

(TLN101A)

INFRARED LED FOR PHOTO SENSOR

OPTO-ELECTRONIC SWITCH

SMOKE SENSOR

INFRARED RAYS APPLIED EQUIPMENT

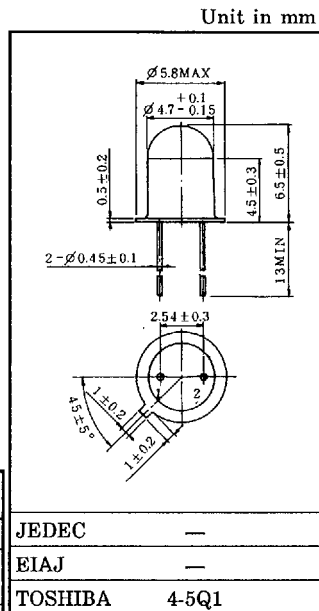
ROTARY ENCODER

LINEAR SCALE

- Excellent linearity of radiant power and modulation by pulse operation and high frequency is possible.
- Highly reliable because of hermetic seal.
- The same external shape as Photo Transistors TPS601A and TPS604.

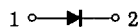
MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	I_F	100	mA
Forward Current Derating ($T_a > 25^\circ\text{C}$)	$\Delta I_F / ^\circ\text{C}$	-1	mA / $^\circ\text{C}$
Pulse Forward Current (Note)	I_{FP}	1	A
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_{opr}	-40~125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$

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

Weight : 0.39g (TYP.)

PIN CONNECTION



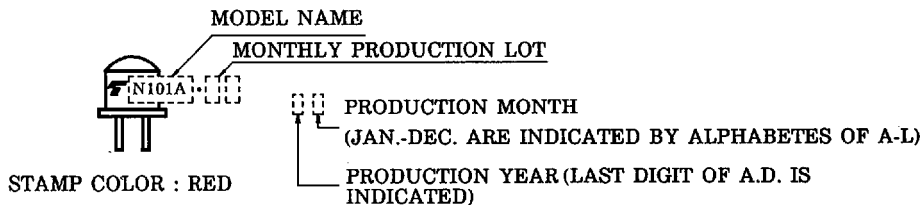
1. ANODE
2. CATHODE (CASE)

OPTO-ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	V_F	$I_F = 50\text{mA}$	—	1.3	1.4	V
Pulse Forward Voltage	V_{FP}	$I_{FP} = 1\text{A}$	—	2.4	—	V
Reverse Current	I_R	$V_R = 5\text{V}$	—	—	10	μA
Radiant Intensity	I_E	$I_F = 50\text{mA}$	—	15	—	mW / sr
Radiant Power	P_o	$I_F = 50\text{mA}$	1.5	—	—	mW
		TLN101A-C	1.5	—	4.5	
Capacitance	C_T	$V_R = 0, f = 1\text{MHz}$	—	30	—	pF
Peak Emission Wavelength	λ_P	$I_F = 50\text{mA}$	—	940	—	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 50\text{mA}$	—	50	—	nm
Half Value Angle	$\theta_{\frac{1}{2}}$	$I_F = 50\text{mA}$	—	± 4	—	$^\circ$

