



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



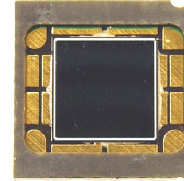
# Surface Mount PIN Photodiode

OPR5910/T, OPR5913



## Features:

- Surface mountable
- High temperature operation
- Circular active area (OPR5910)
- Large area photodiode (OPR5913)
- 880 nm peak responsivity offers maximum coupling with OPTEK's GaAIA LEDs (OPR5910)



## Description:

Each OPR5910, OPR5913 and OP5915 device is a silicon PIN photodiode enclosed in a compact polyamide chip carrier and is designed for open air communications and ambient light detection circuits.

The custom opaque package shields the photodiodes from stray light and can withstand multiple exposures to the most demanding soldering conditions, while the wraparound gold-plated solder pads offer exceptional storage and wetting characteristics.

See Application Bulletin 237 for Handling Instructions.

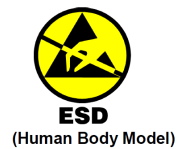
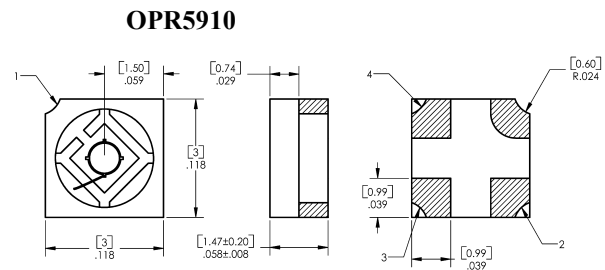
## Applications:

- Encoder applications
- Control applications

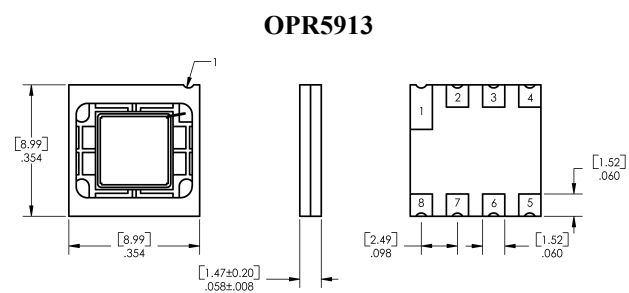
Ordering Information						
Part Number	Receiver Type	# of Elements	Responsivity (mA/mW) Min.	Reverse Voltage Min.	Active Area (mm <sup>2</sup> )	Packaging
OPR5910	Photodiode	1	0.45	35	0.75	Chip Tray
OPR5910T			0.45	35	0.75	Tape & Reel
OPR5913			0.40	10	26.00	Chip Tray

**Warning:** Front Window is pressure sensitive. Do not apply pressure or high vacuum to window.

Pin #	Description
1	Cathode
2	Anode
3	NC
4	NC



Pin #	Description	Pin #	Description
1	Anode	5	NC
2	Cathode	6	Cathode
3	Cathode	7	Cathode
4	NC	8	NC



### General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

TT Electronics | Optek Technology, Inc.  
1645 Wallace Drive, Ste. 130, Carrollton, TX USA 75006 | Ph: +1 972 323 2200  
www.ttelectronics.com | sensors@ttelectronics.com

### Electrical Specifications

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

Storage and Operating Temperature	-55° C to +125° C
Reverse Breakdown Voltage OPR5910, OPR5915 OPR5913	35 V / minute 10 V / minute
Solder reflow time within 5°C of peak temperature is 20 to 40 seconds <sup>(1)</sup>	250° C

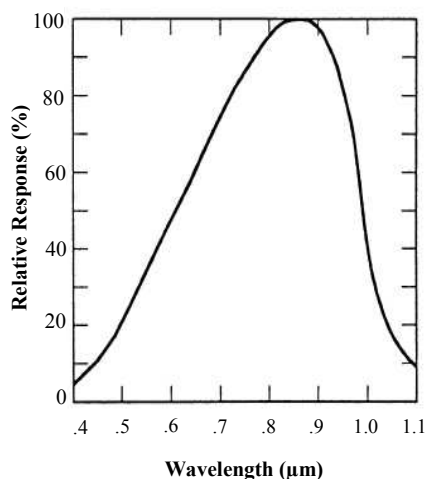
#### Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
R	Responsivity OPR5910, OPR5915 OPR5913	0.45 0.40	- -	- -	A/W	$E_e = 10\ \mu\text{W}$ , $\lambda = 890\ \text{nm}$ , $V = 0\ \text{V}$
$V_{BR}$	Reverse Breakdown Voltage OPR5910, OPR5915 OPR5913	35 10	- -	- -	V	$I_R = 100\ \mu\text{A}$
$I_D$	Reverse Dark Current OPR5910, OPR5915 OPR5913	- -	- -	30 100	nA	$V_R = 10\ \text{V}$ $V_R = 0.5\ \text{V}$
$C_T$	Capacitance OPR5910 OPR5913 OPR5913 OPR5915	- - - -	25 1000 250 125	- - - -	pf	$V_R = 0\ \text{V}$ $V_R = 0\ \text{V}$ $V_R = 10\ \text{V}$ $V_R = 0\ \text{V}$
$L \times W$	Active Area OPR5910 OPR5913 OPR5915	- - -	0.75 26 7.8	- - -	mm <sup>2</sup>	(0.86 mm x 0.86 mm) (5.1 mm x 5.1 mm) (2.8 mm x 2.8 mm)

Notes:

- (1) Solder time less than 5 seconds at temperature extreme.

Spectral Responsivity



General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

TT Electronics | Optek Technology, Inc.  
1645 Wallace Drive, Ste. 130, Carrollton, TX USA 75006 | Ph: +1 972 323 2200  
www.ttelectronics.com | sensors@ttelectronics.com