

InGaAlP Red Light Emission

Unit in mm

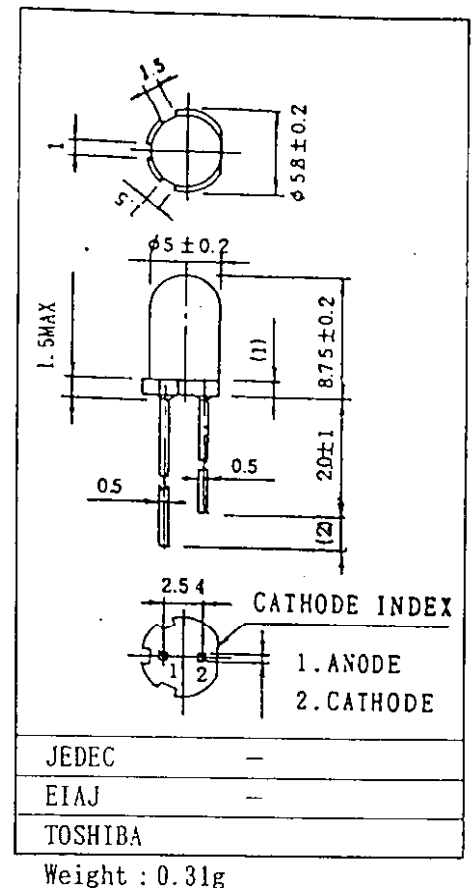
Panel Circuit Indicator

5mm Diameter (T1-3/4)

- InGaAlP Red LED
- All Plastic Mold Type
- Colorless Clear Lens
- Low Drive Current, High Intensity Red Light Emission
 - Recommended Forward Current: $I_F = 1 \sim 20$ mA (DC)
- All Plastic Molded Lens
 - Provides an Excellent ON-OFF Contrast Ratio
- Fast Response Time
 - Capable of Pulse Operation
- High Power Luminous Intensity
- Straight Lead (no stand-off)
- Applications:
 - Outdoor Message Signboard
 - Railway Signals / Traffic Signals

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

Characteristic	Symbol	Rating	Unit
Forward Current (DC)	I_F	30	mA
Reverse Voltage	V_R	4	V
Power Dissipation	P_D	75	mW
Operating Temperature Range	T_{opr}	$-30 \sim 85$	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-40 \sim 120$	$^\circ\text{C}$



Electro-Optical Characteristics ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 20$ mA	—	1.85	2.4	V
Reverse Current	I_R	$V_R = 4$ V	—	—	50	μA
Luminous Intensity (NOTE)	I_V	$I_F = 20$ mA	(153)	—	—	mcd
Peak Emission Wavelength	λ_p	$I_F = 20$ mA	—	644	—	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 20$ mA	—	18	—	nm
Dominant Wavelength	λ_d	$I_F = 20$ mA	—	630	—	nm

(NOTE) Rank selection carried out under next range respectively, although it needs $\pm 15\%$ additional for guaranteed limits.

P:180-360mcd, Q:320-640mcd, R:560-1120mcd

The information contained here is subject to change without notice.
 The information contained herein is presented only as guide for the applications of our products. No responsibility is assumed by TOSHIBA for any infringements of patents or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of TOSHIBA or others. These TOSHIBA products are intended for usage in general electronic equipments (office equipment, communication equipment, measuring equipment, domestic electrification, etc.) Please make sure that you consult with us before you use these TOSHIBA products in equipments which require high quality and/or reliability, and in equipments which could have major impact to the welfare of human life (atomic energy control, spaceship, traffic signal, combustion control, all types of safety devices, etc.). TOSHIBA cannot accept liability to any damage which may occur in case these TOSHIBA products were used in the mentioned equipments without prior consultation with TOSHIBA.

Precaution

Please be careful of the following:

1. Soldering temperature: 260°C MAX. Soldering time: 3 sec MAX. (Soldering portion of lead: up to 2mm from the body of the device)
2. If the lead is formed, the lead should be formed up to 5mm from the body of the device without forming stress. Soldering shall be performed after lead forming.

