

# SIDE LOOK PACKAGE PIN PHOTODIODE

## MID-85H1C

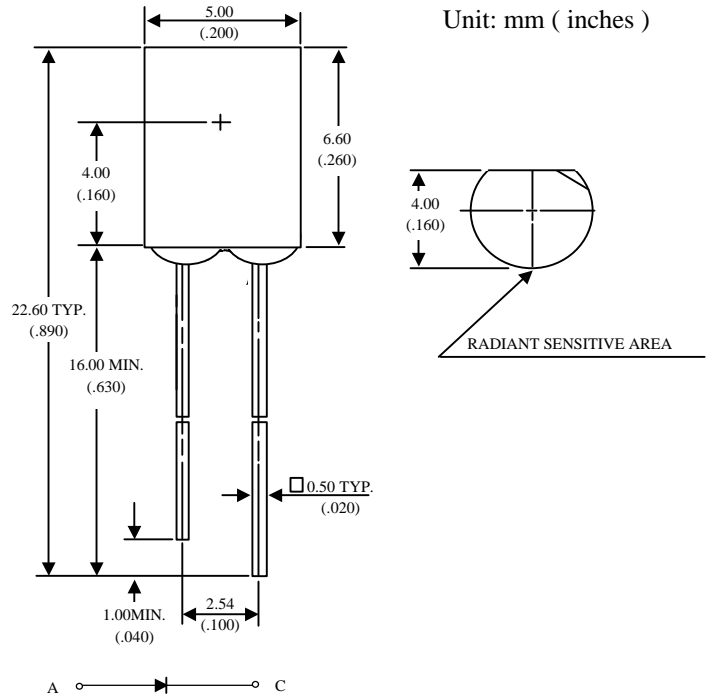
### Description

The MID-85H1C is a photodiode mounted in special dark plastic package and suitable for the IRED (850nm/880nm) Type.

### Features

- High photo sensitivity
- Low junction capacitance
- High cut -off frequency
- Fast switching time
- Suitable for the IRED 850nm/880nm type

### Package Dimensions



#### Notes :

1. Tolerance is  $\pm 0.25$  mm (.010") unless otherwise noted.
2. Protruded resin under flange is 1.0 mm (.040") max.
3. Lead spacing is measured where the leads emerge from the package.

### Absolute Maximum Ratings

@  $T_A = 25^\circ\text{C}$

Parameter	Maximum Rating	Unit
Power Dissipation	100	mW
Operating Temperature Range	$-55^\circ\text{C}$ to $+100^\circ\text{C}$	
Storage Temperature Range	$-55^\circ\text{C}$ to $+100^\circ\text{C}$	
Lead Soldering Temperature	$260^\circ\text{C}$ for 5 seconds	

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## Optical-Electrical Characteristics

@ T<sub>A</sub>=25°C

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse Break Down Voltage	I <sub>R</sub> =0.1mA E <sub>e</sub> =0	V <sub>(BR)R</sub>	30			V
Reverse Dark Current	V <sub>R</sub> =10V E <sub>e</sub> =0	I <sub>D</sub>			30	nA
Open Circuit Voltage	λ=850nm E <sub>e</sub> =0.1mW/cm <sup>2</sup>	V <sub>OC</sub>		350		mV
Rise Time	V <sub>R</sub> =10V λ=850nm	T <sub>r</sub>		50		nsec
Fall Time	R <sub>L</sub> =50Ω	T <sub>f</sub>		50		
Light Current	V <sub>R</sub> =5V, λ=850nm E <sub>e</sub> =0.1mW/cm <sup>2</sup>	I <sub>L</sub>		9		μA
Total Capacitance	V <sub>R</sub> =3V, f=1MHz E <sub>e</sub> =0	C <sub>T</sub>		25		pF

## Typical Optical-Electrical Characteristic Curves

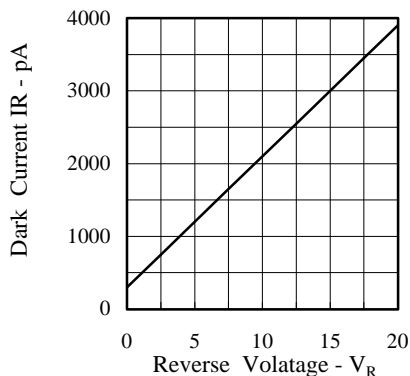


FIG.1 DARK CURRENT VS REVERSE VOLTAGE  
TEMP=25°C, E<sub>e</sub>=0 mW/cm<sup>2</sup>

