

Femtowatt Photoreceiver with Si Photodiode



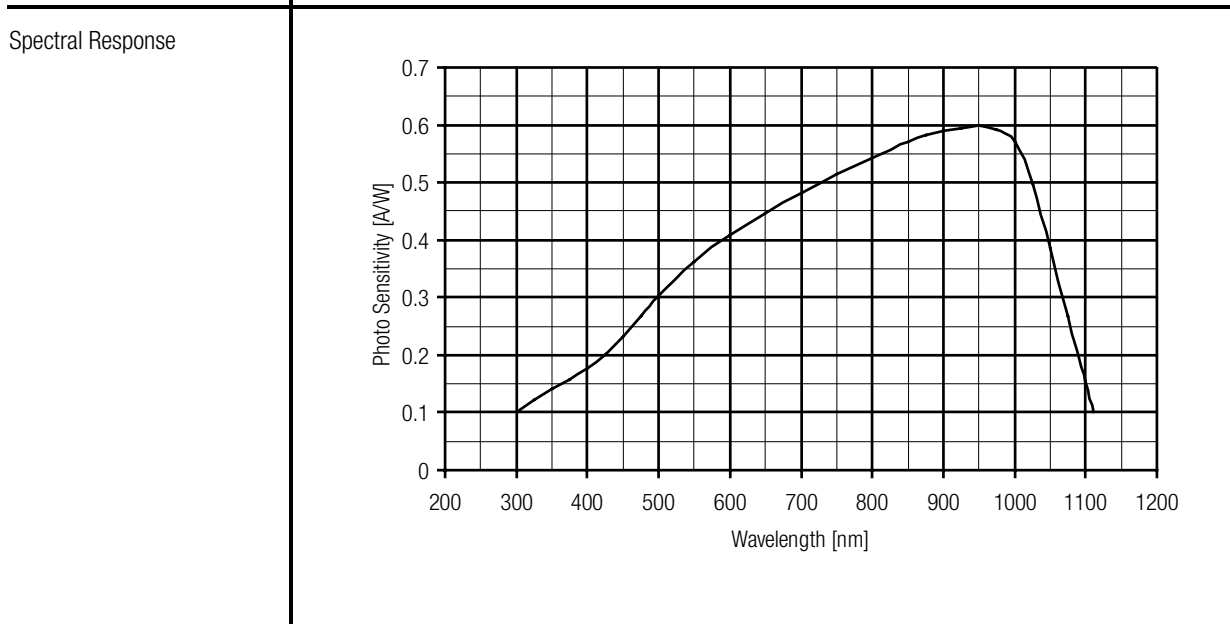
The Photoreceiver will be delivered without post holder and post.

Features	<ul style="list-style-type: none"> • Ultra-Low-Noise, Minimum NEP 0.7 fW/√Hz • Amplifier Transimpedance Gain 1×10^{12} V/A • Si Photodiode, $1.1 \times 1.1 \text{ mm}^2$ Active Area 	
Applications	<ul style="list-style-type: none"> • Fluorescence Measurements • Spectroscopy • Electrophoresis • Replacement for Photomultiplier Tubes (PMTs) and Avalanche Photodiodes (APDs) 	
Specifications	<p>Test Conditions</p> <p>Gain</p> <p>Frequency Response</p> <p>Detector</p> <p>Input</p> <p>Noise</p> <p>Output</p>	<p>$V_s = \pm 15 \text{ V}, T_a = 25^\circ\text{C}$</p> <p>Transimpedance $1.0 \times 10^{12} \text{ V/A}$ Max. Conversion Gain $0.6 \times 10^{12} \text{ V/W (@ 960 nm)}$</p> <p>Lower Cut-Off Frequency DC Upper Cut-Off Frequency 20 Hz (-3 dB) Rise/Fall-Time 18 ms (10% - 90%)</p> <p>Detector Material Si Photodiode Active Area $1.1 \times 1.1 \text{ mm}^2$ Spectral Response 320 nm - 1100 nm</p> <p>Optical Saturation Power 18 pW (@ 960 nm)</p> <p>Min. NEP $0.7 \text{ fW}/\sqrt{\text{Hz}} (@ 960 \text{ nm}, 1 \text{ Hz})$</p> <p>Output Voltage $\pm 10 \text{ V} (@ \geq 10 \text{ k}\Omega \text{ Load})$ Output Impedance 50Ω (Terminate with $>10 \text{ k}\Omega$ for Best Performance) Offset Voltage 0 V, Adjustable by Offset-Trimpot within $\pm 1.6 \text{ V}$ Max. Output Current $\pm 25 \text{ mA}$</p>

