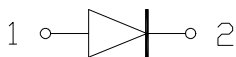
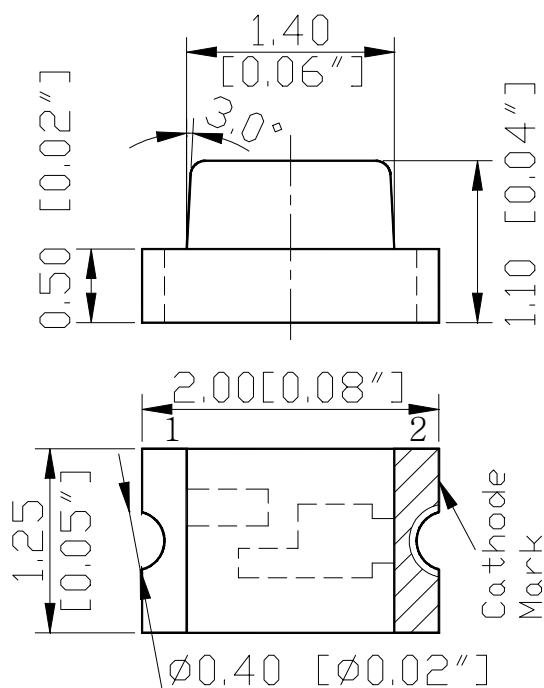
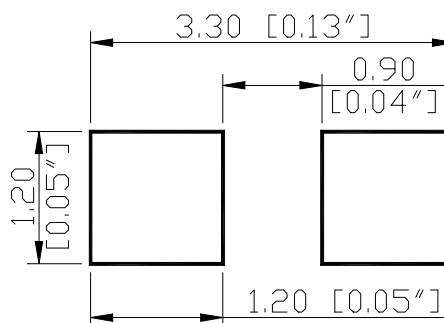


◆ Package outlines & Reflow Profile



RECOMMEND PAD LAYOUT



NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are $\pm 0.1\text{mm}$ (0.004inch) unless otherwise noted.

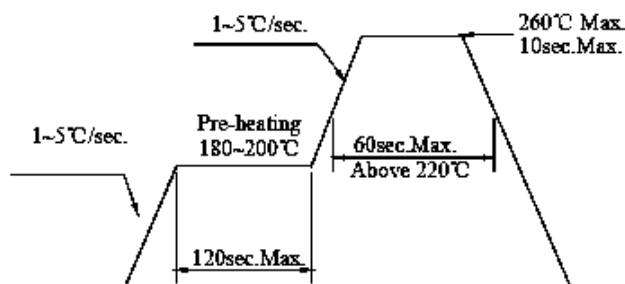
◆ Electrical Optical Characteristics (Ta=25°C)

Parameter	Symbol	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I_V	110	--	mcd	If=20mA
Forward Voltage	V_F	2.2	--	V	If=20mA
Reverse Current	I_R	--	10	uA	Vr=5V
Dominant Wavelength	λ_d	625	--	nm	If=20mA
Wavelength at peak emission	λ_p	635	--	nm	If=20mA
Viewing Angle	$2\theta_{1/2}$	140	--	Deg.	If=20mA
CIE Coordinates	X	--	--	--	If=20mA
	Y	--	--	--	

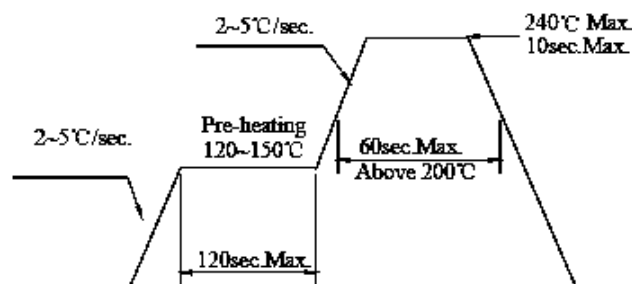
◆ Soldering Conditions (Maximum allowable soldering conditions)

1. Reflow soldering profile

<Lead-free solder>



<Lead solder>



2. Soldering Iron

Power dissipation of Iron should be smaller than 25W, and temperature should be controllable. The work must be finished within 3sec under 320°C, only once.

