

PC120TR4-140

Hi-Eff Red

T1 (3mm) Right-Angle 0.20" Centerline PCB LEDs
55° viewing angle

DWG BY:
BL / GP
10-16-07

R&D:
BJ
01-25-13

QA:
RD
01-25-13

REVISION LTR: B
ECR#: 012513-RTD01
01-25-13

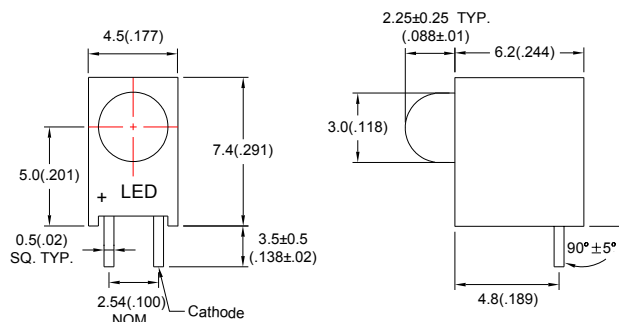
● Features:

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. 3mm diameter package.
9. This product is RoHS compliant.

● Applications:

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

● Package dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (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 ^{*1}	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)	

^{*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	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=20\text{mA}$	-	2.0	2.6	V
Luminous Intensity	I_v	$I_F=20\text{mA}$	-	60	-	mcd
Reverse Current	I_R	$V_R=5\text{V}$	-	-	100	μA
Peak Wave Length	λ_p	$I_F=20\text{mA}$	639	642	649	nm
Dominant Wave Length	λ_d	$I_F=20\text{mA}$	625	628	633	nm
Spectral Line Half-width	$\Delta\lambda$	$I_F=20\text{mA}$	-	42	-	nm
Viewing Angle	$2\theta_{1/2}$	$I_F=20\text{mA}$	-	55	-	deg
Radiant Intensity		$I_F=20\text{mA}$	-	-	-	mW/sr
Chromaticity Coordinates	X	$I_F=20\text{mA}$	-	0.70	-	
	Y		-	0.29	-	

● **Typical electro-optical characteristics curves**

Fig.1 Relative intensity vs. Wavelength

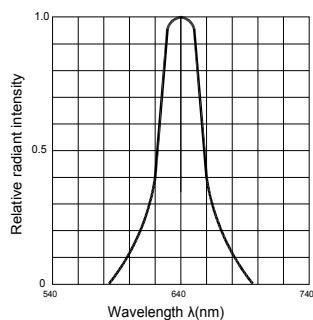


Fig.2 Forward current derating curve vs. Ambient temperature

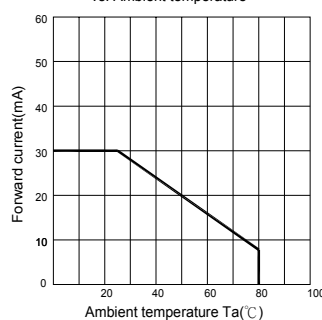


Fig.3 Forward current vs. Forward voltage

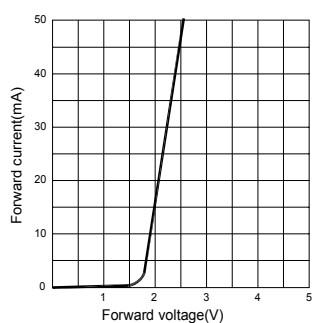


Fig.4 Relative luminous intensity vs. Ambient temperature

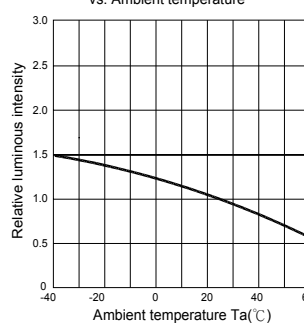


Fig.5 Relative luminous intensity vs. Forward current

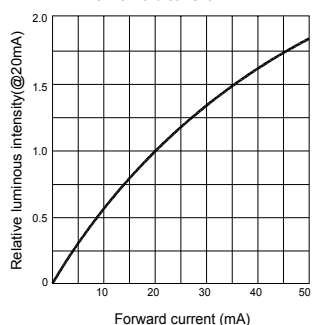
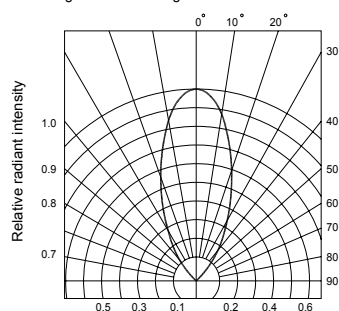


Fig.6 Radiation diagram



● **DIP soldering (Wave Soldering)**

Preheating : 120°C, within 120~180 sec.

Operation heating : 255°C±5°C within 5 sec. 260°C (Max)

Gradual Cooling (Avoid quenching).

