

TOSHIBA INFRARED LED GaAs INFRARED EMITTER

TLN203

INFRARED LED FOR PHOTO SENSOR

Unit in mm

OPTO-ELECTRONIC SWITCH

TAPE, CARD READERS

ROTARY ENCODER

DETECTION OF FDD (FLOPPY DISK DRIVE)

- High radiant intensity
- Best suited for combination with Photo Transistor TPS613.

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	I_F	50	mA
Forward Current Derating (Ta > 25°C)	ΔI_F	-0.67	mA / °C
Pulse Forward Current (Note)	I_{FP}	1	A
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_{opr}	-20~75	°C
Storage Temperature Range	T_{stg}	-30~100	°C

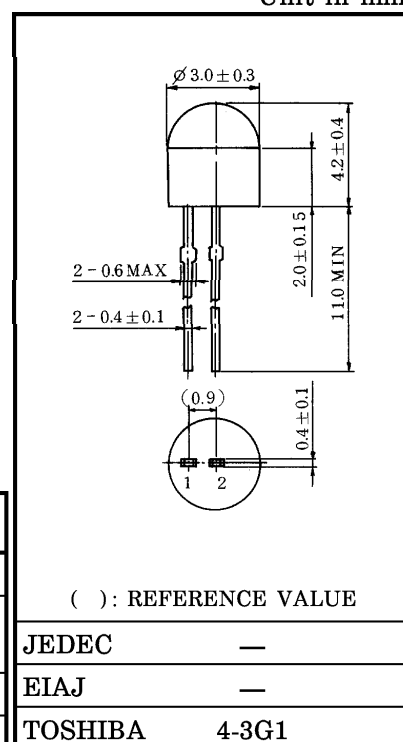
(Note) Pulse Width $\leq 100\mu s$, Repetitive Frequency = 100Hz

OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	V_F	$I_F = 50\text{mA}$	—	1.45	1.9	V
Reverse Current	I_R	$V_R = 5\text{V}$	—	—	10	μA
Radiant Intensity	I_E	$I_F = 20\text{mA}$	1.0	—	—	mW / sr
Radiant Power	P_O	$I_F = 20\text{mA}$	—	3.5	—	mW
Capacitance	C_T	$V_R = 0, f = 1\text{MHz}$	—	60	—	pF
Peak Emission Wavelength	λ_P	$I_F = 20\text{mA}$	—	880	—	nm
Spectral Line Half Width	$\Delta\lambda_P$	$I_F = 20\text{mA}$	—	80	—	nm
Half Value Angle	$\theta_{\frac{1}{2}}$	$I_F = 20\text{mA}$	—	± 35	—	°

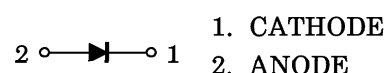
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Weight : 0.09g (TYP.)

