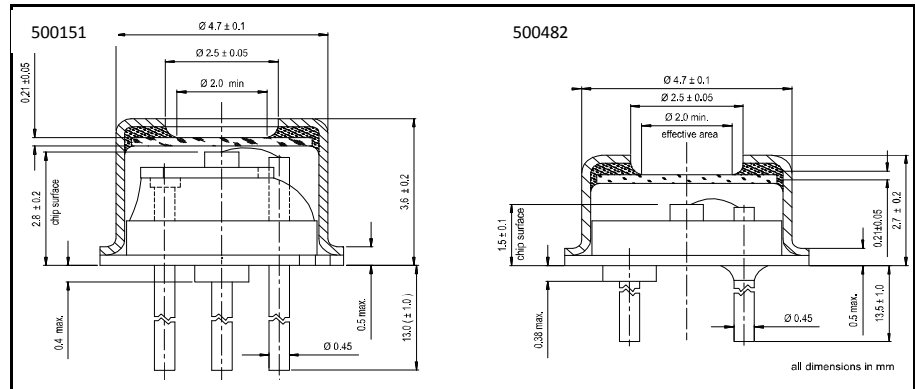




### Features

- 1 mm<sup>2</sup> PIN detector
- High sensitivity
- High shunt resistance
- Low dark current

### Description

Low dark current circular active area PIN photodiode with 1 mm<sup>2</sup> active area. Metal can type hermetic TO52 package with clear glass window.

### Application

- Precision photometry
- Analytical instruments
- Medical equipment
- Pulsed light detector

### RoHS

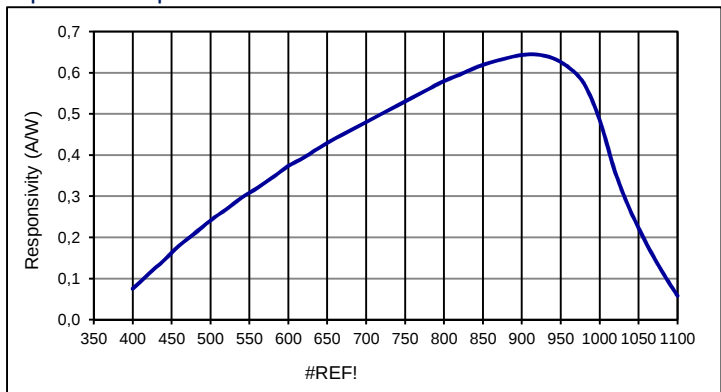
2002/95/EC



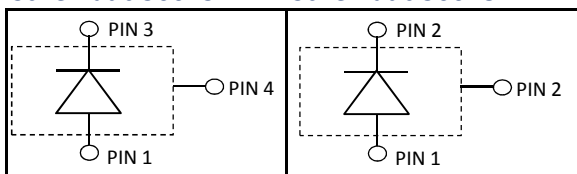
### Absolute maximum ratings

| Symbol            | Parameter           | Min | Max  | Unit |
|-------------------|---------------------|-----|------|------|
| T <sub>STG</sub>  | Storage temp        | -55 | 125  | °C   |
| T <sub>OP</sub>   | Operating temp      | -40 | 100  | °C   |
| V <sub>max</sub>  | Max reverse voltage |     | 30   | V    |
| I <sub>PEAK</sub> | Peak DC current     |     | 0.25 | mA   |

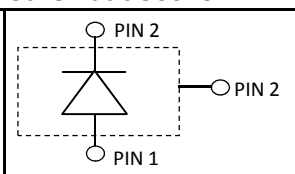
### Spectral response



### Schematic 500151



### Schematic 500482



### Electro-optical characteristics @ 23 °C

| Symbol          | Characteristic    | Test Condition                                           | Min           | Typ      | Max | Unit            |
|-----------------|-------------------|----------------------------------------------------------|---------------|----------|-----|-----------------|
|                 | Active area       |                                                          | diameter 1130 |          |     | μm              |
|                 | Active area       |                                                          | 1             |          |     | mm <sup>2</sup> |
| I <sub>D</sub>  | Dark current      | V <sub>R</sub> = 10 V                                    |               | 0.05     |     | nA              |
| C               | Capacitance       | V <sub>R</sub> = 0 V                                     |               | 20       |     | pF              |
|                 |                   | V <sub>R</sub> = 10 V                                    |               | 3        |     | pF              |
|                 | Responsivity      | λ = 632 nm                                               |               | 0.4      |     | A/W             |
|                 |                   | λ = 900 nm                                               |               | 0.64     |     | A/W             |
| t <sub>R</sub>  | Rise time         | V <sub>R</sub> = 0 V; λ = 850 nm; R <sub>L</sub> = 50 Ω  |               | 2000     |     | ns              |
|                 |                   | V <sub>R</sub> = 10 V; λ = 850 nm; R <sub>L</sub> = 50 Ω |               | 10       |     | ns              |
|                 |                   | V <sub>R</sub> = 80 V; λ = 850 nm; R <sub>L</sub> = 50 Ω |               | 5        |     | ns              |
|                 |                   |                                                          |               |          |     |                 |
|                 | Shunt Resistance  | V <sub>R</sub> = 5 mV                                    | 1000          | 2000     |     | MΩ              |
|                 | N.E.P.            | V <sub>R</sub> = 10 V; λ = 900 nm                        |               | 6.3 E-15 |     | W/√Hz           |
| V <sub>BR</sub> | Breakdown voltage | I <sub>R</sub> = 2 μA                                    | 30            | 100      |     | V               |

