

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.
- High output
- Effective emission diameter of 344  $\mu\text{m}$
- Optical output efficiently radiated in solid angle of 0.685 sr
- Can be operated at  $V_{CC} = 3\text{ V}$  (which is equal to is two cells)
- Optical output vs. temperature characteristic almost constant with constant forward voltage drive system

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current (Note 1)	$I_F$	50	mA
Pulse Forward Current (Note 2)	$I_{FP}$	400	mA
Reverse Voltage	$V_R$	1	V
Operating Temperature	$T_{opr}$	-25~60	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40~90	$^\circ\text{C}$

(Note 1) : Permissible value for acceptance inspection / characteristic test and is guaranteed for actual application

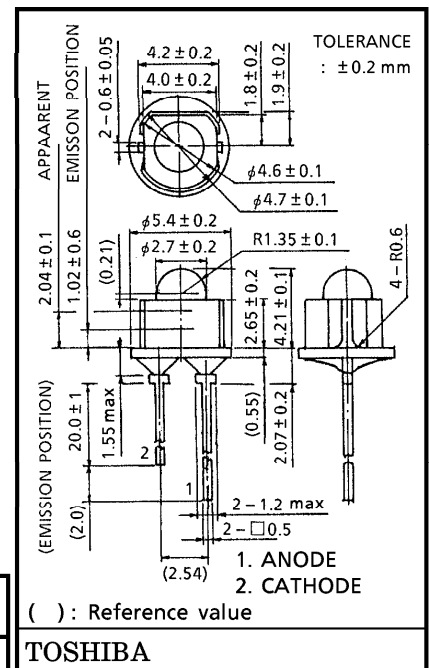
(Note 2) : Within 4 hours at 1 cycle with frequency 10 kHz, duty 50%, power applied for 0.1 s paused for 0.4 s

OPTICAL AND ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	Min	Typ.	Max	UNIT
Forward Voltage	$V_F$	$I_F = 50\text{ mA}$	—	1.35	—	V
Pulse Forward Voltage	$V_{FP}$	$I_{FP} = 300\text{ mA}, t = 10\text{ ms}$	—	1.75	1.95	V
Reverse Current	$I_R$	$V_R = 1\text{ V}$	—	—	100	$\mu\text{A}$
Effective emission spot diameter	—	—	—	344	—	$\mu\text{m}$
Radiation Flux (Note)	$\phi_e$	$I_{FP} = 300\text{ mA}, t = 10\text{ ms}$	7	12	—	mW
Half Value Angle	$\theta_{\frac{1}{2}}$	$I_F = 50\text{ mA}$	—	54	—	$^\circ$
Peak Emission Wavelength	$\lambda_P$	$I_F = 50\text{ mA}$	—	875	—	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 50\text{ mA}$	—	40	—	nm

(Note) : Luminous radiation output to effective angle  $\pm 25$  degree.

