

**DESCRIPTION**

This is a Silicon P-Type PIN Quadrant detector designed for use in precision guidance and laser tracking applications.

**FEATURES**

- High Responsivity @ 1.06  $\mu\text{m}$ , 0.45 A/W typical
- Sensitivity range 600-1100 nm
- Four Quadrant Geometry w/guard ring
- 3.5 mm Diameter Active Area

**ABSOLUTE MAXIMUM RATINGS**

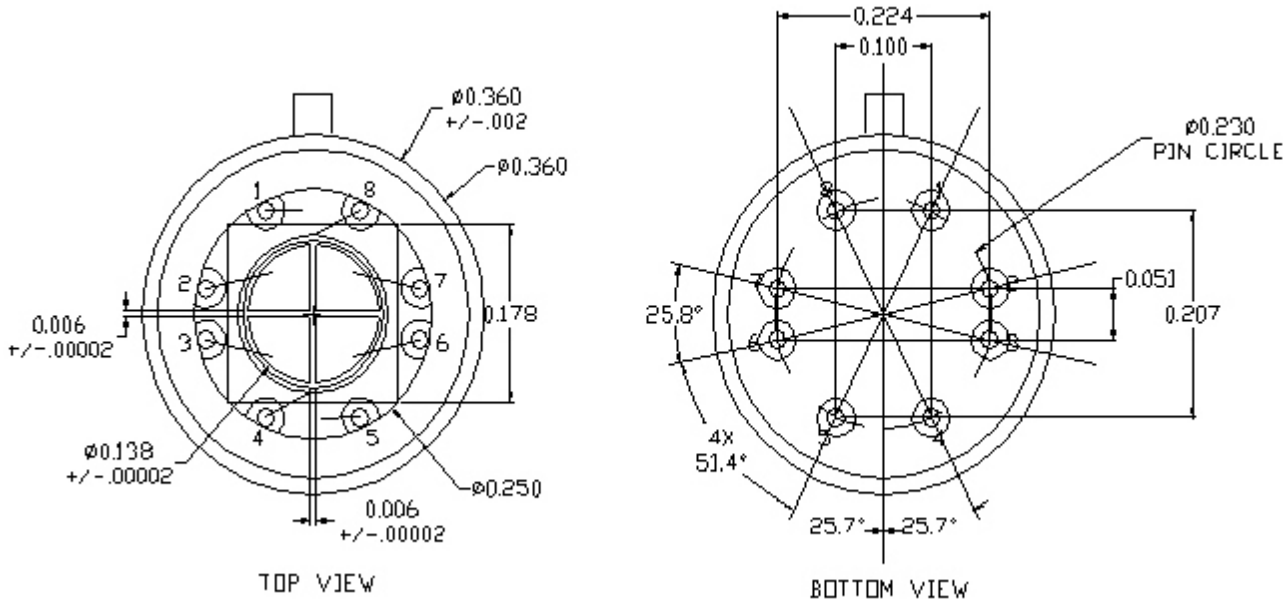
- Storage temperature..... -54°C to +125°C
- Case operating temperature... -54°C to +100°C
- Lead solder temperature..... 260°C, 10 seconds
- Supply Voltage..... +250 Volts

**OPERATING CONDITIONS**

- Supply Voltage..... 180 Volts
- Forward Voltage..... 0.5 Volts
- Power Dissipation (per quadrant, 25°C).. 500 mW
- Noise Current.....  $0.5 \times 10^{-13}$  A/Hz

**ELECTRO-OPTICAL CHARACTERISTICS (Case T = 25°C)**

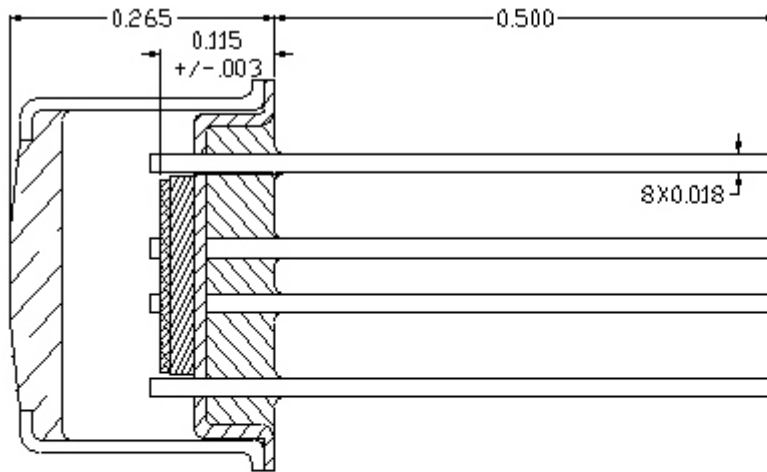
PARAMETER	TEST CONDITION	SYMBOL	MIN	TYP	MAX	UNIT
Breakdown Voltage	$I_R = 100 \mu\text{A}, H = 0 \text{ mW/cm}^2$	$V_{BR}$	250			Volts
Dark Current	$V_R = 180\text{V}, H = 0 \text{ mW/cm}^2$	$I_D$		30	100	nA
Capacitance	$V_R = 180\text{V}, f = 1 \text{ MHz}$	$C_T$		10	12	pF
Crosstalk	$V_R = 180\text{V}$				1	%
Response Time	10%-90%, $\lambda = 1.06 \mu\text{m}$ $V_R = 180 \text{ V}, R_L = 50 \Omega$	$t_r$		12	15	nsec
		$t_f$		12	20	nsec
Responsivity	$V_R = 180\text{V}, \lambda = 1.06 \mu\text{m}$	$R_e$	0.36	0.45		A/W



Mechanical Tolerances:  $\pm 0.005$  inches, except where noted.

**PINOUT:**

- Pin 1: Common Anode
- Pin 2: Cathode 1
- Pin 3: Cathode 2
- Pin 4: Guard Ring Cathode
- Pin 5: Common Anode
- Pin 6: Cathode 3
- Pin 7: Cathode 4
- Pin 8: Guard Ring Cathode



Notes:

1. Center of Detector to be centered within package to  $\pm 0.002$  inches,  $\pm 1$  Degree.
2. Window Material: Clear Schott Glass.
3. Window is AR Coated with MgF<sub>2</sub>.

Mechanical Tolerances:  $\pm 0.005$  inches, except where noted.