

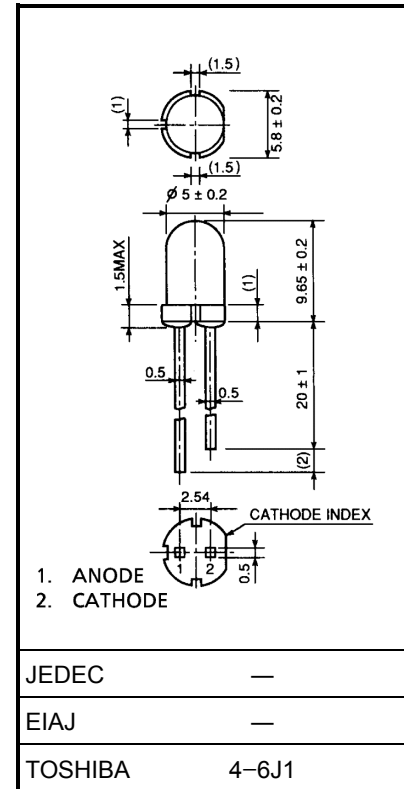
TOSHIBA LED Lamp InGaAlP Red Light Emission

TLSH180P

Panel Circuit Indicator

- 5 mm 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
- Without stand-offs
- Applications: Suitable for outdoor message signboard, safety equipment.

Unit in mm



Weight: 0.31 g

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

Characteristic	Symbol	Rating	Unit
Forward current (DC)	I_F	50	mA
Reverse voltage	V_R	4	V
Power dissipation	P_D	125	mW
Operating temperature range	T_{opr}	$-30 \sim 85$	$^\circ\text{C}$
Storage temperature range	T_{stg}	$-40 \sim 120$	$^\circ\text{C}$

Electrical And Optical Characteristics ($T_a = 25^\circ\text{C}$)

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	TLSH180P	I_V	$I_F = 20\text{mA}$ (Note)	2720	10000	—	mcd
	TLSH180P(VW)			4760	—	23000	
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.

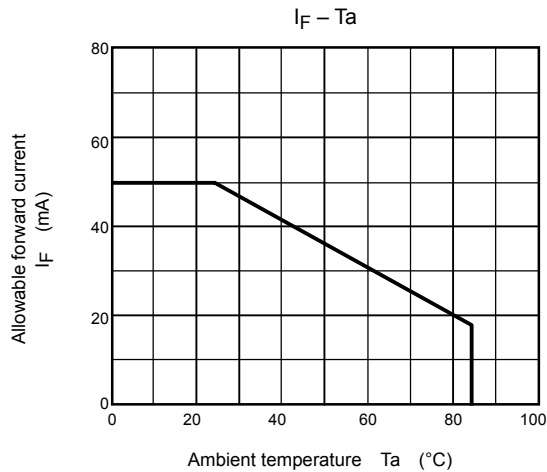
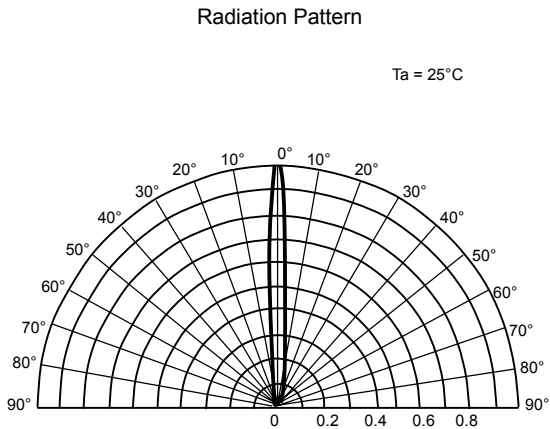
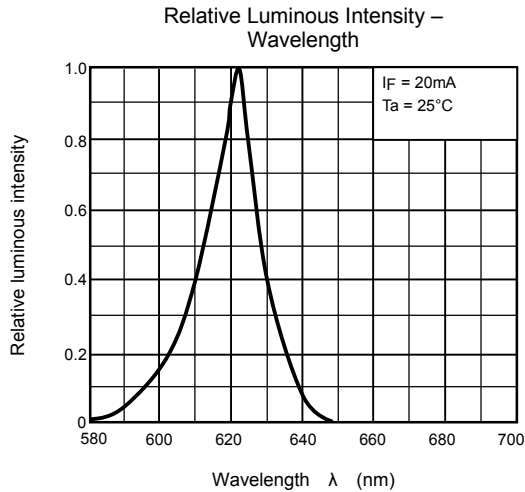
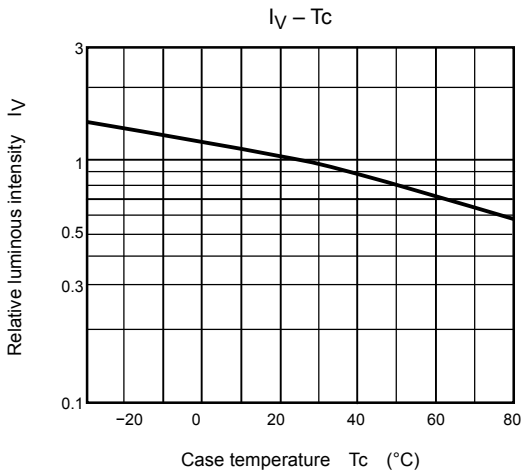
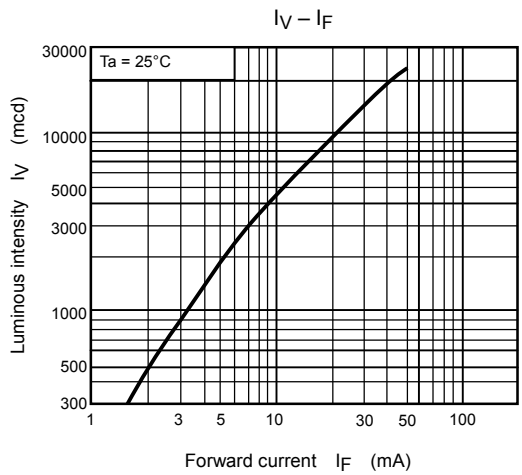
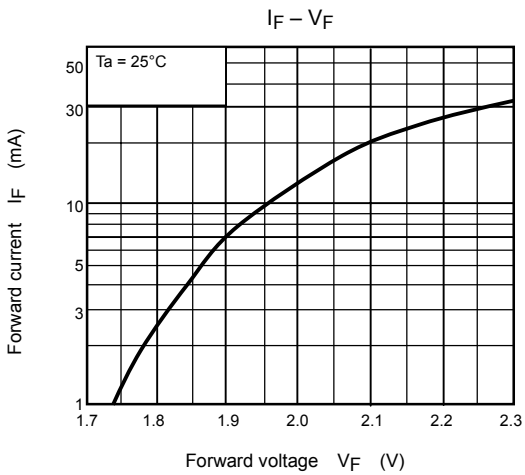
Measurement tolerance for each limit is $\pm 15\%$.

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

Precaution

Please be careful of the followings

- Soldering temperature: 260°C max Soldering time: 3s 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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