

TOSHIBA LED Lamp GaAlAs Red-light Emitter

TLRA270

Auxiliary Light Source For Auto-focus Camera

Unit: mm

- Resin molding with accurate luminous position
- LED in DH structure yielding high radiant flux
- Harmonious wavelength of visual sensitivity and detective device
- Pulse drive rating and characteristic expression optimized for use in cameras

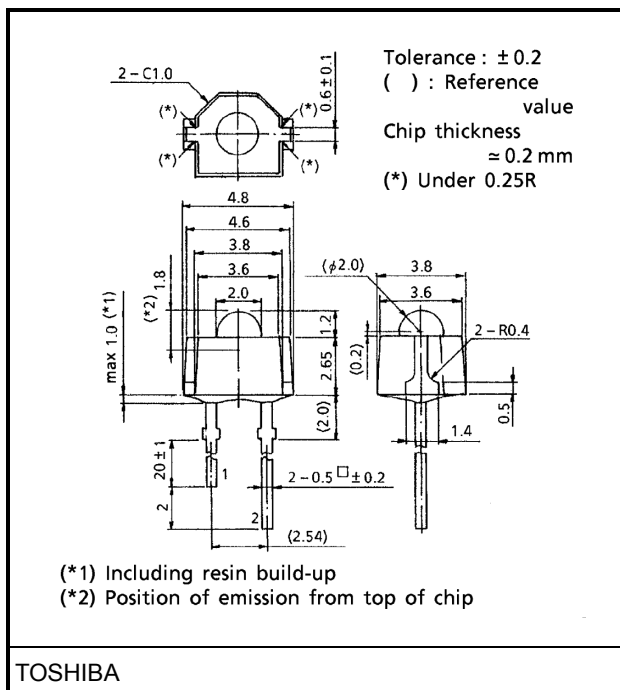
Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Forward current	I_F (Note 1)	25	mA
Pulse forward current	I_{FP} (Note 2)	165	mA
Reverse voltage	V_R	3	V
Operating temperature	T_{opr}	-20~50	°C
Storage temperature	T_{stg}	-30~100	°C

(Note 1): This rating is the permissible value for acceptance inspection or characteristic test and is not guaranteed for actual use.

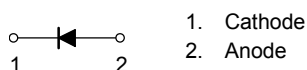
(Note 2): • Rated pulse current values corresponding to temperature changes are as shown in the following table:

Temperature	I_{FP}
-20°C	165 mA + 15%
25°C	165 mA
45°C	165 mA - 10%

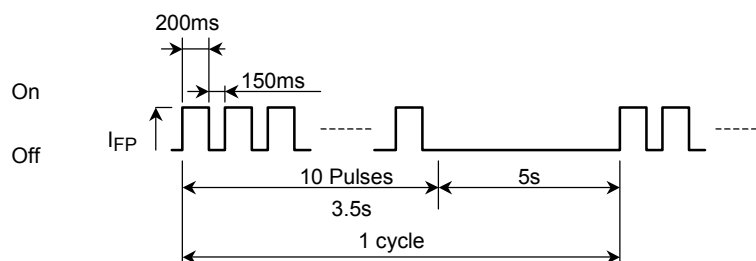


Weight: 0.16 g (typ.)

Pin Connection



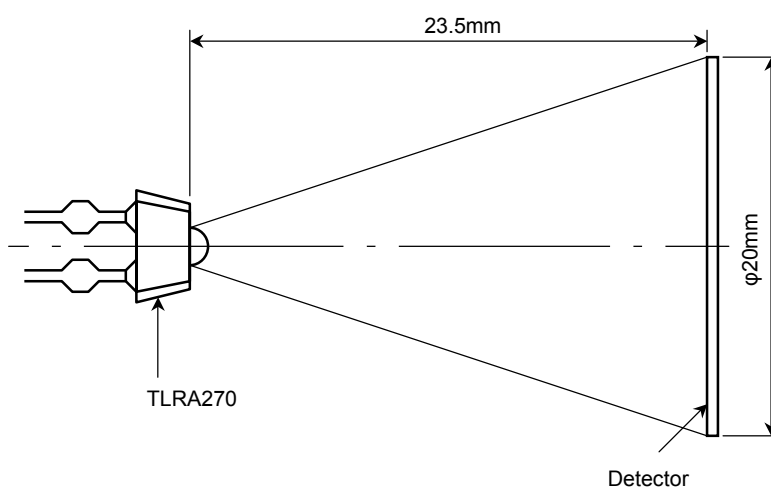
- The rated period is 3000 cycles of the waveform shown in the following diagram :



Optical And 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	μA
Lens diameter	—	Resin lense diameter	—	2	—	mm
Radiant flux	ϕ_e	$I_F = 150 \text{ mA}$, $t = 10 \text{ ms}$ (Note)	12	18	—	mW
Directional half value angle	θ	$I_F = 70 \text{ mA}$	—	30	—	°
Peak emission wave length	λ_P	$I_F = 70 \text{ mA}$, about 3 s	680	695	710	nm
Spectral line half width	$\Delta\lambda$	$I_F = 70 \text{ mA}$, about 3 s	—	28	35	nm

