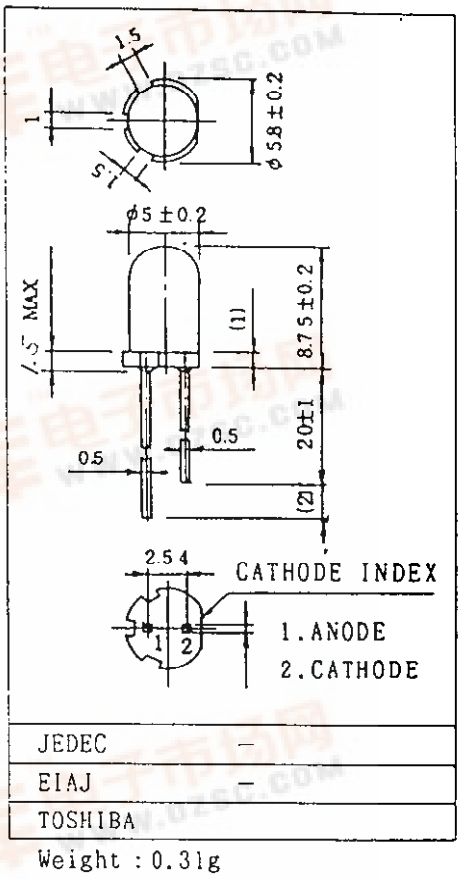
TOSHIBA

LED Lamp TLOE156P

InGaAlP Orange Light Emission

Unit in mm



Panel Circuit Indicator

5 mm Diameter (T1-3/4)

- New Emission Material (InGaAlP) Orange LED
- Peak Wavelength: λ p = 612 nm
- All Plastic Mold Type
- Colorless Clear Lens
- Low Drive Current, High Intensity Orange Light Emission
  - Recommended Forward Current: I_F = 15 ~ 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
  - Suitable for Outdoor Message Signboard
  - Automotive use
- Straight Lead (no stand-off)
- High Reliability
  - T_{stg}: -40 ~ 120°C

Maximum Ratings (T_a = 25°C)

Characteristic	Symbol	Rating	Unit
Forward Current (DC)	I_F	30	mA
Reverse Voltage	V_R	4	V
Power Dissipation	P_D	75	mA
Operating Temperature Range	T_{opr}	–30 ~ 85	°C
Storage Temperature Range	T_{stg}	–40 ~ 120	°C

Electro-Optical Characteristics (T_a = 25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F = 20 mA	–	1.95	2.4	V
Reverse Current	I_R	V_R = 4 V	–	–	50	μA
Luminous Intensity	I_V	I_F = 20 mA (NOTE)	(272)	–	–	mcd
Peak Emission Wavelength	λ_p	I_F = 20 mA	–	612	–	nm
Spectral Line Half Width	$\Delta\lambda$	I_F = 20 mA	–	15	–	nm

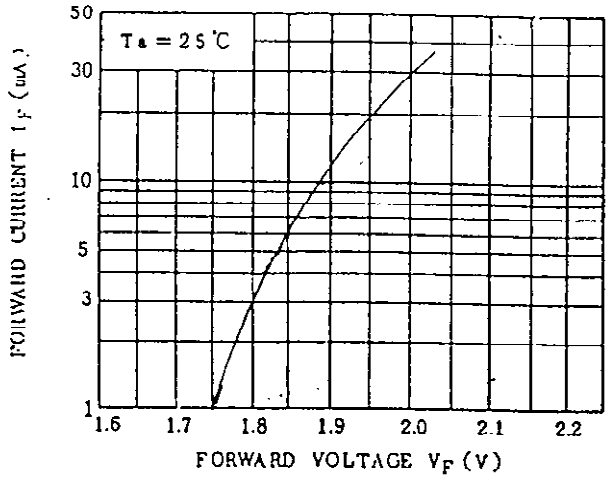
(NOTE) Rank selection carried out under next standard range respectively, although it needs ±15% additional for guaranteed limits.
Q:320-640mcd, R:560-1120mcd, S:1000-2000mcd.

