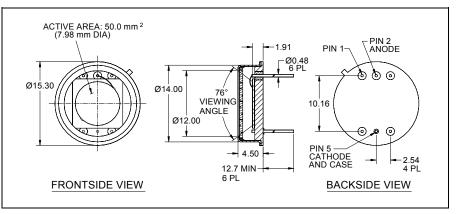


# Pacific Silicon Sensor Series 6 Data Sheet Part Description PC50-6-TO8 Order # 03-209





#### **FEATURES**

#### • Ø 7.98 mm active area

## Low dark current

- Long term stability
- High shunt resistance

## **ABSOLUTE MAXIMUM RATING**

| SYMBOL              | PARAMETER                    | MIN | MAX | UNITS |
|---------------------|------------------------------|-----|-----|-------|
| T <sub>STG</sub>    | Storage Temp                 | -20 | +80 | °C    |
| T <sub>OP</sub>     | Operating Temp               | -20 | +60 | °C    |
| V <sub>R(OP)</sub>  | Reverse Operating<br>Voltage | -   | 50  | V     |
| I <sub>(PEAK)</sub> | Peak DC Current              | -   | 10  | mA    |

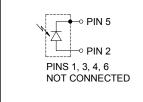
DESCRIPTION

50.0 mm<sup>2</sup> Low Dark Current PIN Photodiode. Packaged in a

TO-8 with a non-hermetic ultra flat fused silica glass window

cap. Also available with six pin isolated case package.

## **SCHEMATIC**

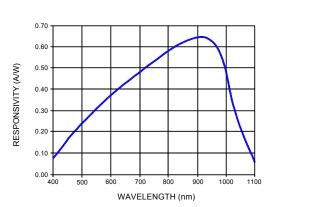


# APPLICATIONS

- Precision photometry
- Bar code readers
- Medical equipment
- Pulsed light sensor



## SPECTRAL RESPONSE



### **ELECTRO-OPTICAL CHARACTERISTICS @ 22° C**

| SYMBOL          | CHARACTERISTIC         | TEST CONDITIONS                                       | MIN | TYP                     | MAX | UNITS               |
|-----------------|------------------------|---|-----|-------------------------|-----|---------------------|
| R <sub>SH</sub> | Shunt Resistance       | $V_R = \pm 10 \text{ mV}$                             | 100 | 300                     |     | MΩ                  |
| ID              | Dark Current           | V <sub>R</sub> = 10 V                                 |     | 0.5                     |     | nA                  |
| С               | Capacitance            | V <sub>R</sub> = 0 V;                                 |     | 480                     |     | pF                  |
| U               |                        | V <sub>R</sub> = 10 V;                                |     | 100                     |     |                     |
|                 | Responsivity           | V <sub>R</sub> = 0 V; λ = 633 nm                      |     | 0.40                    |     | A/W                 |
|                 |                        | V <sub>R</sub> = 0 V; λ = 900 nm                      |     | 0.64                    |     |                     |
| NEP             | Noise Equivalent Power | $V_R$ = 10 V; $\lambda$ = 850 nm; $R_L$ = 50 $\Omega$ |     | 2.5 X 10 <sup>-14</sup> |     | W/Hz <sup>1/2</sup> |
| V <sub>BR</sub> | Breakdown Voltage      | I <sub>R</sub> = 10 μA                                | 100 |                         |     | V                   |
|                 | Rise Time              | $V_R$ = 10 V; $\lambda$ = 850 nm; $R_L$ = 50 $\Omega$ |     | 30                      |     | ns                  |
| t <sub>r</sub>  |                        | $V_R$ = 80 V; $\lambda$ = 850 nm; $R_L$ = 50 $\Omega$ |     | 7                       |     |                     |

Disclaimer: Due to our policy of continued development, specifications are subject to change without notice.

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