### European, International Sales:

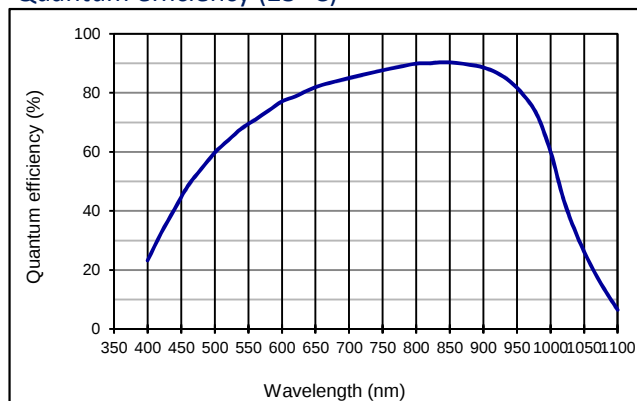
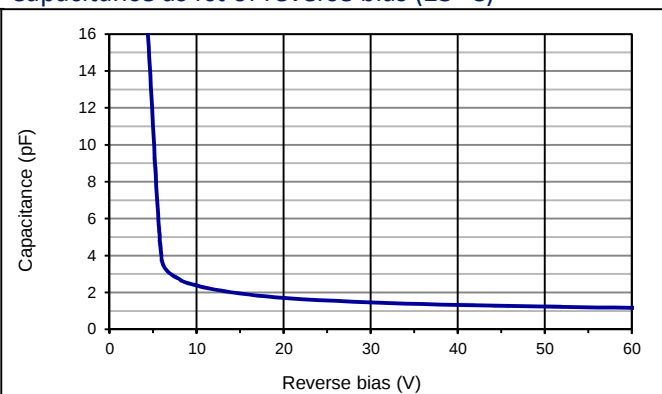
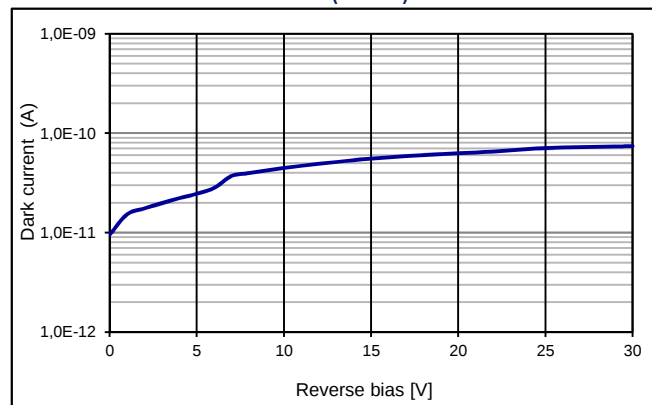


First Sensor AG  
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E-Mail: sales.opto@first-sensor.com

