

Ultra High Speed Photo Diode

MTD5010M

Applications -

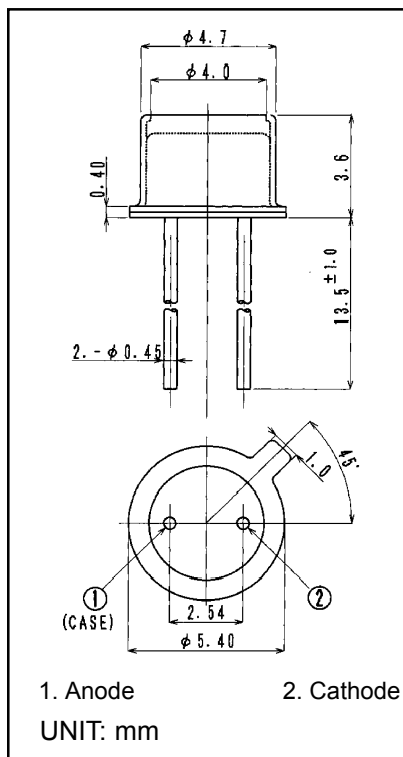
- Optical Switches
- Edge Sensing
- Smoke Detectors
- Fiber Optical Communications

Features -

- Ultra High Speed
- Low Dark current
- Wide Angular Response
- High Reliability in Demanding Environments (Metal Can Package)

MAXIMUM RATINGS (Ta = 25°C)

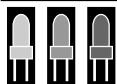
CHARACTERISTIC	SYMBOL	RATING	UNIT
Reverse Voltage	V_R	30	V
Power Dissipation	P_D	100	mW
Operating Temperature	T_{opr}	-30~100	°C
Storage Temperature	T_{stg}	-40~125	°C
High Frequency Response	fc	up to 100	MHz



OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Open Circuit Voltage	V_{oc}	$L = 1000\text{Lux}^*$	—	0.35	—	V
Light Current	I_L	$V_R = 10\text{V}$ $L = 1000\text{Lux}^*$	—	30	—	μA
Dark Current	I_D	$V_R = 10\text{V}$	—	—	5	nA
Spectral Sensitivity	λ	—	400~1000			nm
Peak Sensitivity Wavelength	λ_p	—	—	850	—	nm
Responsivity	R_t	$V_R = 0\text{V}$, $\lambda = 450\text{nm}$	—	.15	—	A/W
	R_t	$V_R = 0\text{V}$, $\lambda = 900\text{nm}$	—	.55	—	A/W
Angular Response	θ	—	—	± 55	—	deg
Junction Capacitance	C_j	1 MHz $V = 0\text{V}$	—	15	—	pF

* Color Temperature = 2870° K Standard Tungsten Lamp



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MTD5010M Graphs -

