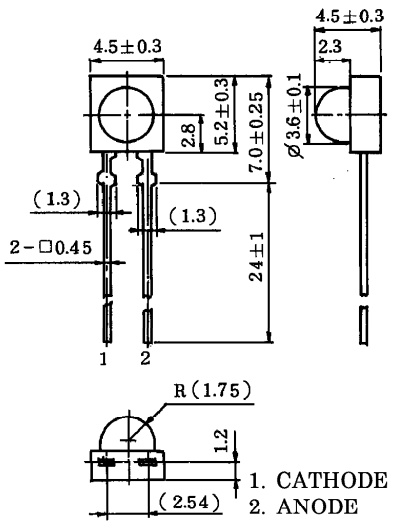
TOSHIBA INFRARED LED GaAℓAs INFRARED EMITTER

TLN212

INFRARED LIGHT EMISSION DIODE FOR STILL CAMERA

LIGHT SOURCE FOR AUTO FOCUS

Unit in mm



( ) : REFERENCE VALUE

JEDEC	—
EIAJ	—
TOSHIBA	—

Weight : 0.18g (TYP.)

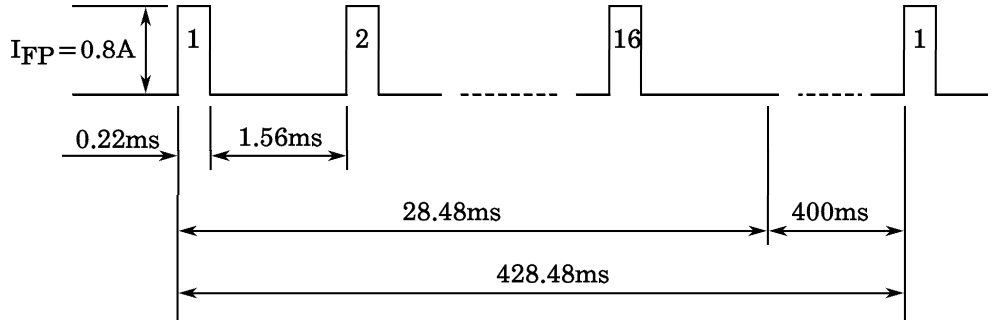
- Optical radiation of current confining LED chip is condensed by a resin lens.
- Large output
- Effective emission size is 388×296μm
- Optical output can be radiated efficiently in a solid angle 1.136sr.
- Proper forward voltage for 2 cells (Vcc=3V)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current (Note 1)	I_F	50	mA
Pulse Forward Current (Note 2)	I_{FP}	800	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 actual application.

(Note 2) Within 4 hours at the drive condition in the following diagram.



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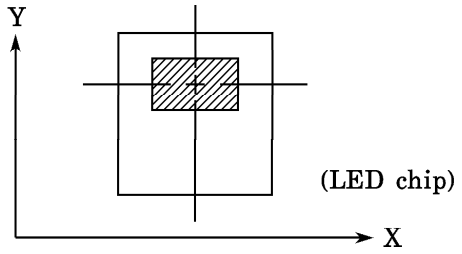
OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

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	—	1.67	1.85	V
Reverse Current	I_R	V_R=1V	—	—	100	μA
Effective emission spot size	X	Half Value of Peak (Note 1)	—	388	—	μm
	Y	Half Value of Peak (Note 1)	—	296	—	μm
Radiation Flux	ϕ_e	I_{FP}=300mA, t=10ms (Note 2)	8	12	—	mW
Half Value Angle	$\theta_{\frac{1}{2}}$	I_F=50mA	—	±35	—	°
Peak Emission Wavelength	λ_P	I_F=50mA	850	870	900	nm
Spectral Line Half Width	$\Delta\lambda$	I_F=50mA	—	40	—	nm

(Note 1) The direction of X, Y are in the following diagram.
The area with slash line describe emitting surface.



