
Features

- 16 element APD array
- High QE >80% for $\lambda = 760-910$ nm
- High speed, low noise
- High uniformity, low cross talk

Description

Matrix APD array for NIR detection.
Hermetic ceramic SMD package
with soldered glass lid.

Application

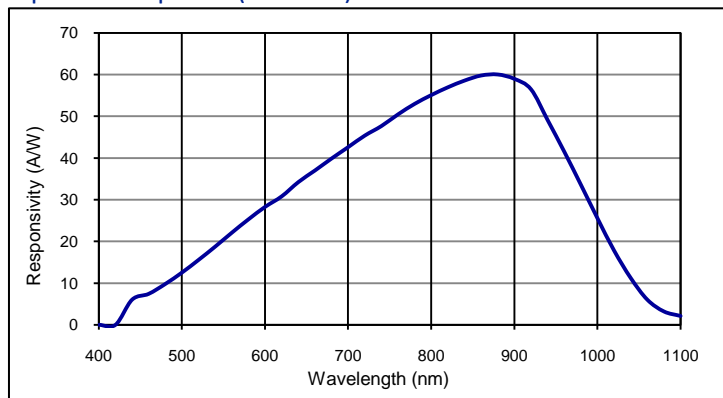
- LIDAR range finder
- Lidar ACC
- Laser scanner

RoHS

2002/95/EC


Absolute maximum ratings

| Symbol | Parameter | Min | Max | Unit |
|------------|-------------------------|-----|------|------|
| T_{STG} | Storage temp | -40 | 100 | °C |
| T_{OP} | Operating temp | -20 | 70 | °C |
| M_{max} | Gain ($I_{PO} = 1$ nA) | 200 | | |
| I_{PEAK} | Peak DC current | | 0.25 | mA |

Spectral response (M = 100)

