TOSHIBA LED Lamp InGaA{P Red Light Emission

# TLRH156P

### 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:  $I_F = 1 \sim 20 \text{mA} (DC)$
- 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, automotive use.

#### Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit	
Forward current (DC)	١ <sub>F</sub>	50	mA	
Reverse voltage	V <sub>R</sub>	4	V	
Power dissipation	PD	125	mW	
Operating temperature range	T <sub>opr</sub>	-30~85	°C	
Storage temperature range	T <sub>stg</sub>	-40~120	°C	

### Electrical And Optical Characteristics (Ta = 25°C)

Characteristic		Symbol	Test Condition		Min	Тур.	Max	Unit
Forward voltage		V <sub>F</sub>	I <sub>F</sub> = 20 mA		_	1.9	2.5	V
Reverse current		I <sub>R</sub>	$V_R = 4 V$		_	_	50	μA
Luminous intensity	TLRH156P	- I <sub>V</sub>	I <sub>F</sub> = 20 mA (N	(Note)	272	800	_	mcd
	TLRH156P(QR)		1F = 20 IIIA (N		272	_	1290	
Peak emission wavelength		λp	I <sub>F</sub> = 20 mA		_	644	_	nm
Spectral line half width		Δλ	I <sub>F</sub> = 20 mA		_	18	_	nm
Dominant wavelength		λd	I <sub>F</sub> = 20 mA		—	630		nm

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

Mesurement tolerance for each limit is ±15%.

Q: 320-640mcd, R: 560-1120mcd, S: 1000-2000mcd.

1. ANODE 2. CATHODE JEDEC — ELAJ — TOSHIBA

Weight: 0.31g

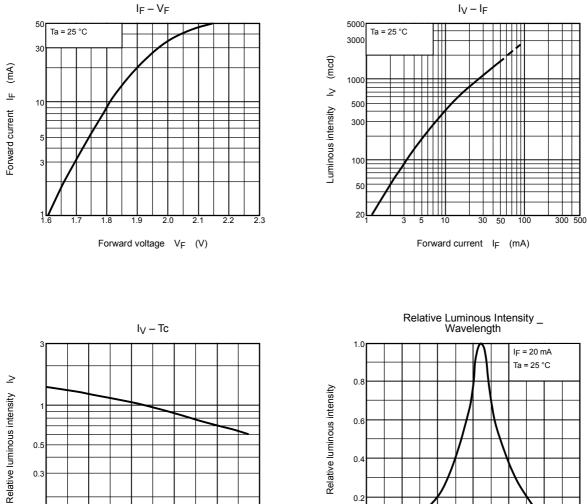
Unit in mm

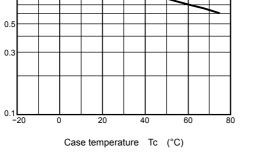
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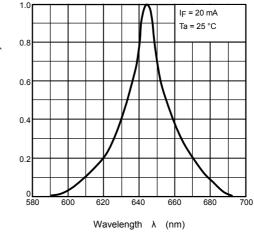
### Precaution

- Please be careful of the followings
- Soldering temperature: 260°Cmax 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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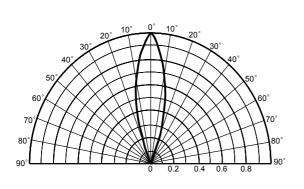


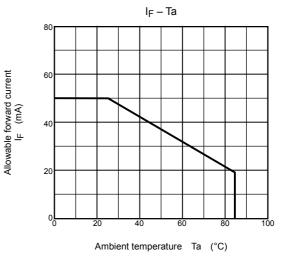




Radiation Pattern







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