

TOSHIBA LED LAMP GaAlAs RED LIGHT EMITTER

# TLRA270

AUXILIARY LIGHT SOURCE FOR AUTO FOCUS CAMERA

Unit in mm

- Resin molding with accurate luminous position.
- LED in DH structure employed provides high radiant flux.
- Harmonious wavelength of visual sensitivity and detective device.
- Pulse driving ratings and characteristic expression dedicated for camera.

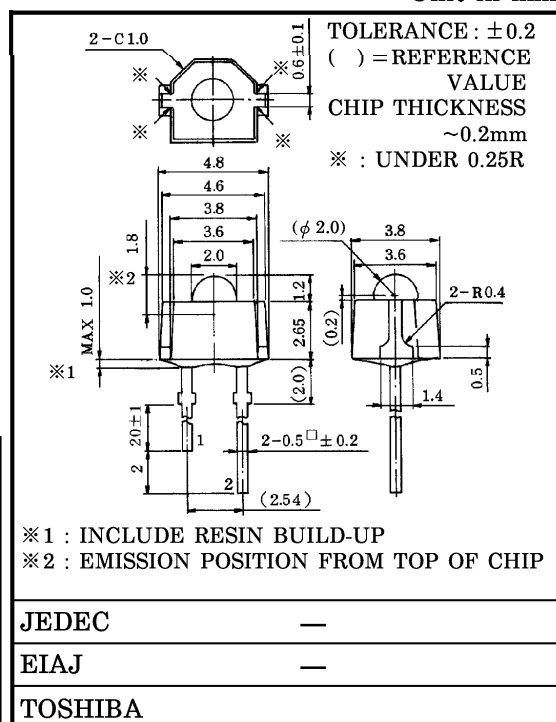
MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Foward Current	$I_F$ (Note 1)	25	mA
Pulse Foward Current	$I_{FP}$ (Note 2)	165	mA
Reverse Voltage	$V_R$	3	V
Operating Temperature range	$T_{opr}$	$-20 \sim 50$	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	$-30 \sim 100$	$^\circ\text{C}$

(Note 1) This rating is an allowable value in the acceptance inspection or characteristic test but not guaranteed in actual use.

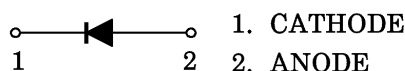
(Note 2) • Rated pulse current values corresponding to temperature changes are as shown in the following table.

Temperature	$I_{FP}$
$-20^\circ\text{C}$	$165\text{mA} + 15\%$
$25^\circ\text{C}$	$165\text{mA}$
$45^\circ\text{C}$	$165\text{mA} - 10\%$

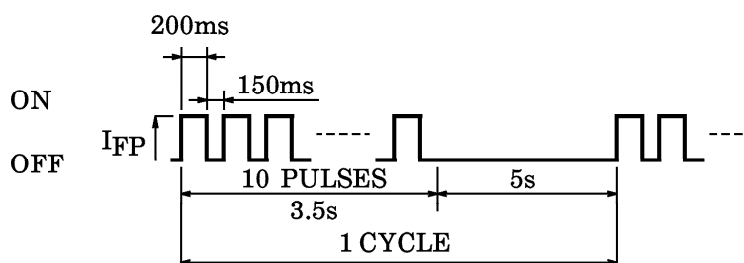


Weight : 0.16g (TYP.)

## PIN CONNECTION



- The rated cycle is 3000 cycles at the waveform in the following diagram.



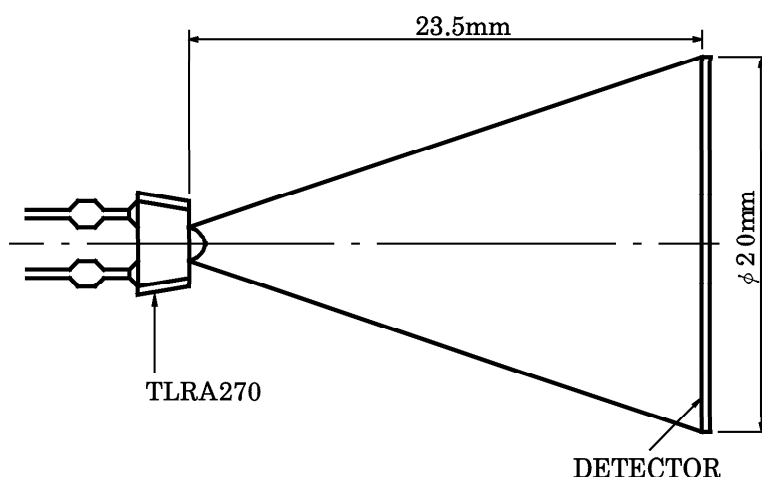
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## OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_F$	$I_F = 20\text{mA}$	—	1.8	—	V
Pulse Forward Voltage	$V_{FP}$	$I_{FP} = 150\text{mA}$ , $t = 10\text{ms}$	—	2.7	3.2	V
Reverse Current	$I_R$	$V_R = 3\text{V}$	—	—	100	$\mu\text{A}$
Lens Diameter	—	Resin lense diameter	—	2	—	mm
Radiant Flux	$\phi_e$	$I_F = 150\text{mA}$ , $t = 10\text{ms}$ (Note)	12	18	—	mW
Directional Half Value Angle	$\theta$	$I_F = 70\text{mA}$	—	30	—	°
Peak Emission Wave Length	$\lambda_P$	$I_F = 70\text{mA}$ , About 3s	680	695	710	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 70\text{mA}$ , About 3s	—	28	35	nm

(Note) Radiant flux  $\phi_e$  : Positional relation between TLRA270 and the light receiving surface.



## PRECATION

Please be careful of the followings.

1. Soldering temperature : 260°C MAX. Soldering time : 5s MAX.  
(Soldering portion of lead : at above 1.5mm from the body of the device)
2. If the lead is formed, the lead should be formed at a distance of 2mm from the body of the device. Soldering shall be performed after lead forming.
3. Do not apply stress to the lead for 30 sec. after soldered.

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- Gallium arsenide (GaAs) is a substance used in the products described in this document. GaAs dust and fumes are toxic. Do not break, cut or pulverize the product, or use chemicals to dissolve them. When disposing of the products, follow the appropriate regulations. Do not dispose of the products with other industrial waste or with domestic garbage.
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