
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.
Non-hermetic ceramic through hole package with soldered glass lid.

Application

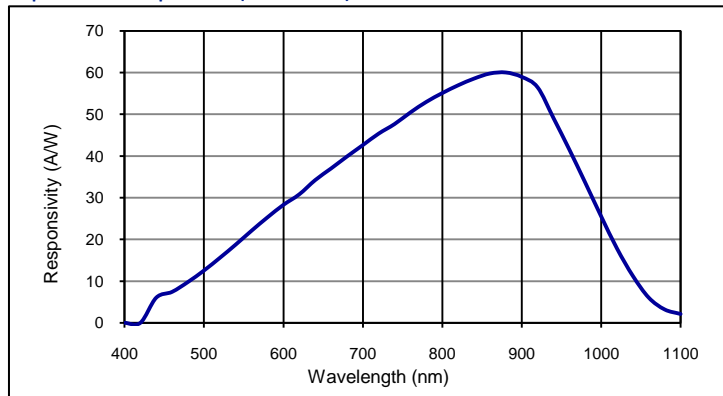
- LIDAR range finder
- Lidar ACC
- Laser scanner

RoHS

2002/95/EC


Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T_{STG}	Storage temp	-60	100	°C
T_{OP}	Operating temp	-20	80	°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

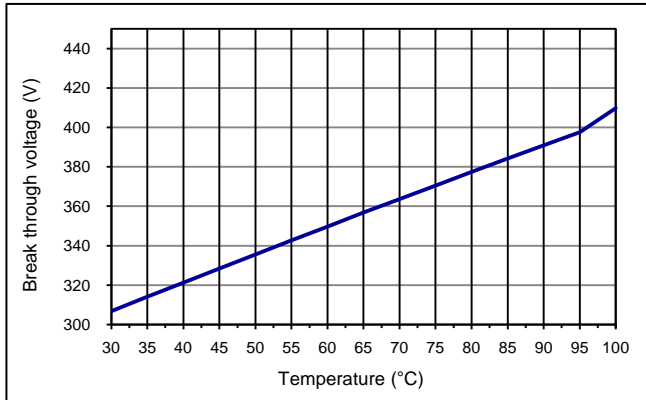
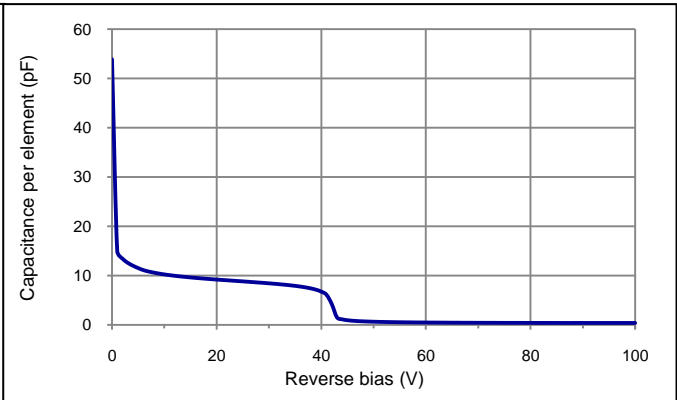
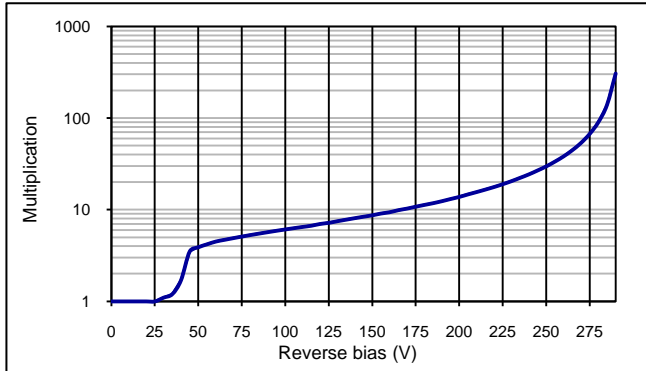
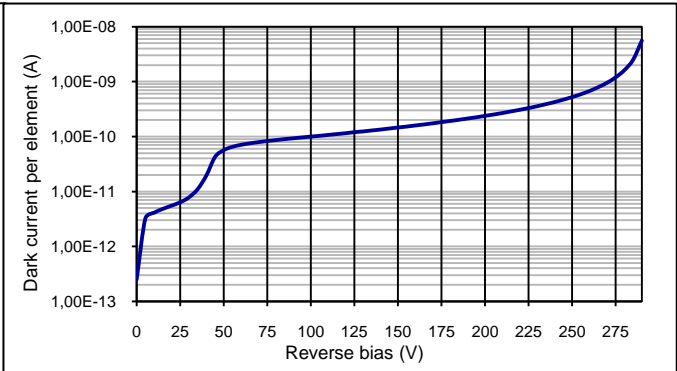
