TOSHIBA INFRARED LED GaAs INFRARED EMITTER

TLN119

PRINTER, FACSIMILE

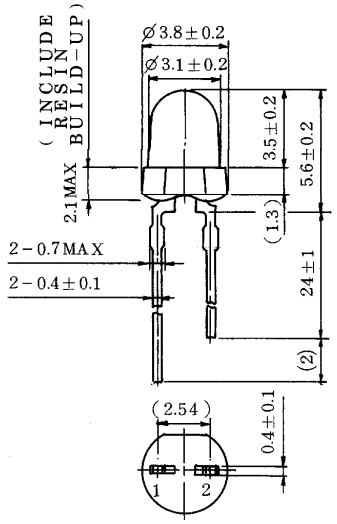
FLOPPY DISK DRIVE

HOME ELECTRIC EQUIPMENT

OPTO-ELECTRONIC SWITCH

- ϕ3.1mm plastic package
- Radiant intensity : I_E = 5mW / sr (TYP.)
- Half value angle : $\theta_{\frac{1}{2}} = \pm 30°$ (TYP.)

Unit in mm



( ): REFERENCE VALUE

JEDEC	—
EIAJ	—
TOSHIBA	4-4E1

Weight : 0.12g (TYP.)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	I_F	60	mA
Forward Current Derating (Ta > 25°C)	ΔI_F / °C	−0.8	mA / °C
Pulse Forward Current (Note 1)	I_{FP}	600	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_{opr}	−25~85	°C
Storage Temperature Range	T_{stg}	−30~100	°C
Soldering Temperature (3s)	T_{sol} (Note 2)	260	°C

PIN CONNECTION

1. ANODE
2. CATHODE

Note 1. Pulse Width ≦ 100μs, Repetitive Frequency = 100Hz

2. Soldering portion of lead : above 2mm from the body of the device.

OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	V_R	I_F = 10mA	1.00	1.15	1.30	V
Reverse Current	I_R	V_R = 5V	—	—	10	μA
Radiant Intensity (Note 3)	I_E	I_F = 20mA	2.5	5.0	10.0	mW / sr
Radiant Power	P_O	I_F = 20mA	—	4.5	—	mW
Peak Emission Wavelength	λ_P	I_F = 20mA	—	945	—	nm
Spectral Line Half Width	$\Delta\lambda$	I_F = 20mA	—	50	—	nm
Half Value Angle	$\theta_{\frac{1}{2}}$	I_F = 20mA	—	±30	—	°

Note 3. I_E classification A : 2.5~6.0mW / sr, B : 4.2~10mW / sr

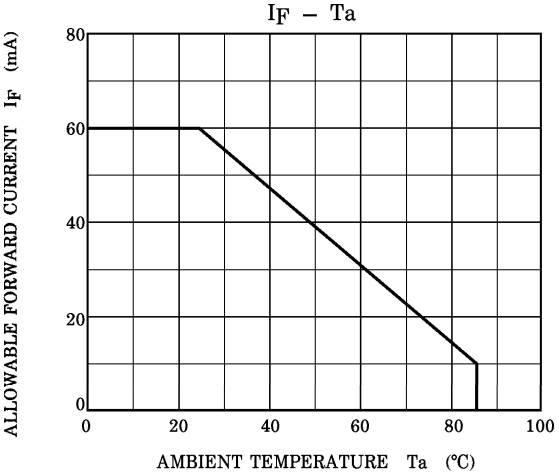
961001EAC2

PRECAUTION

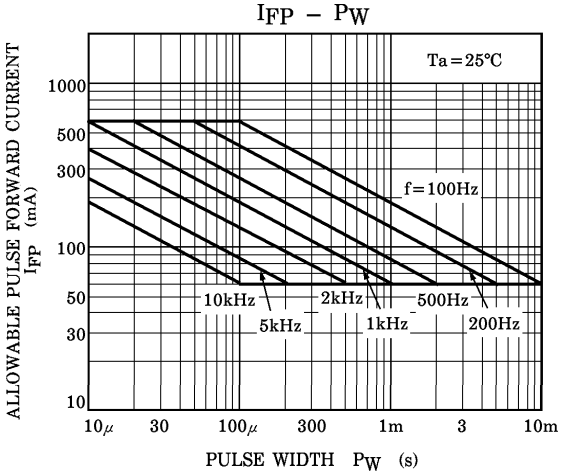
Please be careful of the followings.

1. When the lead is formed, the lead shall be formed at a distance of 2mm from the body without leaving forming stress to the body of the device.
   Soldering shall be performed after lead forming.

