

## Peak Sensitivity Wavelength: 850nm

The MTD5010W is a photo diode in a TO-18 metal can flat top package. It is well suited for high reliability and high speed applications.

### FEATURES

- > Ultra High Speed
- > Low Dark Current / Metal Can Package
- > Wide Angular Response
- > High Reliability in Demanding Environments

### APPLICATIONS

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



## Absolute Maximum Ratings (Ta=25°C)



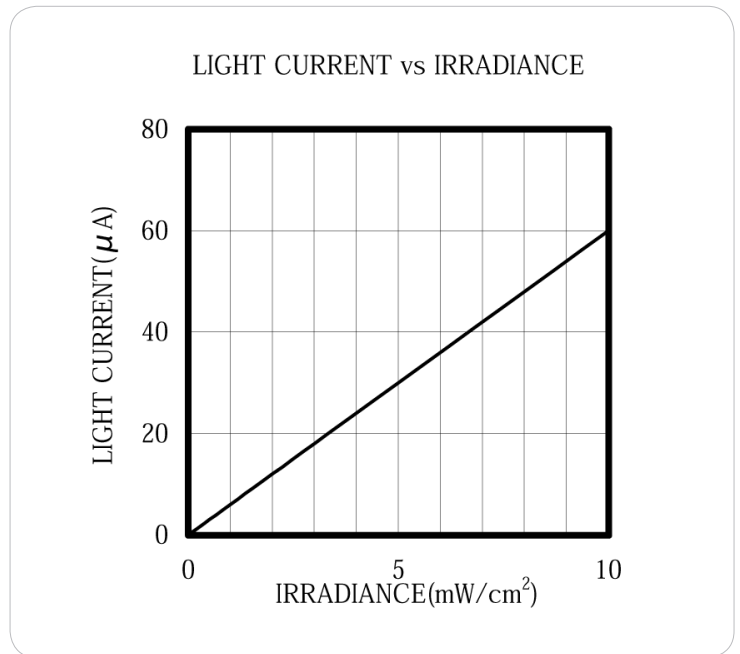
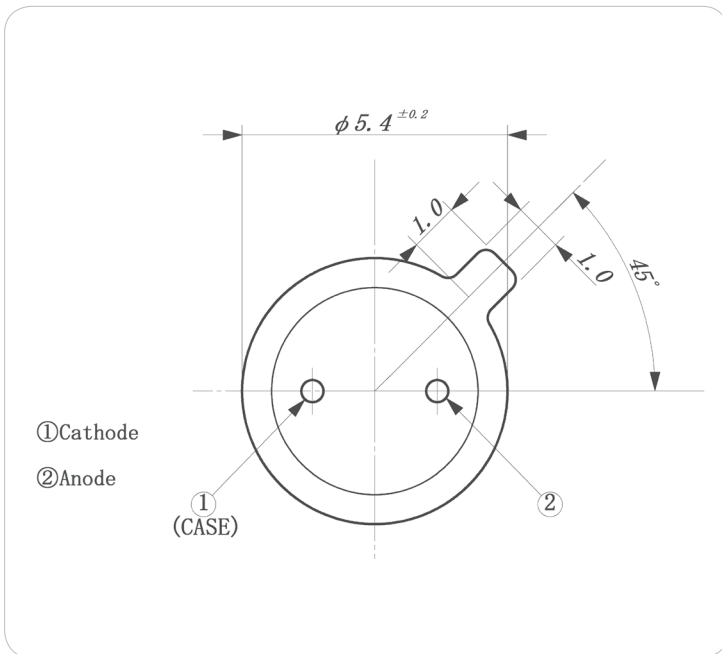
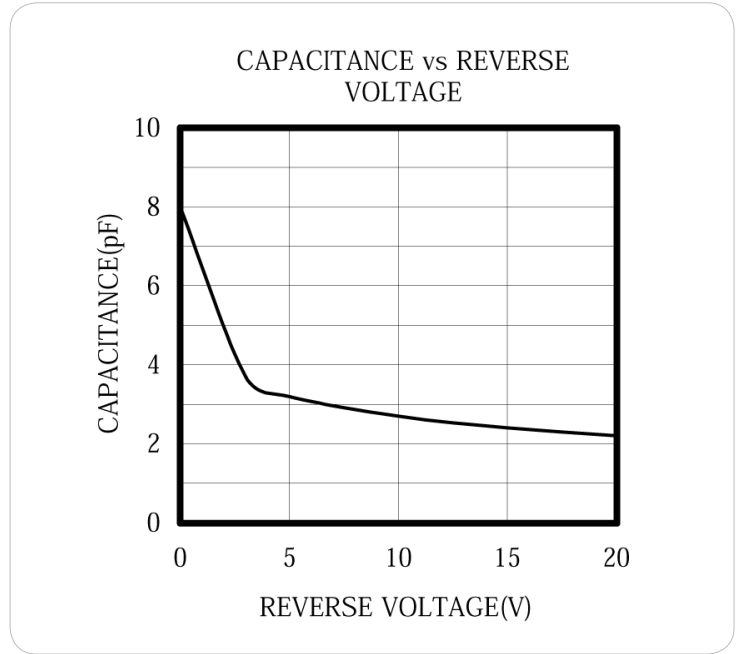
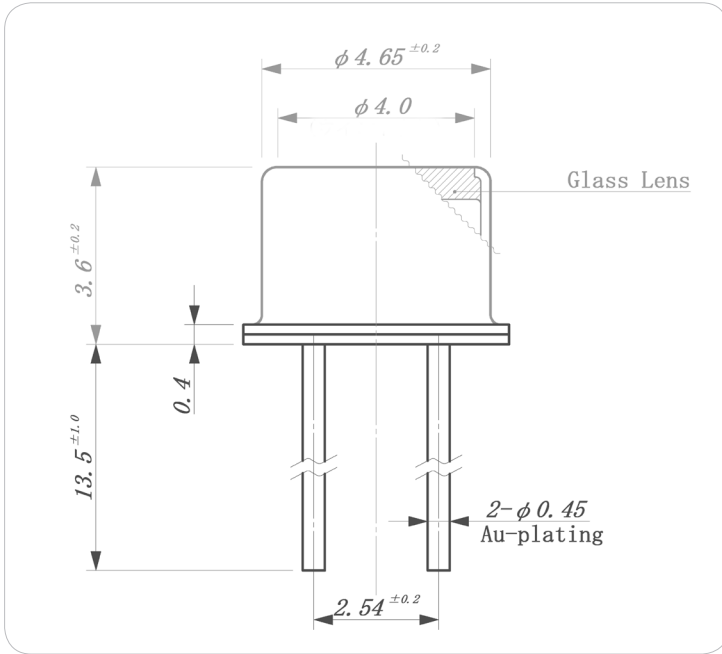
ITEMS	SYMBOL	RATINGS	UNIT
Reverse Voltage	VR	30	V
Power Dissipation	PD	100	mW
Operating Temperature Range	Topr	-30 ~ +100	°C
Storage Temperature Range	Tstg	-40 ~ +125	°C
Junction Temperature	Tj	100	°C
Lead Soldering Temperature*1	Tls	260	°C