Electro-optical characteristics @ 23°C

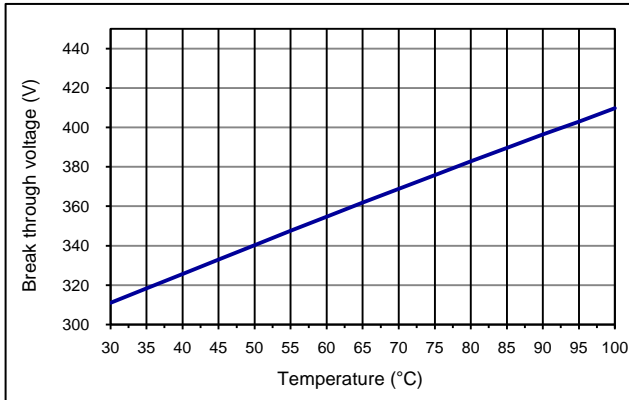
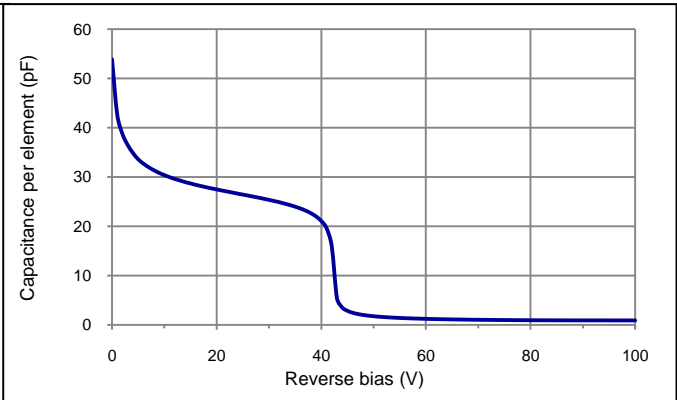
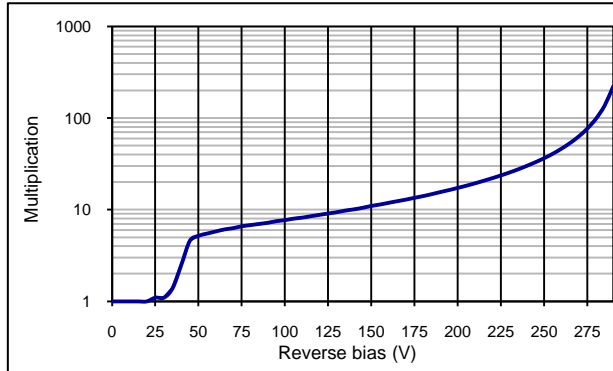
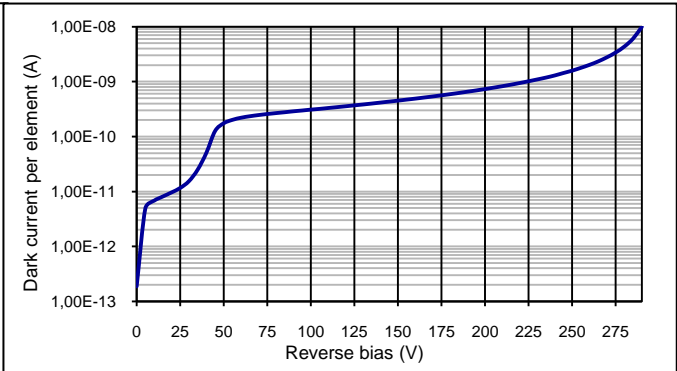
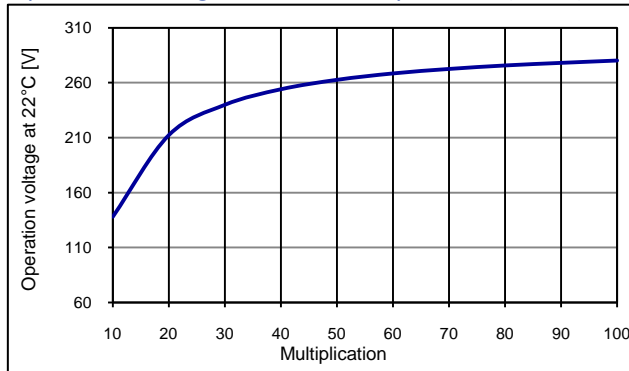
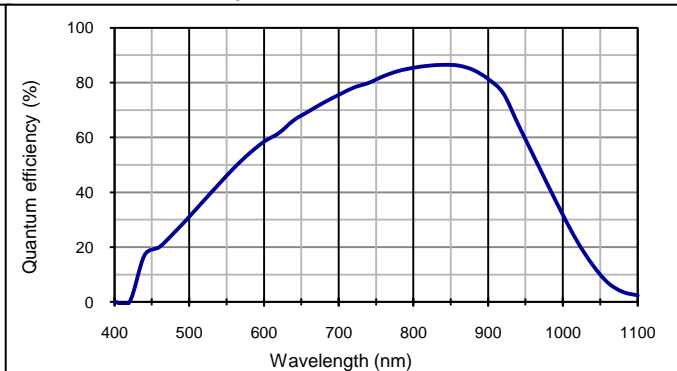
| Symbol | Characteristic | Test Condition | Min | Typ | Max | Unit |
|----------|--------------------------|--|-----|------------|----------|---------------|
| | No of elements | | | 16 | | |
| | Active area | | | 1000 x 405 | | μm |
| | Gap; Pitch | | | 95 ; 500 | | μm |
| I_D | Dark current | M = 50; $\lambda = 880$ nm, per element | | 2.0 | | nA |
| C | Capacitance | M = 50, per element | | 1.0 | | pF |
| | Responsivity | M = 100; $\lambda = 905$ nm | 55 | 60 | | A/W |
| t_R | Rise time | M = 100; $\lambda = 905$ nm; $R_L = 50 \Omega$ | | 2 | | ns |
| V_{BR} | Breakdown voltage | $I_R = 2 \mu\text{A}$ | 100 | 300 | 400 | V |
| | Temperature coefficient | | | 1.45 | | V/K |
| | Cross talk | $\lambda = 905$ nm | | 50 | | dB |
| | Photo current uniformity | M = 50 | | ± 5 | ± 20 | % |
| | Dark current uniformity | M = 50 | | ± 5 | ± 20 | % |

