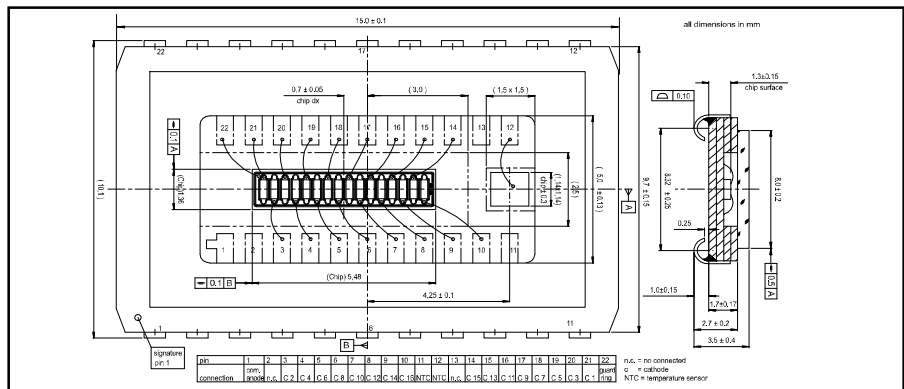
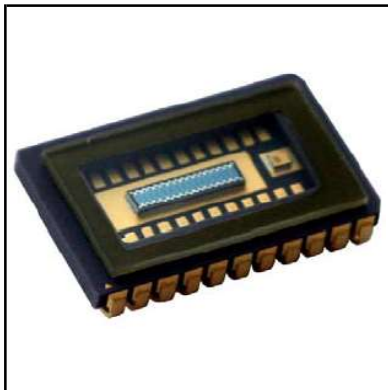




Features

- 16 element APD array with NTC
- High QE >80% for $\lambda = 760-910 \text{ nm}$
- 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

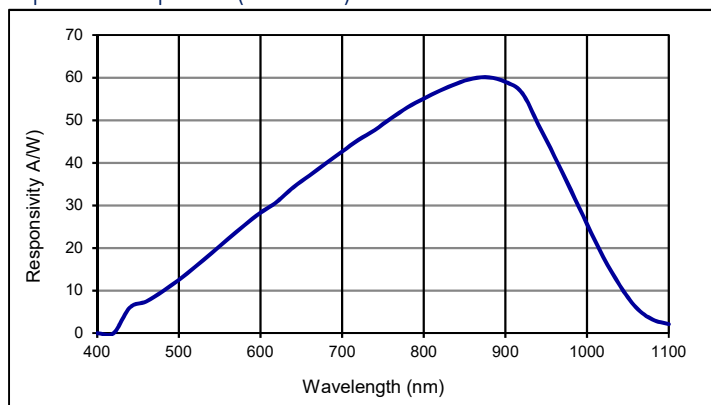
RoHS

2011/65/EU

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 ($I_{PO} = 1 \text{ nA}$)	200		
I_{PEAK}	Peak DC current		0.25	mA

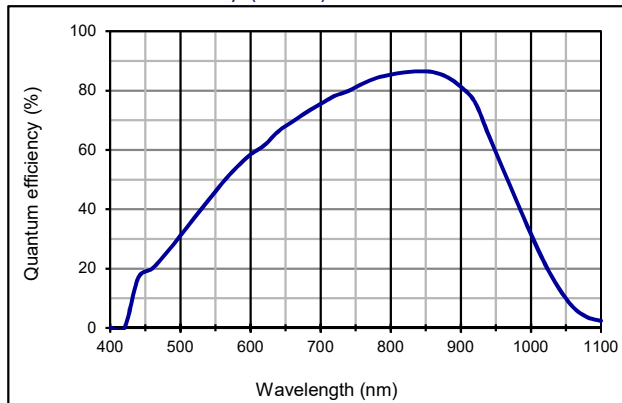
Spectral response (M = 100)



