

TOSHIBA PHOTO TRANSISTOR SILICON NPN EPITAXIAL PLANAR

TPS 618

PHOTO TRANSISTOR FOR PHOTO INTERRUPTER

Unit in mm

PHOTOELECTRIC COUNTER

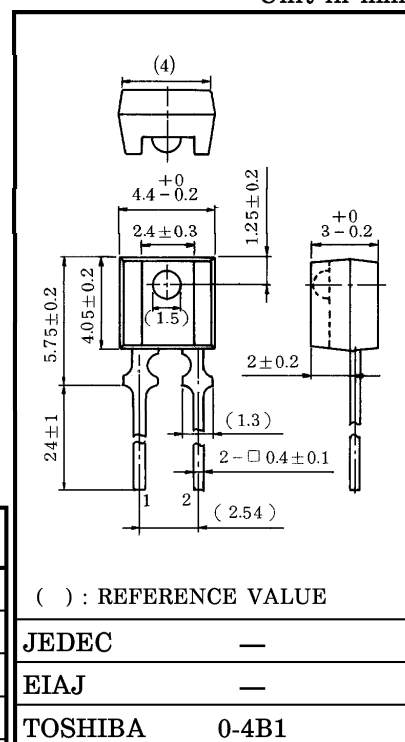
POSITION AND ROTATIONAL SPEED SENSOR

AUTOMATIC CONTROL UNIT

- Fast response speed
- The same external shape as the infrared LED TLN107A, and is best suited for combination with TLN107A as a photo interrupter.
- Visible light cut type (black package)

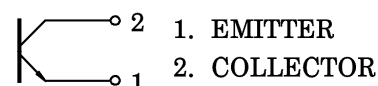
MAXIMUM RATINGS (T_a = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Collector Voltage	V_{ECO}	5	V
Collector Current	I_C	50	mA
Collector Power Dissipation	P_C	75	mW
Collector Power Dissipation Derating ($T_a > 25^{\circ}\text{C}$)	$\Delta P_C / ^{\circ}\text{C}$	-1	mW / $^{\circ}\text{C}$
Operating Temperature Range	T_{opr}	-25~85	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-40~100	$^{\circ}\text{C}$



Weight : 0.16g (TYP.)

PIN CONNECTION



OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Dark Current		$I_D (I_{CEO})$	$V_{CE}=24V, E=0$	—	0.005	0.1	μA
Light Current (Note 1)		I_L	$V_{CE}=3V, E=0.1mW/cm^2$ (Note 2)	27	70	—	μA
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=10\mu A, E=0.1mW/cm^2$ (Note 2)	—	0.15	0.4	V
Switching Time	Rise Time	t_r	$V_{CC}=5V, I_C=2mA,$ $R_L=100\Omega$	—	6	—	μs
	Fall Time	t_f		—	6	—	
Peak Sensitivity Wavelength		λ_P	—	—	870	—	nm
Half Value Angle		$\theta_{\frac{1}{2}}$	—	—	± 15	—	°

