

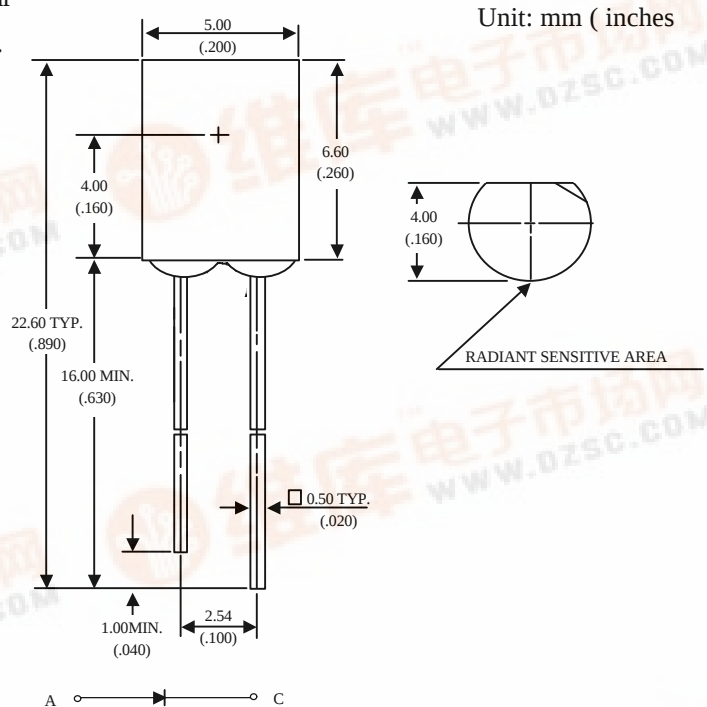
SIDE LOOK PACKAGE PIN PHOTODIODE

MID-8541C

Description

The MID-8541C is a photodiode mounted in water clear plastic package and suitable for the variety wavelength.

Package Dimensions



Features

- High photo sensitivity
- Low junction capacitance
- 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 $+100^\circ\text{C}$	
Storage Temperature Range	-55°C to $+100^\circ\text{C}$	
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	$I_R=100\mu\text{A}$ $E_e=0$	$V_{(BR)R}$	30			V
Reverse Dark Current	$V_R=10\text{V}$ $E_e=0$	I_D			30	nA
Open Circuit Voltage	$\lambda=850\text{nm}$ $E_e=0.1\text{mW}/\text{cm}^2$	V_{OC}		350		mV
Rise Time	$V_R=10\text{V}, \lambda=850\text{nm}$	T_r		50		nsec
Fall Time	$R_L=50\Omega$	T_f		50		
Light Current	$V_R=5\text{V}, \lambda=850\text{nm}$ $E_e=0.1\text{mW}/\text{cm}^2$	I_L		10		μA
Total Capacitance	$V_R=3\text{V}, f=1\text{MHz}$ $E_e=0$	C_T		25		pF

