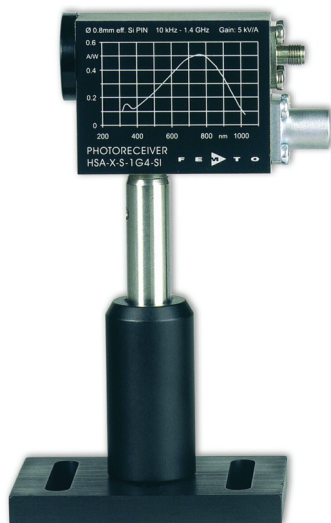


Ultra High Speed Photoreceiver with Si PIN Photodiode



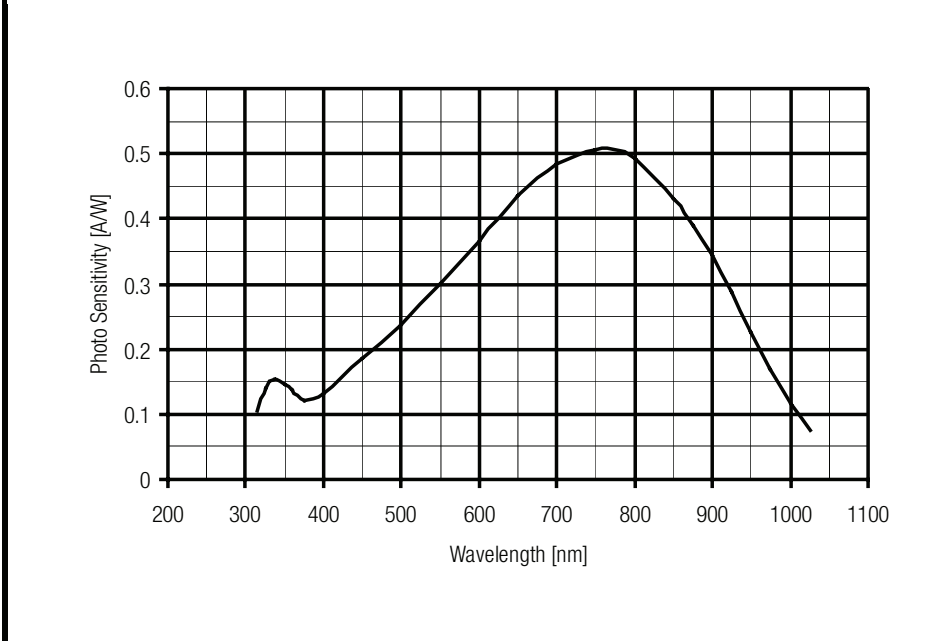
The photoreceiver will be delivered without post holder and post