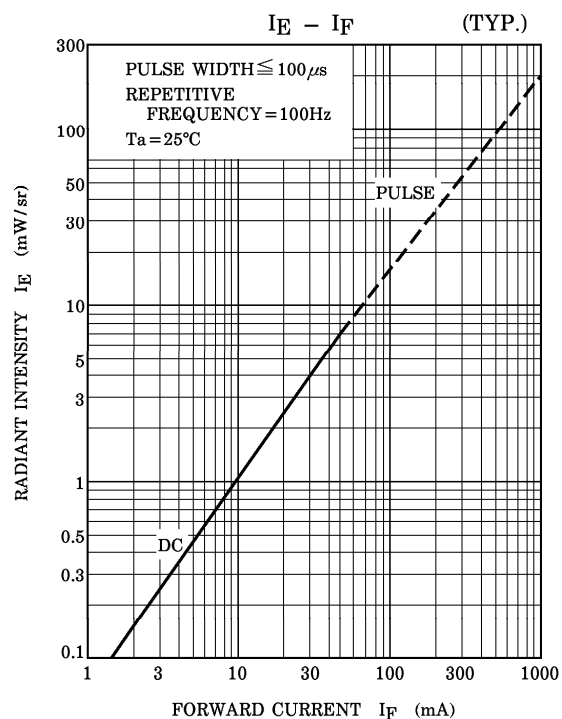
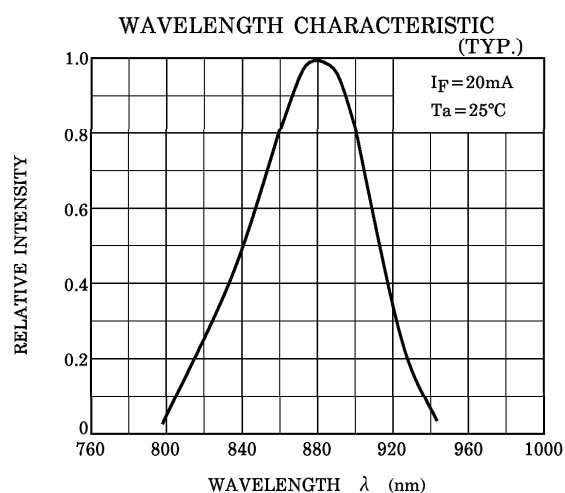
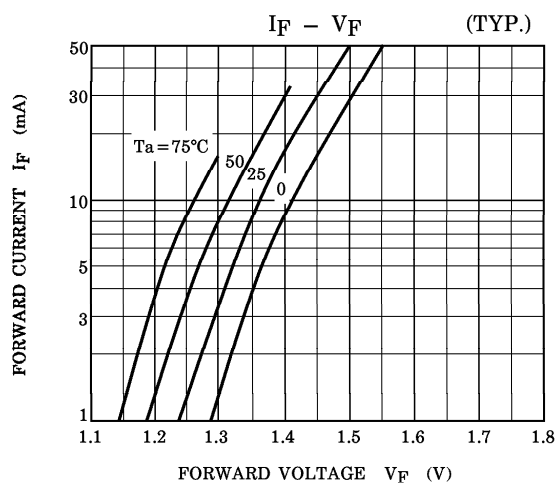
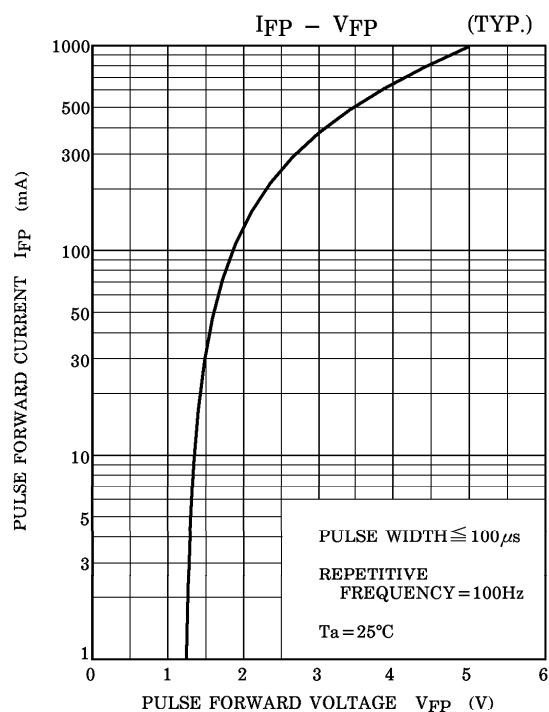
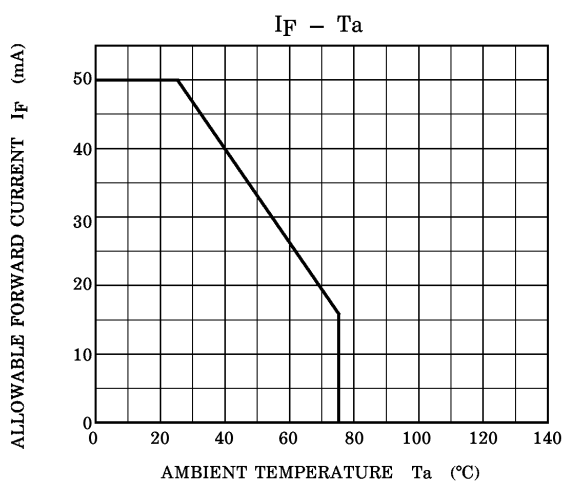
PIN CONNECTION



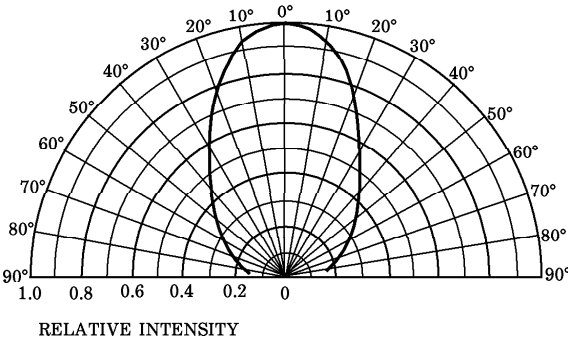
PRECAUTION

Please be careful of the followings.

1. Soldering temperature : 260°C MAX. Soldering time : 3s MAX.
(Soldering portion of lead : above 2mm from the body of the device)
2. 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.



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



RELATIVE $I_E - T_a$ (TYP.)

