

Features

- Quadrant detector
- Low dark current
- Fast rise time, low capacitance
- High QE at 1064 nm

Description

Square active area quadrant PIN detector with 4 x 25 mm² and 50 μm gaps, optimized for 1064 nm. Quasi-hermetic ceramic carrier type package with glass cover (reflow solderable).

Application

- 1064 nm laser detection
- High speed photometry
- NIR pulsed light sensor
- Laser guidance

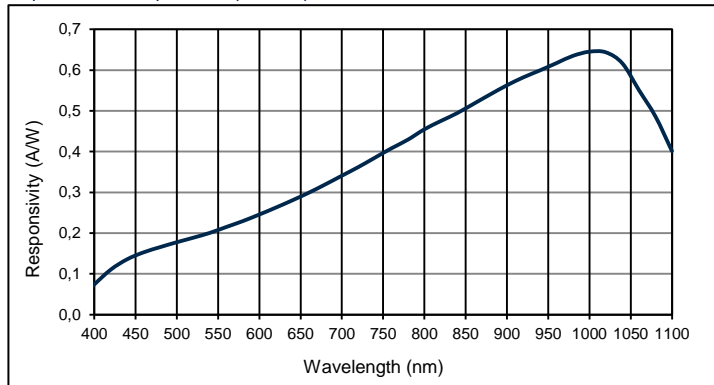
RoHS

2011/65/EU

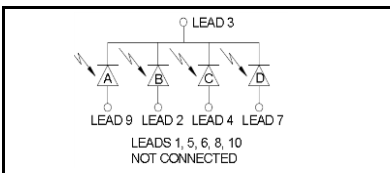
Absolute maximum ratings

| Symbol | Parameter | Min | Max | Unit |
|-------------------|-------------------|-----|-----|------|
| T _{STG} | Storage temp | -55 | 125 | °C |
| T _{OP} | Operating temp | -40 | 85 | °C |
| V _{OP} | Operating voltage | | 250 | V |
| I _{PEAK} | Peak DC current | | 10 | mA |

Spectral response (23 °C)



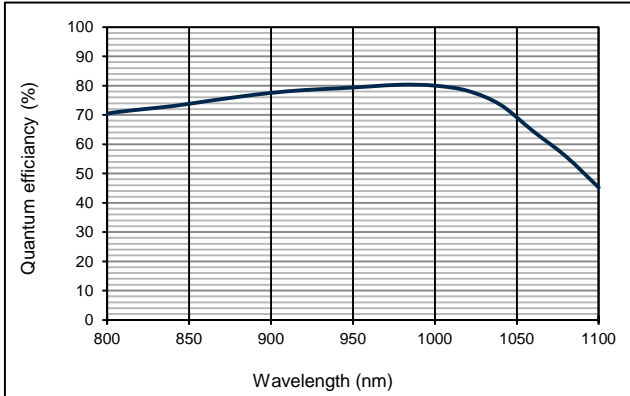
Schematic



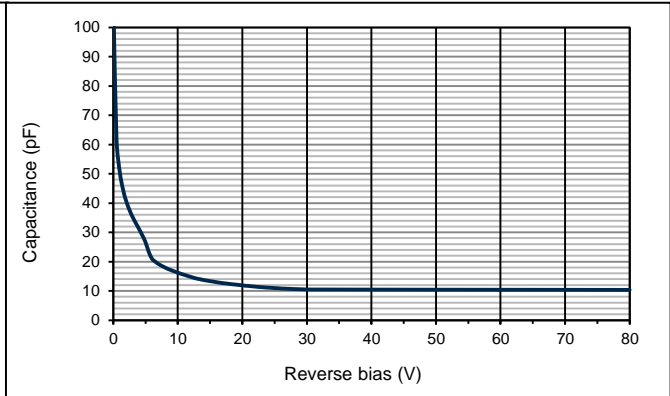
Electro-optical characteristics @ 23 °C

| Symbol | Characteristic | Test Condition | Min | Typ | Max | Unit |
|-----------------|-------------------------|--|-------------|------|------|-----------------|
| | Number of elements | | 4 quadrants | | | |
| | Active area | | 10 x 10 | | | mm |
| | Active area | per element | 25 | | | mm ² |
| | Gap | between elements | 50 | | | μm |
| I _D | Dark current | V _R = 150 V, per element | | 6.5 | 20 | nA |
| C | Capacitance | V _R = 150 V, per element | | 10 | | pF |
| | Responsivity | V _R = 150 V; λ = 1064 nm; R _L = 50 Ω | 0.42 | 0.48 | 0.65 | A/W |
| t _R | Rise time | V _R = 180 V; λ = 1064 nm; R _L = 50 Ω | | 12 | | ns |
| V _{BR} | Breakdown voltage | I _R = 2 μA | 250 | | | V |
| | Temperature coefficient | Change of I _{PH} with temperature | | 1.07 | | %/K |
| | Cross talk | V _R = 150 V; λ = 1064 nm; R _L = 50 Ω | | 2 | | % |

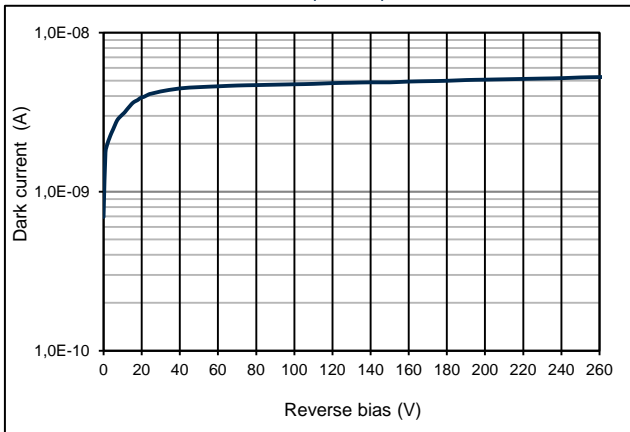
Quantum efficiency (23 °C)



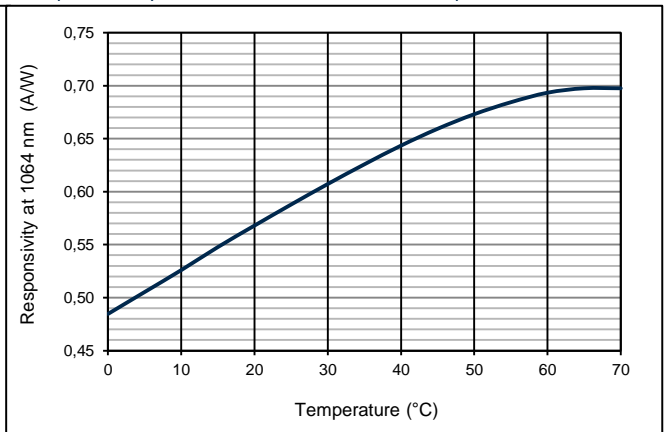
Capacitance as fct of reverse bias (23 °C)



Dark current as fct of bias (23 °C)



Responsivity at 1064 nm as fct of temperature



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.