

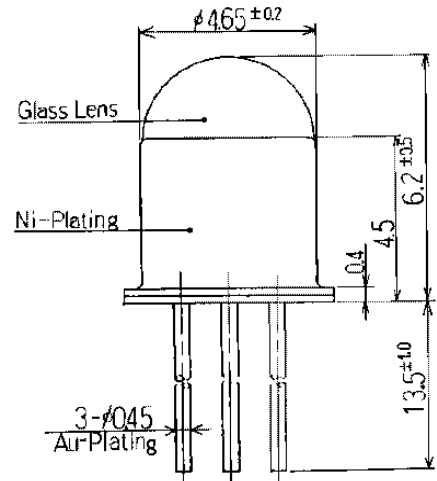
## MTD8000N

### Features

High Reliability in Demanding Environments

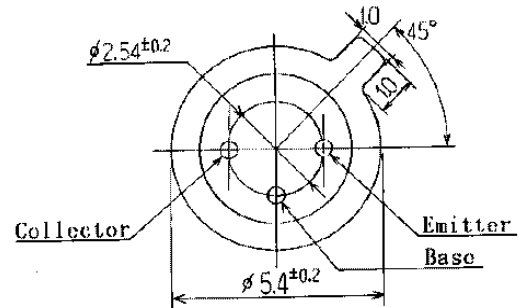
### Applications

Optical Sensors  
Optical Switches  
Edge Sensing  
Smoke Detectors



### Maximum Ratings (Ta=25°C)

Characteristic	Symbol	Max.	Test Condition	Unit
Collector Power Dissipation	P <sub>c</sub>	250	-	mW
Collector-Emitter Voltage	V <sub>CE</sub>	30	-	V
Emitter-Collector Voltage	V <sub>EC</sub>	5	-	V
Collector Current	I <sub>c</sub>	50	-	mA
Operating Temperature	T <sub>opr</sub>	-30~+100	-	°C
Storage Temperature	T <sub>stg</sub>	-40~+125	-	°C
Junction Temperature	T <sub>j</sub>	125	-	°C
Soldering Temperature	T <sub>sol</sub>	260	for 5 sec. max	°C



### Opto-Electrical Characteristics (Ta=25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =0.2mA E <sub>e</sub> =5mW/cm <sup>2</sup>	-	.20	-	μA
Light Current	I <sub>L</sub>	V <sub>ce</sub> =20V, E <sub>e</sub> =0.5mW/cm <sup>2</sup>	-	3.00	-	μA
Dark Current	I <sub>D</sub>	V <sub>ce</sub> =20V, E <sub>e</sub> = 0mW/cm <sup>2</sup>	-	-	100	nA
Spectral Sensitivity	λ	-	-	400~1100	-	μA
Peak Sensitivity Wavelength	λ <sub>p</sub>	-	-	880	-	V
Beam Angle	θ	-	-	± 12°	-	deg.
Rise Time	T <sub>r</sub>	R <sub>L</sub> =100Ω, V <sub>ce</sub> =5V, I <sub>c</sub> =0.5mA	-	10000.00	-	ns
Fall Time	T <sub>f</sub>	R <sub>L</sub> =100Ω, V <sub>ce</sub> =5V, I <sub>c</sub> =0.5mA	-	10000.00	-	ns

\* Color Temperature = 2870°K Standard Tungsten Lamp

## MTD8000N Graphs

