

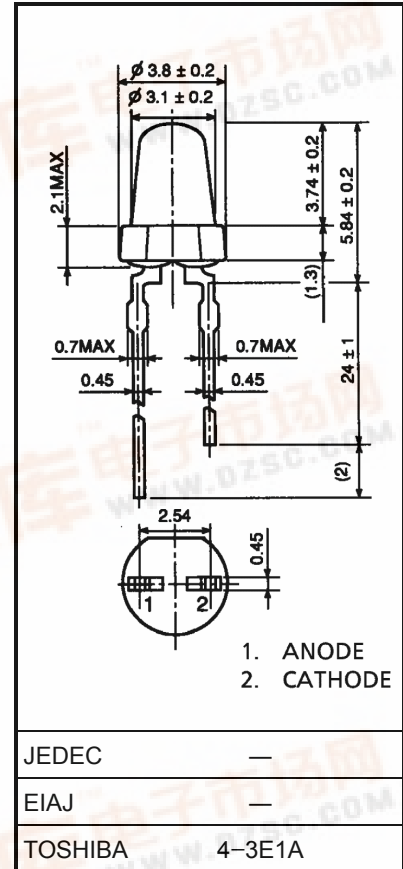
TOSHIBA LED Lamp InGaAlP Red Light Emission

TLSH160

Panel Circuit Indicator

- 3.1mm diameter (T1)
- InGaAlP red LED
- Colorless transparent lens
- Low drive current, high intensity red light emission
Recommended forward current: $I_F = 1\sim 20\text{mA}$ (DC)
- All plastic molded lens, provides an excellent on-off contrast ratio.
- Fast response time, capable of pulse operation.
- Applications: Indicator, backlight.

Unit in mm



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)

Weight: 0.14 g

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V_F	$I_F = 20\text{mA}$	—	2.1	2.5	V
Reverse current	I_R	$V_R = 4\text{V}$	—	—	50	μA
Luminous intensity	I_V	$I_F = 20\text{mA}$ (Note)	2720	4500	—	mcd
Peak emission wavelength	λ_P	$I_F = 20\text{mA}$	—	623	—	nm
Spectral line half width	$\Delta\lambda$	$I_F = 20\text{mA}$	—	15	—	nm
Dominant wavelength	λ_d	$I_F = 20\text{mA}$	—	613	—	nm

(Note): Lamps are classified into the following ranks according to their luminous intensity.

