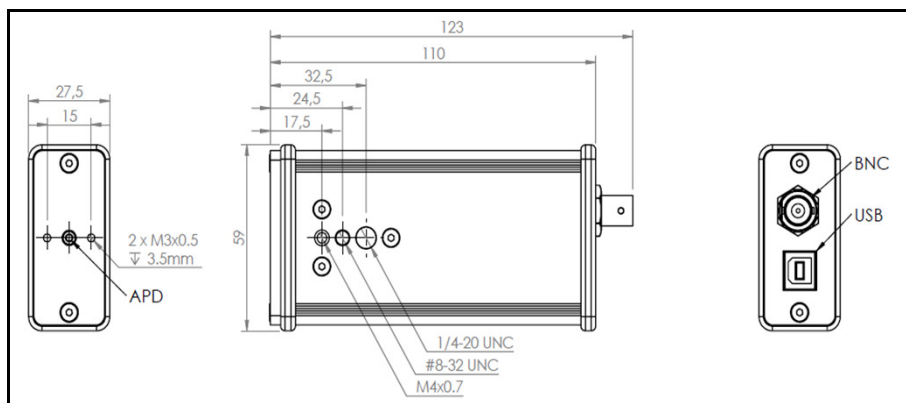




Features

- User friendly APD module
- Bandwidth DC to 10 MHz
- Power and control via USB
- Signal output via BNC
- Including APD AD1100-8

Description

USB-controlled APD kit with temperature compensated power supply in black aluminum housing. Includes APD in hermetic isolated TO package.

Application

- APD evaluation
- Analytical equipment

RoHS

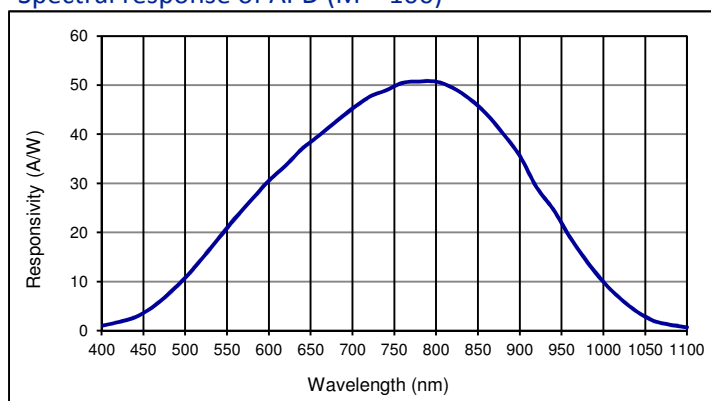
2002/95/EC



Absolute maximum ratings

Symbol	Parameter	Min	Max	Unit
T_{STG}	Storage temp	-20	80	°C
T_{OP}	Operating temp	-10	70	°C
P_{max}	Incident light level		10	mW

Spectral response of APD (M = 100)



Electro-optical characteristics of APD chip @ 23 °C*

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
	Active area		diameter 1130			μm
	Active area		1.0			mm ²
I_D	Dark current	M = 100		4.0	8.0	nA
C	Capacitance	M = 100		8.0		pF
	Responsivity	M = 100; $\lambda = 800$ nm	45	50		A/W
t_R	Rise time	M = 100; $\lambda = 905$ nm; $R_L = 50 \Omega$		1.0		ns
	Cut-off frequency	-3dB		0.35		GHz
V_{BR}	Breakdown voltage	$I_R = 2 \mu A$, V_{BR} - binning available	80	150	240	V
	Temperature coefficient	Change of V_{BR} with temperature		0.45		V/K
	Excess noise factor	M = 100		2.2		
	Excess noise index	M = 100		0.2		

* APD-Kit also available with other APDs. Specifications are subject to APD type or may be varied on customer demand.

