
Features

- 16 element APD array with NTC
- 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 and temperature control device (NTC).

Application

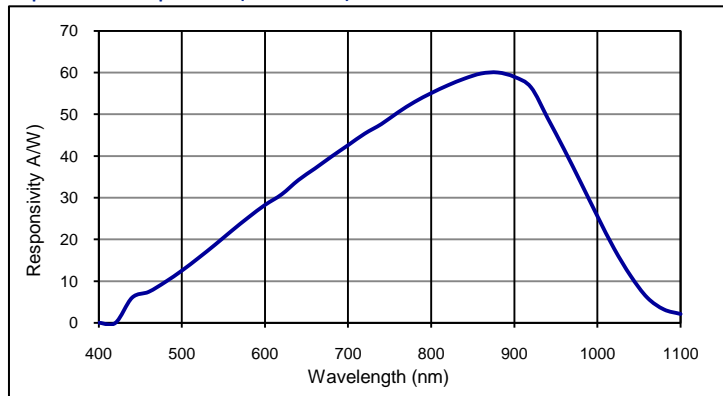
- LIDAR range finder
- Lidar ACC
- Laser scanner

RoHS

2002/95/EC


Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T_{STG}	Storage temp	-60	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

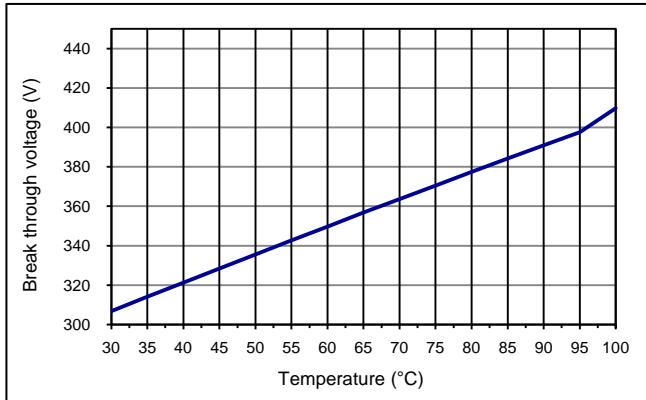
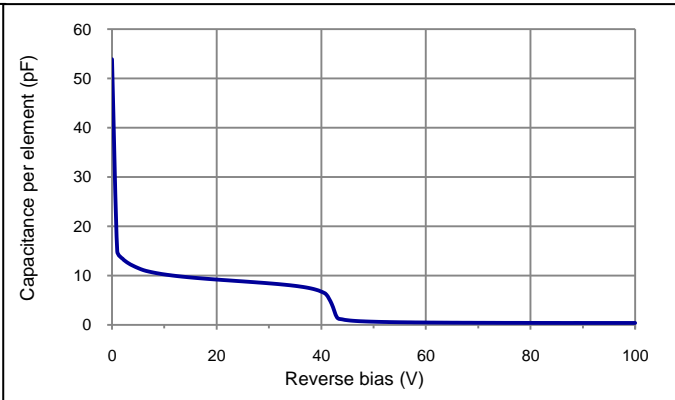
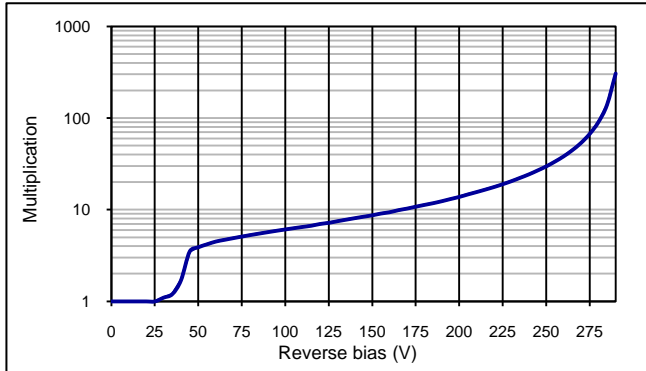
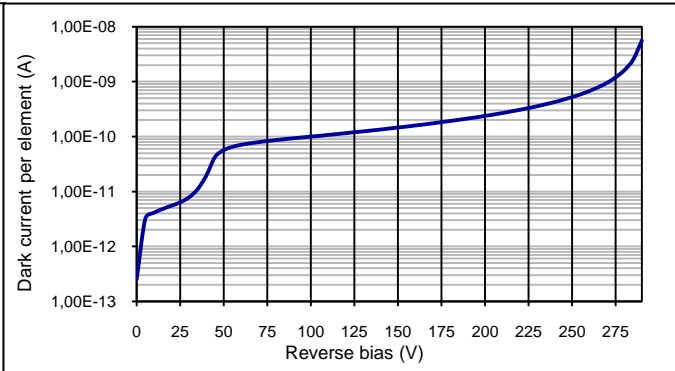
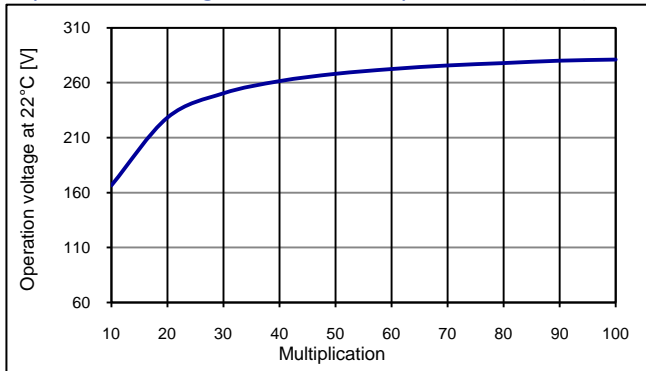
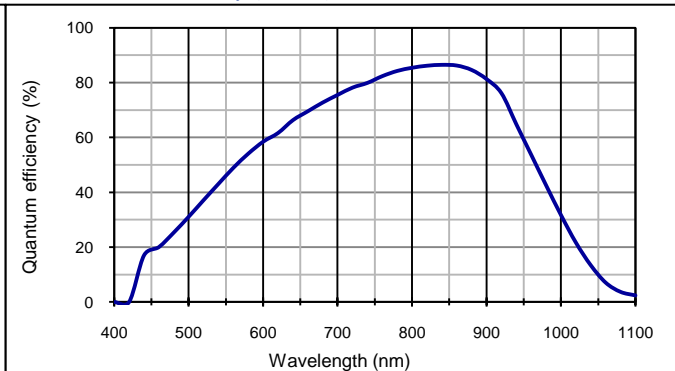
Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	No of elements			16		
	Active area			648 x 208		μm
	Gap; Pitch			112 ; 320		μm
I_D	Dark current	M = 50; $\lambda = 880$ nm, per element		1.0		nA
C	Capacitance	M = 50, per element		0.5		pF
	Responsivity	M = 100; $\lambda = 905$ nm	55	60		A/W
t_R	Rise 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	%
	Resistance of NTC	T = 25 °C		10		k Ω
	Alpha value of NTC	T = 25 °C		-4.39		%/°C
	Beta value 25/85 of NTC	T = 25 °C		3976		K