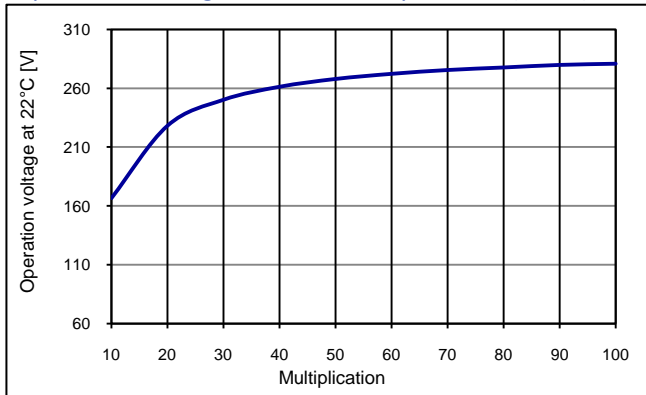
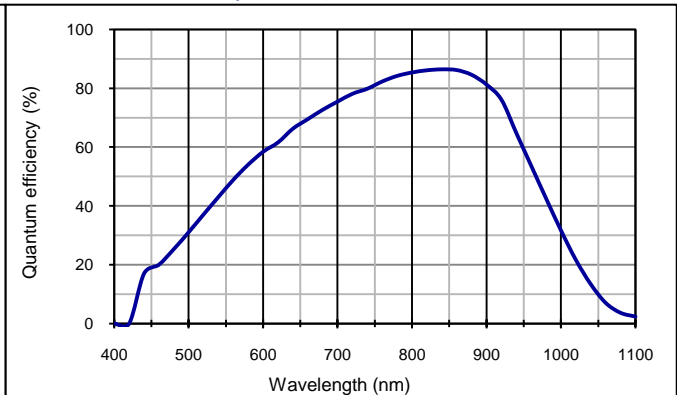
Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	No of elements			16		
	Active area			648 x 208		μm
	Gap; Pitch			112 ; 320		μm
I_D	Dark current	$M = 50; \lambda = 880$ nm, per element		1.0		nA
C	Capacitance	$M = 50$, per element		0.5		pF
	Responsivity	$M = 100; \lambda = 905$ nm	55	60		A/W
t_R	Rise time	$M = 100; \lambda = 905$ nm; $R_L = 50$ Ω		2		ns
V_{BR}	Breakdown voltage	$I_R = 2$ μA	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:


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:

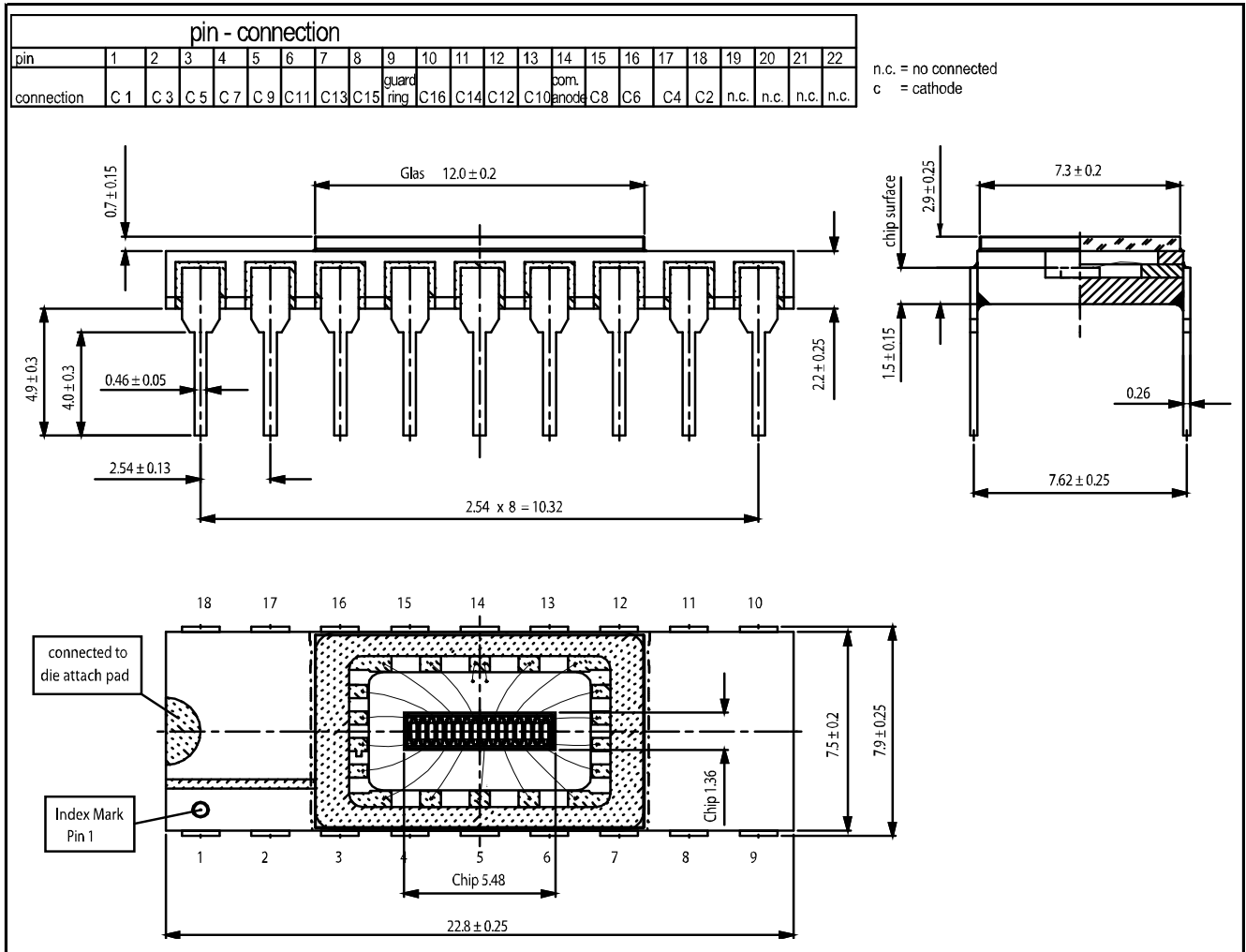

First Sensor Inc.
5700 Corsa Avenue #105
Westlake Village
CA 91362 USA
T +1 818 706 3400
F +1 818 889 7053
sales.us@first-sensor.com

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)

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Technical Drawing, Package: THD Dil18 with soldered glass lid

Package dimension

Small quantities: Chips on foam pad, boxed (12 cm x 16.5 cm)

Handling:

Please refer to document "Instructions for handling and processing"

Please consider ESD protection while handling.

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

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