

Low-Noise Photoreceiver with InGaAs PIN Photodiode

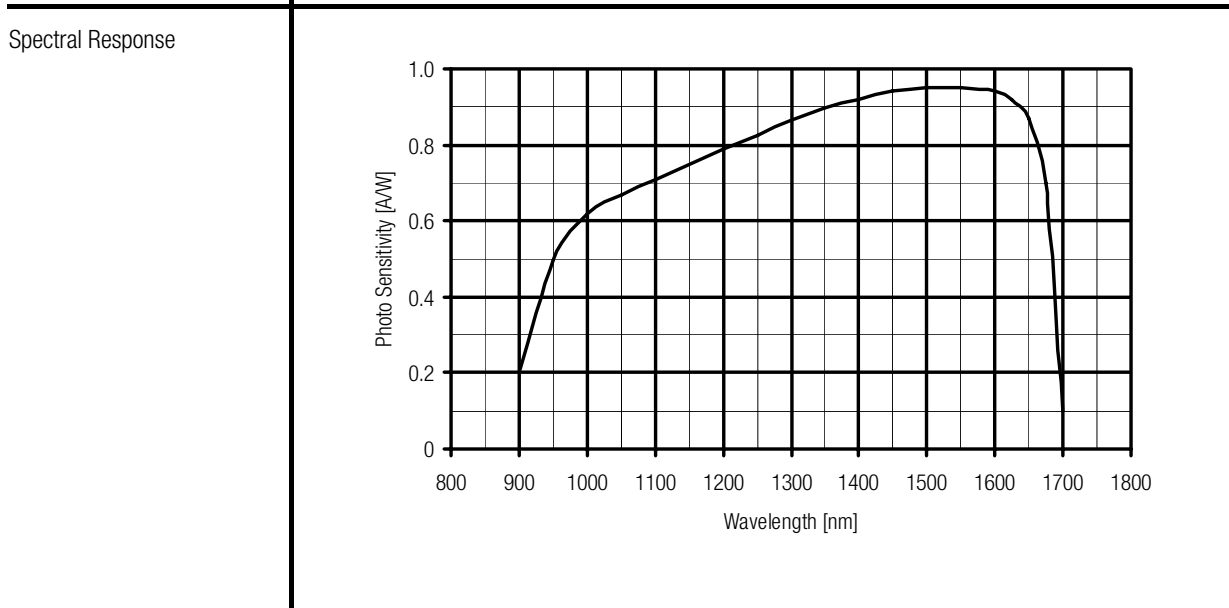


The photoreceiver will be delivered without post holder and post

Features	<ul style="list-style-type: none"> InGaAs PIN Detector, 0.5 mm Active Diameter Spectral Range 900 ... 1700 nm Amplifier Transimpedance (Gain) 1.0×10^7 V/A Max. Conversion Gain 9.5×10^6 V/W @ 1550 nm Bandwidth DC ... 400 kHz 		
Applications	<ul style="list-style-type: none"> Spectroscopy General Purpose Opto-Electronic Measurements Optical Front-End for Oscilloscopes, A/D Converters and Lock-In Amplifiers 		
Specifications	<i>Test Conditions</i>	<i>Vs = ± 15 V, Ta = 25°C</i>	
Gain	Transimpedance	1.0×10^7 V/A	(@ >10 kΩ load)
	Max. Conversion Gain	9.5×10^6 V/W	(@ 1550 nm)
Frequency Response	Lower Cut-Off Frequency	DC	
	Upper Cut-Off Frequency (- 3 dB)	400 kHz	
	Rise- / Fall-Time (10% - 90%)	1 μs	
	Gain Flatness	± 0.5 dB	
Detector	Detector Material	InGaAs PIN photodiode	
	Active Area	Ø 0.5 mm	
	Spectral Response	900 ... 1700 nm	
Input	Offset Current Compensation	± 300 nA, adjustable by offset trimpot	
	Max. Optical Input Power	1 μW (for linear amplification @ 1550 nm)	
Noise	Min. NEP	$75 \text{ fW}/\sqrt{\text{Hz}}$ (@ 1550 nm, 10 kHz)	

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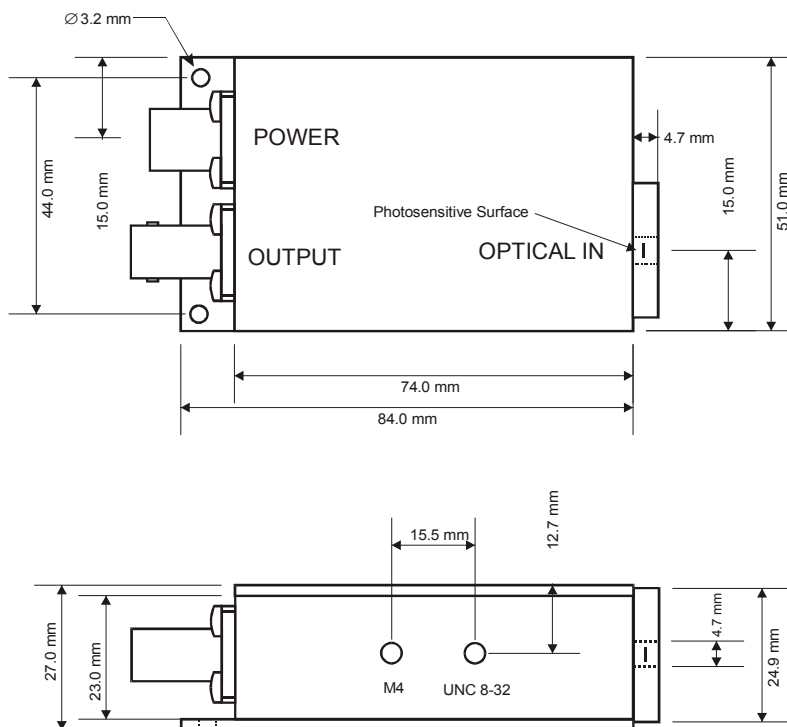
Output	Output Voltage	$\pm 10\text{ V}$ (@ $\geq 10\text{ k}\Omega$ Load)
	Max. Output Current	$\pm 30\text{ mA}$
	Output Impedance	$50\ \Omega$ (terminate with $\geq 10\text{ k}\Omega$ load for best performance)
	Output Noise	10 mV peak-peak (@ $1\text{ M}\Omega$ load, no signal on photodiode)
Power Supply	Supply Voltage	$\pm 15\text{ V}$
	Supply Current	$\pm 40\text{ mA}$ typ. (depends on operating conditions, recommended power supply capability minimum $\pm 150\text{ mA}$)
Case	Weight	210 g (0.5 lbs)
	Material	AlMg4.5Mn, nickel-plated
Temperature Range	Storage Temperature	$-40 \dots +100\text{ }^\circ\text{C}$
	Operating Temperature	$0 \dots +60\text{ }^\circ\text{C}$
Absolute Maximum Ratings	Optical Input Power	10 mW
	Power Supply Voltage	$\pm 22\text{ V}$



Connectors	Input	optical, free space, 25 mm \varnothing round flange compatible with microbench systems
	Output	BNC
	Power Supply	LEMO series 1S, 3-pin fixed socket Pin 1: $+15\text{V}$ Pin 2: -15V Pin 3: GND

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Dimensions



DZ-FWPR_1.cdr

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