

TOSHIBA PHOTO DIODE SILICON PN

TPS708

PHOTO DIODE FOR PHOTO SENSOR

Unit in mm

OPTICAL SWITCH

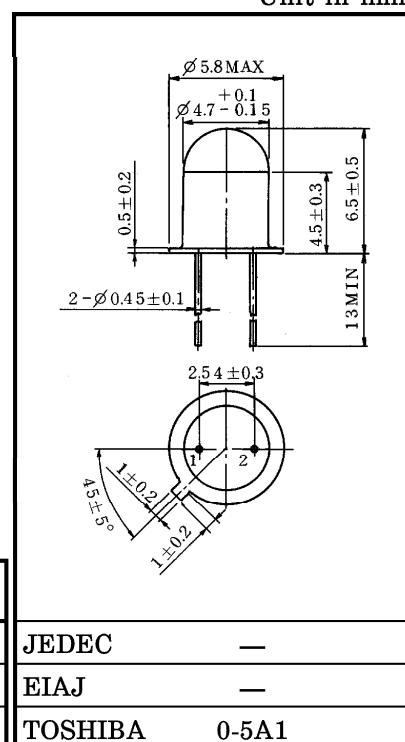
SMOKE SENSOR

POSITION SENSOR

- TO-18 metal package
- High sensitivity : $I_{SC}=1.5\mu A$ (TYP.)
- Small dark current : $I_D=10pA$ (TYP.)
- TLN108 ($\lambda_P=940nm$) and TLN201 ($\lambda_P=880nm$) are available as high radiant power infrared LEDs for a light source.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Reverse Voltage	V_R	30	V
Power Dissipation	P_D	100	mW
Operating Temperature Range	T_{opr}	$-40 \sim 125$	$^\circ C$
Storage Temperature Range	T_{stg}	$-55 \sim 150$	$^\circ C$
Power Dissipation Derating ($T_a > 25^\circ C$)	$\Delta P_D / ^\circ C$	-0.81	mW / $^\circ C$



Weight : 0.32g (TYP.)

PIN CONNECTION



1. ANODE
2. CATHODE (CASE)

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Dark Current	I_D	$V_R=10V, E=0$	—	0.01	60	nA
Short Circuit Current	I_{SC}	$E=0.1mW/cm^2$ (Note)	1.0	1.5	—	μA
Capacitance	C_T	$V_R=10V, f=1MHz$	—	50	—	pF
Peak Sensitivity Wavelength	λ_P	—	—	850	—	nm
Switching Time	Rise Time	$V_R=10V, R_L=1k\Omega$	—	100	—	ns
	Fall Time		—	100	—	
Half Value Angle	$\theta_{1/2}$	—	—	± 15	—	$^\circ$

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

961001EAA2

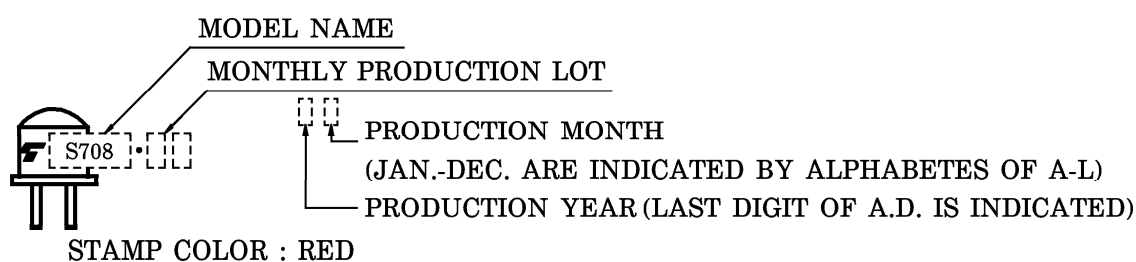
● TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

PRECAUTION

Please be careful of the followings.