Typical Optical-Electrical Characteristic Curves

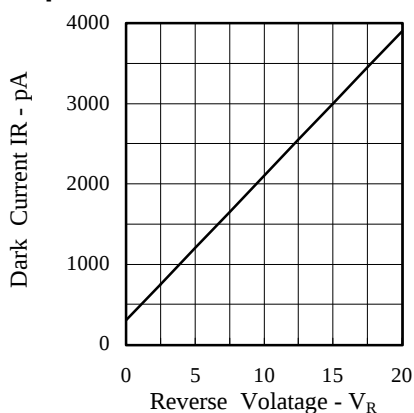


FIG.1 DARK CURRENT VS REVERSE VOLTAGE

$T_{AMB}=25^{\circ}\text{C}, E_e=0 \text{ mW}/\text{cm}^2$

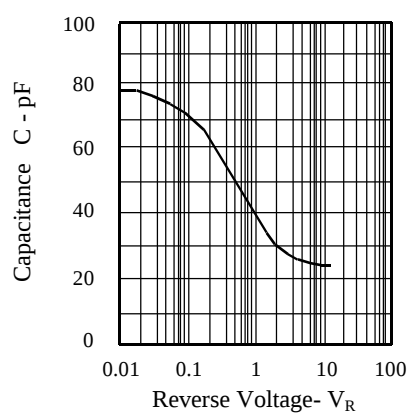


FIG.2 CAPACITANCE VS. REVERSE VOLTAGE

$F=1\text{MHz}, E_e=0 \text{ mW}/\text{cm}^2$

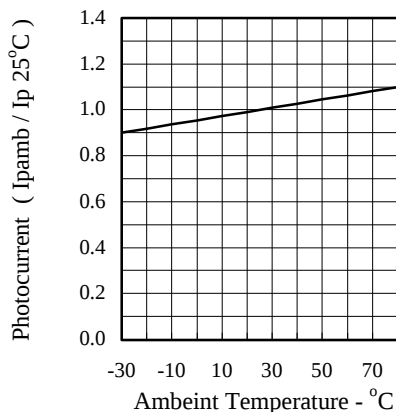


FIG.3 PHOTOCURRENT VS AMBIENT TEMPERATURE

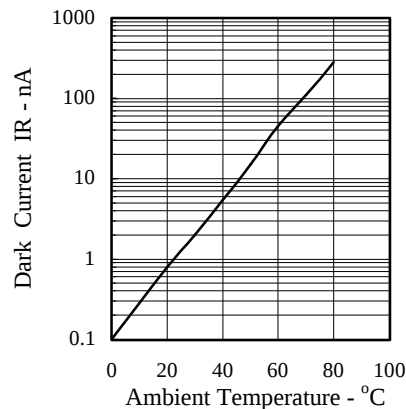


FIG.4 DARK CURRENT VS AMBIENT TEMPERATURE

$V_R=10, E_e=0 \text{ mW}/\text{cm}^2$

Typical Optical-Electrical Characteristic Curves

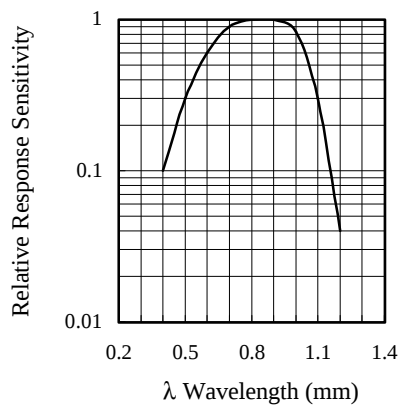


FIG.5 RELATIVE SPECTRAL SENSITIVITY
VS. WAVELENGTH

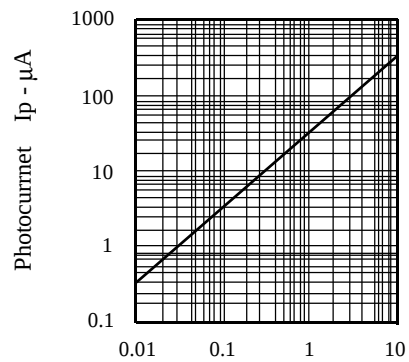


FIG.6 PHOTOCURRENT VS.
IRRADIANCE = 950 nm

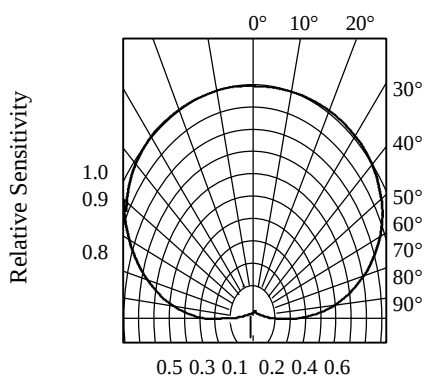


FIG.7 SENSITIVITY DIAGRAM