

SIDE LOOK PACKAGE PIN PHOTODIODE

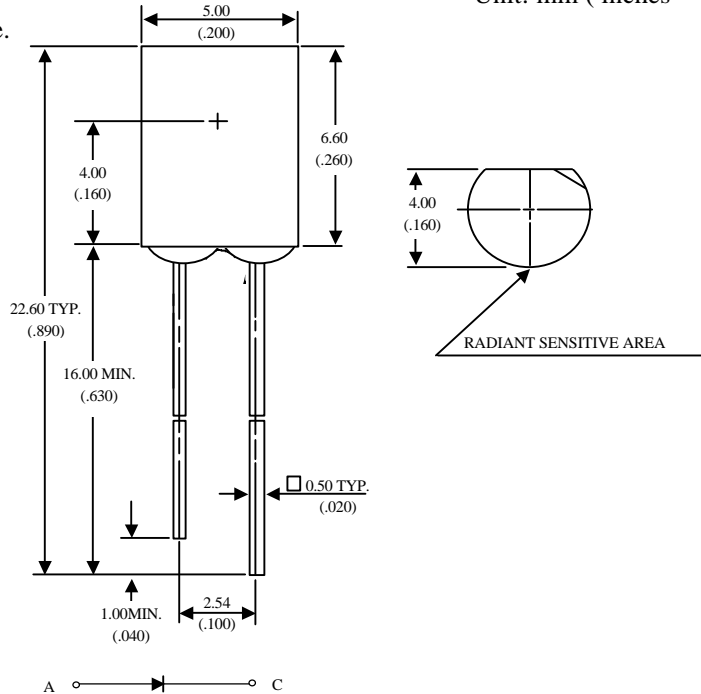
MID-85A1C

Description

The MID-85A1C is a photodiode mounted in special dark plastic package and suitable for the IRED (940nm) Type.

Package Dimensions

Unit: mm (inches)



Features

- High photo sensitivity
- Low junction capacitance
- High cut -off frequency
- Fast switching time

Notes :

1. Tolerance is ± 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°C to +100°C | |
| Storage Temperature Range | -55°C to +100°C | |
| Lead Soldering Temperature | 260°C for 5 seconds | |

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Optical-Electrical Characteristics

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

| Parameter | Test Conditions | Symbol | Min. | Typ. | Max. | Unit |
|----------------------------|---|-------------|------|------|------|---------------|
| Reverse Break Down Voltage | $I_R=0.1\text{mA}$ $E_e=0$ | $V_{(BR)R}$ | 30 | | | V |
| Reverse Dark Current | $V_R=10\text{V}$ $E_e=0$ | I_D | | | 30 | nA |
| Open Circuit Voltage | $\lambda=940\text{nm}$ $E_e=0.1\text{mW/cm}^2$ | V_{OC} | | 350 | | mV |
| Rise Time | $V_R=10\text{V}$, $\lambda=940\text{nm}$ | T_r | | 50 | | nsec |
| Fall Time | $R_L=50\text{K}\Omega$ | T_f | | 50 | | |
| Light Current | $V_R=5\text{V}$, $\lambda=940\text{nm}$ $E_e=0.1\text{mW/cm}^2$ | I_L | | 9 | | μA |
| Total Capacitance | $V_R=3\text{V}$, $f=1\text{MHz}$ $E_e=0$ | C_T | | 25 | | pF |

