

TOSHIBA PHOTO DIODE SILICON PIN

TPS703, TPS704

SILICON PIN PHOTO DIODE FOR REMOTE CONTROL

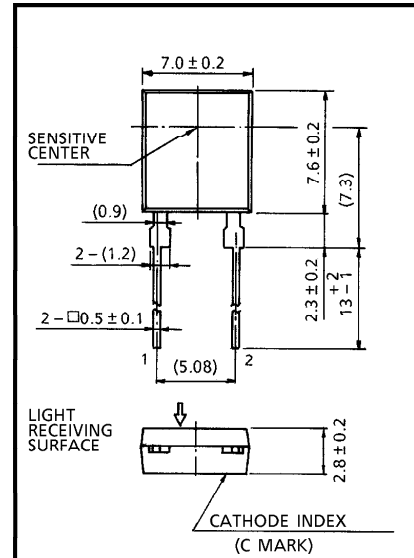
VARIOUS KINDS OF REMOTE CONTROL SYSTEMS

SMOKE SENSOR

OPTICAL COMMUNICATION

- Detector for visible, fluorescent, and other disturbance light.
 TPS703 : $\lambda > 700\text{nm}$
 TPS704 : $\lambda > 800\text{nm}$
- High sensitivity
 TPS703 : $I_{SC} = 1.5\mu\text{A (Typ.)}$
 TPS704 : $I_{SC} = 0.9\mu\text{A (Typ.)}$
- High speed response : $t_r, t_f = 100\text{ns (Typ.)}$
- Wide half value angle : $\theta \frac{1}{2} = \pm 65^\circ \text{(Typ.)}$
- TLN105B, TLN115A, etc. are available as high radiant power infrared LEDs.

Unit in mm



() : REFERENCE VALUE

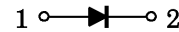
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Reverse Voltage	V_R	20	V
Power Dissipation	P_D	150	mW
Power Dissipation Derating (Ta > 25°C)	TPS703	-2.36	mW / °C
	TPS704	-4.3	
Operating Temperature Range	TPS703	-30~80	°C
	TPS704	-30~60	
Storage Temperature Range	TPS703	-40~90	°C
	TPS704	-40~60	
Soldering Temperature · Time	T_{sol}	260°C · 3s	—

JEDEC	—
EIAJ	—
TOSHIBA	0-7B1

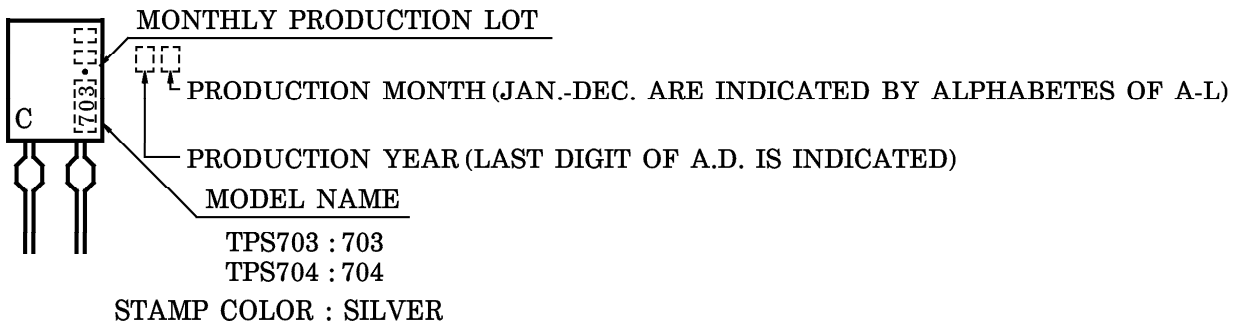
Weight : 0.31g (Typ.)

PIN CONNECTION



1. ANODE
2. CATHODE

PRODUCT INDICATION



961001EAA2

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● The information contained herein is subject to change without notice.

OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

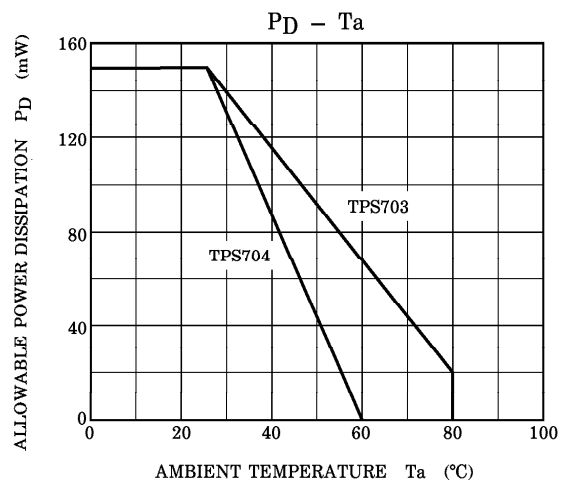
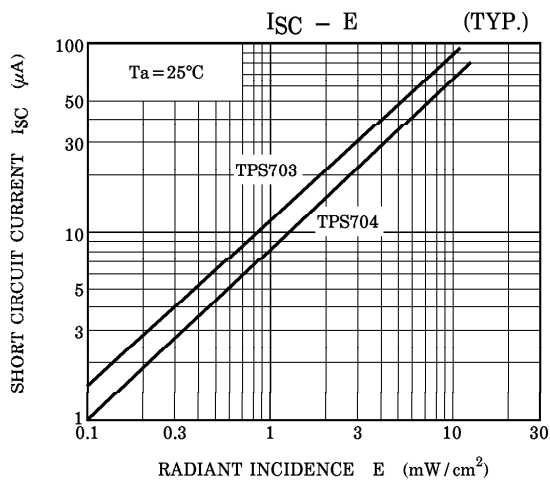
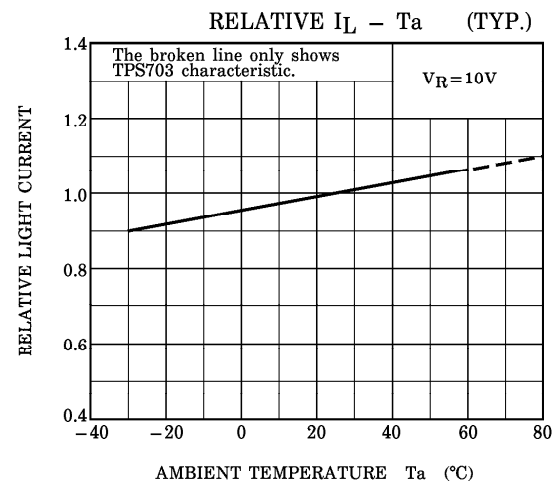
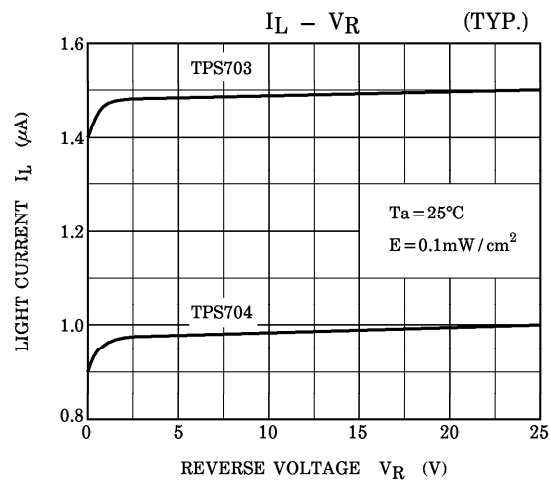
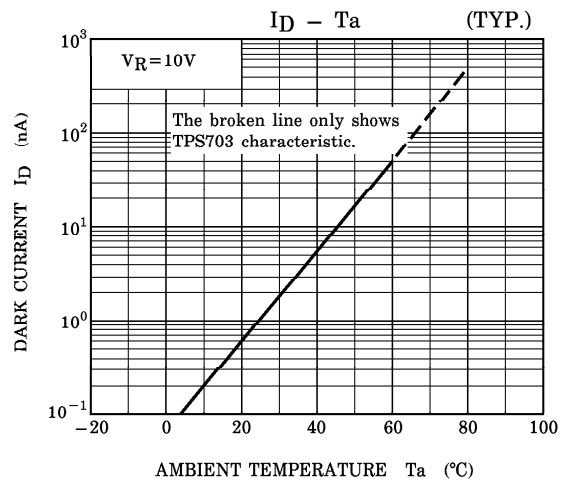
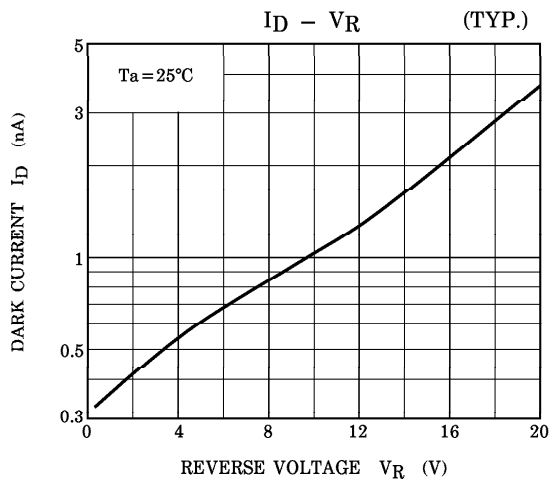
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Short Circuit Current		I _{SC}	E = 0.1mW / cm ² (Note)	TPS703	0.9	1.5	—	μA
				TPS704	0.5	0.9		
Dark Current		I _D	V _R = 10V, E = 0	—	1	30	nA	
Open Circuit Voltage		V _{OP}	E = 0.1mW / cm ² (Note)	TPS703	150	250	—	mV
Capacitance		C _T	V _R = 3V, f = 1MHz	—	20	—	pF	
Peak Sensitivity Wavelength		λ _P	—	TPS703	—	960	—	nm
				TPS704	—	1000		
Switching Time	Rise Time	t _r	V _R = 10V, R _L = 1kΩ	—	100	—	ns	
	Fall Time	t _f		—	100	—		
Half Value Angle		θ _{1/2}		—	±65	—	°	