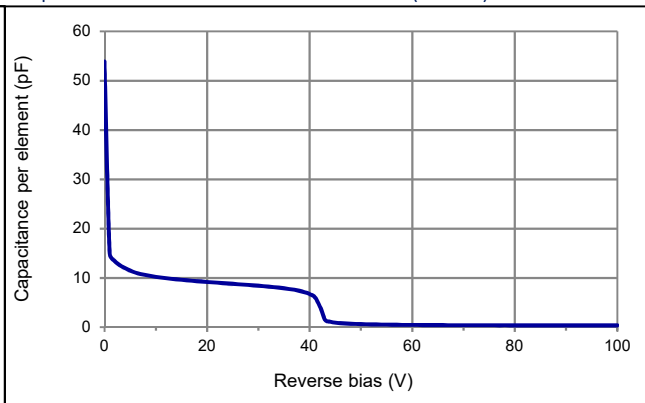
Electro-optical characteristics @ 23°C

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	$M = 50; \lambda = 880 \text{ nm}$, per element		1.0		nA
C	Capacitance	$M = 50$, per element, $f = 100 \text{ kHz}$		0.5		pF
	Responsivity	$M = 100; \lambda = 905 \text{ nm}$	55	60		A/W
t_R	Rise time	$M = 100; \lambda = 905 \text{ nm}; R_L = 50 \Omega$		2		ns
V_{BR}	Breakdown voltage	$I_R = 2 \mu\text{A}$	160		240	V
	Temperature coefficient			1.45		V/K
	Cross talk	$\lambda = 905 \text{ nm}$		50		dB
	Photo current uniformity	$M = 50$		± 5	± 20	%
	Dark current uniformity	$M = 50$		± 5	± 20	%
	Resistance of NTC	$T = 25 \text{ }^\circ\text{C}$		10		k Ω
	Alpha value of NTC	$T = 25 \text{ }^\circ\text{C}$		-4.39		%/ $^\circ\text{C}$
	Beta value 25/85 of NTC	$T = 25 \text{ }^\circ\text{C}$		3976		K

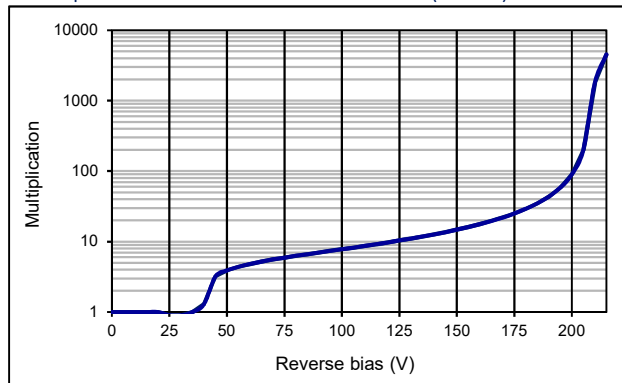
Quantum efficiency (23 °C)



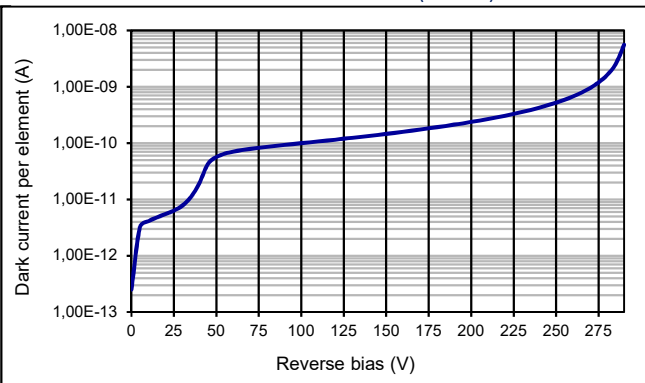
Capacitance as fct of reverse bias (23 °C)



Multiplication as fct of reverse bias (23 °C)



