

TOSHIBA INFRARED LED GaAs INFRARED EMITTER

TLN107A

INFRARED LED FOR PHOTO INTERRUPTER

Unit in mm

OPTO-ELECTRONIC SWITCH

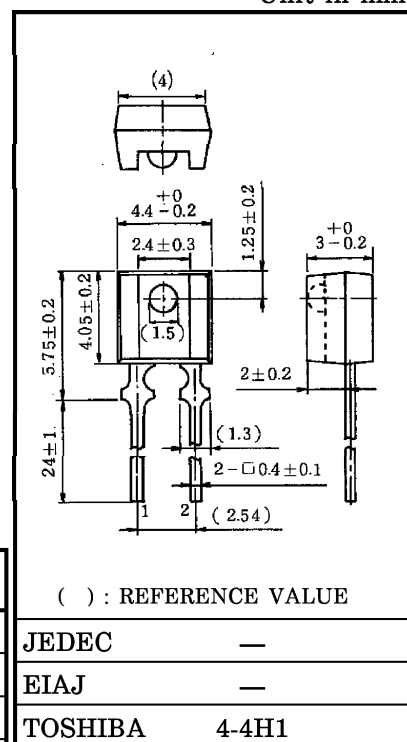
INFRARED RAYS APPLIED EQUIPMENT

- High radiant intensity
- Excellent linearity of radiant intensity and modulation by pulse operation and high frequency is possible.
- The same external shape as Photo Transistors TPS607A and TPS608A and is best suited for combination with them as a photo interrupter.

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	I _F	50	mA
Pulse Forward Current	I _{FP} (Note)	600	mA
Reverse Voltage	V _R	5	V
Forward Current Derating (Ta > 25°C)	ΔI _F / °C	-0.33	mA / °C
Operating Temperature Range	T _{opr}	-25~85	°C
Storage Temperature Range	T _{stg}	-40~100	°C

(Note) Pulse Width ≤ 100μs, Repetitive Frequency = 100Hz



Weight : 0.16g (TYP.)

PIN CONNECTION



1. CATHODE
2. ANODE

OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Forward Voltage	V _F	I _F = 10mA	1.0	1.15	1.3	V	
Reverse Current	I _R	V _R = 5V	—	—	10	μA	
Radiant Intensity	I _E	I _F = 20mA	TLN107A	0.8	—	—	mW / sr
			TLN107A-A	0.8	—	3.0	
			TLN107A-B	2.0	—	7.5	
Radiant Power	P _o	I _F = 20mA	—	2.5	—	mW	
Half Value Angle	θ _{1/2}	I _F = 20mA	—	± 15	—	°	
Capacitance	C _T	V _R = 0, f = 1MHz	—	30	—	pF	
Peak Emission Wavelength	λ _P	I _F = 20mA	—	940	—	nm	
Spectral Line Half Width	Δλ	I _F = 20mA	—	50	—	nm	