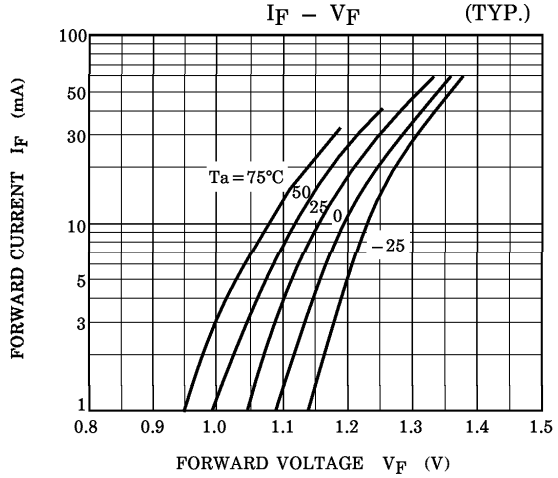
I_F – Ta



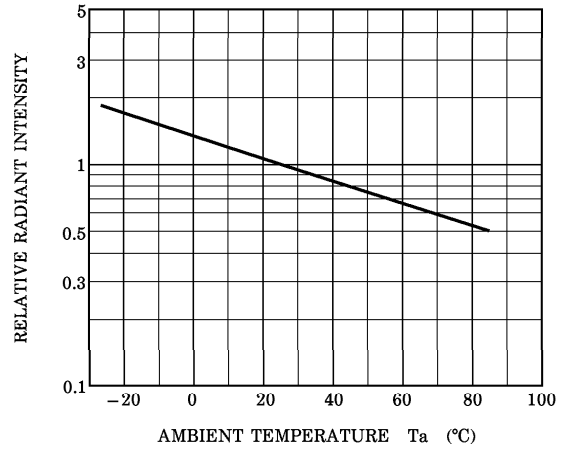
I_{FP} – P_W



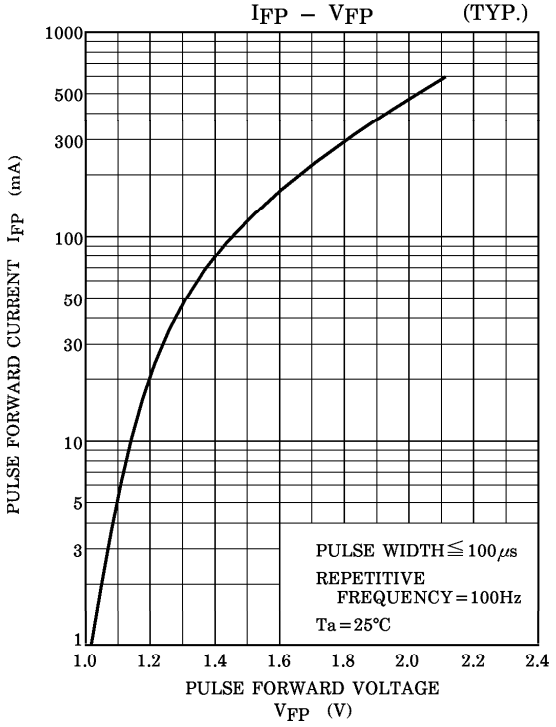
I_F – V_F (TYP.)



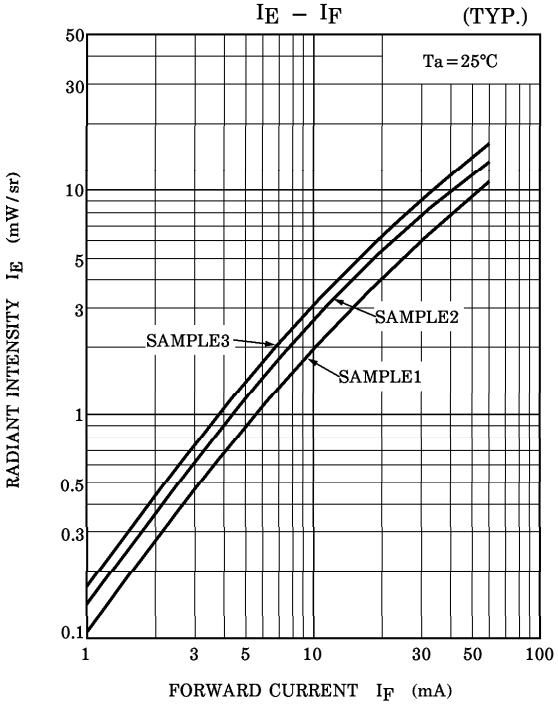
RELATIVE I_E – Ta (TYP.)



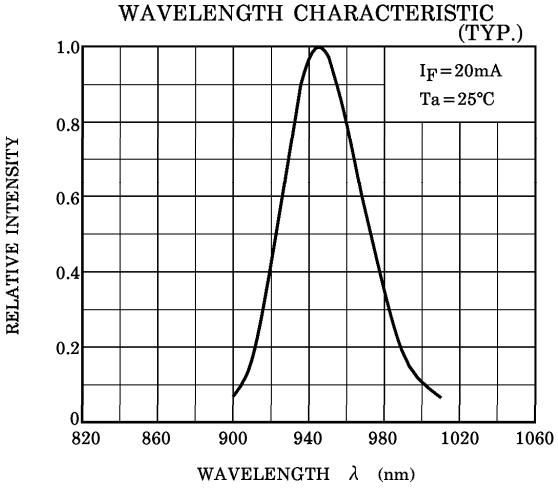
I_{FP} – V_{FP} (TYP.)



$I_E - I_F$ (TYP.)



WAVELENGTH CHARACTERISTIC (TYP.)



RADIATION PATTERN (TYP.)

(Ta = 25°C)