\*1: Time 5 Sec max, Position: Up to 3mm from the body.

## Electrical & Optical Characteristics (Ta = 25°C)

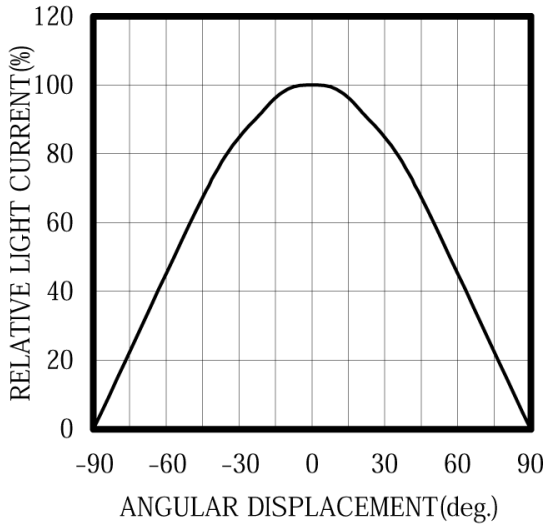
ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Light Current	IL	*1, *2	--	30	--	μA
Dark Current	ID	VR=10V	--	--	5	nA
Curve Factor	CF	Ee=5mW/cm <sup>2</sup> *1	0.55	--	--	--
Spectral Sensitivity	λ	--	--	400~1100	--	nm
Peak Sensitivity Wavelength	λp	--	--	850	--	nm
Responsivity	Rt	VR=0V, λ=450nm	--	0.20	--	A/W
Responsivity	Rt	VR=0V, λ=900nm	--	0.55	--	A/W
Angular Response	θ	--	--	±55	--	deg
Response Time	--	RL=50Ω, Vr=20V	--	3.5	--	nS
Junction Capacitance	Cj	at 1MHz, V=0V	--	8	15	pF

\*1: Color Temperature=2870°K Standard Tungsten Lamp, \*2: VR=10V, Ee=5mW/cm<sup>2</sup>.

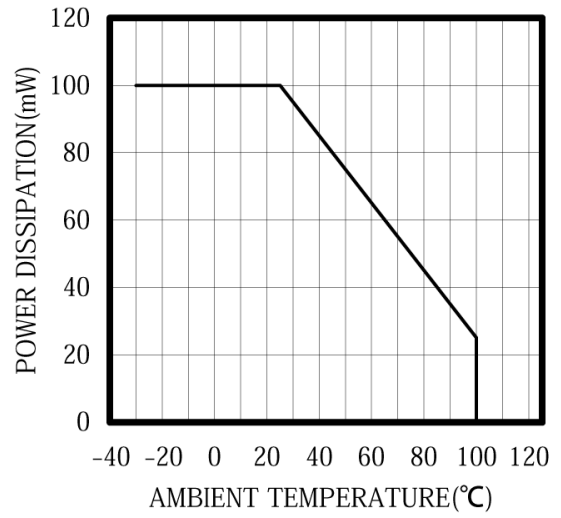


Unit: mm, Tolerance:  $\pm 0.2$

ANGULAR DISPLACEMENT



THERMAL DERATING CURVE



RESPONSIVITY