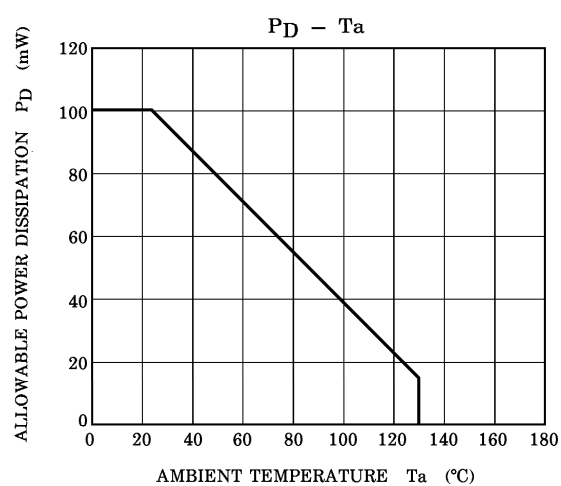
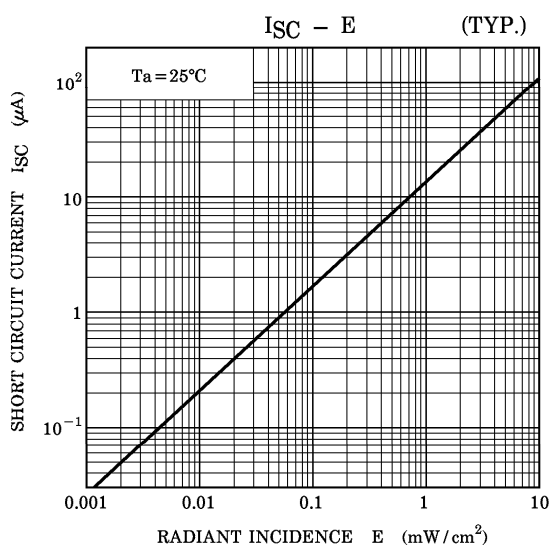
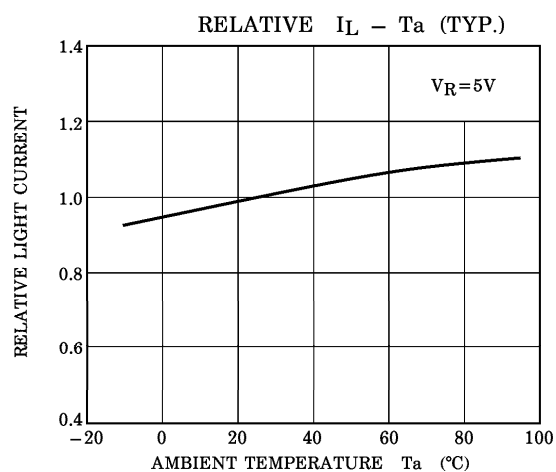
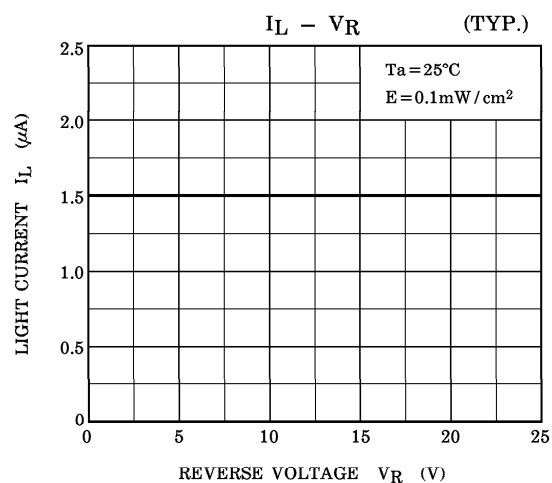
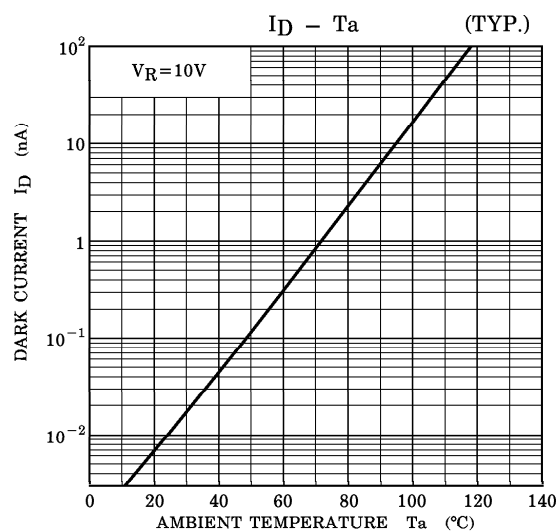
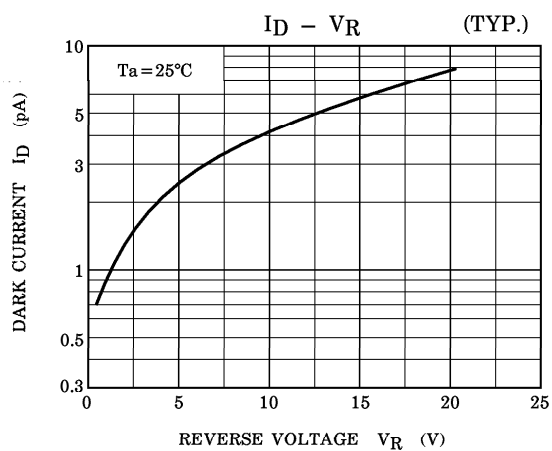
1. Soldering temperature : 260°C MAX. Soldering time : 5s MAX.
(Soldering portion of lead : above 1.5mm from the body of the device)
2. If the lead is formed, the lead should be formed at a distance of 2mm from the body of the device.
Soldering shall be performed after lead forming.

