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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!



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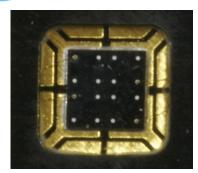
## Surface Mount Quad Photodiode

# **Electronics**

## **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 polyimide 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 exceptions 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 considerations.

#### **Applications:**

- Encoder applications
- Control applications

Ordering Information						
Part Number	Receiver Type	# of Elements	Responsivity (mA/mW) Min.	Reverse Voltage Min.	Active Area (mm²)	Packaging
OPR5911	Photodiode Array	4	0.45	14	1.61 (each)	Chip Tray

**OPR5911** 

0.063

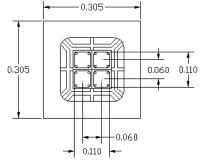




ESD (Human Body Model)



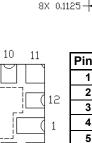




8

5 4

7



2

3

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

8X 0.049

8X 0.059

#### General Note

SYMBOLIZATION AREA

**UNLESS OTHERWISE** 

SPECIFIED, ALL TOLERANCES ARE

±.005"

## **Surface Mount Quad Photodiode**



## **Electrical Specifications**

#### Absolute Maximum Ratings (T<sub>A</sub> = 25° C unless otherwise noted)

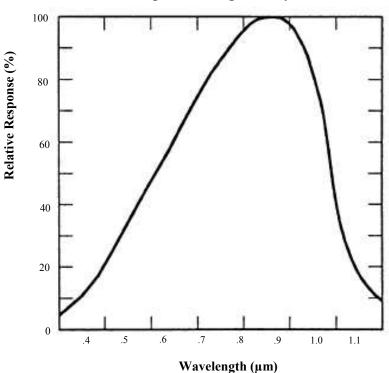
Storage and Operating Temperature	-55° C to +125° C
Reverse Breakdown Voltage	14 V / minute
Solder reflow time within 5°C of peak temperature is 20 to 40 seconds <sup>(1)</sup>	250° C

#### **Electrical Characteristics** (T<sub>A</sub> = 25° C unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
R	Responsivity	0.45	_	1	A/W	$E_e$ = 10 $\mu$ W, $\lambda$ = 850 nm, $V_R$ = 0
$V_{BR}$	Reverse Breakdown Voltage	14	-	1	V	Ι <sub>R</sub> = 100 μΑ
I <sub>D</sub>	Reverse Dark Current	_	_	30	nA	V <sub>R</sub> = 10 V
C <sub>T</sub>	Capacitance	_	10	-	pF	V <sub>R</sub> = 10 V
LXW	Active Area (per diode)	_	1.61	_	mm²	(1.27 mm x 1.27 mm)

#### Notes:

### **Spectral Responsivity**



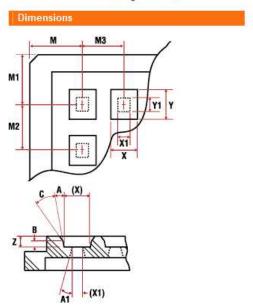
<sup>1.</sup> Solder time less than 5 seconds at temperature extreme.

## **Surface Mount Quad Photodiode**



## **Packaging**

## Bare Die/CSP Tray Detail



М	= 0.592" ±0.005"
M1	= 0.592" ±0.005"
M2	= 0.401" ±0.005"
M3	= 0.401" ±0.005"
Array	=8x8 (64)
POCKE	T DETAILS
Х	= 0.361" ±0.005" pocket size
Y	= 0.361" ±0.005" pocket size
Z	= 0.100" ±0.005" pocket depth

= 5° ±1/2° pocket draft angle No Cross Slots

OVERALL TRAY SIZE

Size = 3.990" ±0.010"

Height = 0.315" +0.005" -0.005"

Flatness = 0.020"

H44-359-62C02



### Orientation