- Do not stress its resin while soldering.
- After soldering, do not warp the circuit board.
- Pay attention to electrostatic (ESD)

◆ Test items and results of reliability

Type	Test Item	REF. Standard	Test Conditions	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	JIS C 7021 (1977)A-4	-20°C ⇒ 25°C ⇒ 80°C ⇒ 25°C 30mins, 5mins, 30mins, 5mins	100 cycle	0/100
	Thermal Shock	MIL-STD-107D	-20°C ⇒ 80°C 15mins, 15mins	100 cycle	0/100
	High Humidity Heat Cycle	JIS C 7021 (1977)A-5	30°C ⇒ 65°C 90%RH 24hrs/1cycle	10 cycle	0/100
	High Temperature Storage	JIS C 7021 (1977)B-10	T _a =80°C	1000 hrs	0/100
	Humidity Heat Storage	JIS C 7021 (1977)B-11	T _a =60°C RH=90%	1000 hrs	0/100
	Low Temperature Storage	JIS C 7021 (1977)B-12	T _a =-30°C	1000 hrs	0/100
Operation Sequence	Life Test	JIS C 7035 (1985)	T _a =25°C I _F =20mA	1000 hrs	0/100
	High Humidity Heat Life Test	*	60°C RH=90% I _F =20mA	500 hrs	0/100
	Low Temperature Life Test	*	T _a =-20°C I _F =20mA	1000 hrs	0/100

◆ Typical Elector-Optical Characteristics Curves

(Ta = 25°C Unless Otherwise Noted)

Fig.1 Forward Current vs. Forward Voltage

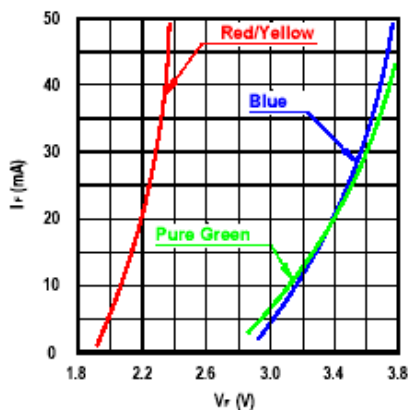


Fig.2 Relative Luminous Intensity vs. Forward Current

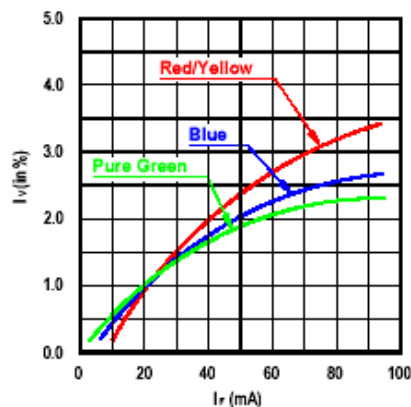


Fig.3 Relative Luminous Intensity vs. Wavelength

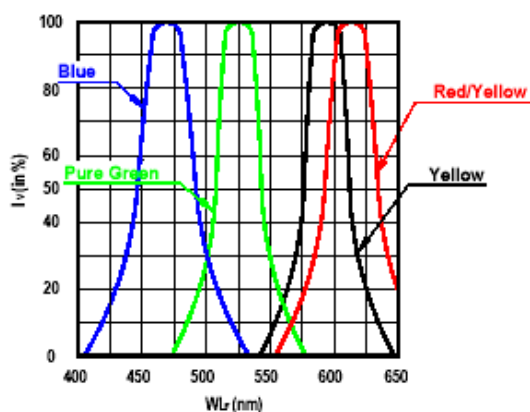


Fig.4 Relative Luminous Intensity vs. Ambient Temperature

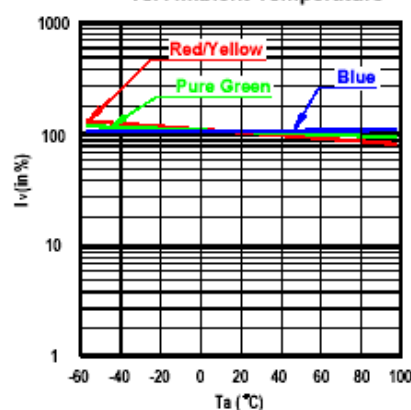


Fig.5 Maximum Forward Current vs. Ambient Temperature

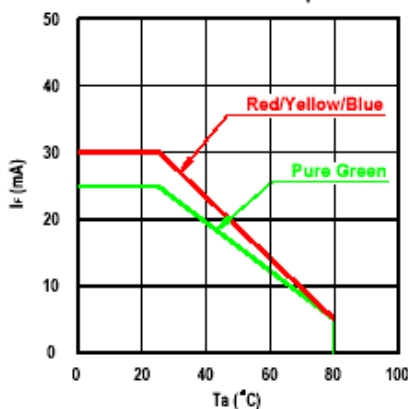


Fig.6 Relative Luminous Intensity vs. Radiation Angle

