
**Features**

- 2660  $\mu\text{m}$  x 2660  $\mu\text{m}$  active area
- Low dark current
- Fast response time
- High speed epitaxy
- Fully depleted at 3.5 V
- Optimized for blue light

**Description**

High speed epitaxy PIN photodiode with 7.1 mm<sup>2</sup> square active area. Metal can type hermetic TO5 package with UV clear window. Other packaging options available upon special request.

**Application**

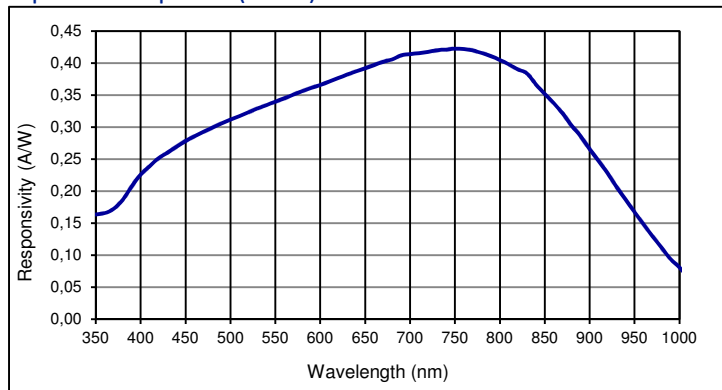
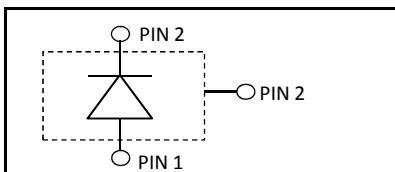
- Pulsed light detection
- High speed photometry
- High speed optical communications
- Laser monitoring

**RoHS**

2002/95/EC


**Absolute maximum ratings**

| Symbol     | Parameter           | Min | Max | Unit             |
|------------|---------------------|-----|-----|------------------|
| $T_{STG}$  | Storage temp        | -55 | 125 | $^\circ\text{C}$ |
| $T_{OP}$   | Operating temp      | -40 | 100 | $^\circ\text{C}$ |
| $V_{max}$  | Max reverse voltage |     | 30  | V                |
| $I_{PEAK}$ | Peak DC current     |     | 10  | mA               |

