

TOSHIBA LED Lamp InGaAlP Orange Light Emission

# TLOH190P

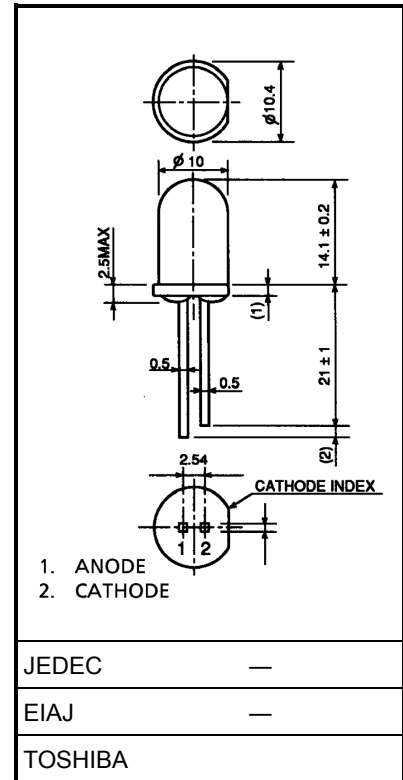
## Panel Circuit Indicator

- 10mm diameter
- InGaAlP orange LED
- All plastic mold type.
- Colorless clear lens
- Low drive current, high intensity orange 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.

## Maximum Ratings (Ta = 25°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	$T_{opr}$	-30~85	°C
Storage temperature range	$T_{stg}$	-40~120	°C

Unit in mm



Weight: 1.0g

## Electrical And Optical Characteristics (Ta = 25°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	$\mu\text{A}$
Luminous intensity	TLOH190P	$I_V$	$I_F = 20\text{mA}$ (Note)	8500	33000	—	mcd
	TLOH190P(XY)			15300	—	73600	
Peak emission wavelength		$\lambda_P$	$I_F = 20\text{mA}$	—	612	—	nm
Spectral line half width		$\Delta\lambda$	$I_F = 20\text{mA}$	—	15	—	nm
Dominant wavelength		$\lambda_d$	$I_F = 20\text{mA}$	—	605	—	nm

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

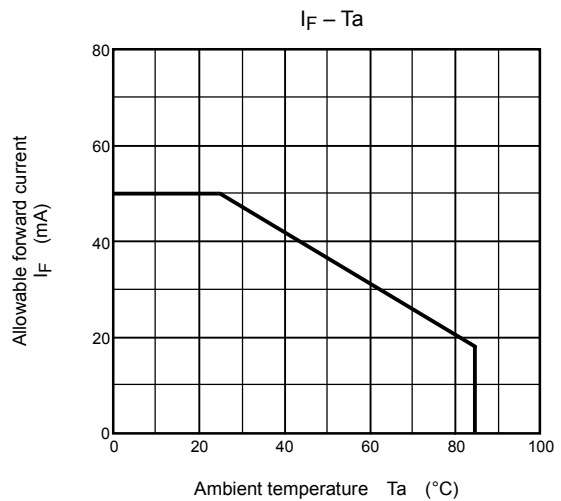
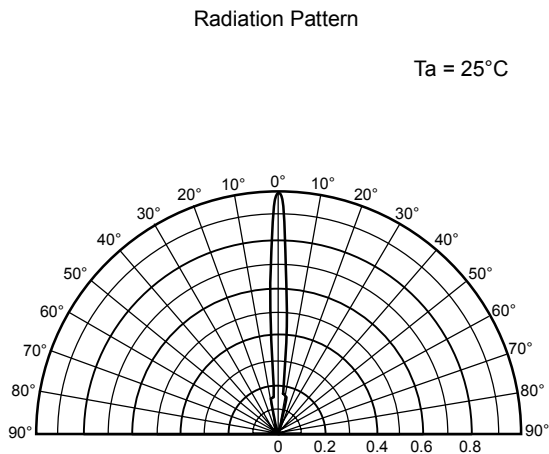
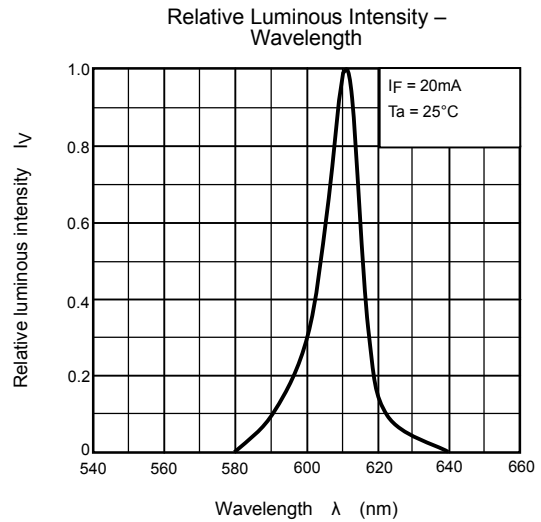
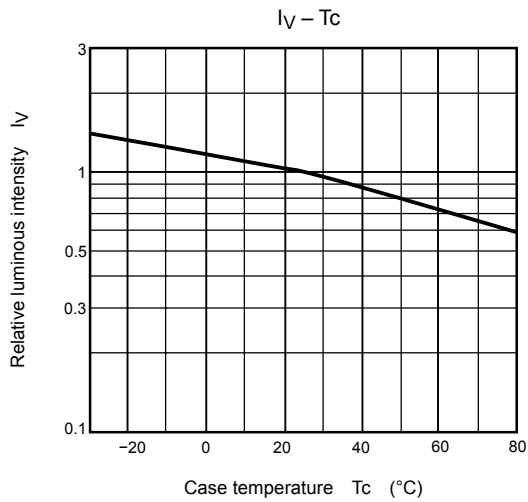
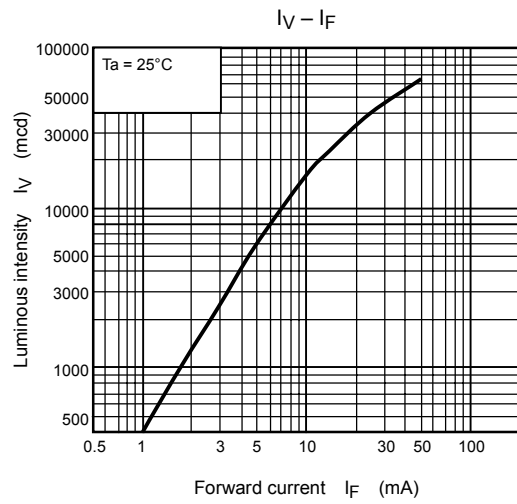
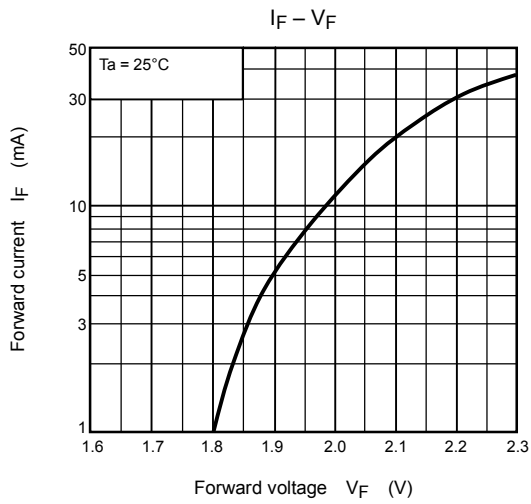
Measurement tolerance for each limit is  $\pm 15\%$ .

S: 10000–20000mcd, X: 18000–36000mcd, Y: 32000–64000mcd.

## 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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