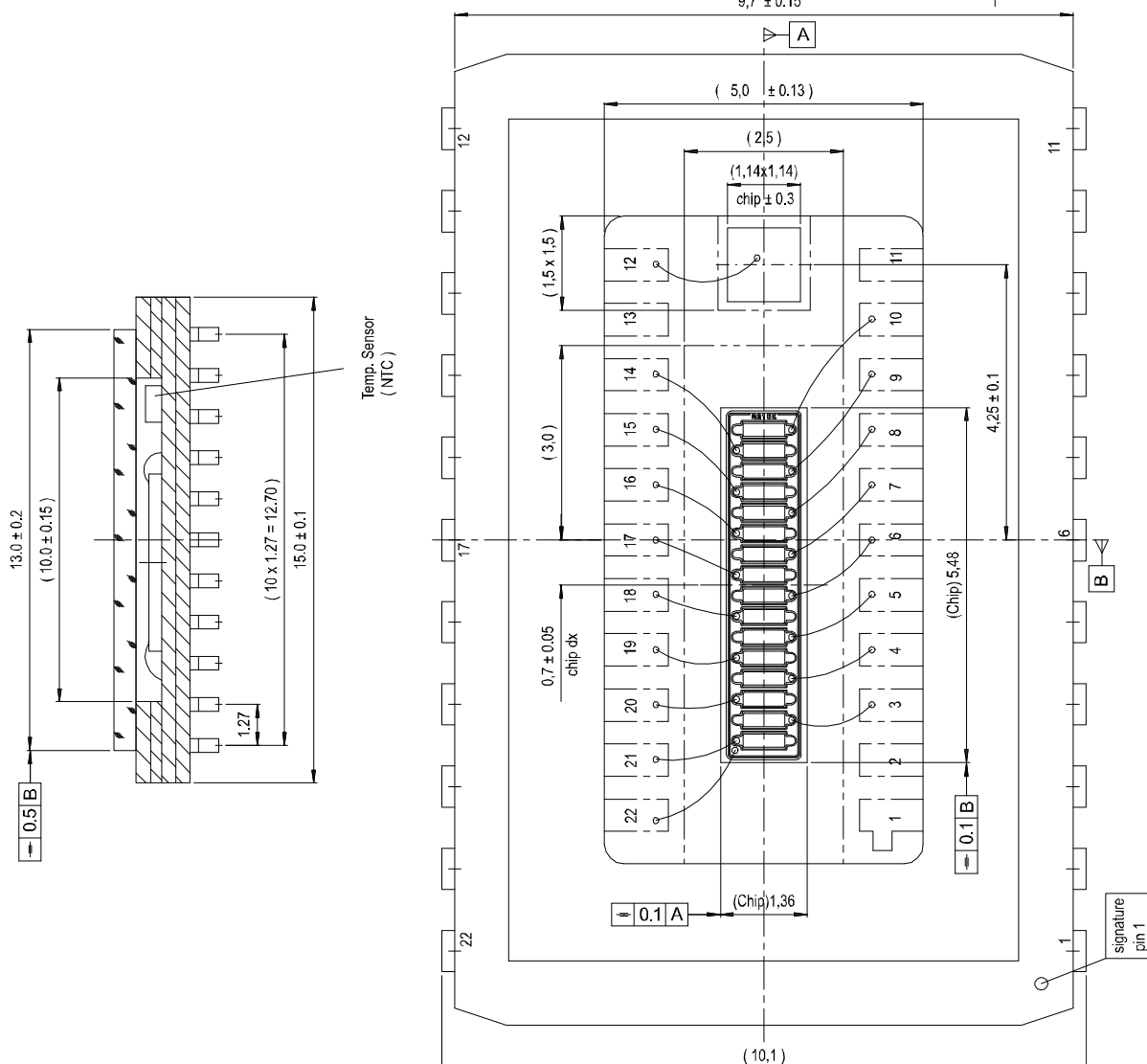
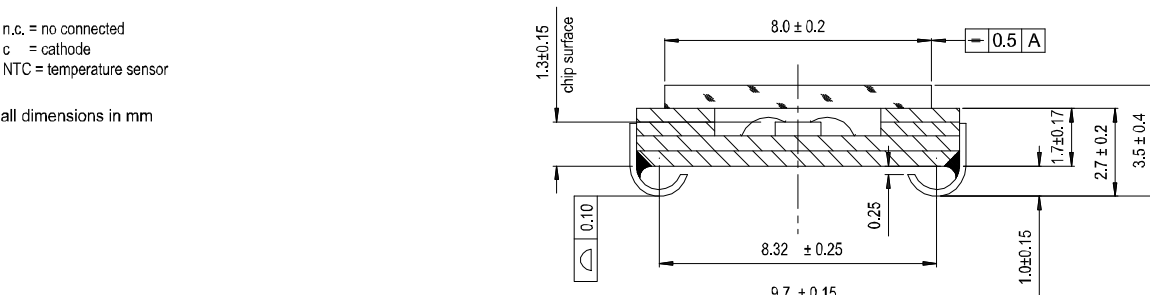
Dark current as fct of reverse bias (23 °C)



