

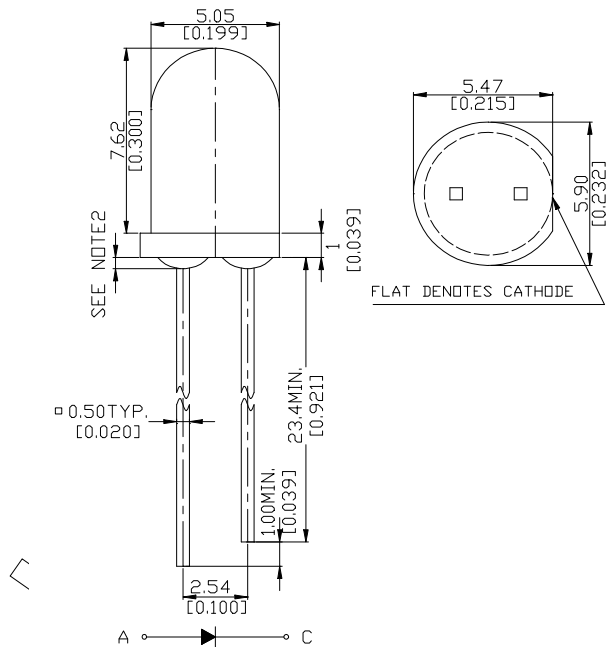
Description

The MID-56x19 is a photo diode mounted in water clear end look plastic T-1 3/4 package with a 60° acceptance angle.

MID-56419	Water Clear Lens
MID-56A19	940nm Lens Filter
MID-56H19	850 / 880nm Lens Filter

Package Dimensions

Unit: mm (inches)



Absolute Maximum Ratings

@ T_A=25°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	

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

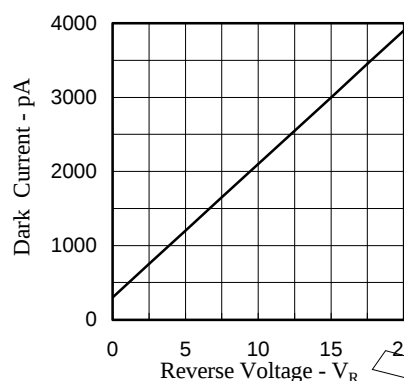


FIG.1 DARK CURRENT VS REVERSE VOLTAGE
 $T_A = 25^\circ\text{C}$, $E_e = 0\text{ mW}/\text{cm}^2$

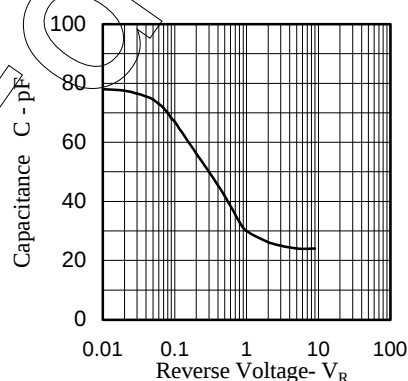


FIG.2 CAPACITANCE VS. REVERSE VOLTAGE
 $F = 1\text{MHz}$, $E_e = 0\text{ mW}/\text{cm}^2$

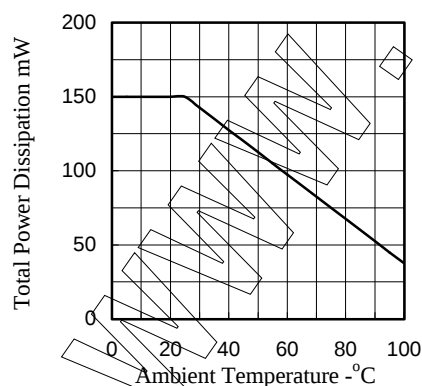


FIG.3 TOTAL POWER DISSIPATION
 VS. AMBIENT TEMPERATURE

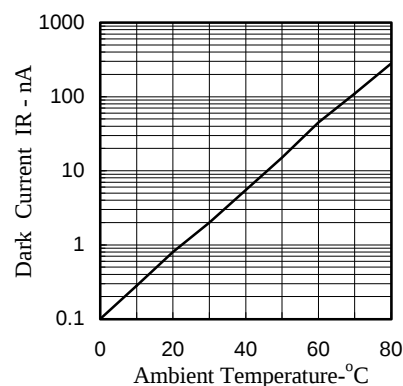


FIG.4 DARK CURRENT VS. AMBIENT TEMPERATURE
 $V_R = 10$, $E_e = 0\text{ mW}/\text{cm}^2$

Typical Optical-Electrical Characteristic Curves

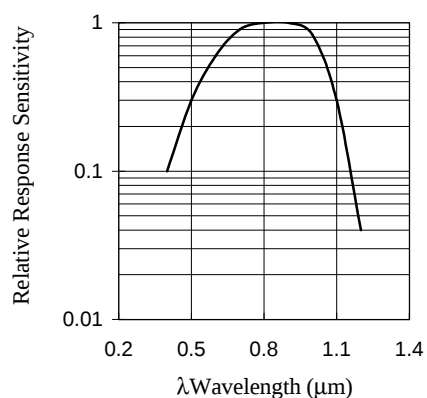


FIG.5 RELATIVE SPECTRAL SENSITIVITY
VS. WAVELENGTH

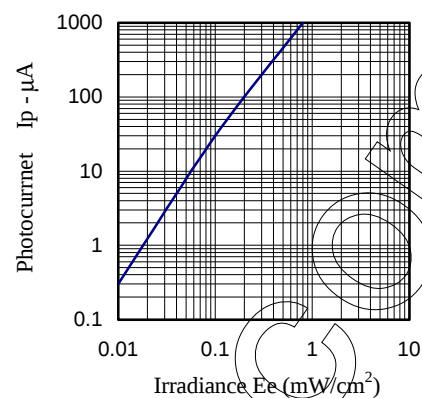


FIG.6 PHOTOCURRENT VS.
IRRADIANCE = 850 nm

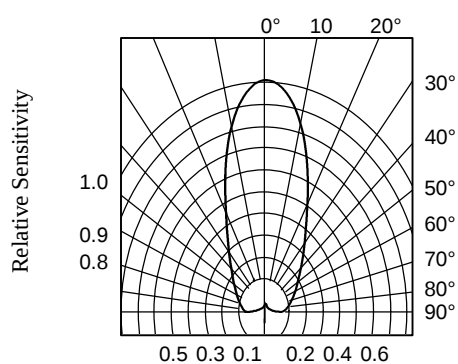


FIG.7 SENSITIVITY DIAGRAM