Precaution

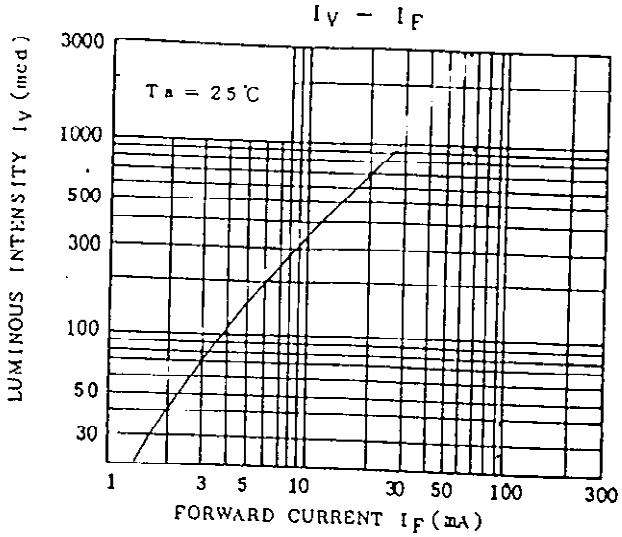
Please be careful of the following:

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

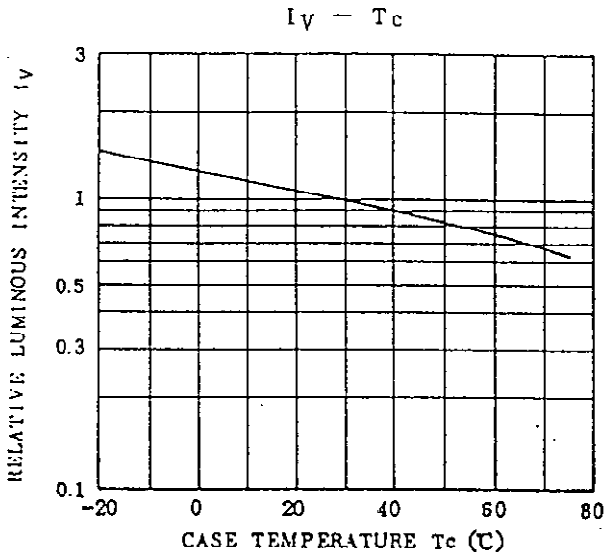
$I_F - V_F$



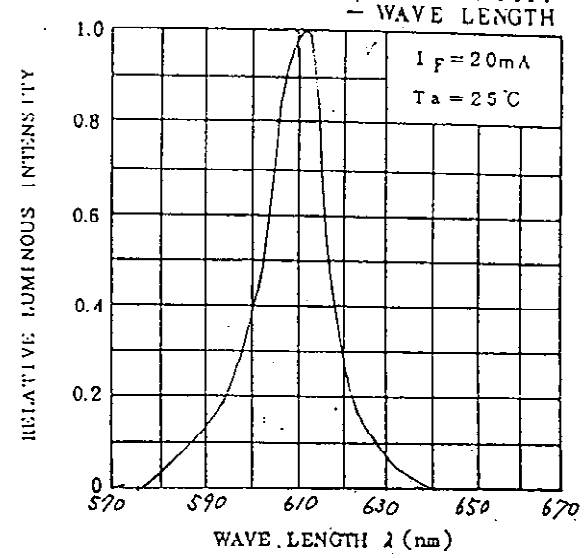
$I_V - I_F$



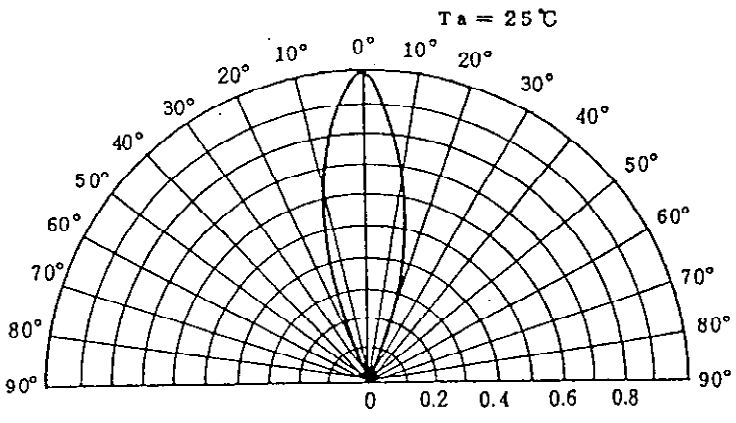
$I_V - T_C$



RELATIVE LUMINOUS INTENSITY – WAVE LENGTH



RADIATION PATTERN



$I_F - Ta$