<p>Features</p>	<ul style="list-style-type: none"> • Bandwidth 10 kHz ... 1.4 GHz • Si-PIN-Detector, Ø 0.8 mm Effective Active Diameter • Spectral Range 320 ... 1000 nm • Amplifier Transimpedance (Gain) 5×10^3 V/A • Max. Conversion Gain 2.5×10^3 V/W @ 760 nm 																																																				
<p>Applications</p>	<ul style="list-style-type: none"> • Spectroscopy • Ultra Fast Pulse and Transient Measurements • Optical Triggering • Optical Front-End for Oscilloscopes and Ultra Fast A/D Converters 																																																				
<p>Specifications</p>	<p><i>Test Conditions</i> <i>V_s = + 15 V, T_a = 25°C, System Impedance = 50 Ω</i></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 20%;">Gain</td> <td style="width: 30%;">Amplifier Transimpedance</td> <td style="width: 20%;">5 x 10³ V/A</td> <td style="width: 30%;">(@ 50 Ω load)</td> </tr> <tr> <td></td> <td>Conversion Gain</td> <td>2.5 x 10³ V/W</td> <td>(@ 760 nm)</td> </tr> <tr> <td rowspan="4">Frequency Response</td> <td>Lower Cut-Off Frequency</td> <td>10 kHz</td> <td></td> </tr> <tr> <td>Upper Cut-Off Frequency</td> <td>1.4 GHz</td> <td>(-3 dB)</td> </tr> <tr> <td>Rise/Fall Time</td> <td>250 ps</td> <td>(10% - 90%)</td> </tr> <tr> <td>Gain Flatness</td> <td>± 1 dB</td> <td></td> </tr> <tr> <td rowspan="4">Input / Detector</td> <td>Detector Material</td> <td colspan="2">Si PIN photodiode</td> </tr> <tr> <td>Active Area</td> <td colspan="2">effective Ø 0.8 mm (actual Ø 0.4 mm plus ball lens)</td> </tr> <tr> <td>Spectral Range</td> <td colspan="2">320 ... 1000 nm</td> </tr> <tr> <td>Max. Optical Input-Power</td> <td>400 µW</td> <td colspan="2">(for linear amplification, @ 760 nm))</td> </tr> <tr> <td>Noise</td> <td>Min. NEP</td> <td>26 pW/√Hz</td> <td>(@ 760 nm, 100 MHz)</td> </tr> <tr> <td rowspan="2">Output</td> <td>Output Impedance</td> <td>50 Ω</td> <td></td> </tr> <tr> <td>Output Peak Voltage</td> <td>1.9 V_{pp}</td> <td>(@ 50 Ω load, for linear amplification)</td> </tr> <tr> <td>Power Supply</td> <td>Supply Voltage</td> <td colspan="2">+ 15 V, 130 mA typ. (depends on operating conditions, recommended power supply capability minimum 200 mA)</td> </tr> </table>			Gain	Amplifier Transimpedance	5 x 10 ³ V/A	(@ 50 Ω load)		Conversion Gain	2.5 x 10 ³ V/W	(@ 760 nm)	Frequency Response	Lower Cut-Off Frequency	10 kHz		Upper Cut-Off Frequency	1.4 GHz	(-3 dB)	Rise/Fall Time	250 ps	(10% - 90%)	Gain Flatness	± 1 dB		Input / Detector	Detector Material	Si PIN photodiode		Active Area	effective Ø 0.8 mm (actual Ø 0.4 mm plus ball lens)		Spectral Range	320 ... 1000 nm		Max. Optical Input-Power	400 µW	(for linear amplification, @ 760 nm))		Noise	Min. NEP	26 pW/√Hz	(@ 760 nm, 100 MHz)	Output	Output Impedance	50 Ω		Output Peak Voltage	1.9 V _{pp}	(@ 50 Ω load, for linear amplification)	Power Supply	Supply Voltage	+ 15 V, 130 mA typ. (depends on operating conditions, recommended power supply capability minimum 200 mA)	
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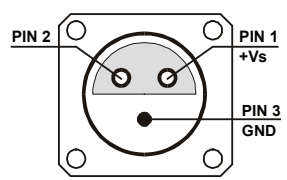
Case	Weight Material	100 g (0.23 lbs) AlMg4.5Mn, nickel-plated
Temperature Range	Storage Temperature Operating Temperature	-40 ... +100 °C 0 ... +60 °C
Absolute Maximum Ratings	Power Supply Voltage Optical Input Power	± 22 V 10 mW (averaged)

Spectral Response



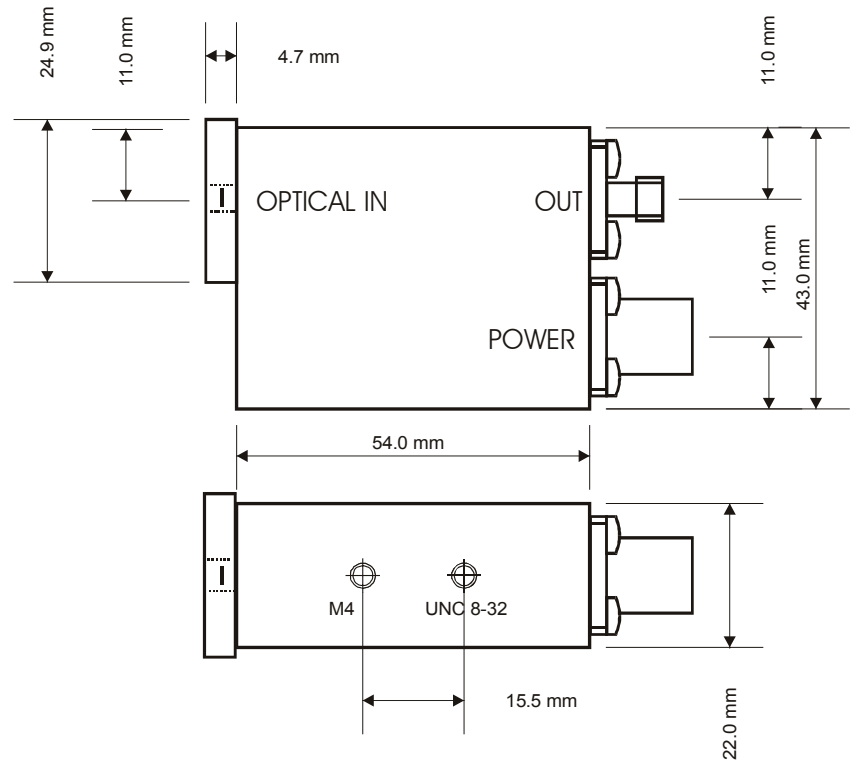
Connectors

Input	optical, free space, 25 mm Ø round flange compatible with microbench systems
Output	SMA
Power Supply	LEMO series 1S, 3-pin fixed socket Pin 1: + 15V Pin 2: n.c. Pin 3: GND



**Ultra High Speed Photoreceiver
with Si PIN Photodiode**

Dimensions



DZ-HSA-X-S_3.cdr

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