European, International Sales:

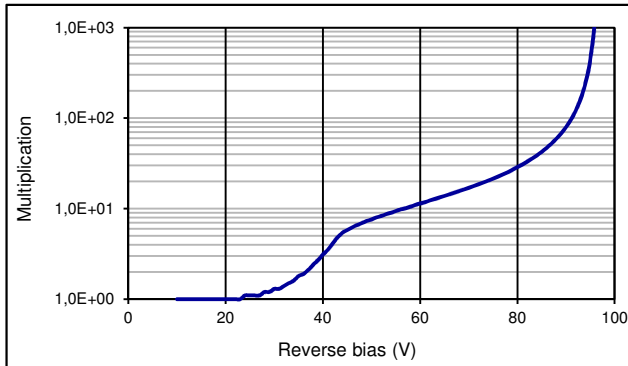
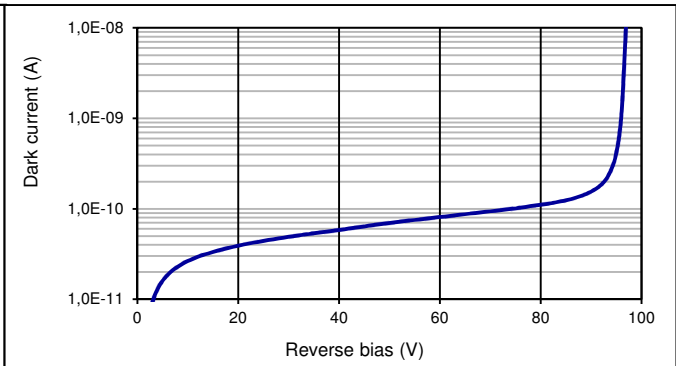


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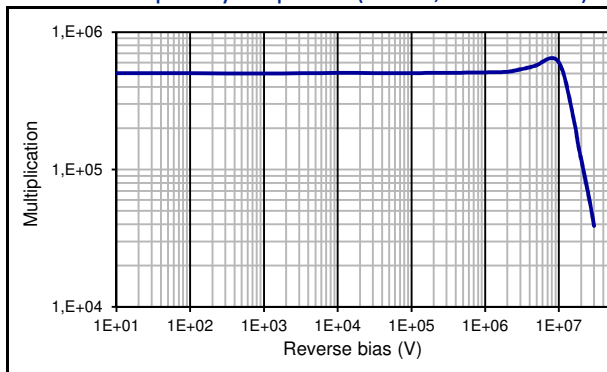
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APD multiplication as fct of reverse bias (23 °C)

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

Characteristics of module (*specifications are subject to APD type or may be varied on customer demand)

Part	Characteristic	Test Condition	Min	Typ	Max	Unit
Module	Power and control connector		USB 2.0 interface (USB Socket Type B)			
Module	Signal connetor		BNC			
Module	Supply voltage	via USB	4.75	5	5.25	V
Module	Supply current	via USB		100		mA
Module	User-interface		Labview runtime based Windows software			
Measurement characteristics						
Power Sup.	Bias range for APD		0		200*	V
Amplifier	Photoelectric sensitivity incl. APD	M = 25; λ = 860 nm; 10 kHz		0.5*		V/ μ W
Amplifier	Feedback resistance			20*		k Ω
Amplifier	Output impedance			50		Ω
Amplifier	Output voltage	1k Ω load		2.5		V
		50 Ω load		0.85		V
Amplifier	Cut-off frequency	-3db		13.5*		MHz
Amplifier	Noise equivalent power	M = 25; λ = 860 nm; 10 kHz		8.5×10^{-12} *		W/Hz ^{1/2}
Amplifier	Gain stability	25 °C $\pm$ 10 °C; M = 25		$\pm$ 5		%
Mechanical characteristics						
Module	Dimensional outline - width			27.5		mm
Module	Dimensional outline - length			59		mm
Module	Dimensional outline - height			123		mm
Module	Weight			215		g
Module	Housing material		Aluminum (black anodized)			

Module frequency response (M=25; λ = 860 nm)

Response to pulsed light signal (M=25; λ = 860 nm)

