

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.
- High output
- Effective emission diameter of 344 μm
- Optical output efficiently radiated in solid angle of 0.984 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

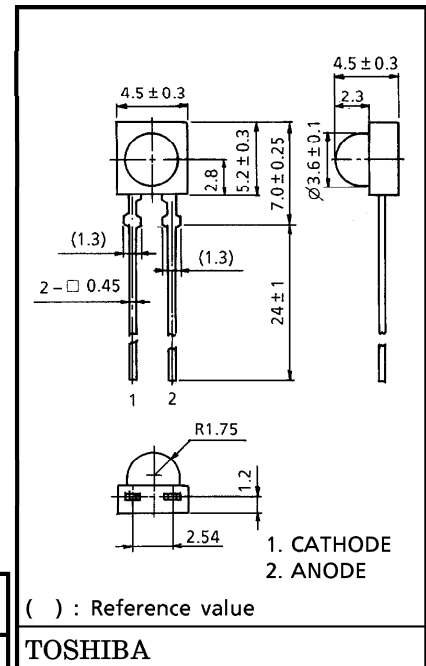
(Note 2) : Within 4 hours at 1 cycle with frequency 10 kHz, duty 50%, power applied for 0.1 s paused for 0.4 s

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	μA
Effective emission spot diameter	—	—	—	348	—	μm
Radiation Flux (Note)	ϕ_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 : mm

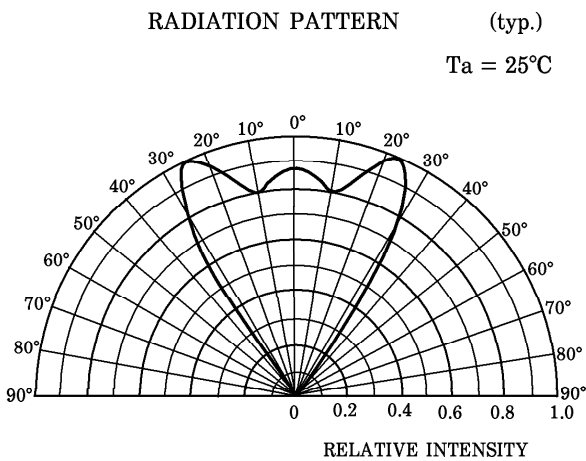
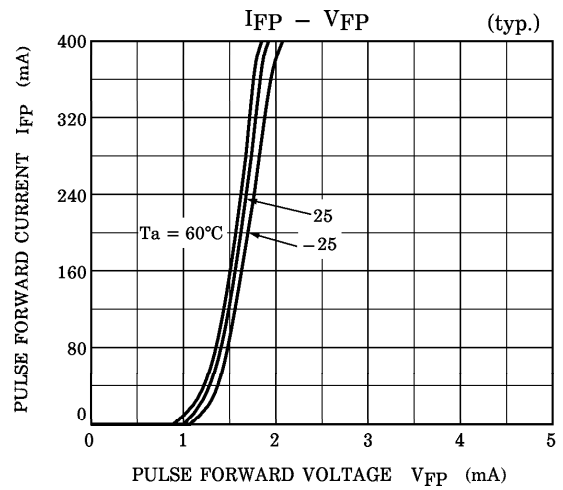
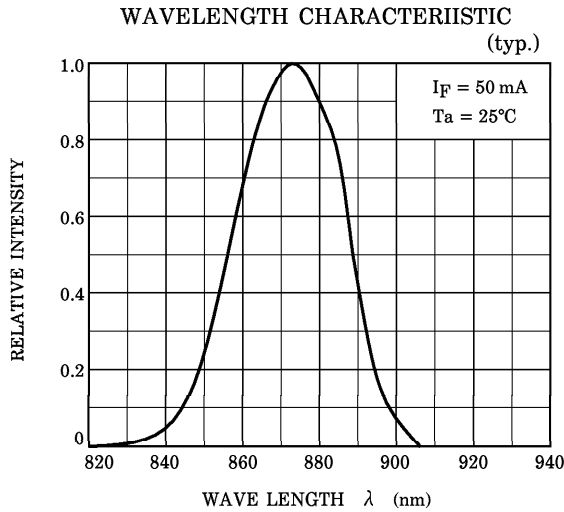
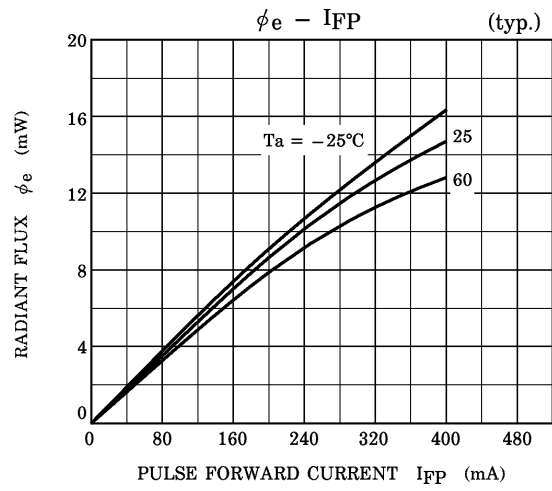
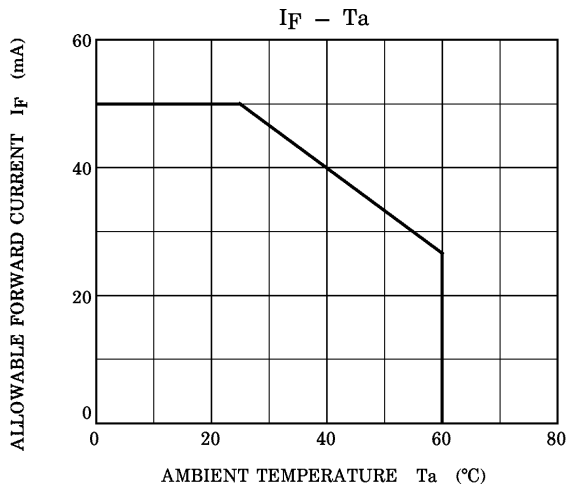


Weight : 0.18 g (typ.)

PRECAUTIONS

Please be careful of the followings.

1. Soldering temperature : 260°C max
Soldering time : 5 s max
(Soldering must be performed 2 mm 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 TLN210 for a camera AF use only. Please do not use this device except for a camera.



RESTRICTIONS ON PRODUCT USE

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