

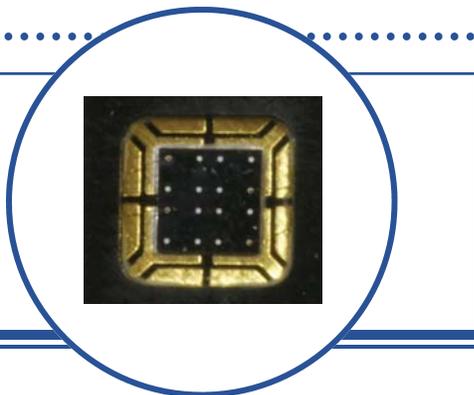
Surface Mount Quad Photodiode

OPR5911



Features:

- Surface mountable
- Closely matched responsivity
- High temperature operation
- Common cathode connections



Description:

Each **OPR5911** device is a four-element photodiode that is enclosed in a compact polyamide chip carrier and designed for a variety of encoder and control applications. The single chip construction ensures excellent matching and very tight dimensional tolerances between active areas. 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.

All cathodes in the **OPR5911** are bonded together, which enables the elements to act in unison with limited external circuitry.

See Application Bulletin 237 for handling instructions.

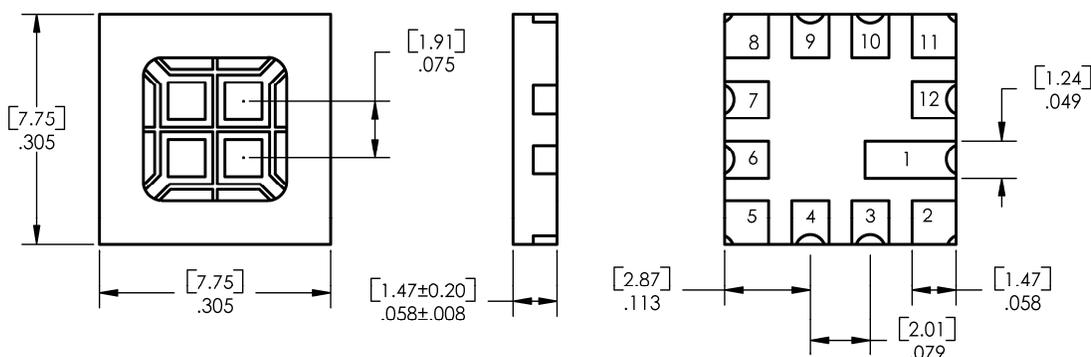
Applications:

- Encoder applications
- Control applications

Ordering Information						
Part Number	Receiver Type	# of Elements	Responsivity (mA/mW) Min.	Reverse Voltage Min.	Active Area (mm ²)	Packaging
OPR5911	Photodiode Array	4	0.45	14	1.61 (each)	Chip Tray

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

OPR5911



TOLERANCE IS ±.005 [0.13]
DIMENSIONS ARE IN INCHES AND [MILLIMETERS].

Pin #	OPR5911	Pin #	OPR5911	Pin #	OPR5911
1	Anode 1	5	Common Cathode	9	N. C. / N.C.
2	Common Cathode	6	Anode 2	10	N. C. / N.C.
3	N. C. / N.C.	7	Anode 3	11	Common Cathode
4	N. C. / N.C.	8	Common Cathode	12	Anode 4



OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

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

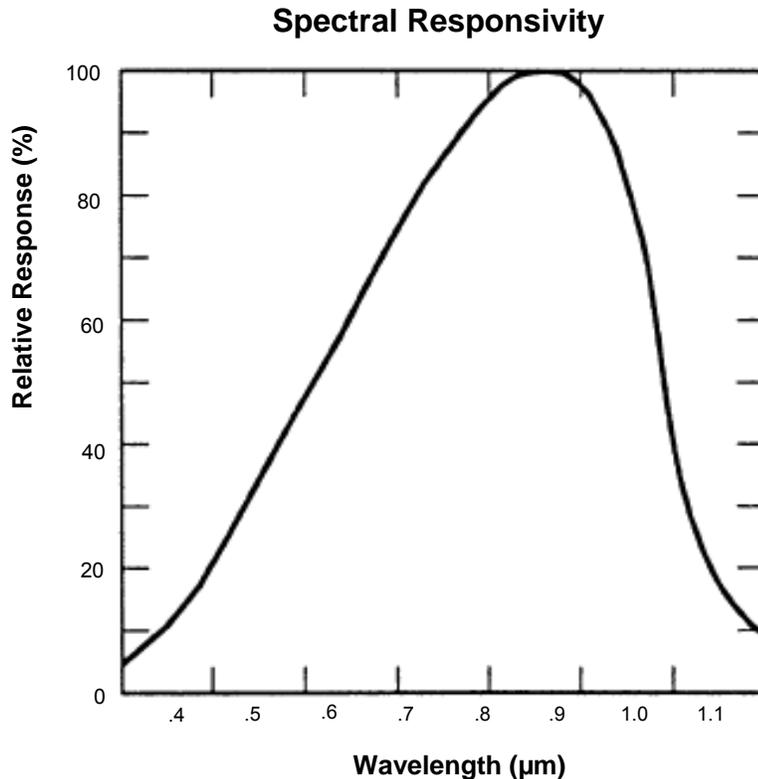
Storage and Operating Temperature	-55° C to +125° C
Reverse Breakdown Voltage	14 V / minute
Solder reflow time within 5°C of peak temperature is 20 to 40 seconds ⁽¹⁾	250° C

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
R	Responsivity	.45	-	-	A/W	$E_e = 10\ \mu\text{W}$, $\lambda = 890\ \text{nm}$, $V = 0\ \text{V}$
V_{BR}	Reverse Breakdown Voltage	14	-	-	V	$I_R = 100\ \mu\text{A}$
I_D	Reverse Dark Current	-	-	30	nA	$V_R = 10\ \text{V}$
C_T	Capacitance	-	10	-	pf	$V_R = 10\ \text{V}$
Lx W	Active Area (per diode)	-	1.27	-	mm ²	(1.0 mm x 1.0 mm)

Notes:

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



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