

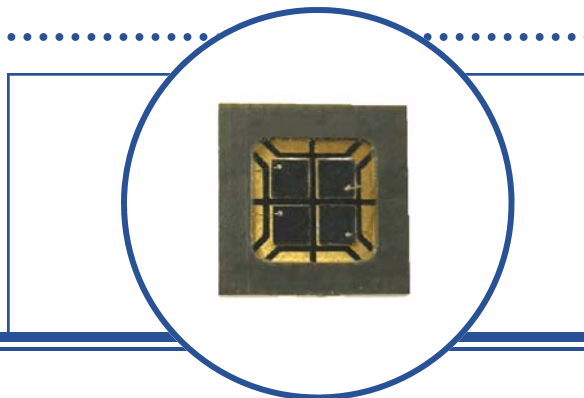
Surface Mount Quad Photodiode

OPR5925



Features:

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



Description:

Each **OPR5925** 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.

Each anode and cathode in the **OPR5925** is bonded out separately, which enables external connection in any desired configuration to match the sensing circuit requirements.

See Application Bulletin 237 for handling instructions.

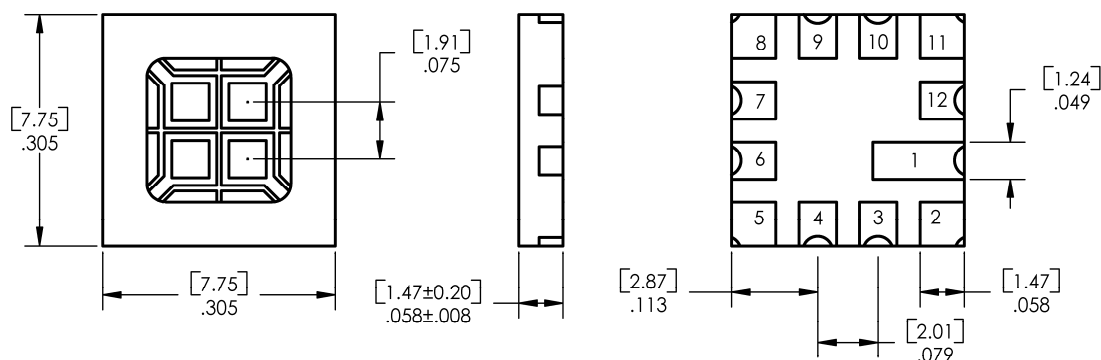
Applications:

- Encoder applications
- Control applications

| Ordering Information | | | | | | |
|----------------------|------------------|---------------|---------------------------|----------------------|--------------------------------|-----------|
| Part Number | Receiver Type | # of Elements | Responsivity (mA/mW) Min. | Reverse Voltage Min. | Active Area (mm ²) | Packaging |
| OPR5925 | Photodiode Array | 4 | 0.45 | 35 | 0.64 | Tube |

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

OPR5925



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

| Pin # | OPR5925 | Pin # | OPR5925 | Pin # | OPR5925 |
|-------|--------------|-------|-----------|-------|--------------|
| 1 | Anode 1 | 5 | Cathode 2 | 9 | N. C. / N.C. |
| 2 | Cathode 1 | 6 | Anode 2 | 10 | N. C. / N.C. |
| 3 | N. C. / N.C. | 7 | Anode 3 | 11 | Cathode 4 |
| 4 | N. C. / N.C. | 8 | Cathode 3 | 12 | Anode 4 |



RoHS

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)

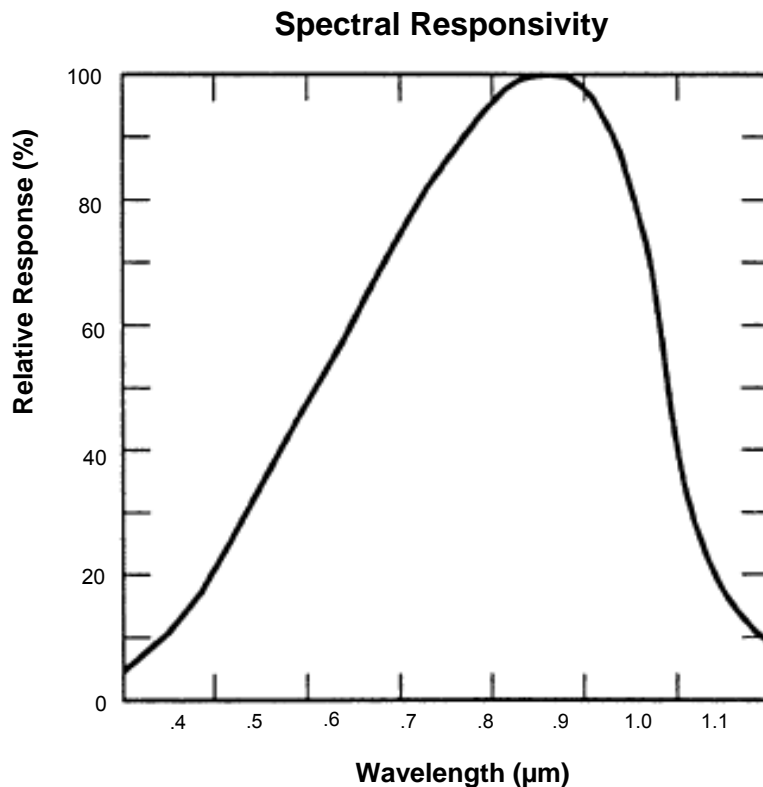
| | |
|--|-------------------|
| Storage and Operating Temperature | -55° C to +125° C |
| Reverse Breakdown Voltage | 35 V / minute |
| Solder reflow time within 5°C of peak temperature is 20 to 40 seconds ⁽¹⁾ | 250° C |

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

| SYMBOL | PARAMETER | MIN | TYP | MAX | UNITS | TEST CONDITIONS |
|-------------|---------------------------|-----|------|-----|-----------------|---|
| R_λ | Responsivity | .45 | - | - | A/W | $\Phi_E = 10\ \mu\text{W}$, $\lambda = 890\ \text{nm}$, $V = 0\ \text{V}$ |
| $V_{(BR)R}$ | Reverse Breakdown Voltage | 35 | - | - | 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) | - | 0.64 | - | mm ² | (0.8 mm x 0.8 mm) |

Notes:

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



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