### USA:



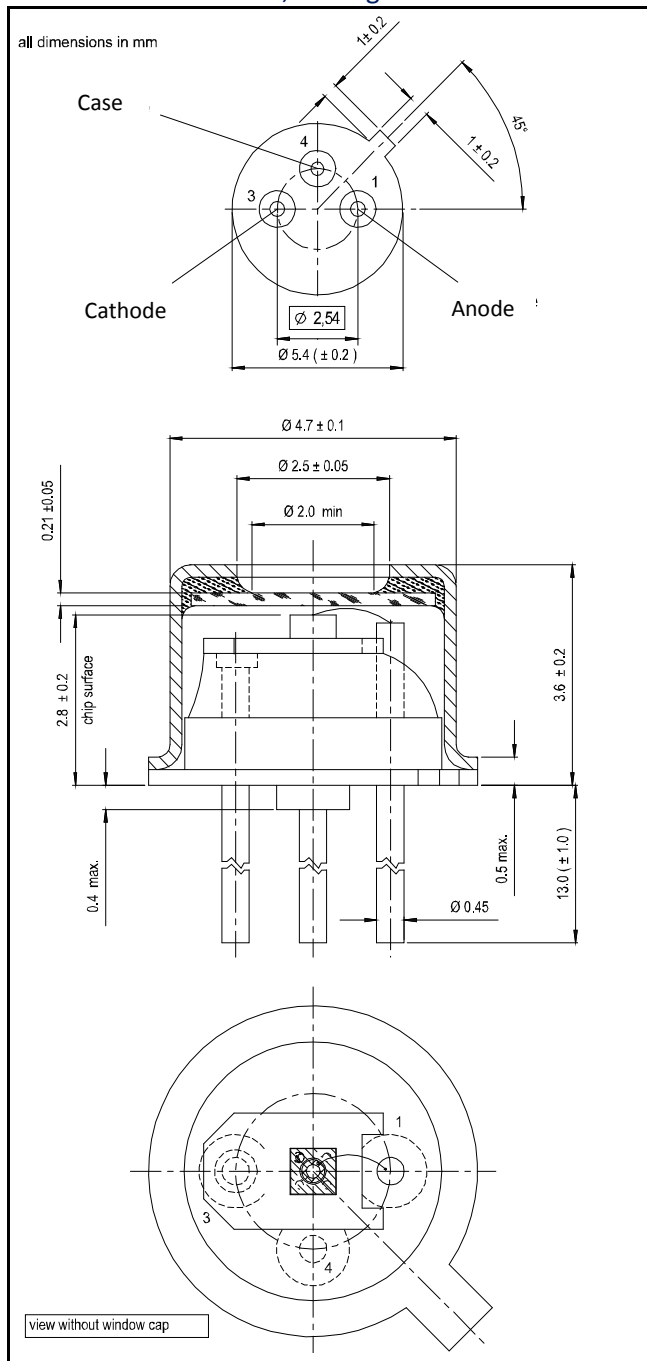
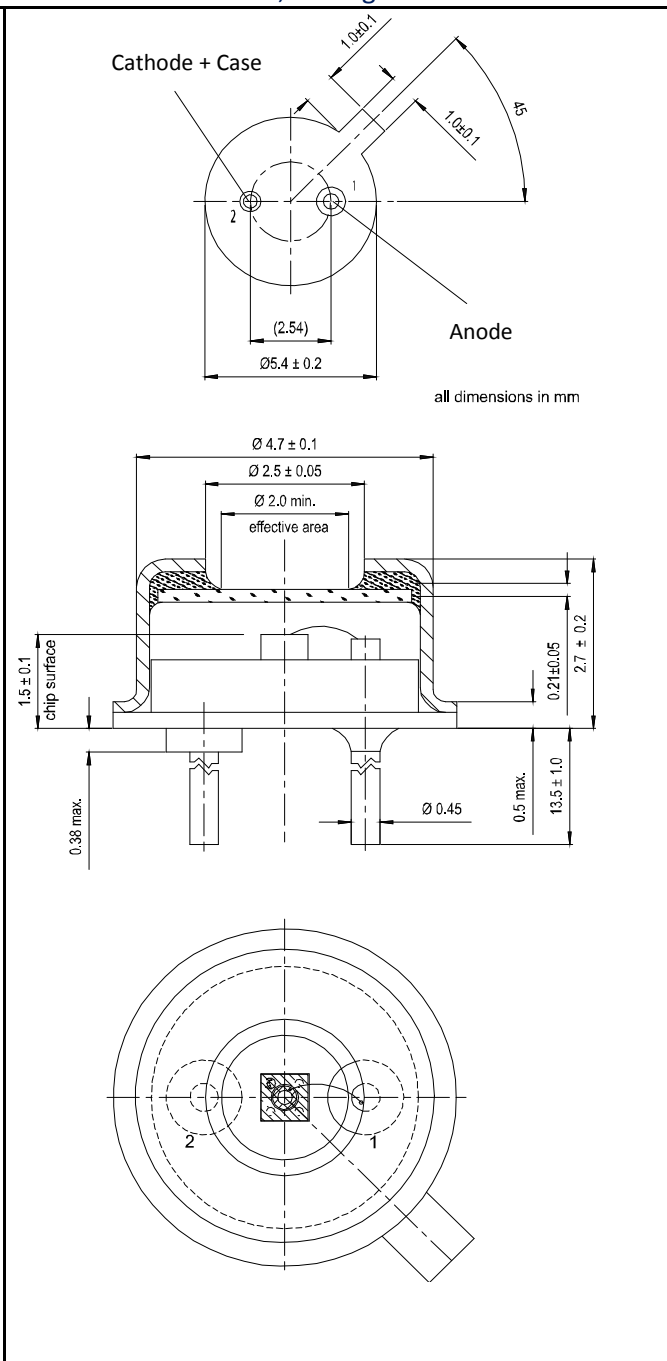
Pacific Silicon Sensor, Inc.  
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Phone: +1-818-706-3400  
Fax: +1-818-889-7053  
E-Mail: sales@pacific-sensor.com

**Quantum efficiency (23 °C)**

**Capacitance as fct of reverse bias (23 °C)**

**Dark current as fct of bias (23 °C)**

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**Order number 500151, Package: TO52S1**

**Order number 500482, Package: TO52S3**

**Package dimension:**

Small quantities: Foam pad, boxed (12 cm x 16.5 cm)

Disclaimer: Due to our strive for continuous improvement, specifications are subject to change within our PCN policy according to JESD46C.

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