

T-1 3/4 PACKAGE PIN PHOTODIODE

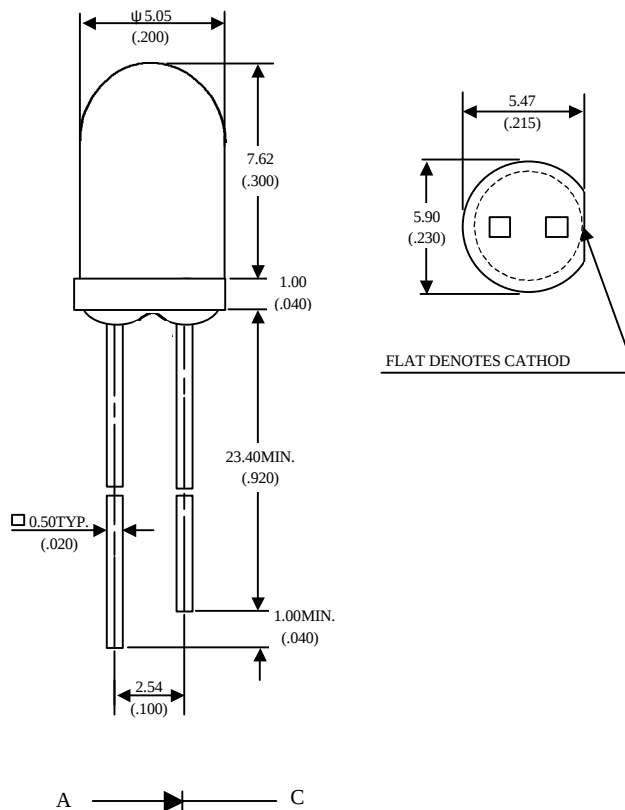
MID-54419

Description

The MID-54419 is a photo diode mounted in water clear end look plastic package and suitable for the variety wavelength.

Package Dimensions

Unit: mm (inches)



Features

- High photo sensitivity
- Low junction capacitance
- High cut-off frequency
- Fast switching time
- Acceptance angle: 40°

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	150	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.	Type	Max.	Unit
Reverse Breakdown 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	$V_R=10\text{V}$ $\lambda=850\text{nm}$ $R_L=1\text{K}\Omega$	T_r		40		nsec
Fall Time		T_f		30		
Light Current	$V_R=5\text{V}$, $\lambda=850\text{nm}$ $E_e=0.1\text{mW}/\text{cm}^2$	I_L		12		μA
Total Capacitance	$V_R=3\text{V}$, $f=1\text{MHz}$ $E_e=0$	C_T		25		pF

Typical Optical-Electrical Characteristic Curves

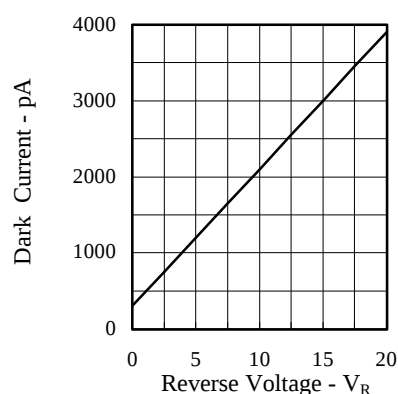


FIG.1 DARK CURRENT VS REVERSE VOLTAGE
 $T_a=25^{\circ}\text{C}$, $E_e=0\text{ mW}/\text{cm}^2$

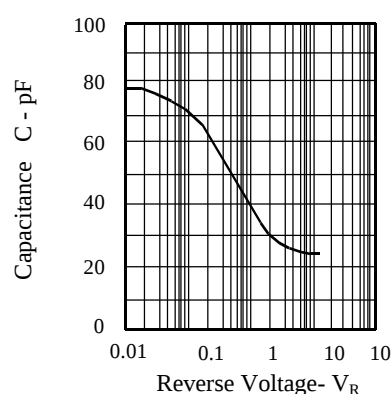


FIG.2 CAPACITANCE VS. REVERSE VOLTAGE
 $F=1\text{MHz}$, $E_e=0\text{mW}/\text{cm}^2$

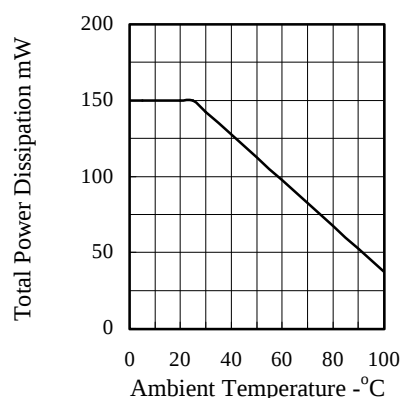


FIG.3 TOTAL POWER DISSIPATION
 VS. AMBIENT TEMPERATURE

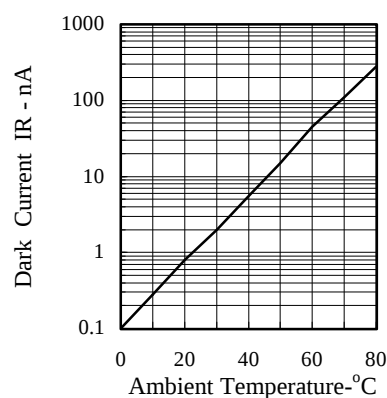


FIG.4 DARK CURRENT VS. AMBIENT
 TEMPERATURE
 $V_R=10$, $E_e=0\text{ mw}/\text{cm}^2$

Typical Optical-Electrical Characteristic Curves

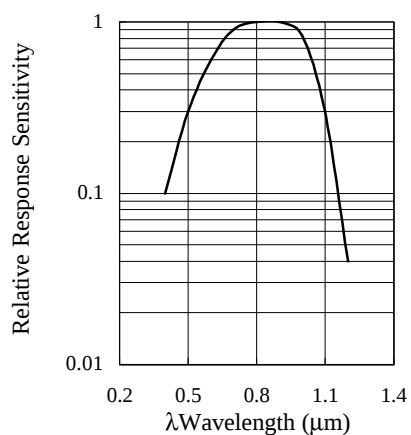


FIG.5 RELATIVE SPECTRAL SENSITIVITY
VS. WAVELENGTH

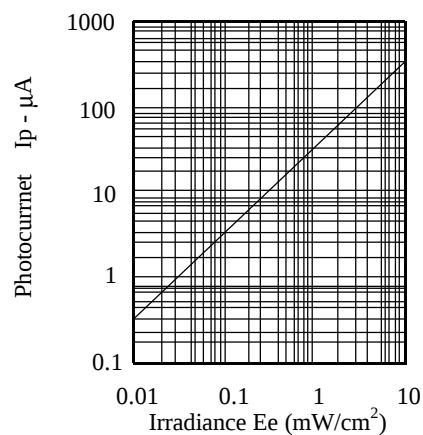


FIG.6 PHOTOCURRENT VS.
IRRADIANCE = 850 nm

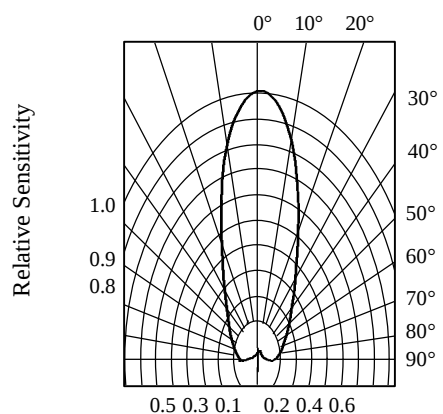


FIG.7 SENSITIVITY DIAGRAM