
Features

- 20 mm² PIN detector
- Low dark current
- High shunt resistance
- High sensitivity

Description

Circular active area PIN photodiode with 20 mm² active area. Metal can type hermetic TO8 package with clear glass window.

Application

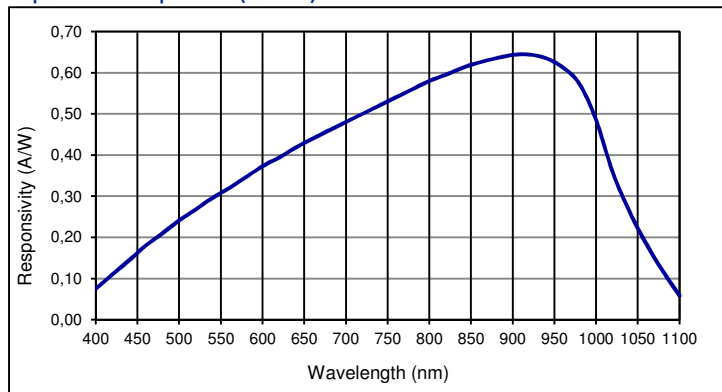
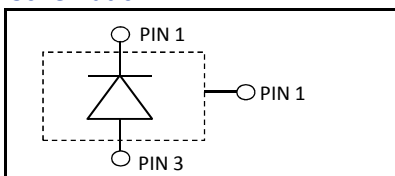
- Precision photometry
- Bar code readers
- Medical equipment
- Pulsed light sensor

RoHS

2002/95/EC


Absolute maximum ratings

| Symbol | Parameter | Min | Max | Unit |
|-------------------|---------------------|-----|-----|------|
| T _{STG} | Storage temp | -55 | 125 | °C |
| T _{OP} | Operating temp | -40 | 100 | °C |
| V _{max} | Max reverse voltage | | 30 | V |
| I _{PEAK} | Peak DC current | | 10 | mA |

Spectral response (23 °C)

