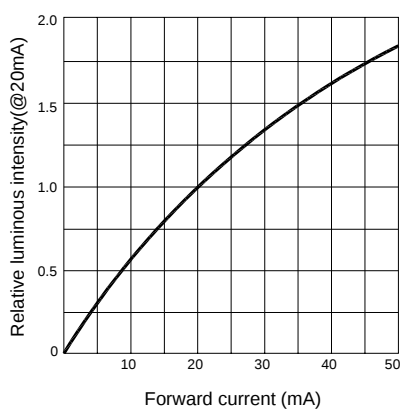
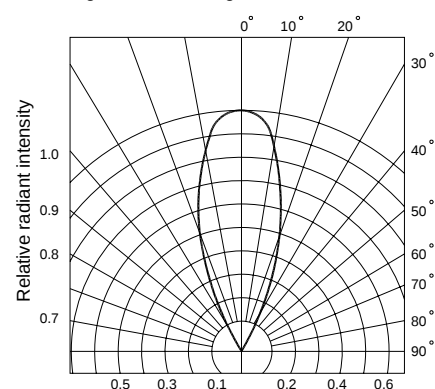
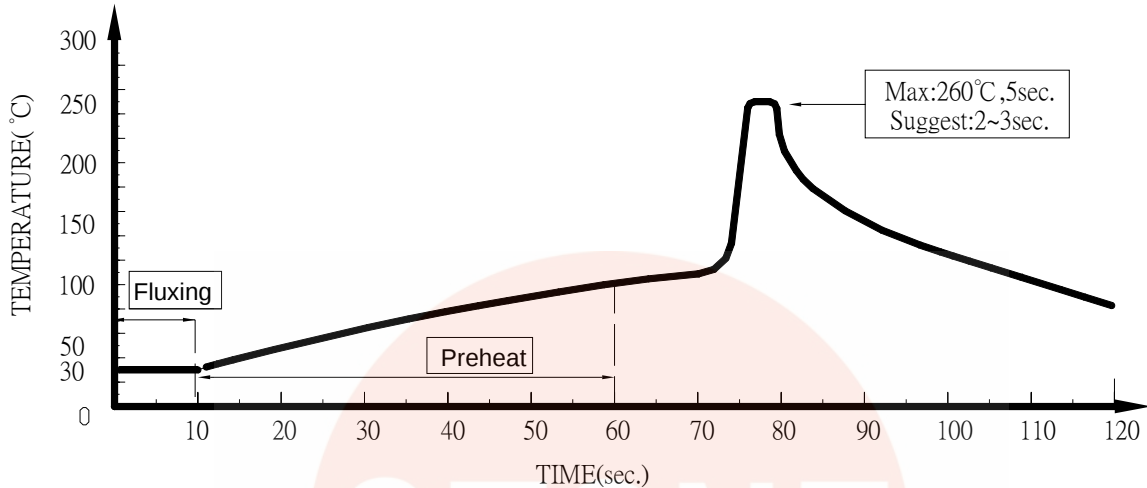


Fig.6 Radiation diagram



● 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.