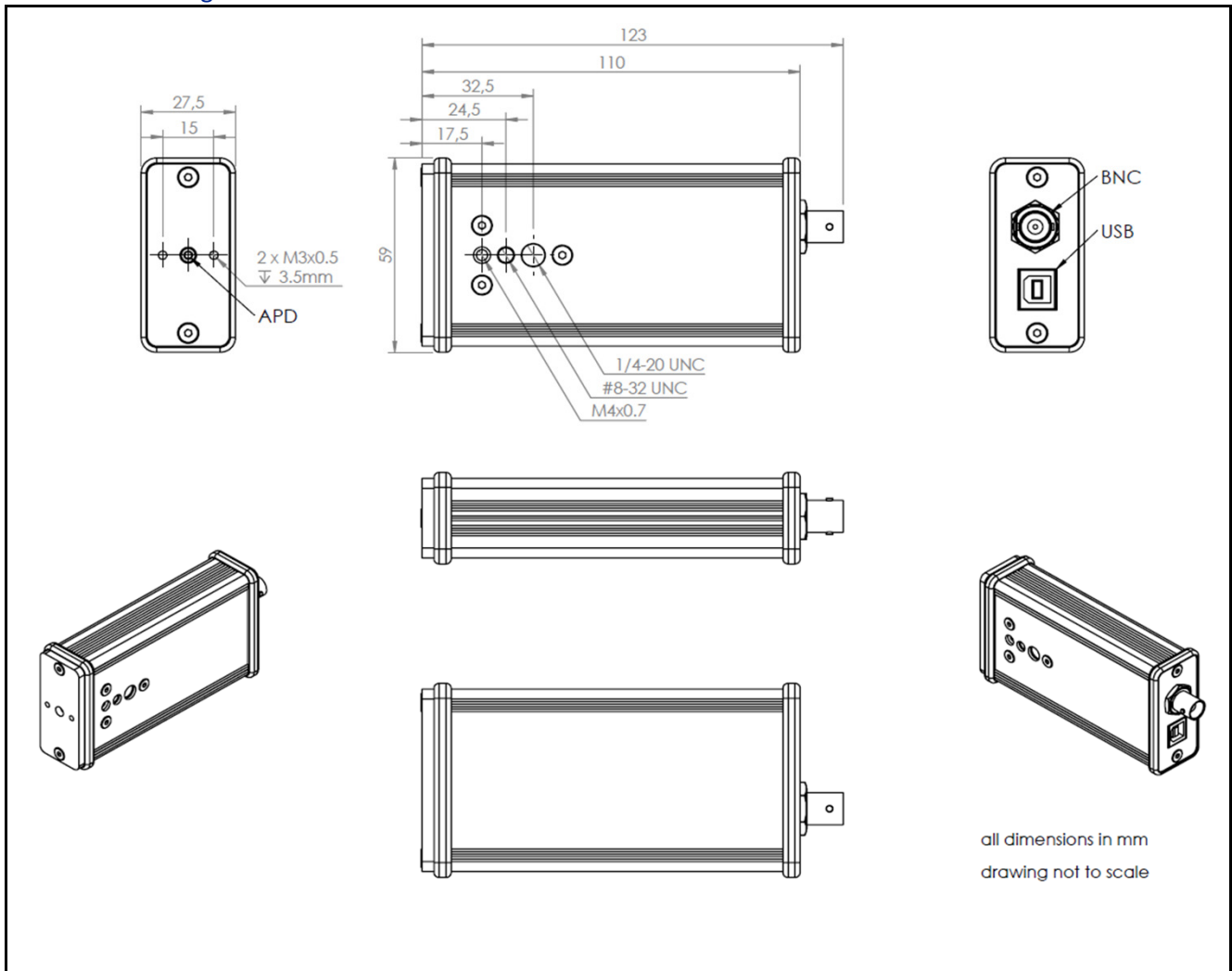
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Technical Drawing APD-Kit



Hint: For more information please refer to the document: "User manual APD-KIT FIS"

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

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