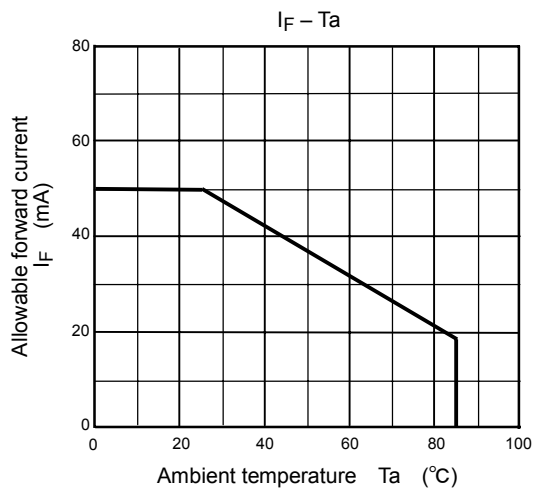
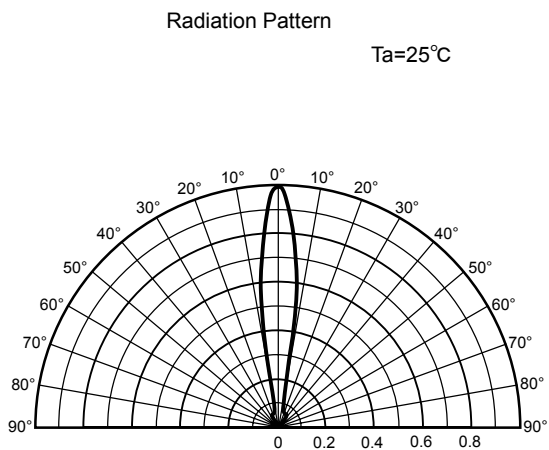
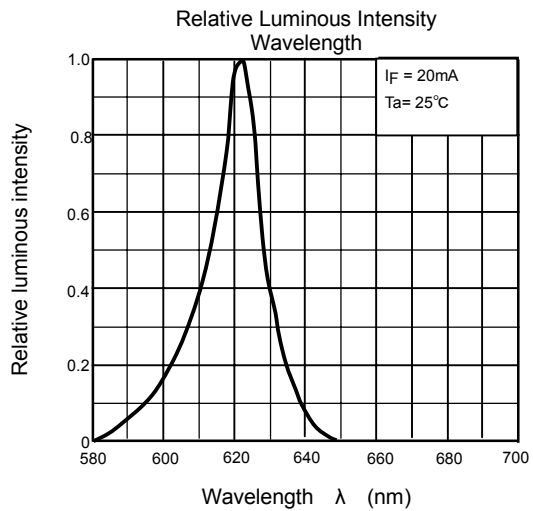
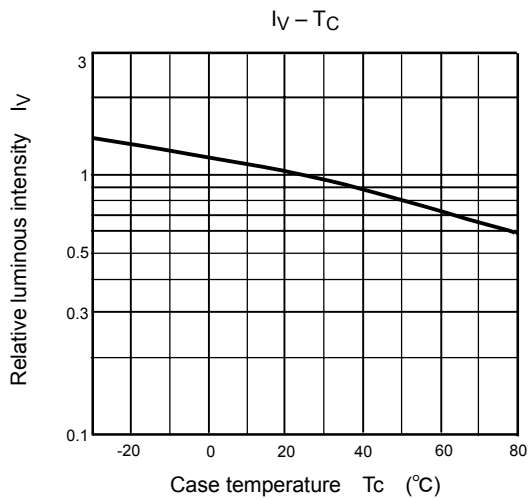
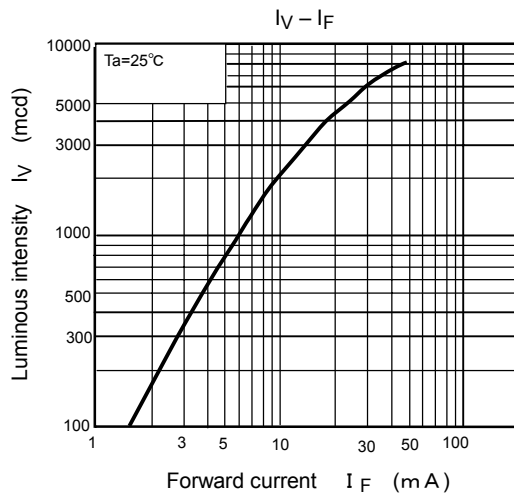
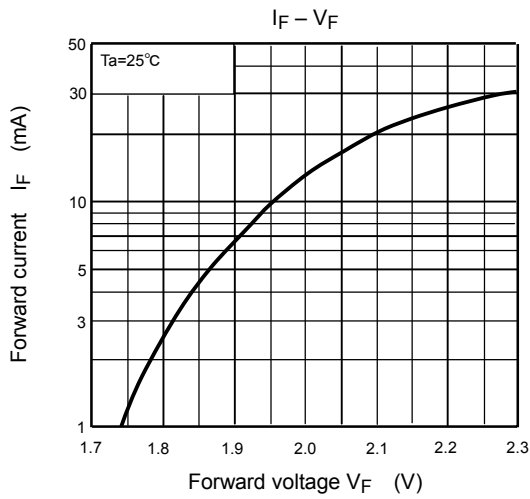
Measurement tolerance for each limit is $\pm 15\%$.

U: 3200~6400mcd, V: 5600~11200mcd, W: 8500~23000mcd

Precaution

Please be careful of the followings

- Soldering temperature: 260°C max Soldering time: 3 s max
(Soldering portion of lead: Up to 2mm from the body of the device)
- If the lead is formed, the lead should be formed up to 5mm 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.



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