

PIN Photo Diode

TPS703

Applications -

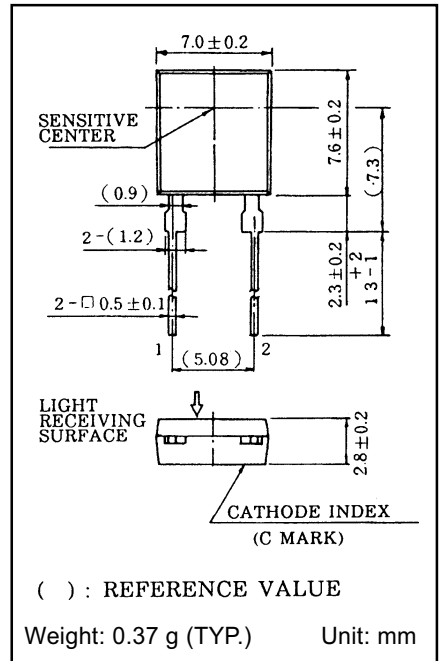
- Smoke Sensor
- Remote Control Systems
- Optical Communication

Features -

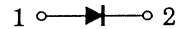
- High Sensitivity: $I_{sc} = 1.5\mu A$ (Typ.)
- Small Dark Current: $I_D = 1nA$ (Typ.)
- High Speed Response: $t_r, t_f = 100ns$ (Typ.)
- Visible Light Cut-off Resin Employed
- Half Value Angle: $\theta_{1/2} = \pm 65^\circ$ (Typ.)
- Spectrally Compatible with TLN105(B) and Other High Powered Emitters

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Reverse Voltage	V_R	20	V
Soldering Temperature·Time	T_{SOL}	$260^\circ C:3s$	—
Power Dissipation	P_D	150	mW
Power Dissipation Derating ($T_a > 25^\circ C$)	$\Delta P_D / ^\circ C$	-2.31	mW / $^\circ C$
Operating Temperature Range	T_{OPR}	-30~80	$^\circ C$
Storage Temperature Range	T_{stg}	-40~90	$^\circ C$



PIN CONNECTION



1. ANODE
2. CATHODE

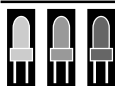
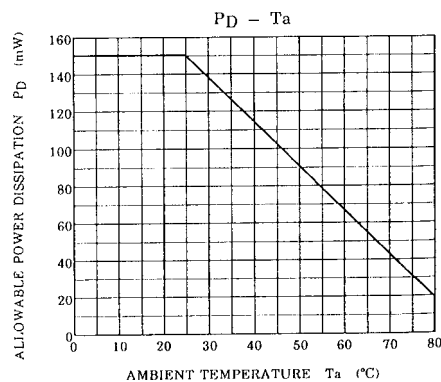
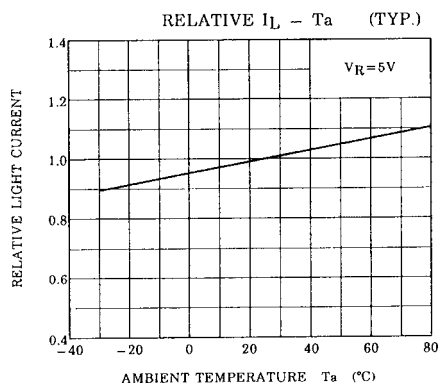
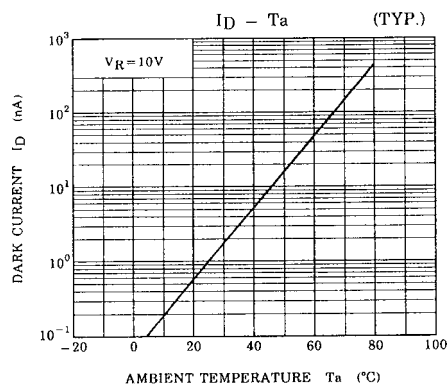
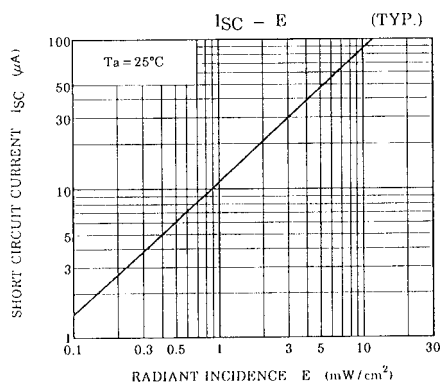
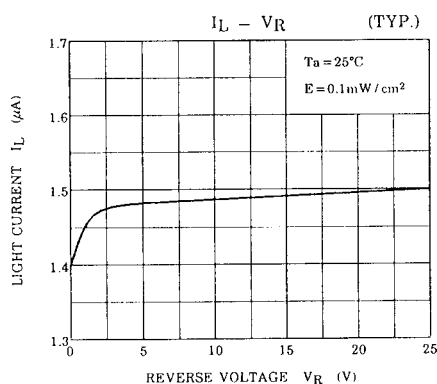
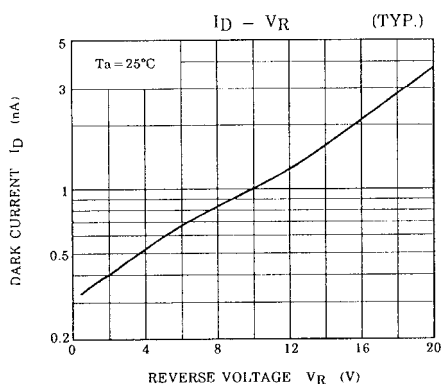
OPTO-ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Dark Current	I_D	$V_R = 10V, E = 0$	—	1	30	nA
Short Circuit Current	I_{SC}	$E = 0.1mW / cm^2$ (Note)	0.9	1.5	—	μA
Open Circuit Voltage	V_{OP}	$I_C = 15\mu A, E = 0.1mW / cm^2$ (Note)	150	250	—	mV
Switching Time	Rise Time	$V_R = 10V, R_L = 1k\Omega$	—	100	—	ns
	Fall Time		—	100	—	
Peak Sensitivity Wavelength	λ_P	—	—	960	—	nm
Half Value Angle	$\theta_{1/2}$	—	—	± 65	—	$^\circ$

(Note) Color temperature=2870°K Standard Tungsten Lamp

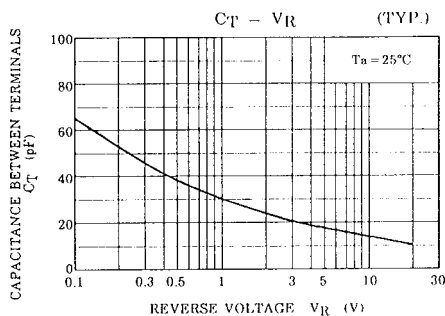
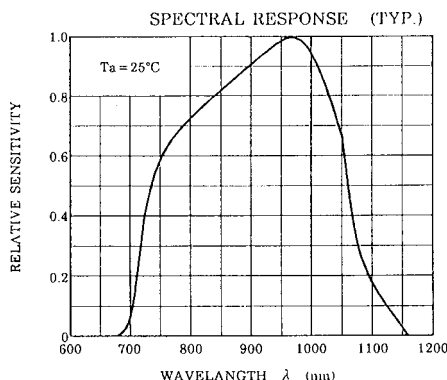
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TPS703 Graphs -



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

