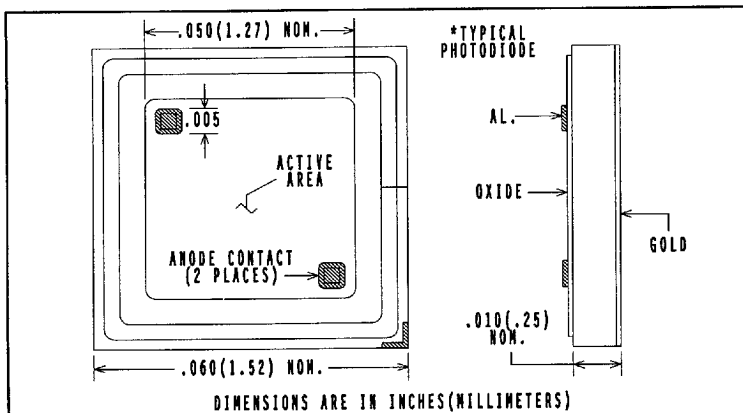
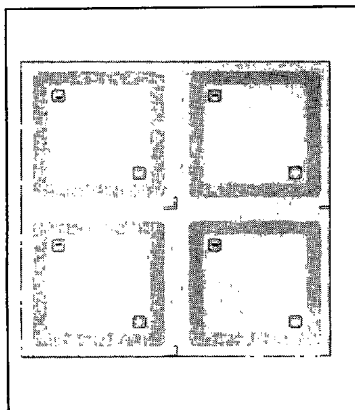


PN Photodiodes

Type OPC9XXX



Features

- PN photodiode elements
- Silicon nitride passivation anti-reflective coating

Description

Multi-element arrays are recommended for a variety of motion sensing and control applications ranging from encoding to quadrant sensing. Optek's photodiodes may be operated from zero bias (photovoltaic) up to the diode's reverse breakdown voltage.

Optek chip warranty excludes any damage resulting from improper bonding or alloying techniques.

Packaging Options

OPC9XXXTP Sawn on Tape
 OPC9XXXWP Waffle Pack
 OPC9XXXSP Unsawn Slice
 Special packaging and testing available upon request.

Absolute Maximum Ratings⁽¹⁾ ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Operating Temperature	-40°C to +85°C
Storage Temperature	-65°C to +150°C
Reverse Breakdown Voltage	30V
Power Dissipation	150mW ⁽²⁾

Electrical Characteristics Per Element ($T_A = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$V_{(BR)}$	Reverse Breakdown Voltage	30	80		V	$I_R = 100\mu\text{A}$
I_D	Reverse Dark Current		<1	15	nA	$V_R = 10\text{V}$
R_λ	Responsivity	0.45	0.50		A/W	$\Phi = 10\mu\text{W}^{(3)}$
C_T	Capacitance per sq. mil		0.03		pF	$V_R = 1\text{V}, \Phi = 0\mu\text{W}$

Notes: (1) All maximum ratings are determined with the chip mounted on a TO-15 header using Optek techniques. (2) Maximum power dissipation is a function of the package in which the chip is housed and the environment in which the assembled package will be used. (3) Light source is a GaAs LED, $\lambda_P = 935\text{nm}$, typical.

Photodiodes Available	
Part Number	Sizes
OPC910	0.050 X 0.050 inches
OPC911	0.060 X 0.060 inches (2 X 2 Array)
OPC915	0.120 X 0.120 inches
OPC925	0.040 X 0.040 inches
OPC9013	0.210 X 0.210 inches
Other sizes available	