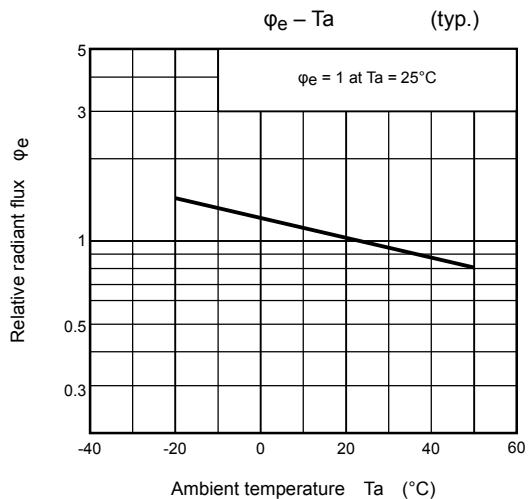
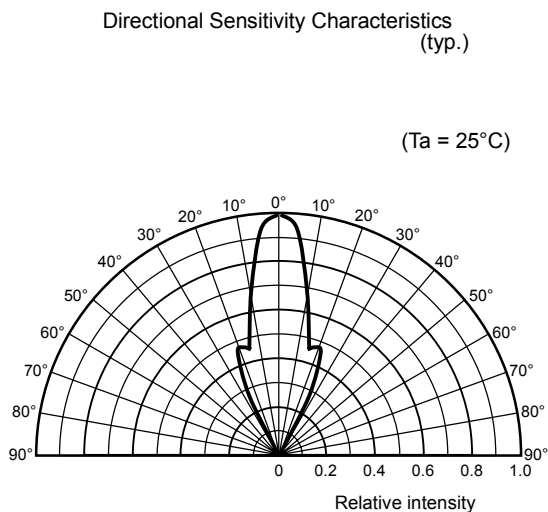
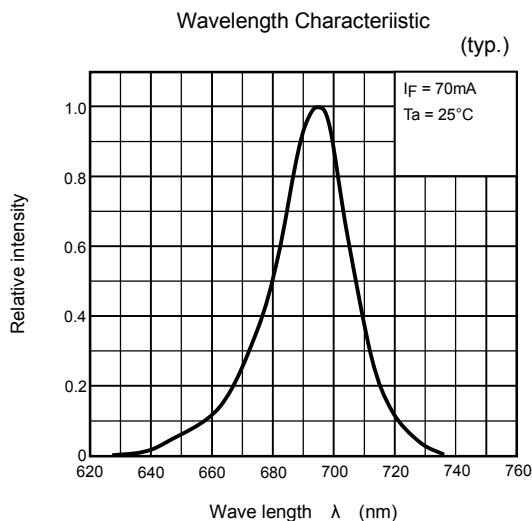
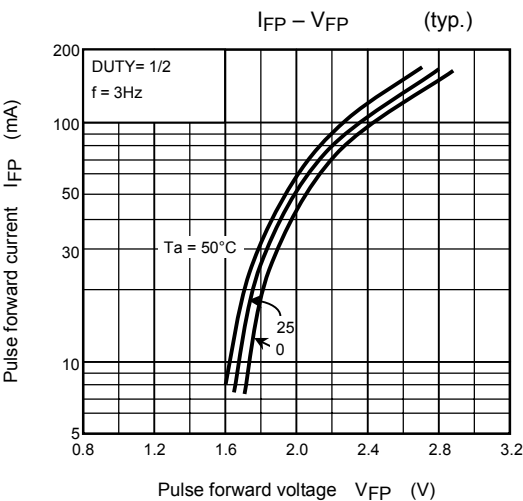
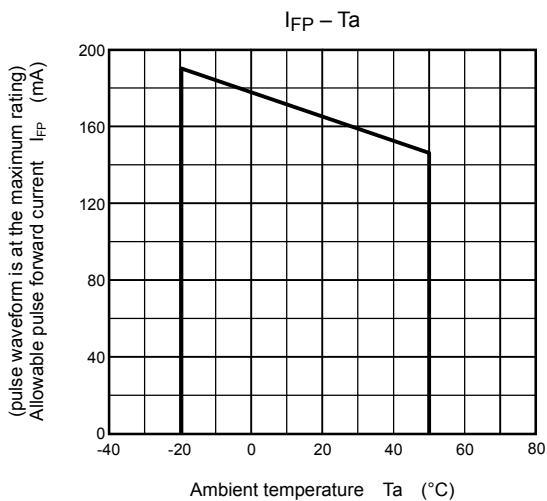
(Note): Radiant flux ϕ_e depends on position of TLRA270 relative to light-receiving surface.



Precautions

Please be careful of the followings.

1. Soldering temperature : 260°C max
Soldering time : 5 s max
(soldering portion of lead: at above 1.5 mm from the body of the device)
2. When forming the leads, bend each lead under the 2mm from the body of the device.
Soldering shall be performed after lead forming.
3. Do not apply stress to the leads for at least 30 s after soldering them.
4. The TLRA270 for a camera AF use only. Please do not use this device except for a camera.



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