

PHOTO DIODE

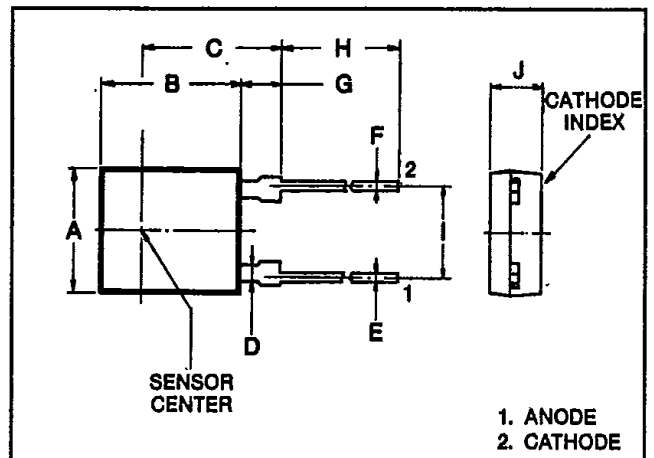
MTD7030 SILICON PIN PHOTO DIODE

APPLICATIONS

- REMOTE CONTROL SYSTEM
- OPTICAL SWITCH

FEATURES

- High sensitivity: $I_{SC} = 1.5\mu A$ (Typ.)
- Small dark current: $I_D = 1nA$ (Typ.) ($V_R = 10V$)
- High speed: $t_r, t_f = 100ns$ (Typ.)
- Non sensitivity for visible light.
- Spectrally matched 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	0.035	0.9
E	0.020	0.5
F	0.020	0.5
G	0.091 ± 0.008	2.3 ± 0.2
H	0.512 ± 0.039	13 ± 1
I	0.200	5.08
J	0.110 ± 0.008	2.8 ± 0.2

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 ~ 80	°C
Storage Temperature Range	T_{stg}	-40 ~ 90	°C

OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°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}	$E = 0.1mW/cm^2$	0.9	1.5	—	μA
Open Circuit Voltage	V_{op}	$E = 0.1mW/cm^2$	150	250	—	mV
Capacitance	C_T	$V_R = 3V, f = 1MHz$	—	20	—	pF
Peak Sensitivity Wave Length	λ_P	—	—	960	—	nm
Switching Time	Rise Time	$V_R = 10V, R_L = 1k\Omega$	—	100	—	ns
	Fall Time					

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