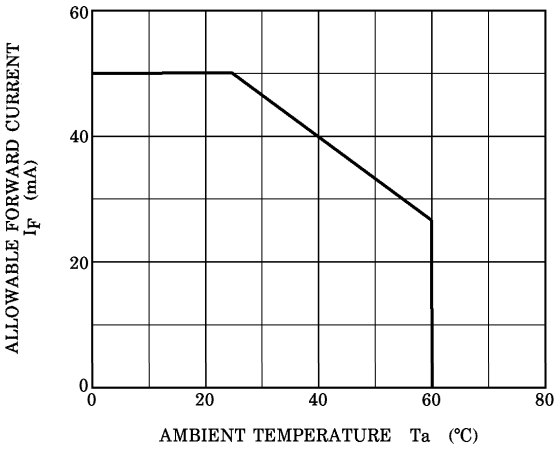
(Note 2) Luminous radiation output to effective angle ±25 degree.

PRECAUTION

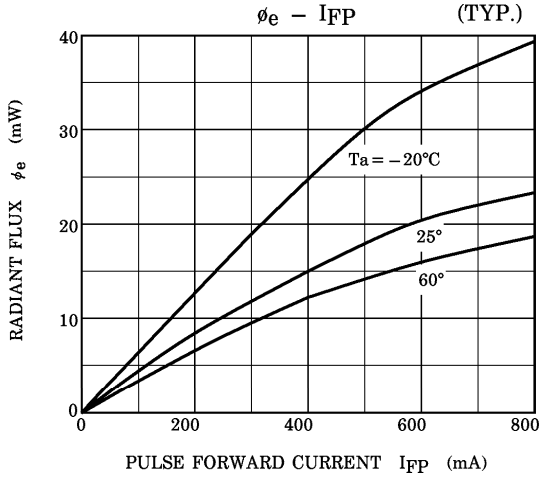
Please be careful of the followings.

1. Soldering temperature : 260°C MAX. Soldering time : 5 sec 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.

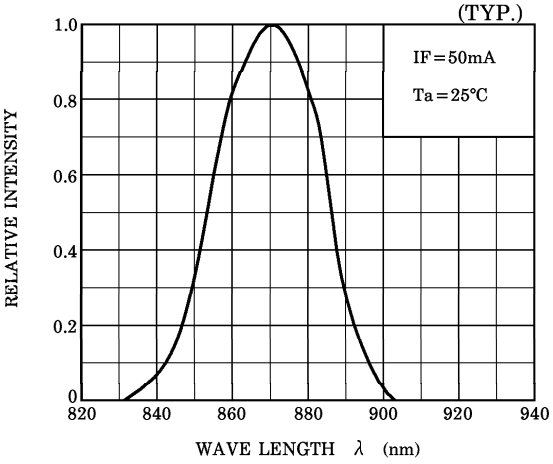
I_F – Ta



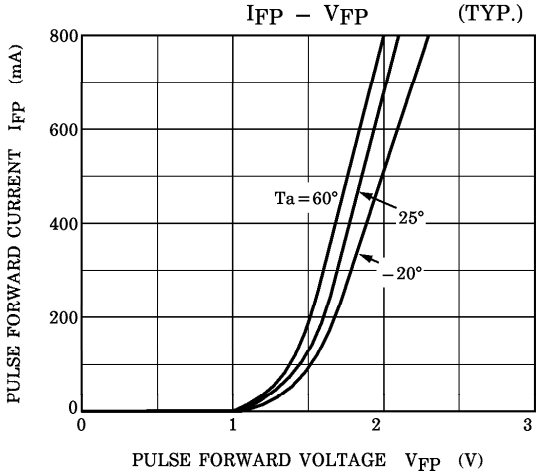
ϕ_e – I_{FP} (TYP.)



WAVE LENGTH CHARACTERISTICS (TYP.)



I_{FP} – V_{FP} (TYP.)



RADIATION PATTERN (TYP.)

Ta = 25°C