

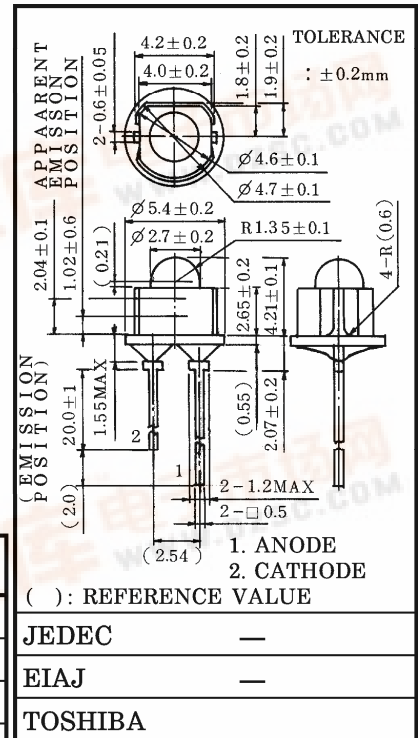
**TOSHIBA****TLN208**

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  $344\mu\text{m}$
- Optical output can be radiated efficiently in a solid angle  $0.685\text{sr}$ .
- Proper forward voltage for 2 cells ( $V_{CC}=3\text{V}$ )
- Optical output vs temperature characteristic is almost constant in case of constant forward voltage drive system.

Unit in mm

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

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	$T_{opr}$	$-25 \sim 60$	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	$-40 \sim 90$	$^\circ\text{C}$

Weight : 0.17g (TYP.)

- Note 1. An allowable value in the acceptance inspection / characteristic test and is not guaranteed for actual 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 ( $T_a = 25^\circ\text{C}$ )

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.

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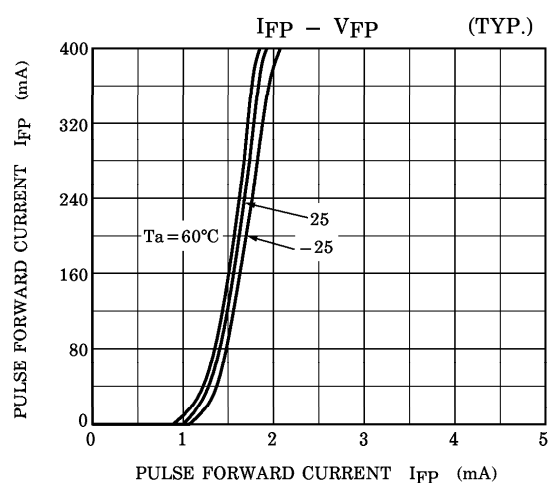
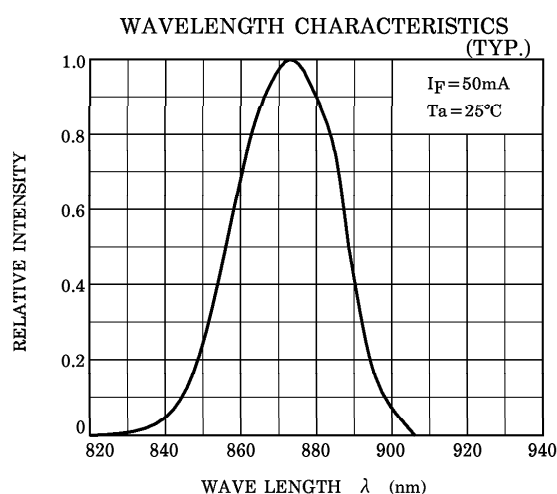
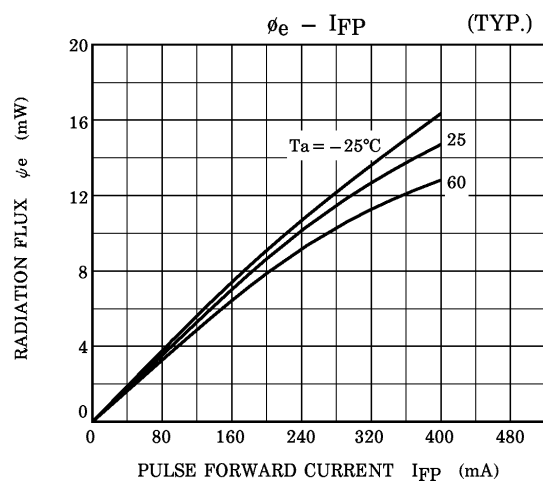
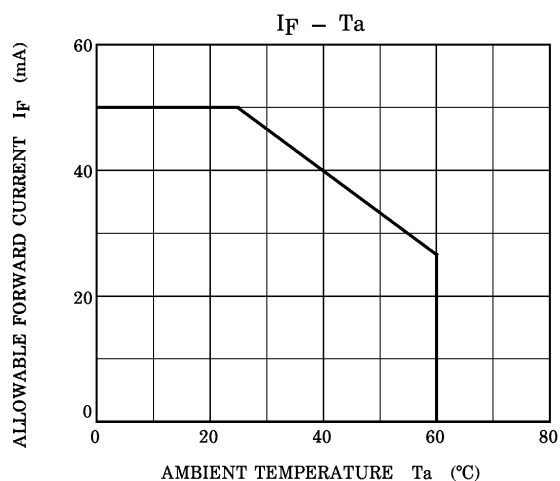
**PRECAUTION**

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.

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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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RADIATION PATTERN (TYP.)  
( $T_a = 25^\circ\text{C}$ )

