PIN Junction Si Photodiode

OP916

Electronics

Features:

- Coaxial leads gold plated
- · Narrow receiving angle
- Enhanced temperature range
- Fast switching speed
- Linear response vs. irradiance



Description:

Each OP916 consists of a PIN junction silicon photodiode mounted in a miniature glass-lensed coaxial hermetically sealed package. The lensing effect allows an acceptance half-angle of 18°, when measured from the optical axis to the half-power point.

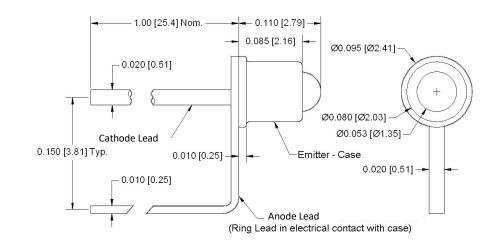
Refer to Application Bulletin 202 for pill-type soldering to PC Board.

Applications:

- Non-contact reflective object sensor
- Assembly line automation
- Machine automation
- Machine safety
- End of travel sensor
- Door sensor

Ordering Information				
Part Number	Sensor			
OP916	Photodiode			

Pin #	Lead type		
1	Cathode		
2	Anode		



All dimensions in inches [mm]

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Electrical Specifications

Absolute Maximum Ratings (T_A = 25° C unless otherwise noted)

Reverse Voltage	100 V
Operating Temperature Range	-55° C to +125° C
Storage Temperature Range	-55° C to +125° C
Lead Soldering Temperature [1/16 inch (1.6 mm) from the case for 5 seconds with soldering iron] (1)	260° C
Power Dissipation ⁽²⁾	50 mW

Electrical Characteristics (T_A = 25° C unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
I _L ⁽³⁾⁽⁴⁾	Light Current	4.5	-	1,000	μΑ	$V_R = 20 \text{ V, } E_E = 5 \text{ mW/cm}^2$
I _D	Dark Current	-	1	20	nA	V _R = 20 V, E _E = 0
V _{(BR)R}	Reverse Voltage Breakdown	30	-	-	V	Ι _R = 100 μΑ
t _r	Rise Time	-	100	-		ns $V_R = 50 \text{ V}$, $I_L = 8 \text{ μA}$, $R_L = 1 \text{ k}\Omega$
t _f	Fall Time	-	100	-	TIS	

Notes:

- (1) RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering.
- (2) Derate linearly 0.30 mW/ $^{\circ}$ C above 25 $^{\circ}$ C.
- (3) Junction temperature maintained at 25° C.
- (4) Light source is an unfiltered tungsten bulb operating at CT = 2870 K or equivalent infrared source.

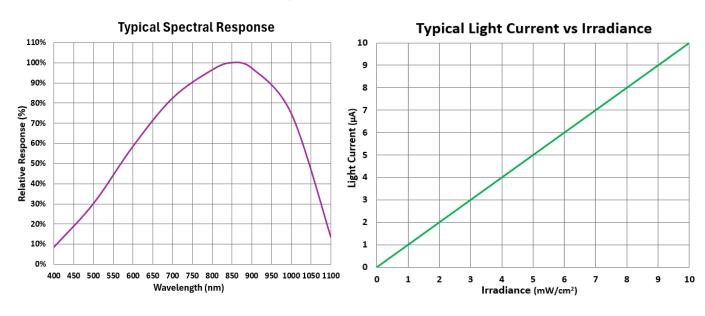
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Typical Performance



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