Note 1. I_J, Classification A : 27~80μA, B : 55~165μA

2. Color temperature=2870°K, Standard Tungsten Lamp

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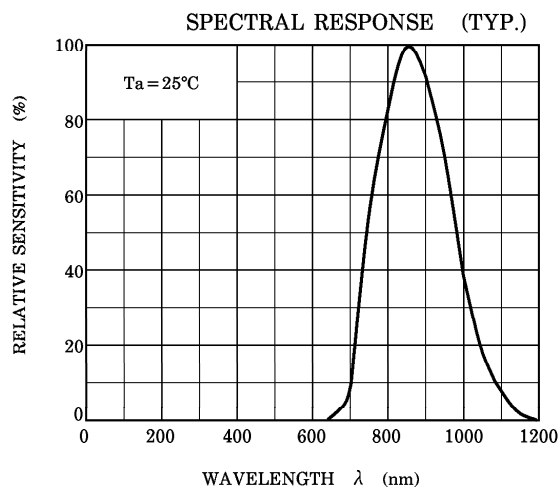
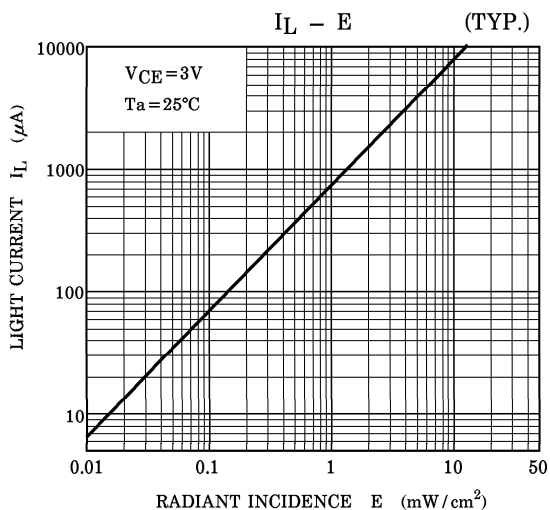
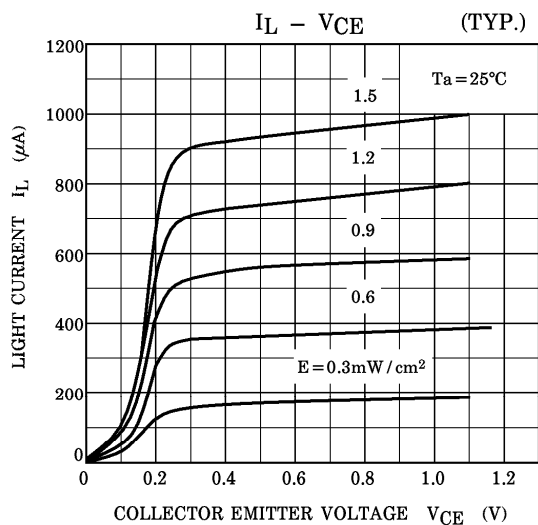
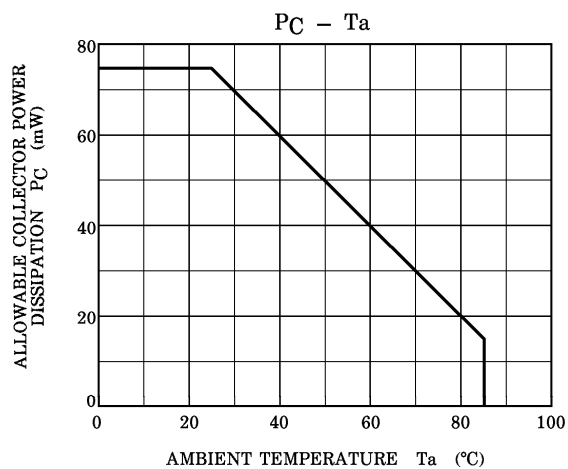
PRECAUTION

Please be careful of the followings.

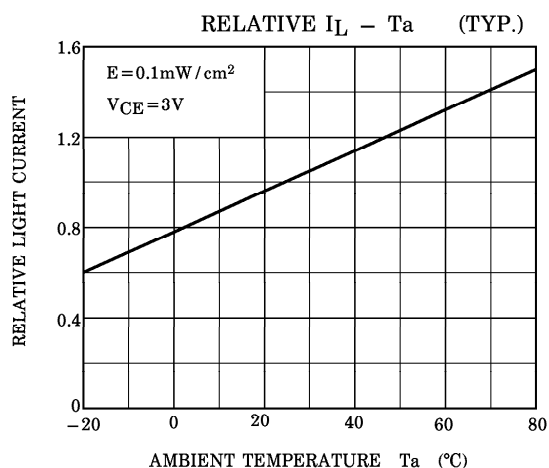
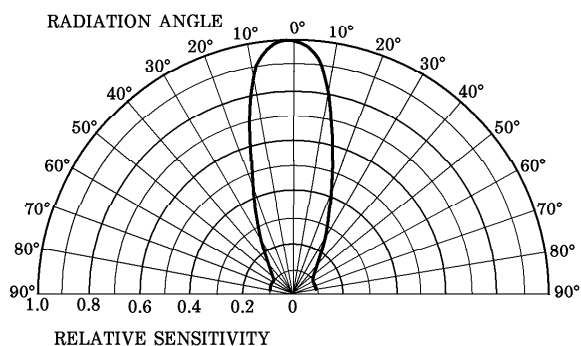
1. Soldering temperature : 260°C MAX. Soldering time : 5s MAX.
(Soldering portion of lead : above 2mm from the body of the device)
2. If the lead is formed, the lead should be formed at a distance of 2mm from the body of the device.
Soldering shall be performed after lead forming.