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

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)


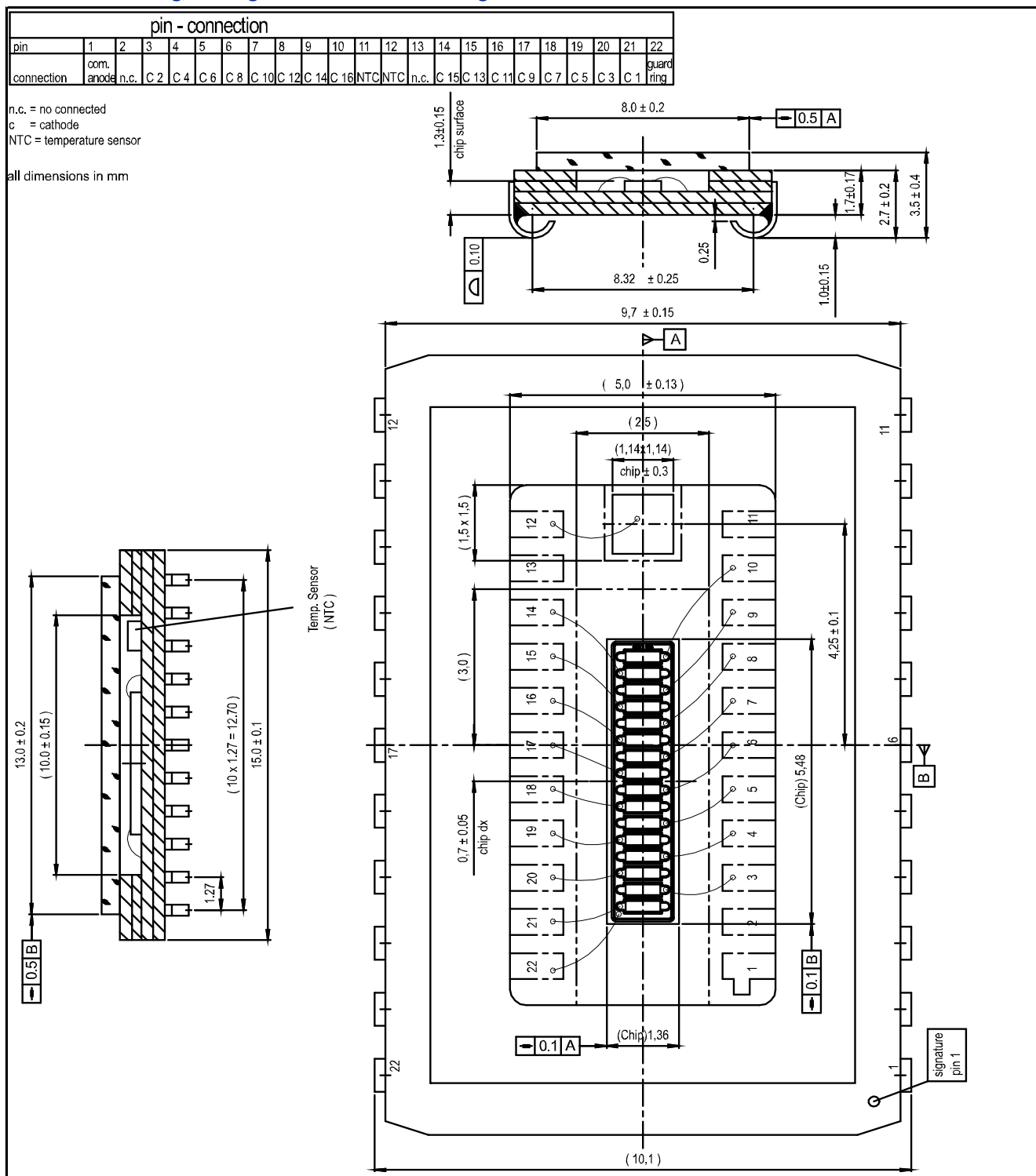
Handling: Please refer to document "Instructions for handling and processing"
Please consider ESD protection while handling.