Typical Optical-Electrical Characteristic Curves

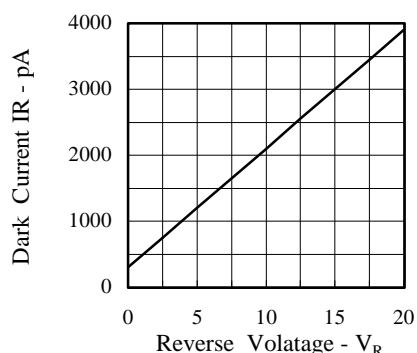


FIG.1 DARK CURRENT VS REVERSE VOLTAGE
TEMP= 25°C , $E_e=0\text{ mW/cm}^2$

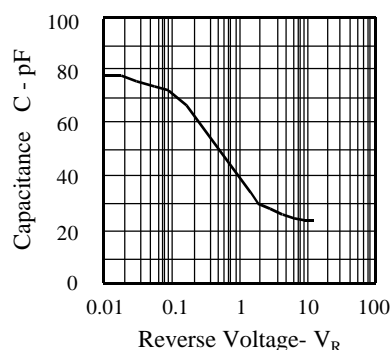


FIG.2 CAPACITANCE VS. REVERSE VOLTAGE
 $F=1\text{MHz}$, $E_e=0\text{mW/cm}^2$

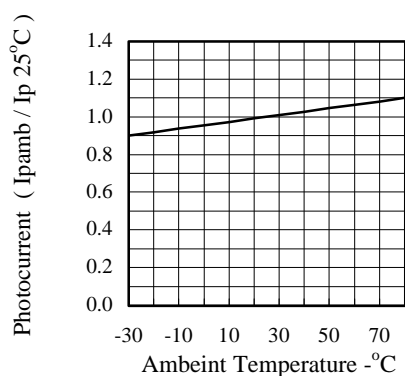


FIG.3 PHOTOCURRENT VS AMBIENT TEMPERATURE

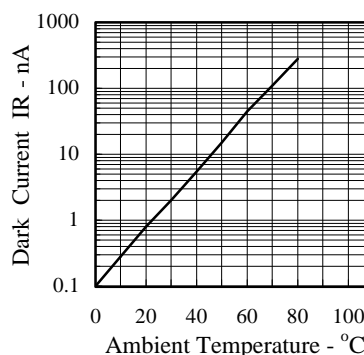


FIG.4 DARK CURRENT VS AMBIENT TEMPERATURE
 $V_R=10$, $E_e=0\text{ mw/cm}^2$

Typical Optical-Electrical Characteristic Curves

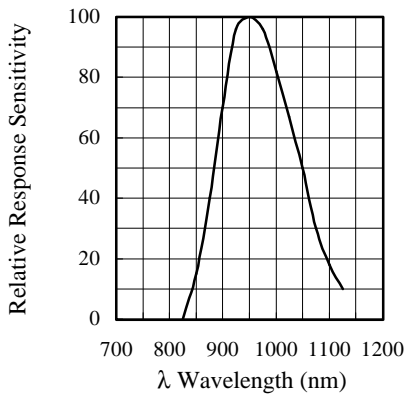


FIG.5 RELATIVE SPECTRAL SENSITIVITY VS. WAVELENGTH

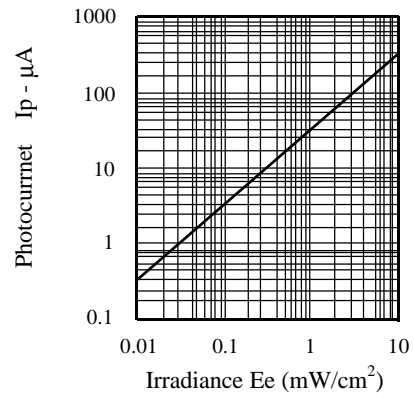


FIG.6 PHOTOCURRENT VS. IRRADIANCE = 950 nm

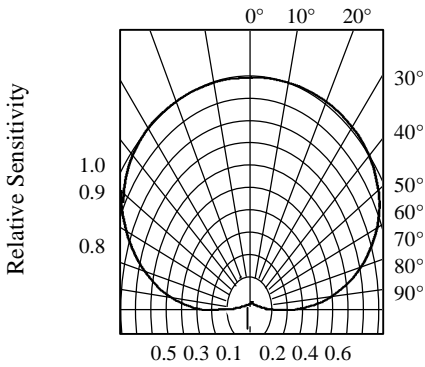


FIG.7 SENSITIVITY DIAGRAM