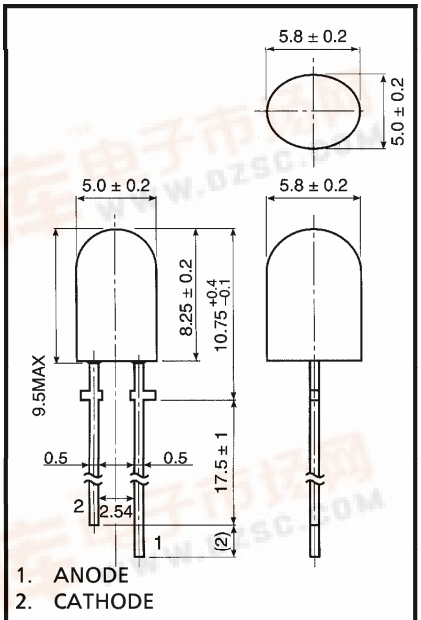
TENTATIVE TOSHIBA LED LAMP InGaAℓP RED LIGHT EMISSION

TLRE248

PANEL CIRCUIT INDICATOR

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	

Weight : 0.3 g

- InGaAℓP RED LED
- Elliptical Lens : Colored Transparent Lens
- Wide Radiation
- Low Drive Current, High Intensity Red Light Emission
- Plastic Molded Colored Transparent Lens Provides for High Contrast of ON-OFF Ratio.
- Fast Response Time, Capable of Pulse Operation.
- APPLICATIONS : Suitable for Outdoor Message Signboard, Full Color Panel, Backlight.

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	I_F	50	mA
Reverse Voltage	V_R	4	V
Power Dissipation	P_D	125	mW
Operating Temperature Range	T_{opr}	−30~85	°C
Storage Temperature Range	T_{stg}	−40~120	°C

ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta = 25°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	I_V	I_F = 20 mA (Note)	85	350	—	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	λd	I_F = 20 mA	—	630	—	nm

(Note) : Lamps are classified into the following ranks according to their luminous intensity.
Measurement tolerance for each limit is ±15%.
N : 100~200 mcd, P : 180~360 mcd, Q : 320~640 mcd

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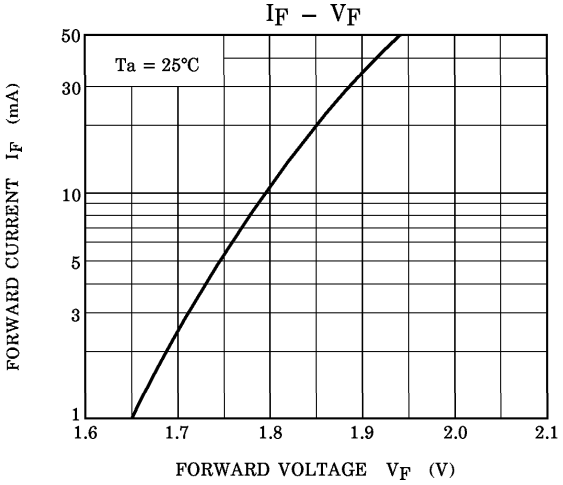
PRECAUTION

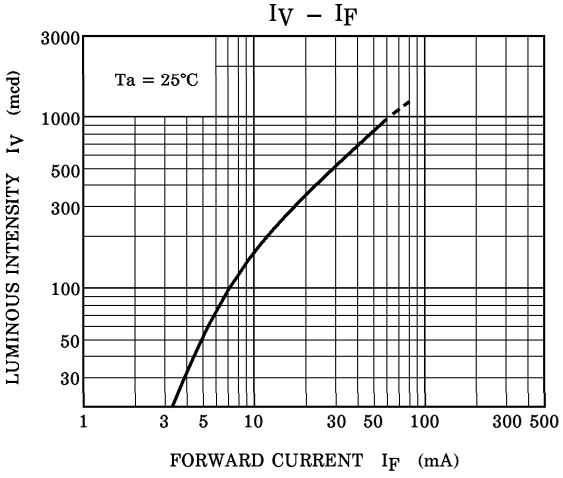
Please be careful of the followings

- Soldering temperature : 260°C max Soldering time : 3 s max
  (Soldering portion of lead : below the lead stopper)
- If the lead is formed, the lead should be formed up to 5 mm from the body of the device without forming stress to the resin. Soldering should be performed after lead forming.
- This visible LED lamp also emits some IR light. If a photodetector is located near the LED lamp, please ensure that it will not be affected by this IR light.

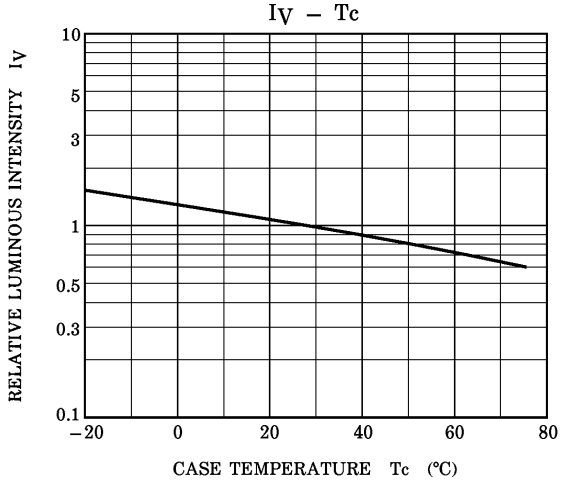
$I_F - V_F$



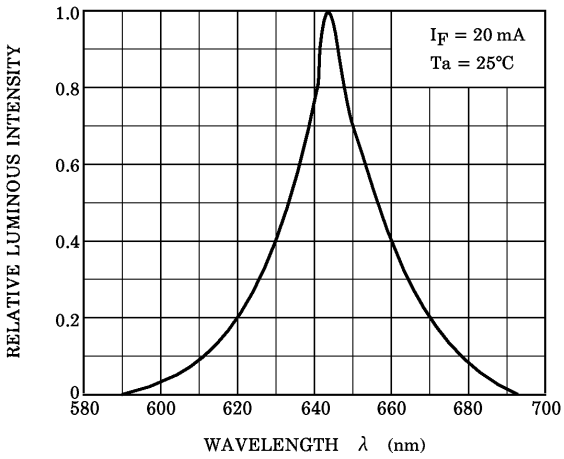
$I_V - I_F$



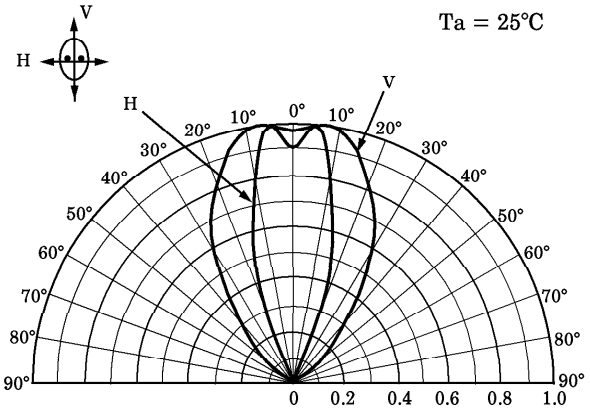
$I_V - Tc$



RELATIVE LUMINOUS INTENSITY WAVELENGTH



RADIATION PATTERN



$I_F - Ta$