European, International Sales:


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U_{br} as fct of temperature (23°C)

Capacitance as fct of reverse bias (23 °C)

Multiplication as fct of reverse bias (23 °C)

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

Operation voltage as fct of multiplication (23 °C)

Quantum efficiency (23 °C)


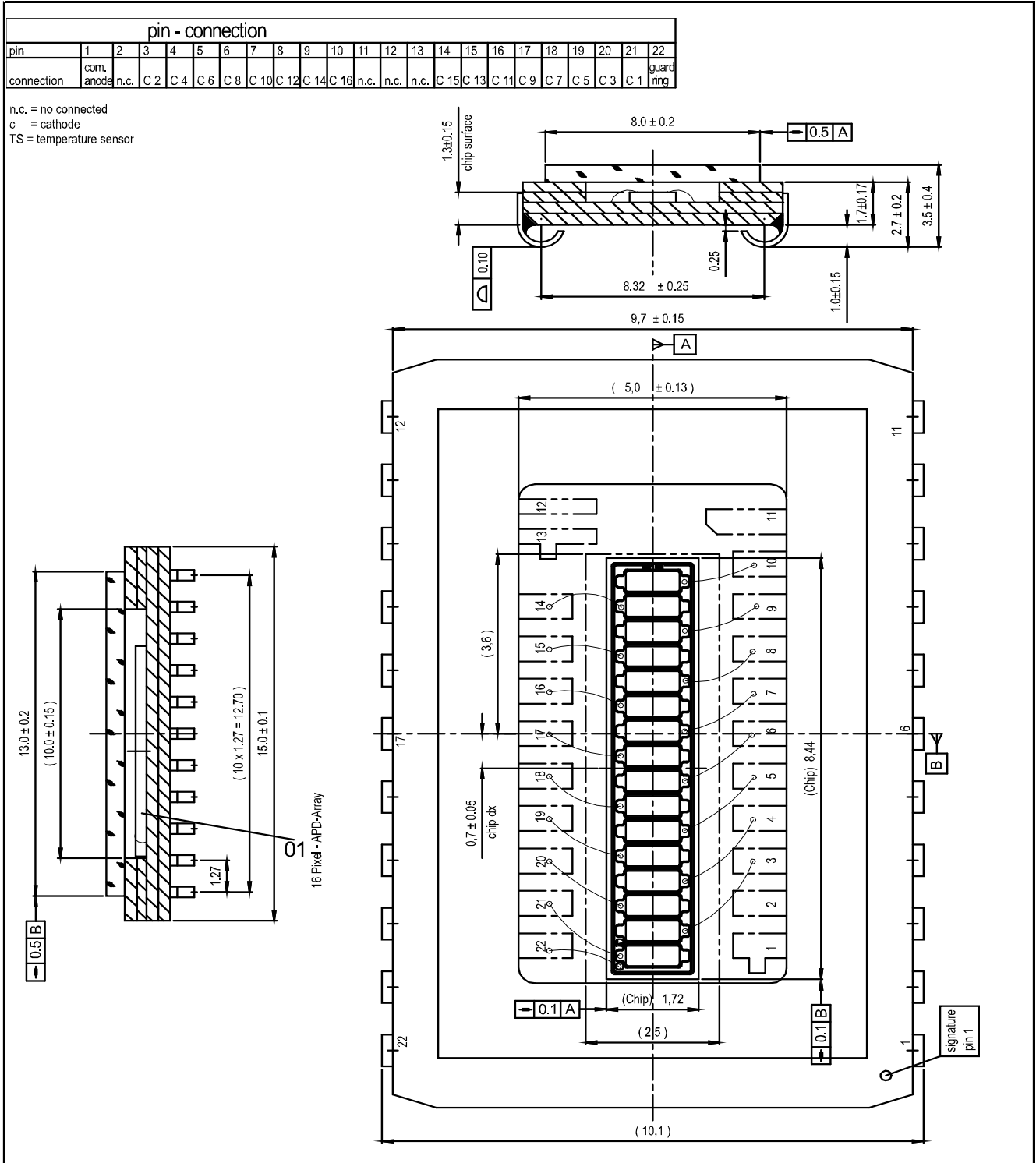
Handling: Please refer to document "Instructions for handling and processing"
Please consider ESD protection while handling.