Unit : mm

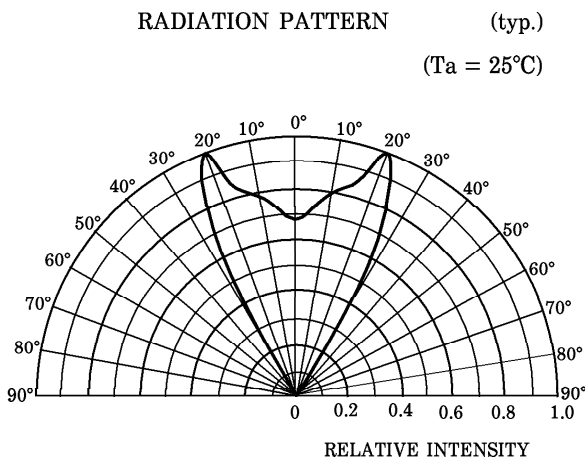
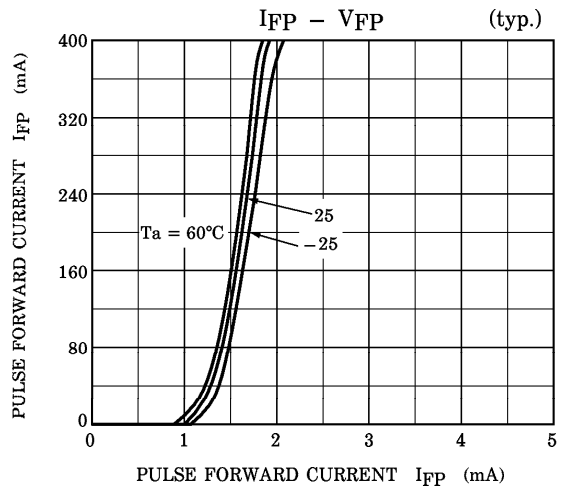
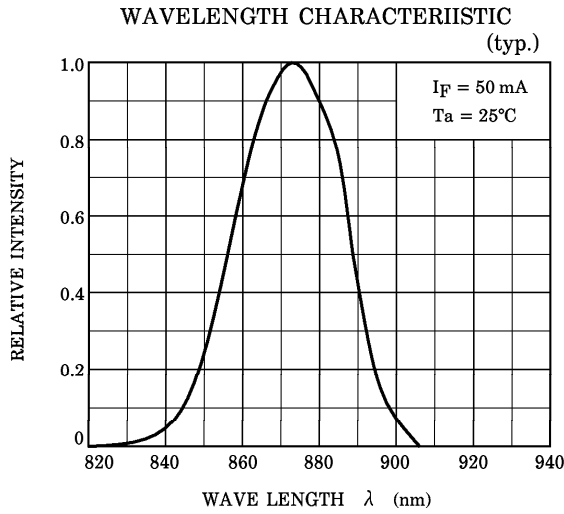
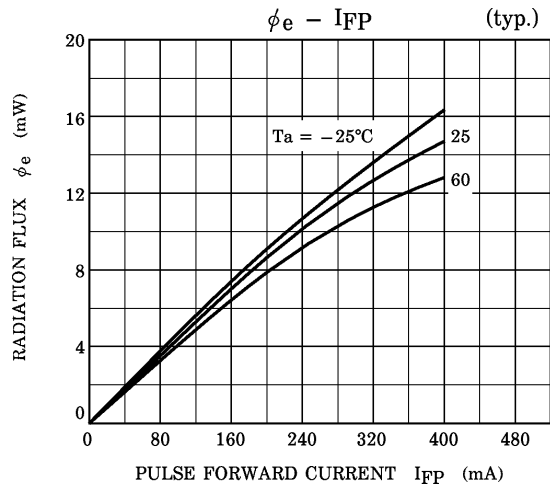
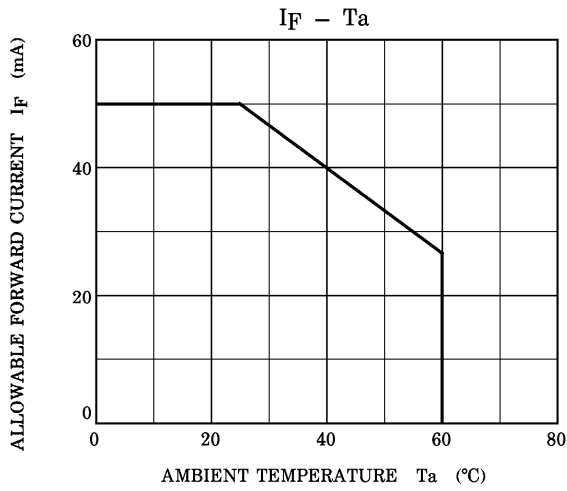


Weight : 0.17 g (typ.)

**PRECAUTIONS**

Please be careful of the followings.

1. Soldering temperature : 260°C max  
Soldering time : 5 s max  
(Soldering must be performed 1.5 m from the bottom of the package.)
2. When forming the leads, bend each lead under the 2 mm from the body of the device.  
Soldering must be performed after the leads have been formed.
3. The TLN208 for a camera AF use only. Please do not use this device except for a camera.



**RESTRICTIONS ON PRODUCT USE**

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