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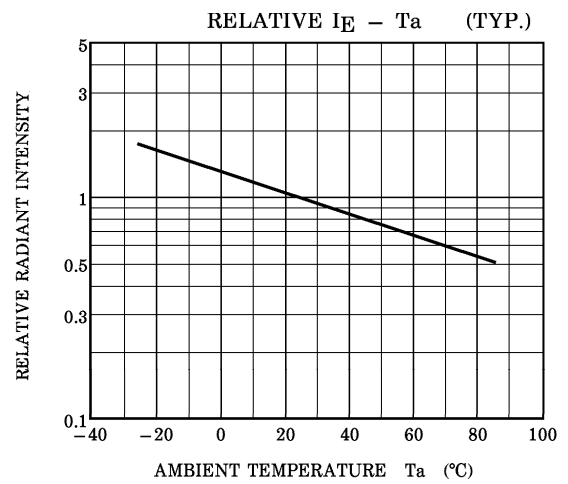
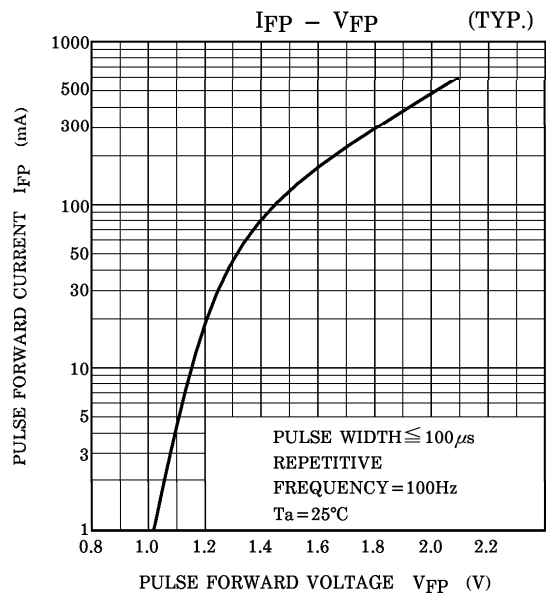
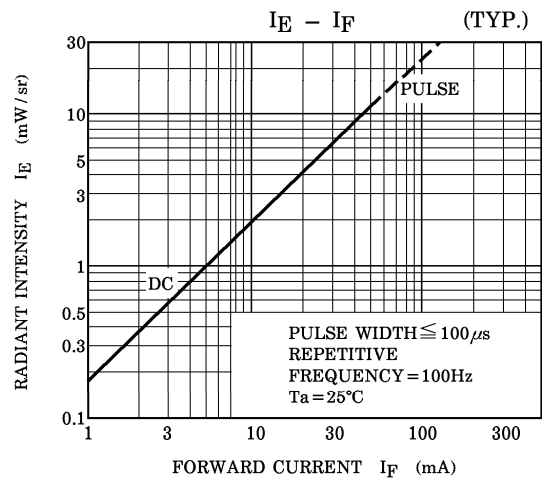
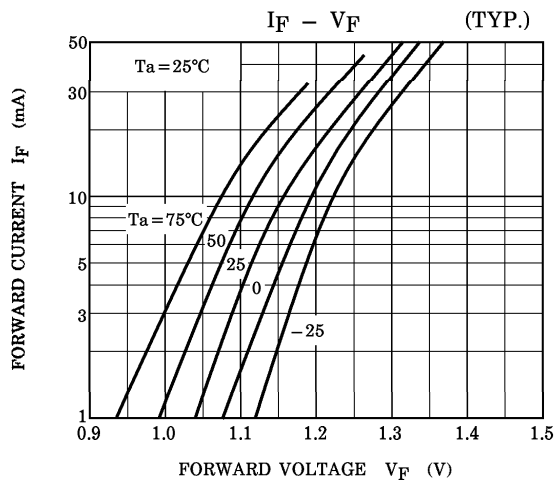
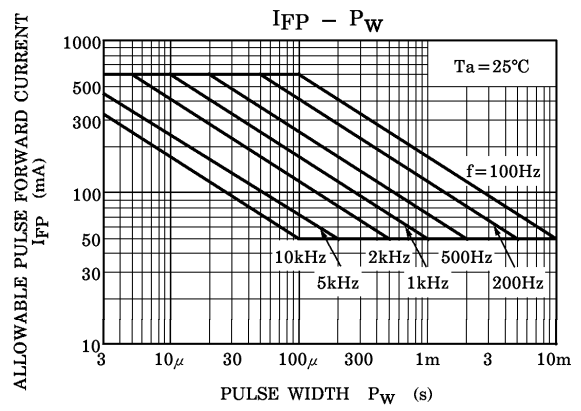
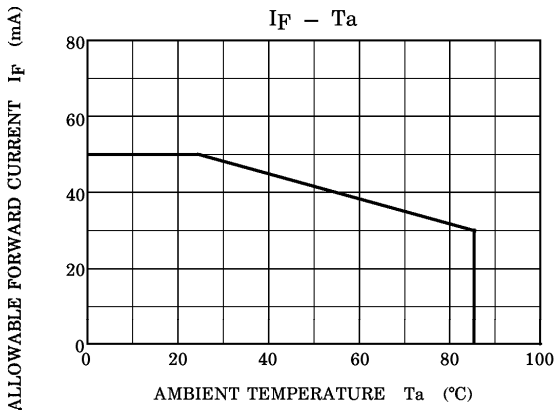
PRECAUTION

Please be careful of the followings.

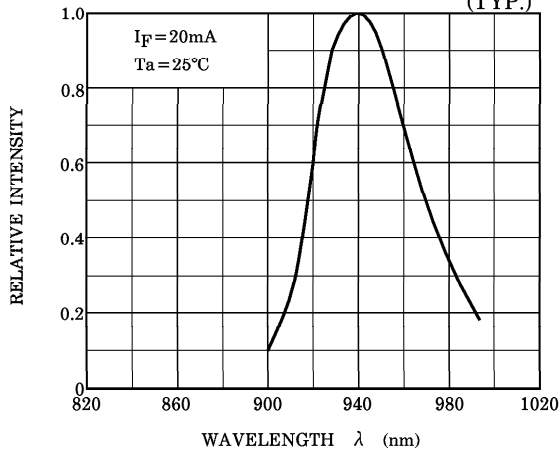
1. Soldering temperature : 260°C MAX.
Soldering time : 5s MAX.
(Soldering portion of lead : above 2mm from the body of the device)
2. If the lead is formed, the lead should be formed at a distance of 2mm from the body of the device.

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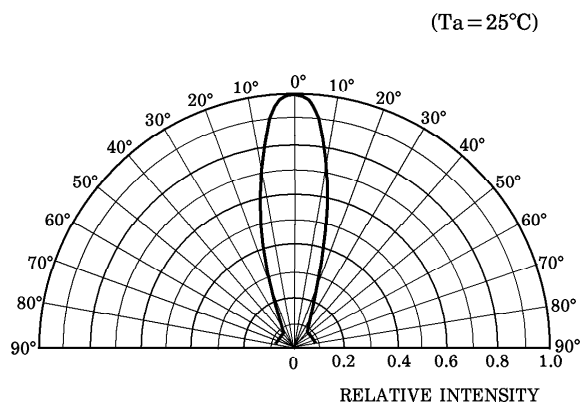
- Gallium arsenide (GaAs) is a substance used in the products described in this document. GaAs dust and fumes are toxic. Do not break, cut or pulverize the product, or use chemicals to dissolve them. When disposing of the products, follow the appropriate regulations. Do not dispose of the products with other industrial waste or with domestic garbage.
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WAVELENGTH CHARACTERISTIC (TYP.)



RADIATION PATTERN (TYP.)



COUPLING CHARACTERISTICS WITH TPS608A

