

T-1 3/4 PACKAGE PIN PHOTODIODE

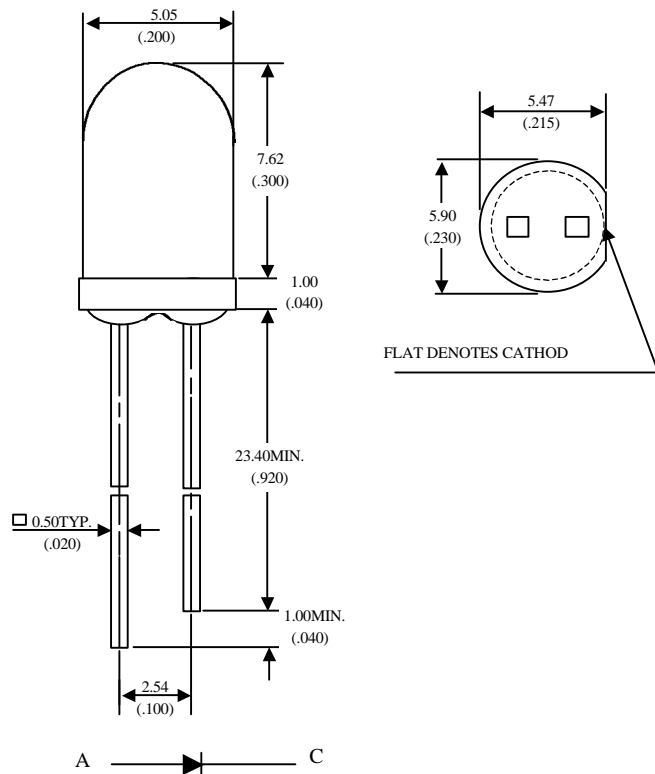
MID-54H19

Description

The MID-54H19 is a photodiode mounted in special dark end look plastic package and suitable for the IRED (850nm/880nm) type.

Package Dimensions

Unit : mm (inches)



Features

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

Application

- Data communication

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°C	
Storage Temperature Range	-55°C to +100°C	
Lead Soldering Temperature	260°C for 5 seconds	

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Unity Opto Technology Co., Ltd.

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Optical-Electrical Characteristics

@ T_A=25°C

Parameter	Test Conditions	Symbol	Min.	Type	Max.	Unit
Reverse Break Down Voltage	I _R =100μA E _e =0	V _{(BR)R}	30			V
Reverse Dark Current	V _R =10V E _e =0	I _D			30	nA
Open Circuit Voltage	λ=850nm E _e =0.1mW/cm ²	V _{OC}		350		mV
Rise Time	V _R =10V λ=850nm R _L =50Ω	Tr		30		nS
Fall Time		Tf		30		
Light Current	V _R =5V, λ=850nm E _e =0.1mW/cm ²	I _L	7	12		μA
Total Capacitance	V _R =3V, f=1MHZ E _e =0	C _T		25		pF

Typical Optical-Electrical Characteristic Curves

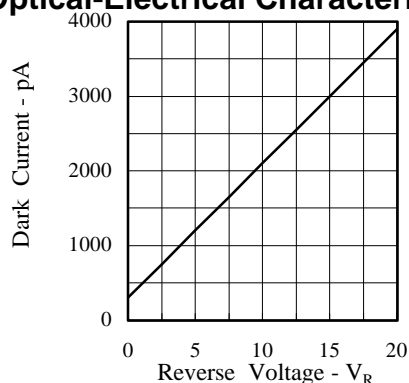


FIG.1 DARK CURRENT VS REVERSE VOLTAGE
TEMP=25°C, E_e=0 mW/cm²

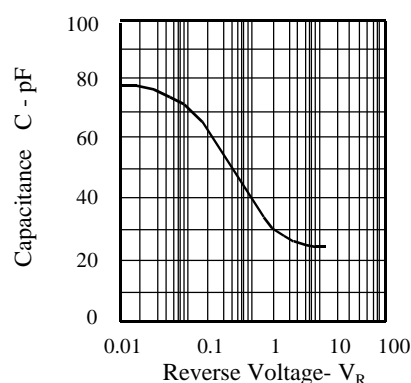


FIG.2 CAPACITANCE VS. REVERSE VOLTAGE
F=1MHZ, E_e=0mW/cm²

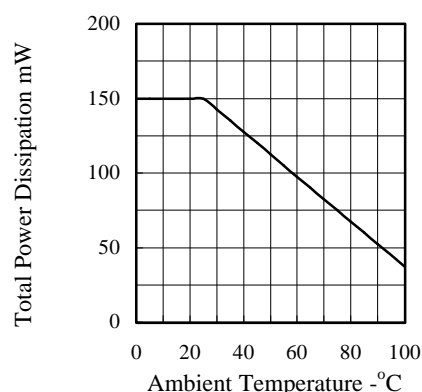


FIG.3 TOTAL POWER DISSIPATION
VS. AMBIENT TEMPERATURE

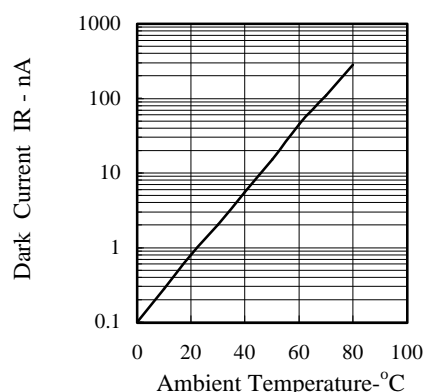


FIG.4 DARK CURRENT VS AMBIENT
TEMPERATURE
V_R=10. E_e=0 mw/cm²

Typical Optical-Electrical Characteristic Curves

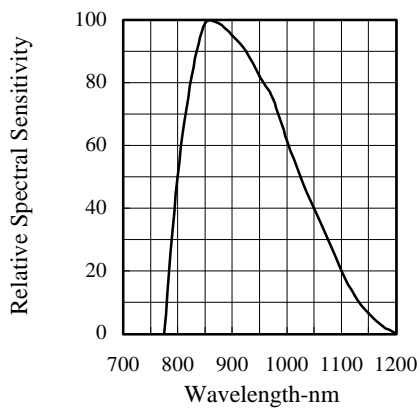


FIG.5 RELATIVE SPECTRAL SENSITIVITY VS. WAVELENGTH

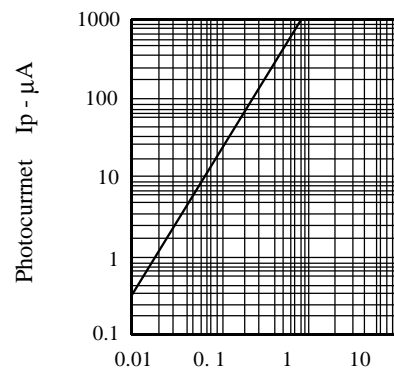


FIG.6 PHOTOCURRENT VS. IRRADIANCE = 850 nm

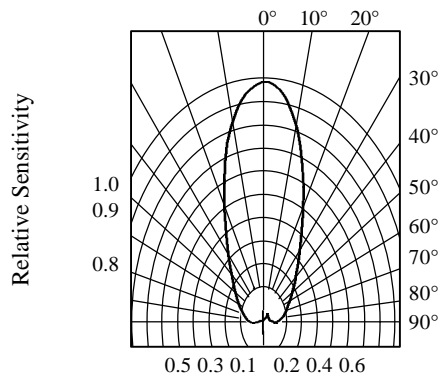


FIG.7 SENSITIVITY DIAGRAM