

# SIDE-LOOK PACKAGE PIN PHOTODIODE

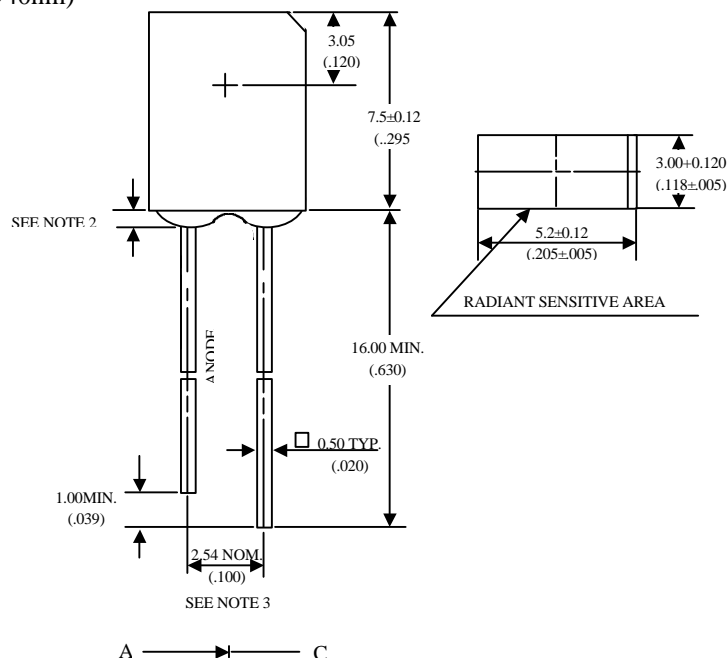
## MID-73A1C

### Description

The MID-73A1C 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  $\pm 0.25$  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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Unity Opto Technology Co., Ltd.

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## Optical-Electrical Characteristics

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

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown 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	$\lambda=940\text{nm}$ $E_e=0.1\text{mW}/\text{cm}^2$	$V_{OC}$		350		mV
Rise Time	$V_R=10\text{V}$ $\lambda=940\text{nm}$ $R_L=50\Omega$	$T_r$		50		nsec
Fall Time		$T_f$		50		
Light Current	$V_R=5\text{V}$ , $\lambda=940\text{nm}$ $E_e=0.1\text{mW}/\text{cm}^2$	$I_L$		9		$\mu\text{A}$
Total Capacitance	$V_R=3\text{V}$ , $f=1\text{MHz}$ $E_e=0$	$C_T$		25		pF

## Typical Optical-Electrical Characteristic Curves

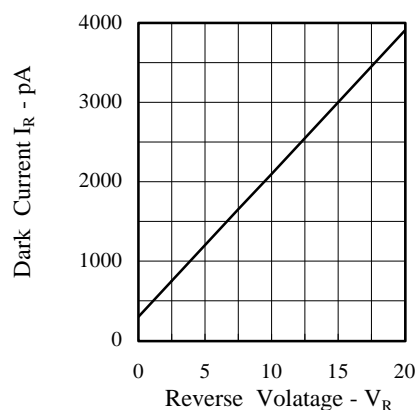


FIG.1 DARK CURRENT VS REVERSE VOLTAGE  
TEMP= $25^{\circ}\text{C}$ ,  $E_e=0\text{ mW}/\text{cm}^2$

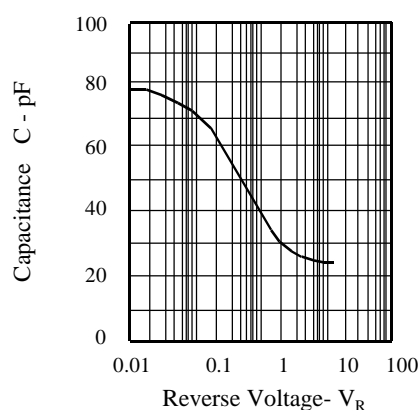


FIG.2 CAPACITANCE VS. REVERSE VOLTAGE  
 $F=1\text{MHz}$ ,  $E_e=0\text{mW}/\text{cm}^2$

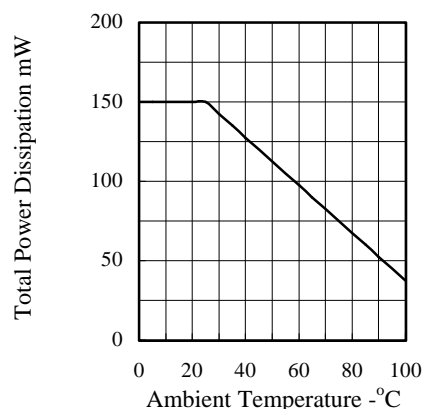


FIG.3 TOTAL POWER DISSIPATION  
VS. AMBIENT TEMPERATURE

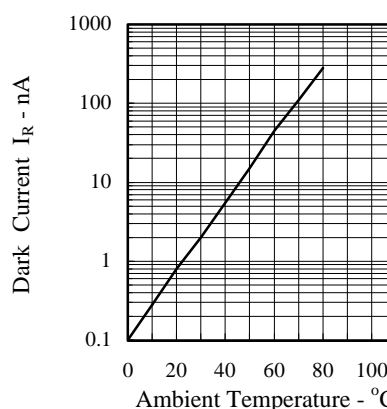


FIG.4 DARK CURRENT VS AMBIENT TEMPERATURE  
 $V_R=10$ ,  $E_e=0\text{ mW}/\text{cm}^2$

# Typical Optical-Electrical Characteristic Curves

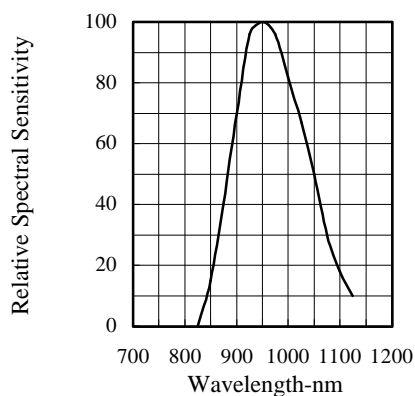


FIG.5 RELATIVE SPECTRAL SENSITIVITY  
VS. WAVELENGTH

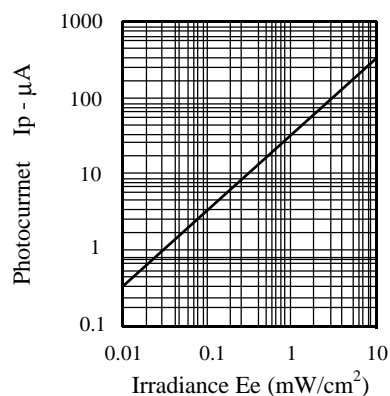


FIG.6 PHOTOCURRENT VS.  
IRRADIANCE = 950 nm

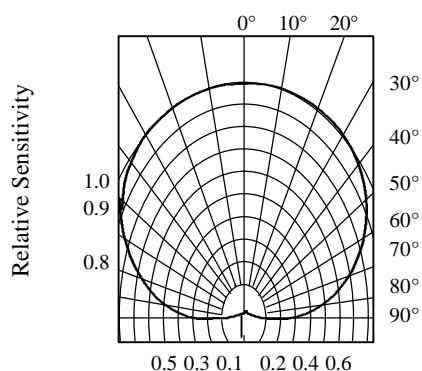


FIG.7 SENSITIVITY DIAGRAM