**Spectral response (23  $^\circ\text{C}$ )**

**Schematic**

**Electro-optical characteristics @ 23  $^\circ\text{C}$** 

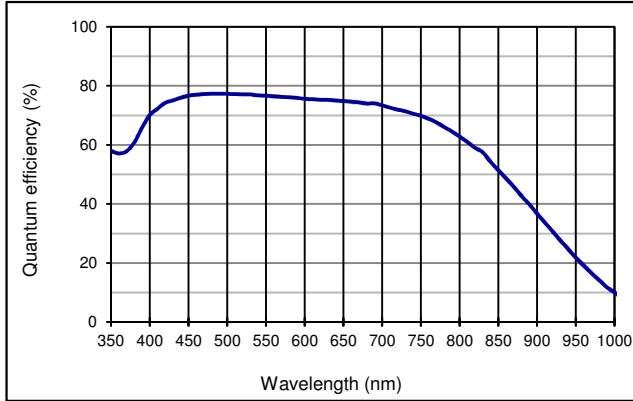
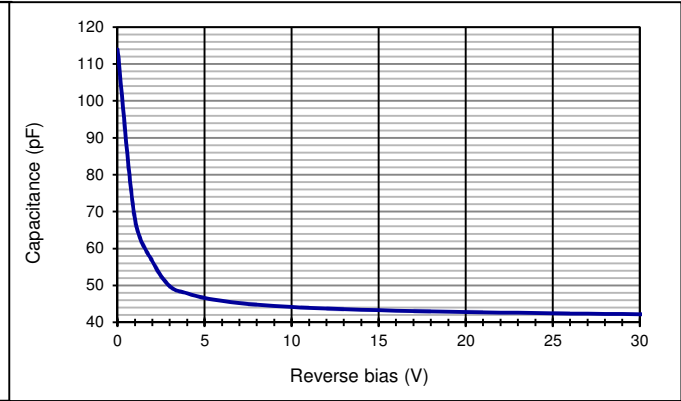
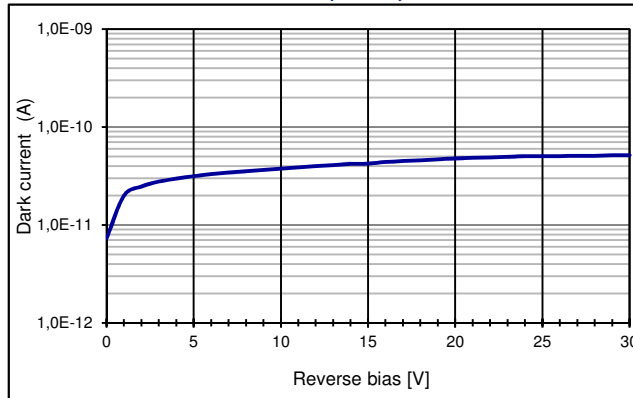
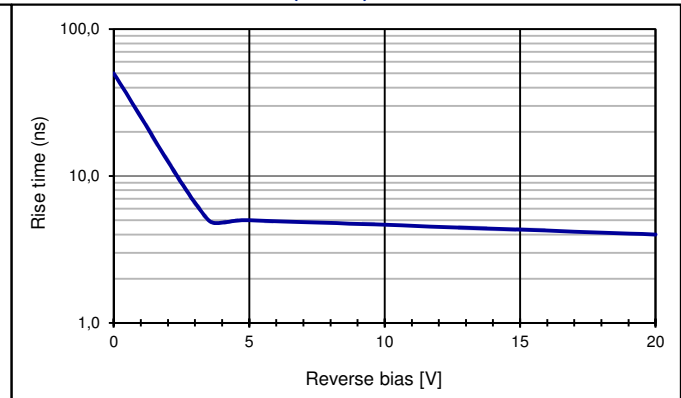
| Symbol   | Characteristic    | Test Condition  | Min         | Typ      | Max | Unit                  |
|----------|-------------------|---|-------------|----------|-----|-----------------------|
|          | Active area       |   | 2660 x 2660 |          |     | $\mu\text{m}$         |
|          | Active area       |   | 7.1         |          |     | mm <sup>2</sup>       |
| $I_D$    | Dark current      | $V_R = 0\text{ V}$  |             | 0.020    | 0.1 | nA                    |
|          |                   | $V_R = 3.5\text{ V}$  |             | 0.040    | 0.2 | nA                    |
| C        | Capacitance       | $V_R = 0\text{ V}$  |             | 120      | 150 | pF                    |
|          |                   | $V_R = 3.5\text{ V}$  |             | 50       | 65  | pF                    |
|          | Responsivity      | $\lambda = 355\text{ nm}$                                       |             | 0.16     |     | A/W                   |
|          |                   | $\lambda = 405\text{ nm}$                                       |             | 0.23     |     | A/W                   |
| $t_R$    | Rise time         | $V_R = 3.5\text{ V}; \lambda = 405\text{ nm}; R_L = 50\ \Omega$ |             | 5        |     | ns                    |
|          |                   | $V_R = 20\text{ V}; \lambda = 405\text{ nm}; R_L = 50\ \Omega$  |             | 4        |     | ns                    |
| $V_{BR}$ | Breakdown voltage | $I_R = 2\ \mu\text{A}$  | 30          |          |     | V                     |
|          | Shunt resistance  | $V_R = 10\text{ mV}$  |             | 500      |     | M $\Omega$            |
|          | N.E.P.            | $V_R = 3.5\text{ V}; \lambda = 405\text{ nm}$                   |             | 1.6 E-14 |     | W/ $\sqrt{\text{Hz}}$ |

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**Quantum efficiency (23 °C)**

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

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

**Rise time as fct of bias (23 °C)**

**Application hints:**

Please refer to document "Instructions for handling and processing"

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