

TOSHIBA LED LAMP GaAlAs INFRARED EMITTER

TLN210

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 $348\mu\text{m}$
- Optical output can be radiated efficiently in a solid angle 0.984sr .
- Proper forward voltage for 2 cells ($V_{CC}=3\text{V}$)
- Optical output vs temperature characteristics is almost constant in case of 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 Range	T_{opr}	$-25\sim 60$	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-40\sim 90$	$^\circ\text{C}$

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

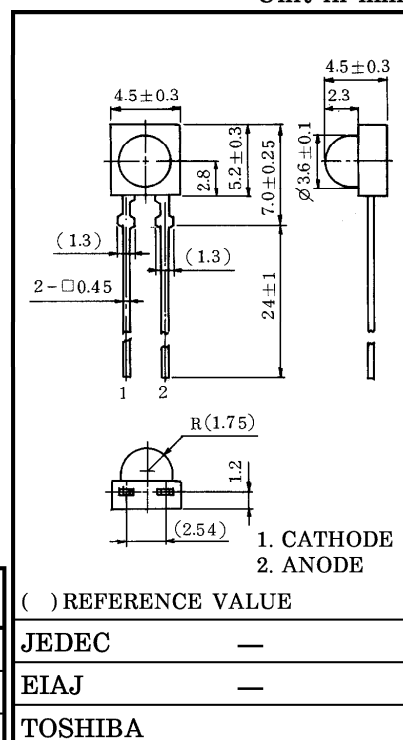
Note 2 Within 4 hours at 1 cycle with frequency 10kHz, duty 50%, power applied for 0.1 sec. paused for 0.1s

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	μA
Effective emission spot diameter	—	—	—	348	—	μm
Radiation Flux (Note)	ψ_e	$I_{FP} = 300\text{mA}$, $t = 10\text{ms}$	7	12	—	mW
Half Value Angle	$\theta_{\frac{1}{2}}$	$I_F = 50\text{mA}$	—	65	—	$^\circ$
Peak Emission Wavelength	λ_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 ± 25 degree.

Unit in mm



Weight : 0.18g (TYP.)

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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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