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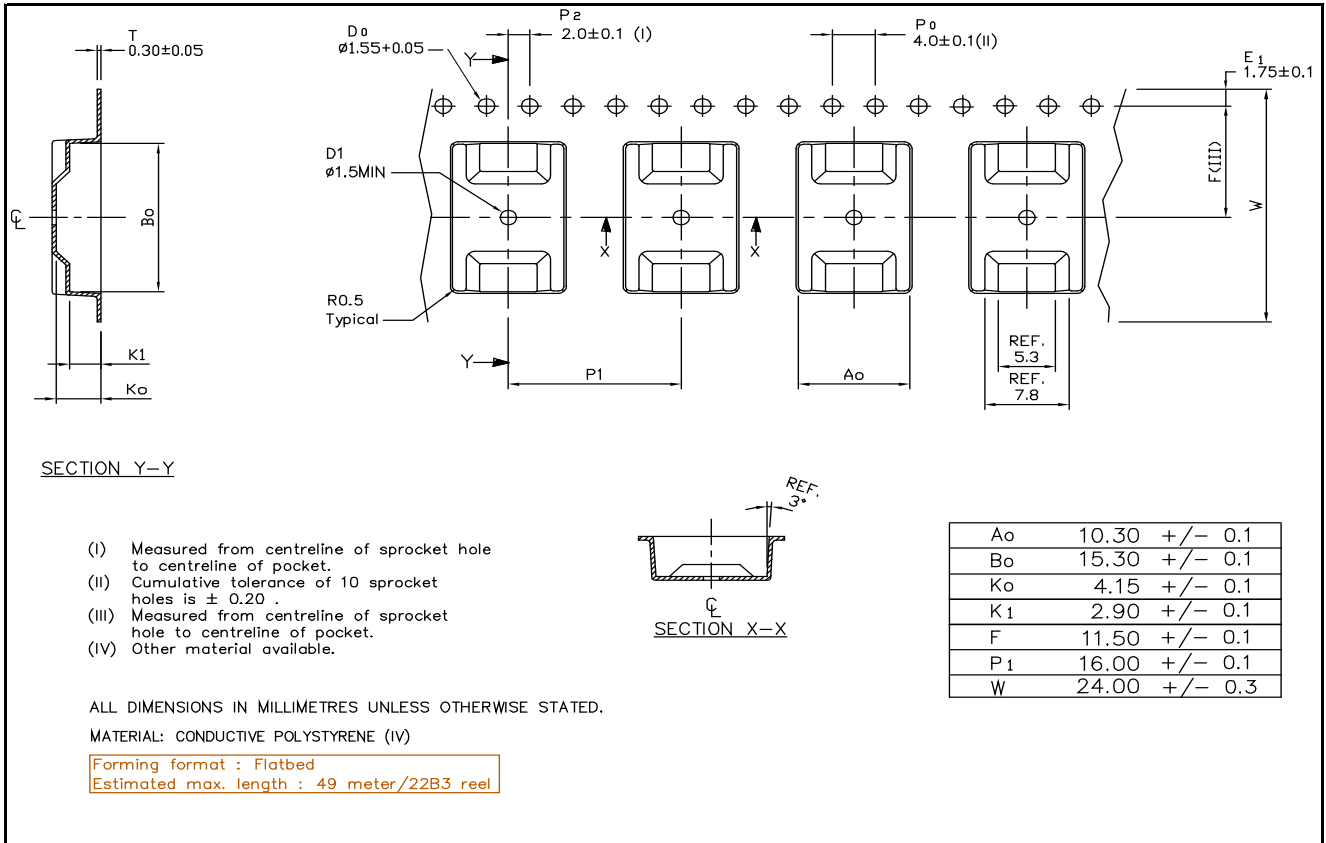

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Technical Drawing, Package: SOJ22 with soldered glass lid

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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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