Schematic

Electro-optical characteristics @ 23 °C

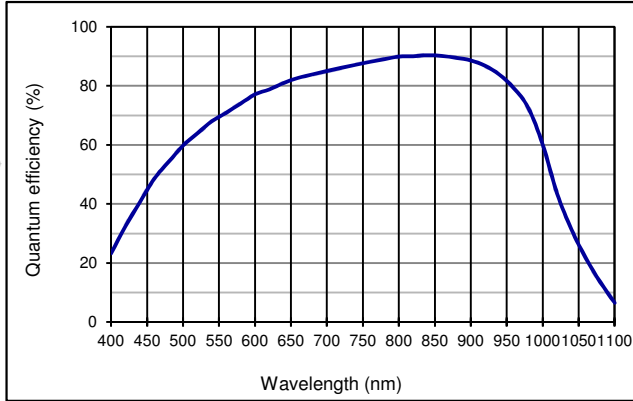
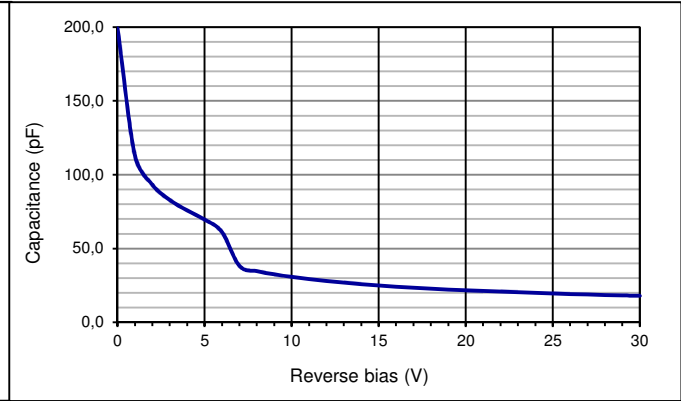
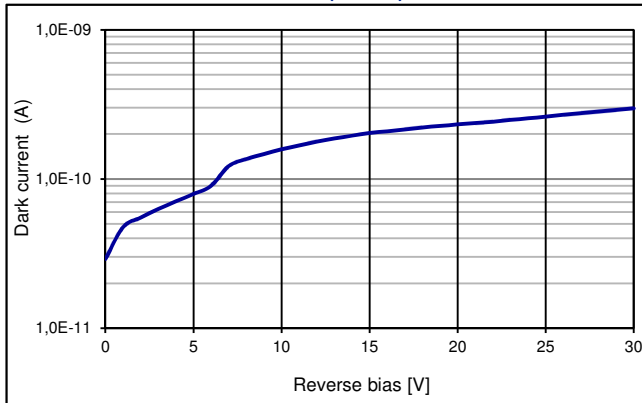
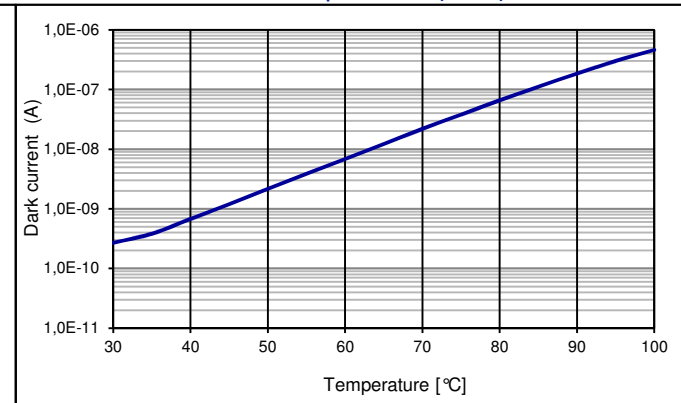
| Symbol | Characteristic | Test Condition | Min | Typ | Max | Unit |
|-----------------|-------------------|--|---------------|----------|-----|-----------------|
| | Active area | | diameter 5050 | | | µm |
| | Active area | | 20 | | | mm ² |
| I _D | Dark current | V _R = 10 V | | 0.3 | 3 | nA |
| C | Capacitance | V _R = 0 V | | 220 | | pF |
| | | V _R = 10 V | | 35 | | pF |
| | Responsivity | λ = 632 nm | | 0.4 | | A/W |
| | | λ = 900 nm | | 0.64 | | A/W |
| t _R | Rise time | V _R = 0 V; λ = 850 nm; R _L = 50 Ω | | 2000 | | ns |
| | | V _R = 10 V; λ = 850 nm; R _L = 50 Ω | | 25 | | ns |
| | | V _R = 20 V; λ = 850 nm; R _L = 50 Ω | | 15 | | ns |
| | | V _R = 80 V; λ = 850 nm; R _L = 50 Ω | | 6 | | ns |
| | Shunt Resistance | V _R = 10 mV | | 700 | | MΩ |
| | N.E.P. | V _R = 10 V; λ = 900 nm | | 1.5 E-14 | | W/√Hz |
| V _{BR} | Breakdown voltage | I _R = 2 µA | 30 | | | V |

European, International Sales:


First Sensor AG
 Peter-Behrens-Strasse 15
 12459 Berlin
 Germany
 T +49 30 6399 2399
 F +49 30 639923-752
 sales.opto@first-sensor.com

USA:


First Sensor Inc.
 5700 Corsa Avenue #105
 Westlake Village
 CA 91362 USA
 T +1 818 706 3400
 F +1 818 889 7053
 sales.us@first-sensor.com

Quantum efficiency (23 °C)

Capacitance as fct of reverse bias (23 °C)

Dark current as fct of bias (23 °C)

Dark current as fct of temperature (10 V)

Package dimension:

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

Handling:

Please refer to document "Instructions for handling and processing"

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

European, International Sales:


First Sensor AG
 Peter-Behrens-Strasse 15
 12459 Berlin
 Germany
 T +49 30 6399 2399
 F +49 30 639923-752
 sales.opto@first-sensor.com

USA:


First Sensor Inc.
 5700 Corsa Avenue #105
 Westlake Village
 CA 91362 USA
 T +1 818 706 3400
 F +1 818 889 7053
 sales.us@first-sensor.com