PIN Junction Si Photodiode

OP916

Features:

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

Description:

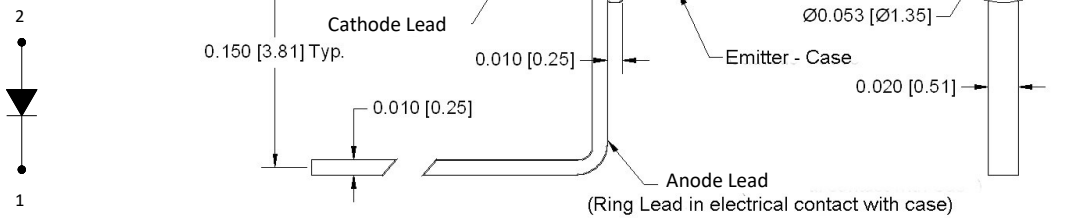
Each OP916 consists of a PIN junction silicon photodiode mounted in a miniature glass-lensed coaxial hermetically sealed package. The lensing effect allows an acceptance half-angle of 18°, when measured from the optical axis to the half-power point.

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)

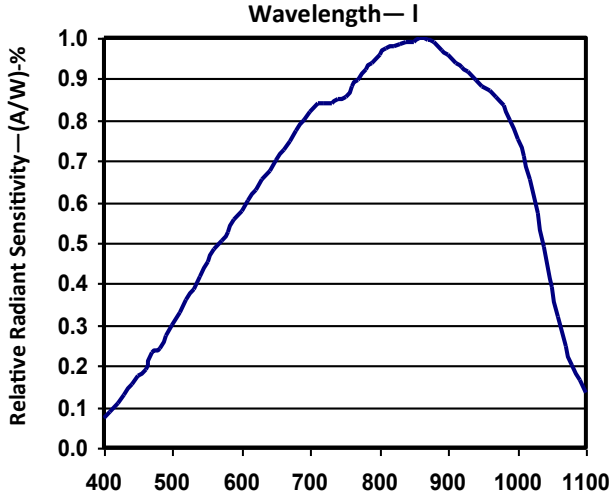
Reverse Voltage	100 V
Operating Temperature Range	-55° C to +125° C
Storage Temperature Range	-55° C to +125° C
Lead Soldering Temperature [1/16 inch (1.6 mm) from the case for 5 seconds with soldering iron]	260° C(1)
Power Dissipation	50 mW(2)

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

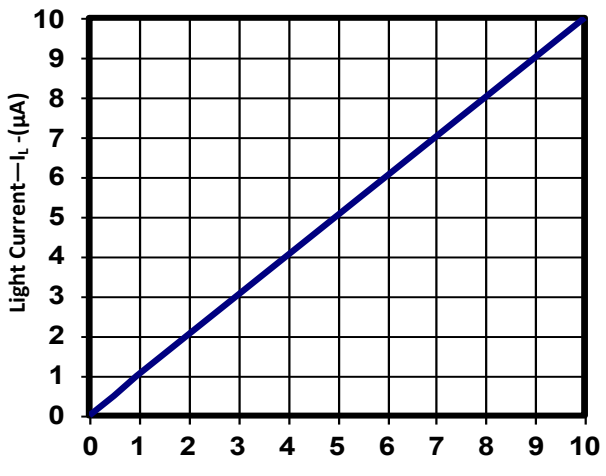
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
I_L	Light Current	4.5		1,000	µA	V_R = 20 V, E_E = 5 mW/cm^2 (3)(4)
I_D	Dark Current	-	-	20	nA	V_R = 20 V, E_E = 0(3)
$V_{(BR)R}$	Reverse Voltage Breakdown	30		-	V	I_R = 100 µA
t_r	Rise Time	-	100	-	ns	V_R = 50 V, I_L = 8 µA, R_L = 1 kΩ
t_f	Fall Time	-	100	-		

Notes:
(1) RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering.
(2) Derate linearly 0.5 mW/° C above 25° 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.

Spectral Responsivity vs. Wavelength— l



Typical Light Current—I_L vs. Irradiance – Ee



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