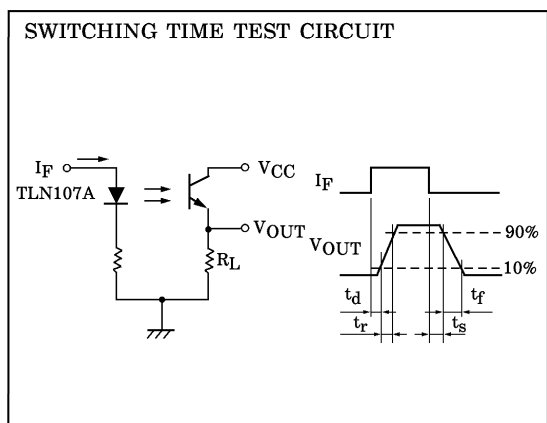
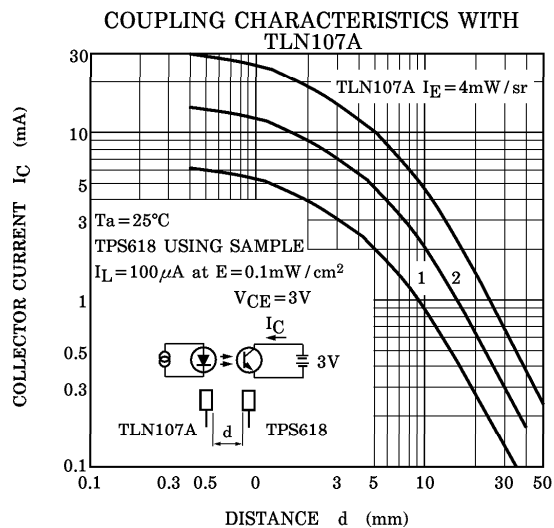
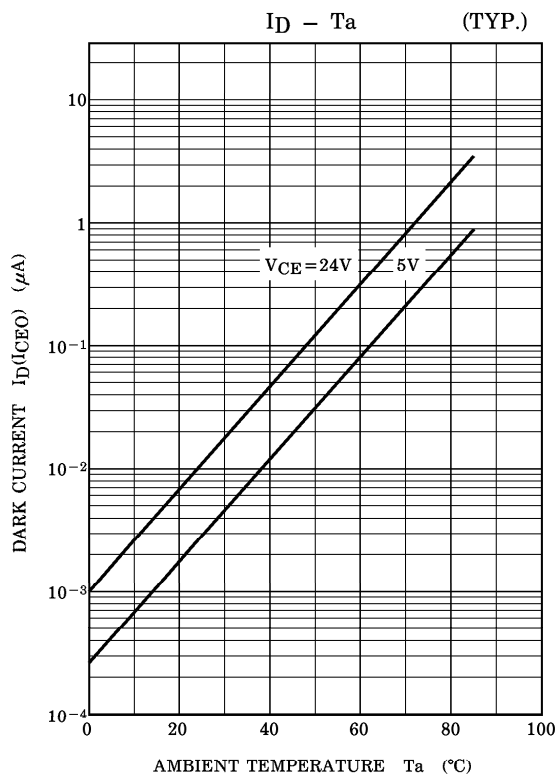
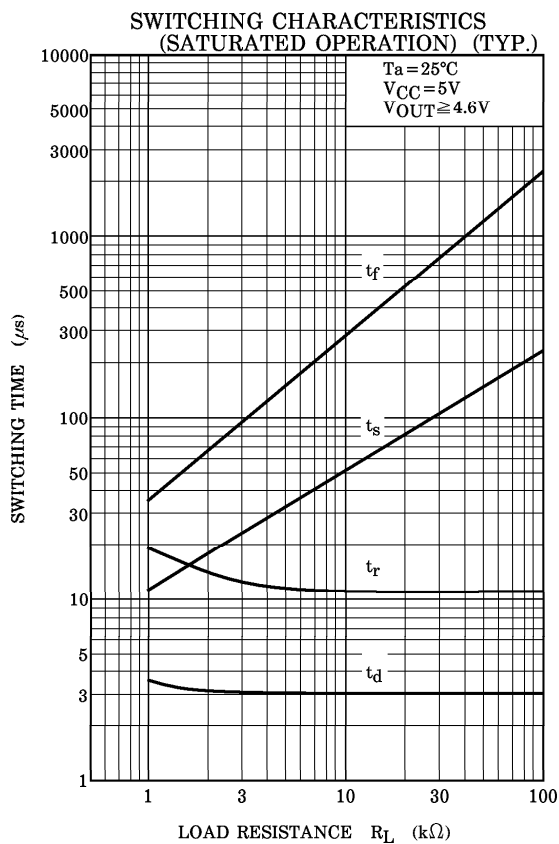
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DIRECTIONAL SENSITIVITY CHARACTERISTIC (TYP.)
($T_a = 25^\circ C$)





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Datasheets for electronics components.