

# PHOTO DIODE

## MTD7030A SILICON PIN PHOTO DIODE

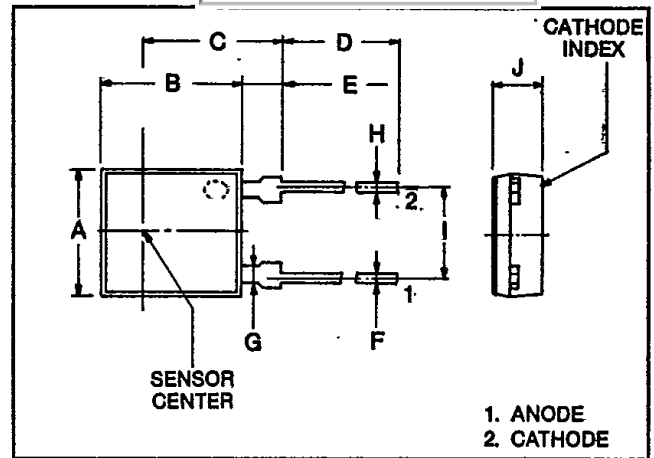
MTD7030A is a high sensitive and high speed photo diode with PIN structure. Employment of filtered mold resin for cutting the visible light are suitable for the detectors of infrared applications.

### APPLICATIONS

- TV CHANNEL CONTROL
- SMOKE DETECTOR
- COUNTERS

### FEATURES

- High speed.
- High sensitivity:  $I_{SC} = 0.9\mu A$  (Typ.).
- Low dark current.
- Visible light cut filter is employed  $\leq 800nm$  (Typ.).
- Wide radiation pattern.
- Spectrally matches with IR emitter MTE1050A, MTE1100



SYMBOL	INCHES	MM
A	0.276 ± 0.008	7.0 ± 0.2
B	0.299 ± 0.008	7.6 ± 0.2
C	0.287	7.3
D	0.512 ± 0.039	13 ± 1
E	0.091 ± 0.008	2.3 ± 0.2
F	0.020	0.5
G	0.035	0.9
H	0.020	0.5
I	0.200	5.08
J	0.128	3.2

### MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Reverse Voltage	$V_R$	20	V
Power Dissipation	$P_D$	150	mW
Operating Temperature Range	$T_{opr}$	-30 ~ 60	°C
Storage Temperature Range	$T_{stg}$	-40 ~ 60	°C

### OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Dark Current	$I_D$	$V_R = 10V$	—	1	30	nA
Short Circuit Current	$I_{SC}$	$E = 0.1mW/cm^2$ (Note)	0.5	.9	—	$\mu A$
Capacitance Under Voltage	$C_T$	$V_R = 3V, f = 1MHz$	—	20	—	pF
Peak Sensitivity Wave Length	$\lambda_P$	—	—	1000	—	nm
Switching Time	Rise Time	$V_R = 10V, R_L = 1k\Omega$	—	100	—	ns
	Fall Time		—	100	—	ns

Note: Color Temperature = 2870°K Standard Tungsten Lamp.

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