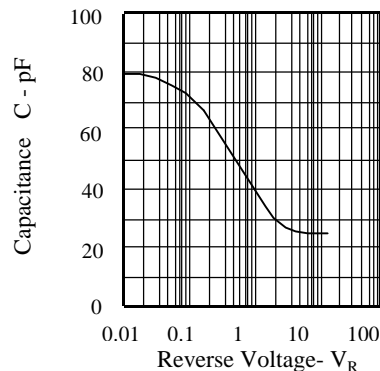


FIG.2 CAPACITANCE VS. REVERSE VOLTAGE  
F=1MHz ; E<sub>e</sub>=0mW/cm<sup>2</sup>

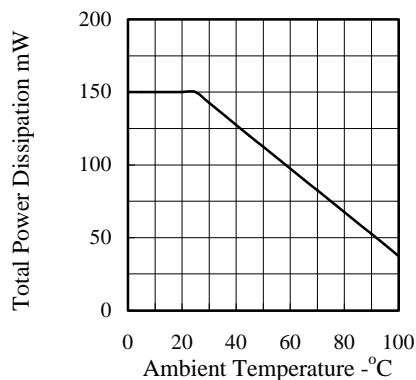


FIG.3 TOTAL POWER DISSIPATION  
VS. AMBIENT TEMPERATURE

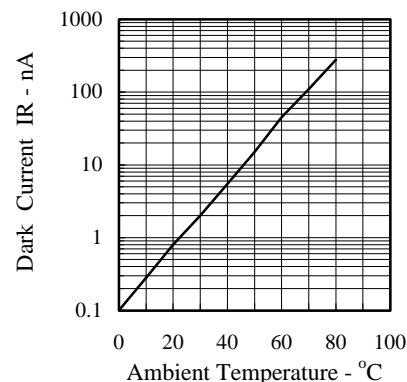


FIG.4 DARK CURRENT VS AMBIENT TEMPERATURE  
V<sub>R</sub>=10V, E<sub>e</sub>=0 mw/cm<sup>2</sup>

Typical Optical-Electrical Characteristic Curves

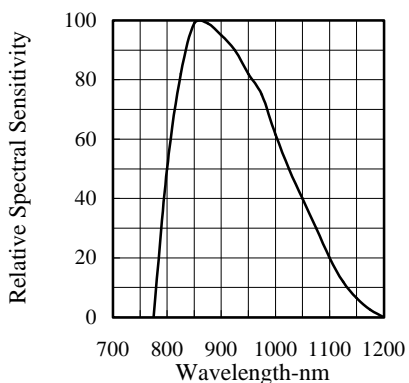


FIG.5 RELATIVE SPECTRAL SENSITIVITY VS. WAVELENGTH

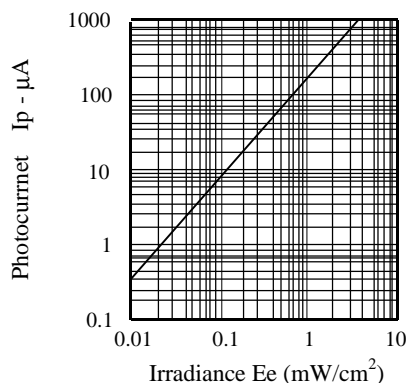


FIG.6 PHOTOCURRENT VS. IRRADIANCE = 850 nm

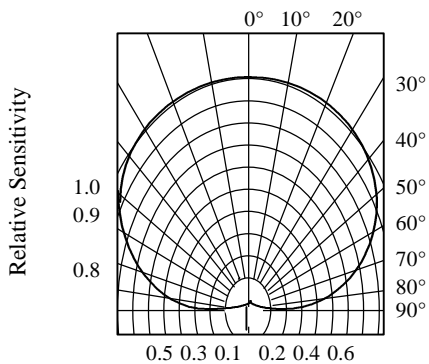


FIG.7 SENSITIVITY DIAGRAM