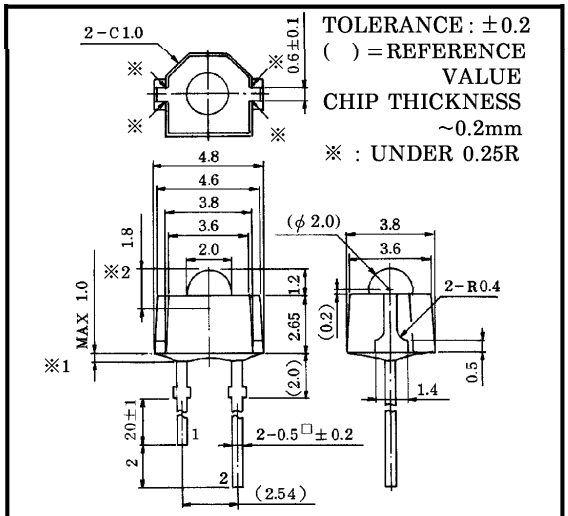
TOSHIBA LED LAMP GaAℓAs RED LIGHT EMITTER

TLRA270

AUXILIARY LIGHT SOURCE FOR AUTO FOCUS CAMERA

Unit in mm

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



※1 : INCLUDE RESIN BUILD-UP
※2 : EMISSION POSITION FROM TOP OF CHIP

JEDEC	—
EIAJ	—
TOSHIBA	

Weight : 0.16g (TYP.)

MAXIMUM RATINGS (Ta = 25°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}	−20~50	°C
Storage Temperature Range	T_{stg}	−30~100	°C

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

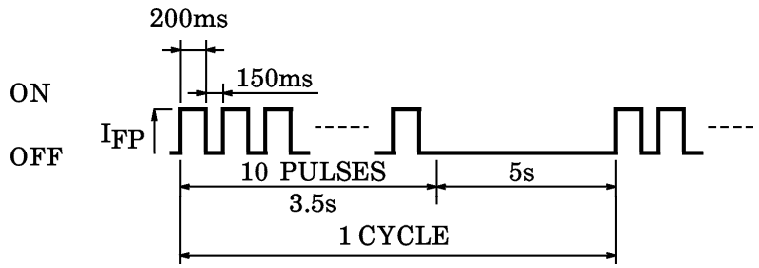
(Note 2) ● Rated pulse current values corresponding to temperature changes are as shown in the following table.

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

PIN CONNECTION

1. CATHODE
2. ANODE

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



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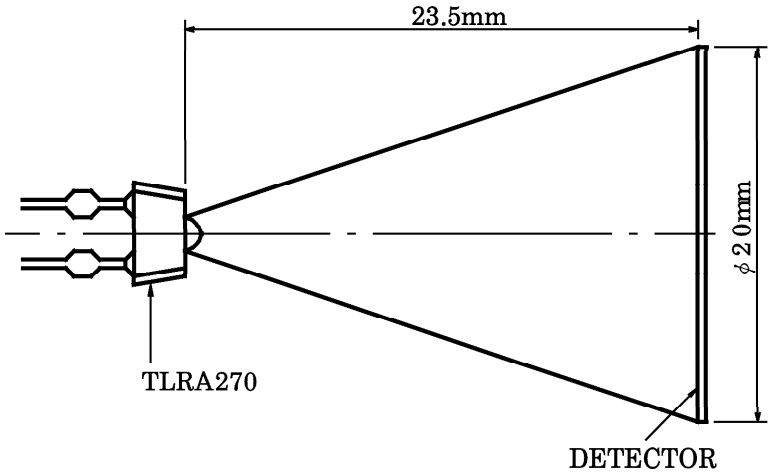
OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

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

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

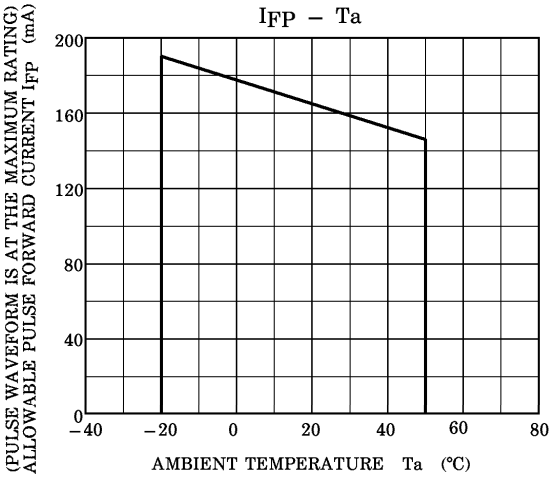


PRECATION

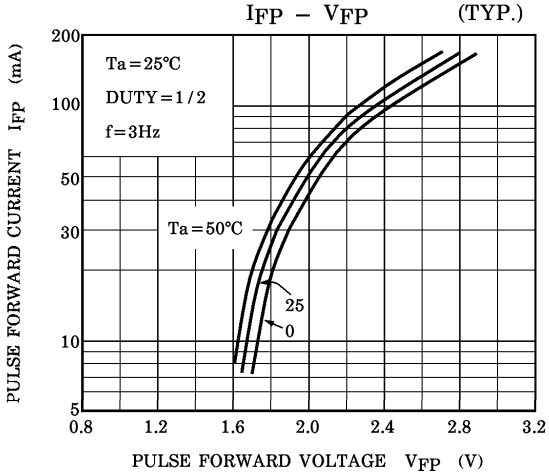
Please be careful of the followings.

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 shoud 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.

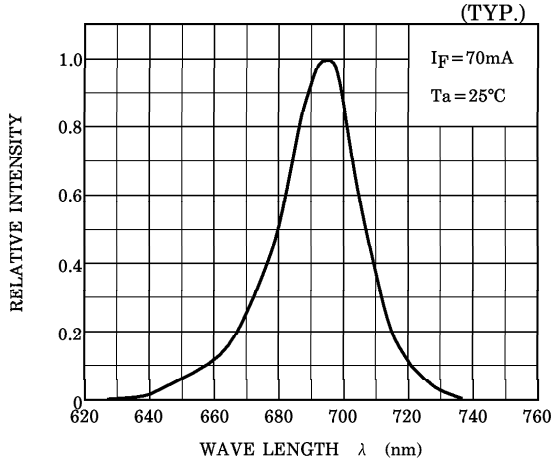
I_{FP} – Ta



I_{FP} – V_{FP} (TYP.)

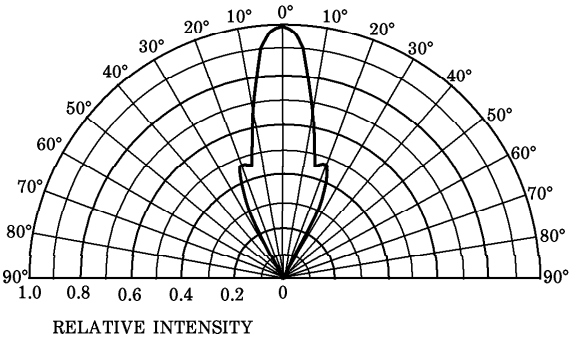


WAVELENGTH CHARACTERISTICS (TYP.)



DIRECTIONAL SENSITIVITY CHARACTERISTICS (TYP.)

Ta=25°C



ψ_e – Ta (TYP.)