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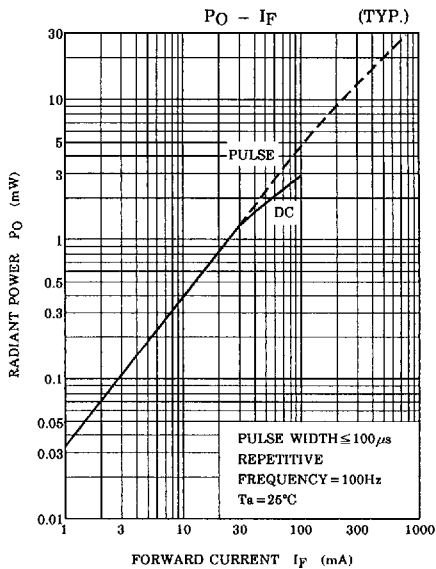
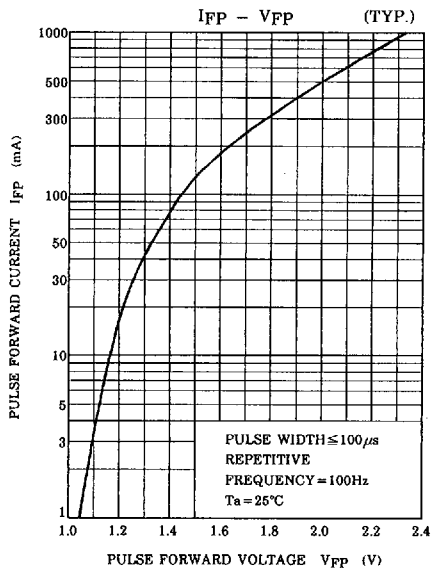
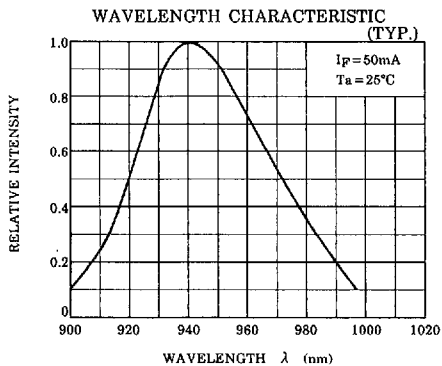
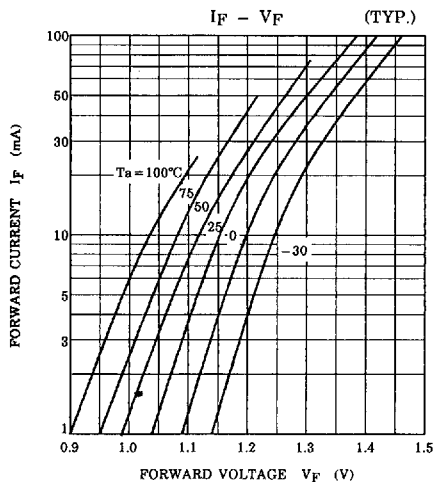
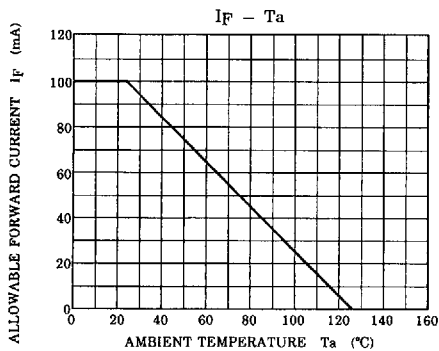
PRODUCT INDICATION



PRECAUTION

Please be careful of the followings.

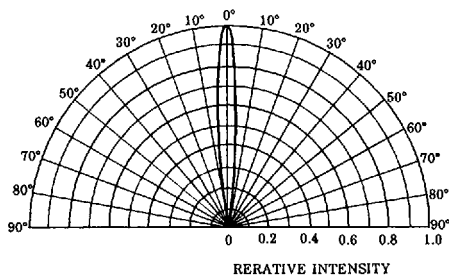
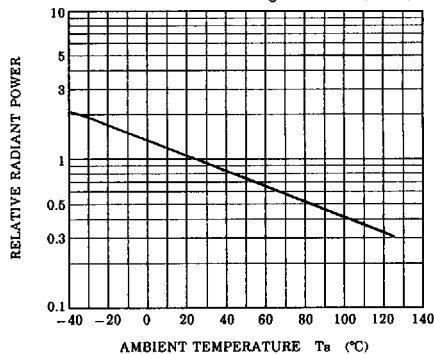
1. Soldering temperature : 260°C MAX.
Soldering time : 5s MAX.
(Soldering portion of lead : above 1.5mm from the body of the device)
2. If the lead is formed, the lead should be formed at a distance of 2mm from the body of the device.
Soldering shall be performed after lead forming.



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RADIATION PATTERN (TYP.)

(Ta = 25°C)

RELATIVE P_O - T_a (TYP.)I_{FP} - P_W

Ta = 25°C