Note : Color temperature = 2870°K, Standard Tungsten Lamp.

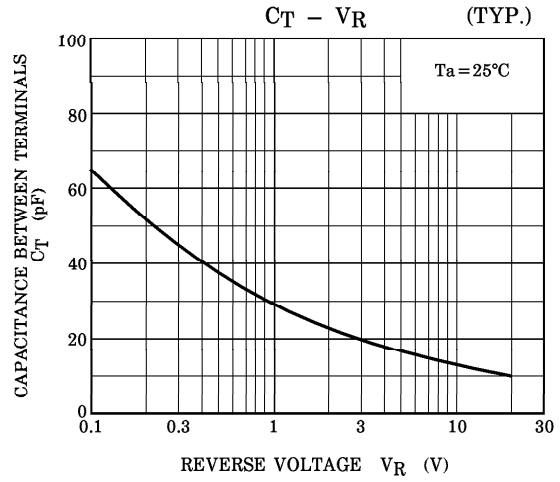
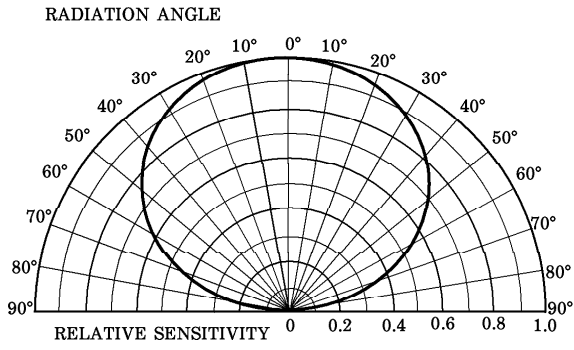
PRECAUTION

Please be careful of the followings.

1. Soldering shall be performed at a portion of lead above 2.3mm from the body of the device.
2. If the lead is formed, the lead should be formed at a distance of 2.3mm from the body of the device.
Soldering shall be performed after lead forming.



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



SPECTRAL RESPONSE (TYP.)

