TOSHIBA LED LAMP GaAℓAs INFRARED EMITTER

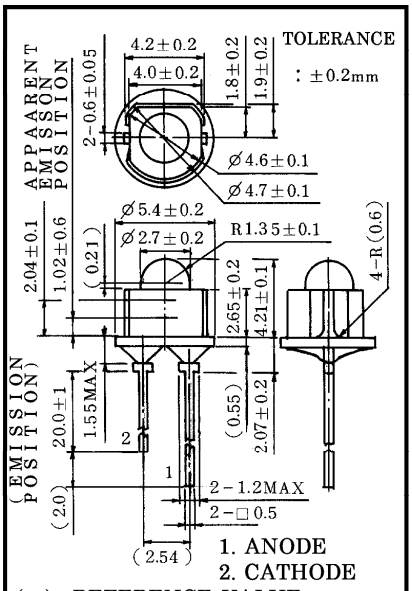
TLN208

○ Infrared light emission diode for still camera

○ Light source for auto focus

- Optical radiation of current confining LED chip is condensed by a resin lens.
- Large output
- Effective emission diameter is 344μm
- Optical output can be radiated efficiently in a solid angle 0.685sr.
- Proper forward voltage for 2 cells (V_{CC}=3V)
- Optical output vs temperature characteristic is almost constant in case of constant forward voltage drive system.

Unit in mm



JEDEC	—
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TOSHIBA	

Weight : 0.17g (TYP.)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	I_F	50	mA
Pulse Forward Current	I_{FP}	400	mA
Reverse Voltage	V_R	1	V
Operating Temperature Range	T_{opr}	−25~60	°C
Storage Temperature Range	T_{stg}	−40~90	°C

Note 1. An allowable value in the acceptance inspection / characteristic test and is not guaranteed for actural application.

2. Within 4 hours at 1 cycle with frequency 10kHz, duty 50%, power applied for 0.1 sec. paused for 0.1s

OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	V_F	I_F=50mA	—	1.35	—	V
Pulse Forward Voltage	V_{FP}	I_{FP}=300mA, t=10ms	—	1.75	1.95	V
Reverse Current	I_R	V_R=1V	—	—	100	μA
Effective emission spot diameter	—	—	—	344	—	μm
Radiation Flux (Note)	ϕ_e	I_{FP}=300mA, t=10ms	7	12	—	mW
Half Value Angle	$\theta\frac{1}{2}$	I_F=50mA	—	54	—	°
Peak Emission Wavelength	λ_P	I_F=50mA	—	875	—	nm
Spectral Line Half Width	$\Delta\lambda$	I_F=50mA	—	40	—	nm

Note : Luminous radiation output to effective angle ±25 degree.

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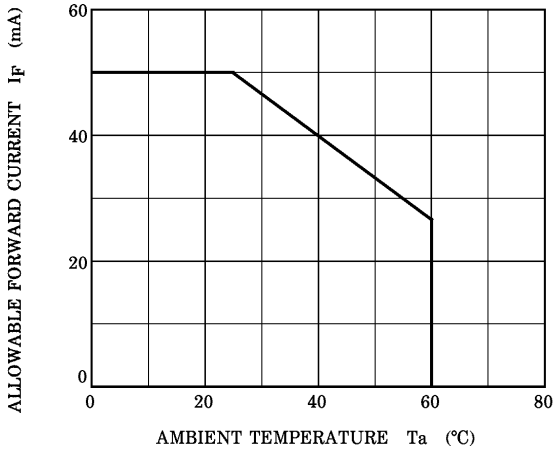
PRECAUTION

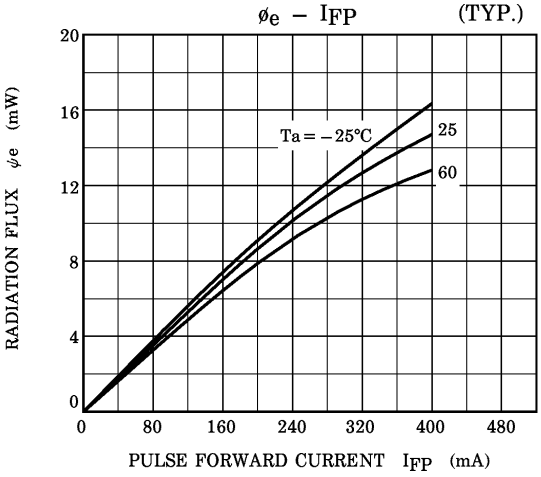
Please be careful of the followings.

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.

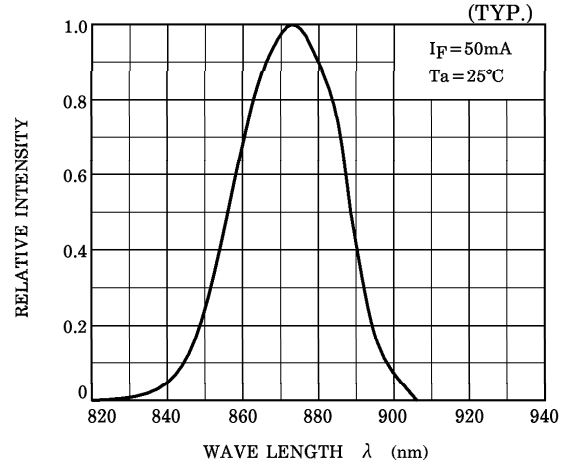
I_F – Ta



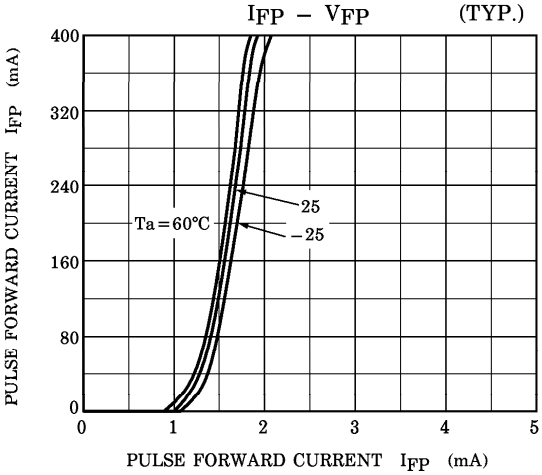
ϕ_e – I_{FP} (TYP.)



WAVELENGTH CHARACTERISTICS (TYP.)



I_{FP} – V_{FP} (TYP.)



RADIATION PATTERN (TYP.)

(Ta = 25°C)