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Power Supply	Supply Voltage Supply Current	$\pm 15\text{ V}$ ($\pm 14.5\text{ V}$ to $\pm 16\text{ V}$) $\pm 15\text{ mA}$ typ. (Depends on Operating Conditions, Recommended Power Supply Capability Minimum $\pm 50\text{ mA}$)
Case	Weight Material	0.19 kg (0.42 lbs) AlMg4.5Mn, nickel-plated
Temperature Range	Storage Temperature Operating Temperature	$-40\text{ }^{\circ}\text{C}$ to $+100\text{ }^{\circ}\text{C}$ $0\text{ }^{\circ}\text{C}$ to $+60\text{ }^{\circ}\text{C}$

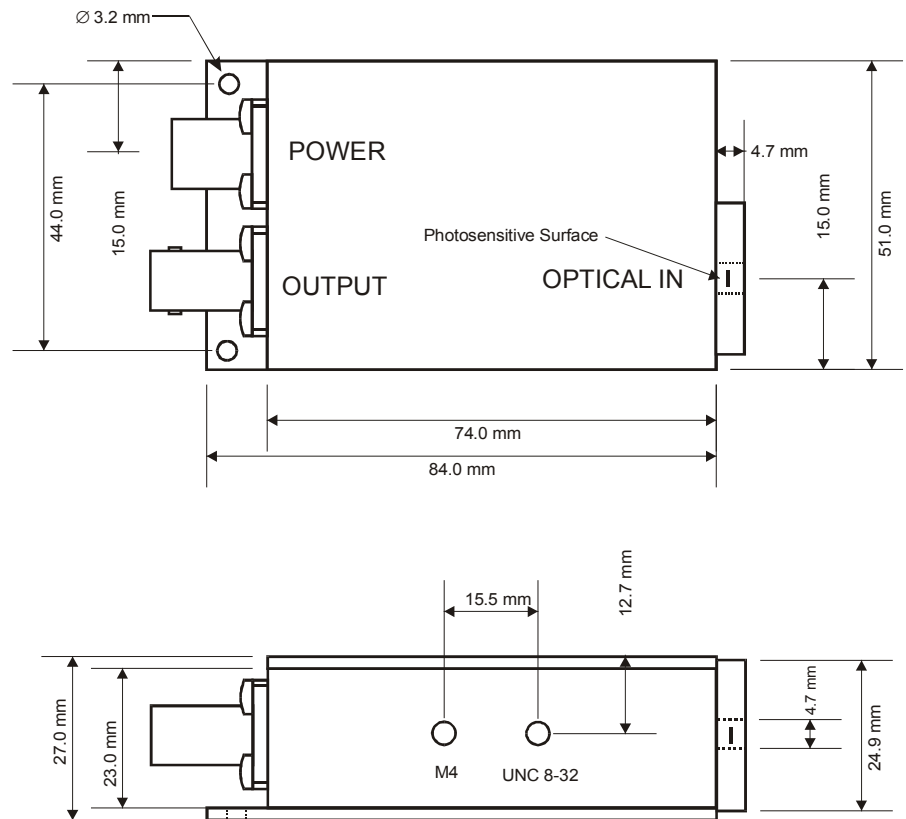
Absolute Maximum Ratings	Optical Input Power Power Supply Voltage	10 mW $\pm 22\text{ V}$
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Connectors	Input	Optical, Free Space, 25 mm \varnothing Round Flange Compatible with Microbench Systems
	Output	BNC
	Power Supply	LEMO Series 1S, 3-pin fixed Socket Pin 1: + 15V Pin 2: - 15V Pin 3: GND

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Dimensions



DZ-FWPR_1.cdr

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