First Sensor 6

RoHS

2011/65/EU





Features

- 400 mm² PSD
- Dual-axis, duo-lateral
- High position resolution
- High NIR sensitivity

Description

Square active area position sensing PIN photodiode with 400 mm² active area. Ceramic carrier type nonhermetic package with clear glass window.

Application

- Laser positioning
- Precision photometry
- Instrumentation
- Medical equipment
- Pulsed light sensor

Absolute maximum ratings

| Symbol | Parameter | Min | Max | Unit | |
|-------------------|---------------------|-----|-----|------|--|
| T _{STG} | Storage temp | -20 | 80 | °C | |
| T _{OP} | Operating temp | -20 | 60 | °C | |
| V_{max} | Max reverse voltage | 80 | | V | |
| I _{PEAK} | Peak DC current | | 10 | mA | |

Spectral response (23 °C)



Electro-optical characteristics @ 23 °C

| Symbol | Characteristic | Test Condition | Min | Тур | Max | Unit |
|-----------------|---------------------------|---|-----|---------|-------|------|
| | Active area | | | 20 x 20 | - | mm |
| | Active area | | | 400 | | |
| Ι _D | Dark current | V _R = 10 V | | 800 | 2.000 | nA |
| С | Capacitance | $V_R = 0 V$ | | 1.000 | | рF |
| | | V _R = 10 V | | 300 | | рF |
| | Responsivity | λ = 633 nm | | 0.4 | | A/W |
| | | λ = 850 nm | | 0.62 | | A/W |
| t _R | Rise time | $V_{R} = 10 \text{ V}; \lambda = 865 \text{ nm}; R_{L} = 50 \Omega$ | | 4000 | | ns |
| | Interelectrode Resistance | E = 0 lx | | 12 | | kΩ |
| | Noise lim. resolution | λ = 632 nm; P = 0.5 μ W, spot dia. 0.5 mm | | 0.3 | | μm |
| | Position detection error | λ = 632 nm; P = 0.5 μW, spot dia. 0.5 mm | | ± 1 | | % |
| V _{BR} | Breakdown voltage | I _R = 2 μA | | 100 | | V |

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First Sensor PSD Data Sheet Part Description DL400-7 SMD Order # 3001039



Dark current as fct of bias (23 °C)



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Technical Drawing, Package: CERsmd



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.

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