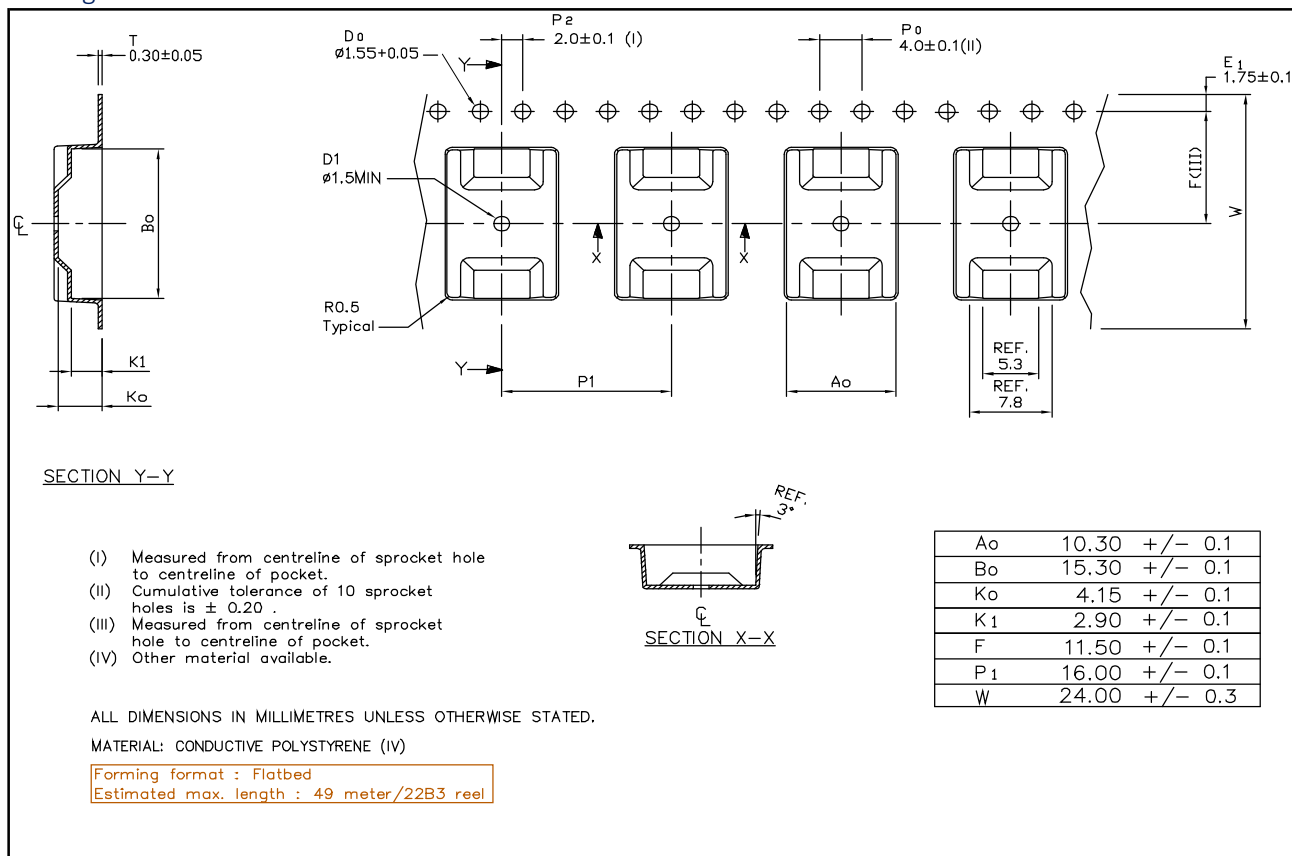
Handling: Please refer to document "Instructions for handling and processing"
Please consider ESD protection while handling.

pin - connection																						
pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
connection	com. anode	n.c.	C2	C4	C6	C8	C10	C12	C14	C16	NTC	NTC	n.c.	C15	C13	C11	C9	C7	C5	C3	C1	guard

all dimensions in mm



Package dimension



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

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

First Sensor:

3005259