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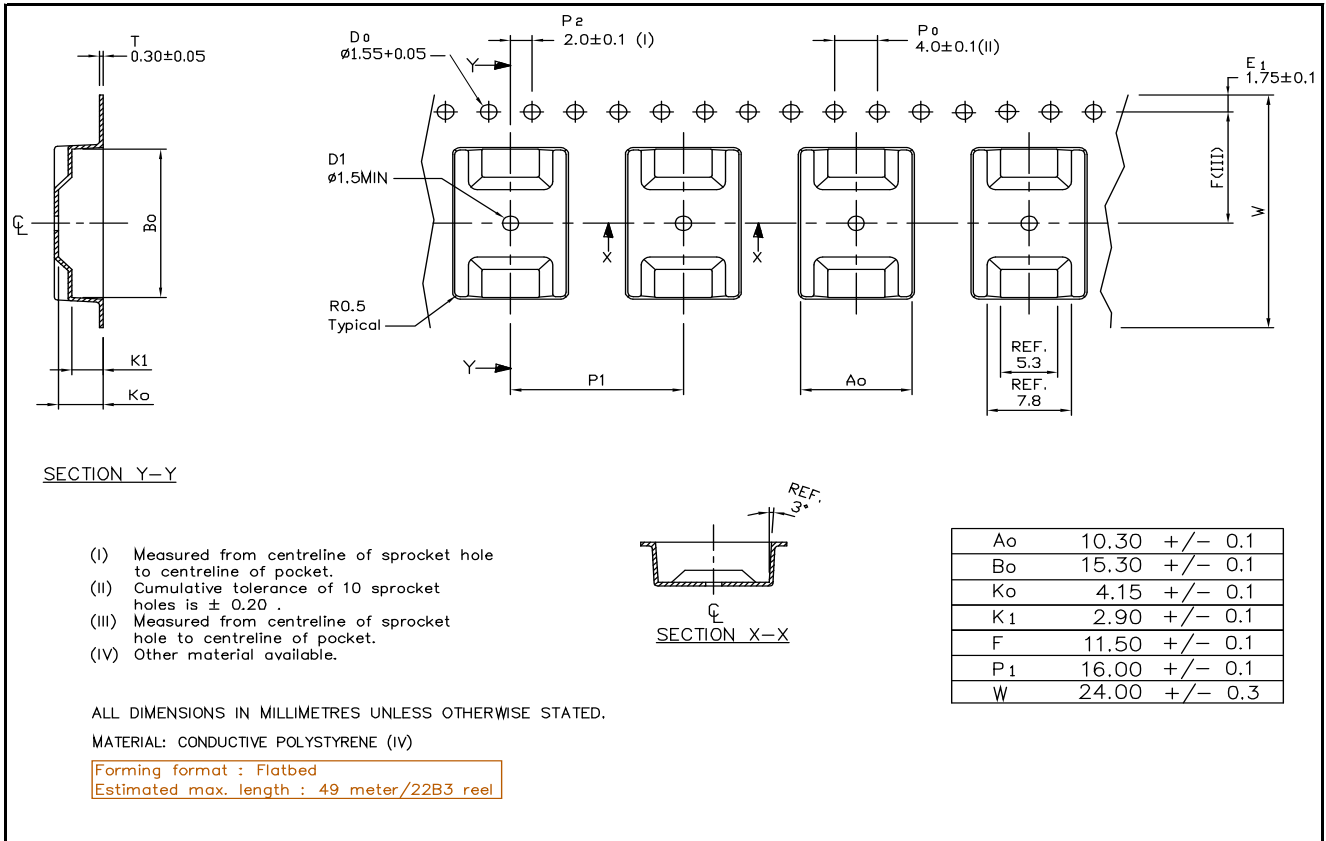

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Technical Drawing, Package: SMD SOJ22 with soldered glass lid

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Package dimension


For smaller quantities chip trays are available (16 pcs per tray)

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

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