PRODUCT INDICATION

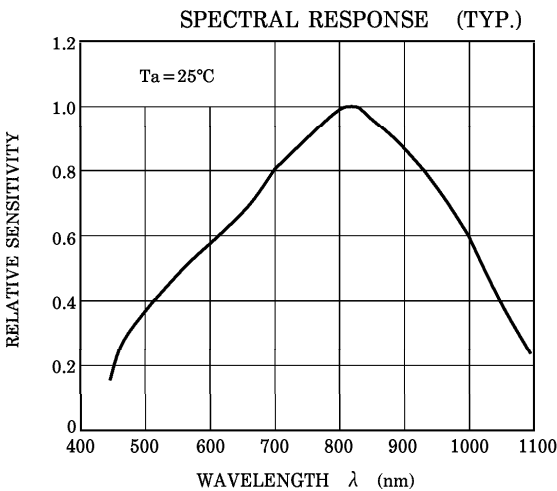
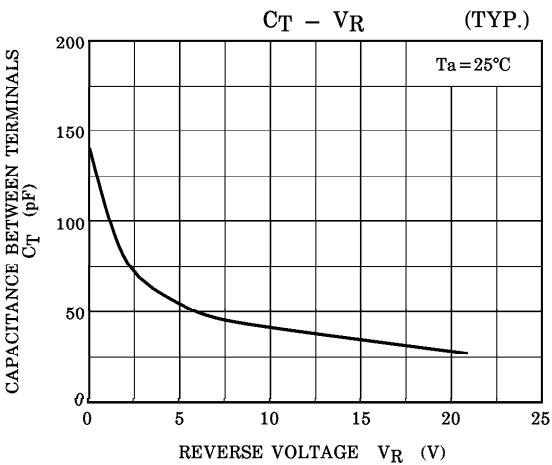
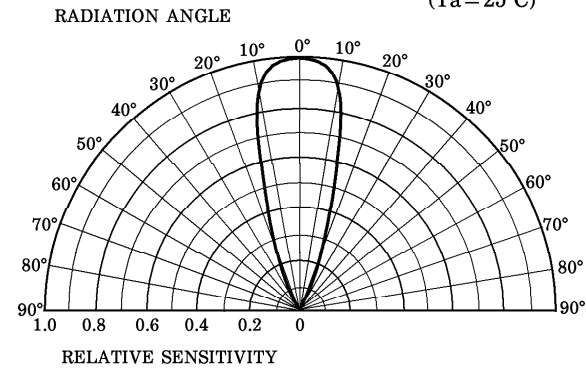


961001EAA2'

- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.
- The information contained herein is subject to change without notice.



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



This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.