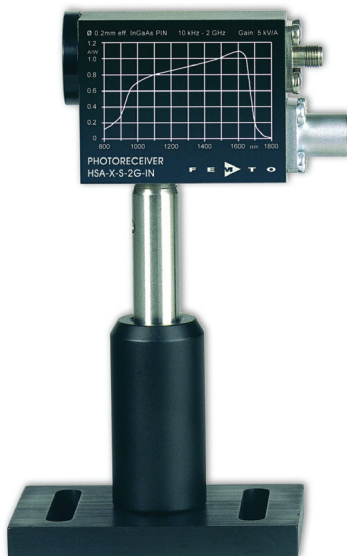


# Ultra High Speed Photoreceiver with InGaAs Photodiode



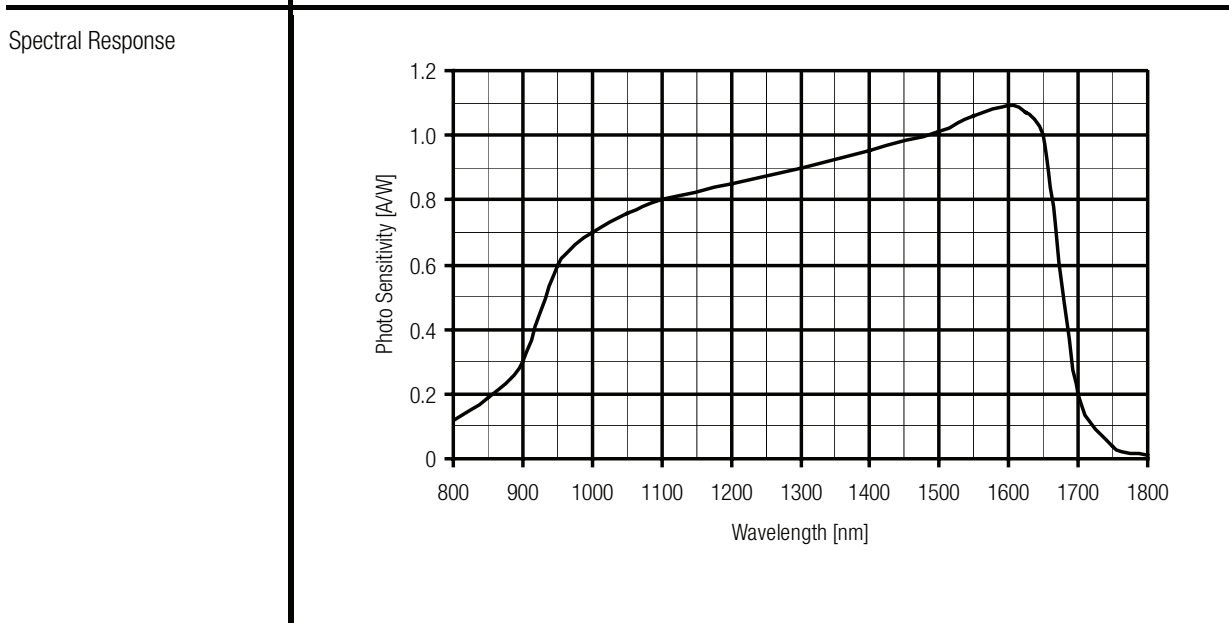
The photoreceiver will be delivered without post holder and post

<p>Features</p>	<ul style="list-style-type: none"> <li>• <b>Bandwidth 10 kHz ... 2 GHz</b></li> <li>• <b>InGaAs Detector, Ø 0.2 mm Effective Active Diameter</b></li> <li>• <b>Spectral Range 850 ... 1700 nm</b></li> <li>• <b>Amplifier Transimpedance (Gain) <math>5 \times 10^3</math> V/A</b></li> <li>• <b>Max. Conversion Gain <math>4.8 \times 10^3</math> V/W @ 1550 nm</b></li> </ul>																																																			
<p>Applications</p>	<ul style="list-style-type: none"> <li>• <b>Spectroscopy</b></li> <li>• <b>Ultra Fast Pulse and Transient Measurements</b></li> <li>• <b>Optical Triggering</b></li> <li>• <b>Optical Front-End for Oscilloscopes and Ultra Fast A/D Converters</b></li> </ul>																																																			
<p>Specifications</p>	<p><i>Test Conditions</i> <span style="float: right;"><i>Vs = + 15 V, Ta = 25°C, System Impedance = 50 Ω</i></span></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 20%; vertical-align: top;">Gain</td> <td style="width: 30%;">Amplifier Transimpedance</td> <td style="width: 20%;">5 x 10<sup>3</sup> V/A</td> <td style="width: 30%;">(@ 50 Ω load)</td> </tr> <tr> <td></td> <td>Conversion Gain</td> <td>4.8 x 10<sup>3</sup> V/W</td> <td>(@ 1550 nm)</td> </tr> <tr> <td rowspan="4" style="vertical-align: top;">Frequency Response</td> <td>Lower Cut-Off Frequency</td> <td>10 kHz</td> <td></td> </tr> <tr> <td>Upper Cut-Off Frequency</td> <td>2 GHz</td> <td>(-3 dB)</td> </tr> <tr> <td>Rise/Fall Time</td> <td>180 ps</td> <td>(10% - 90%)</td> </tr> <tr> <td>Gain Flatness</td> <td>± 1 dB</td> <td></td> </tr> <tr> <td rowspan="4" style="vertical-align: top;">Input / Detector</td> <td>Detector Material</td> <td colspan="2">InGaAs photodiode</td> </tr> <tr> <td>Active Area</td> <td colspan="2">effective Ø 0.2 mm (actual Ø 0.1 mm plus ball lens)</td> </tr> <tr> <td>Spectral Range</td> <td colspan="2">850 ...1700 nm</td> </tr> <tr> <td>Max. Optical Input-Power</td> <td>240 µW</td> <td>(for linear amplification, @ 1550 nm)</td> </tr> <tr> <td>Noise</td> <td>Min. NEP</td> <td>14 pW/√Hz</td> <td>(@ 1550 nm, 100 MHz)</td> </tr> <tr> <td rowspan="2" style="vertical-align: top;">Output</td> <td>Output Impedance</td> <td>50 Ω</td> <td></td> </tr> <tr> <td>Output Peak Voltage</td> <td>1.9 Vpp</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 <sup>3</sup> V/A	(@ 50 Ω load)		Conversion Gain	4.8 x 10 <sup>3</sup> V/W	(@ 1550 nm)	Frequency Response	Lower Cut-Off Frequency	10 kHz		Upper Cut-Off Frequency	2 GHz	(-3 dB)	Rise/Fall Time	180 ps	(10% - 90%)	Gain Flatness	± 1 dB		Input / Detector	Detector Material	InGaAs photodiode		Active Area	effective Ø 0.2 mm (actual Ø 0.1 mm plus ball lens)		Spectral Range	850 ...1700 nm		Max. Optical Input-Power	240 µW	(for linear amplification, @ 1550 nm)	Noise	Min. NEP	14 pW/√Hz	(@ 1550 nm, 100 MHz)	Output	Output Impedance	50 Ω		Output Peak Voltage	1.9 Vpp	(@ 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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## Ultra High Speed Photoreceiver with InGaAs Photodiode

Case	Weight Material	100 g (0.23 lbs) AlMg4.5Mn, nickel-plated
Temperature Range	Storage Temperature Operating Temperature	-40 ... +100 °C 0 ... +60 °C

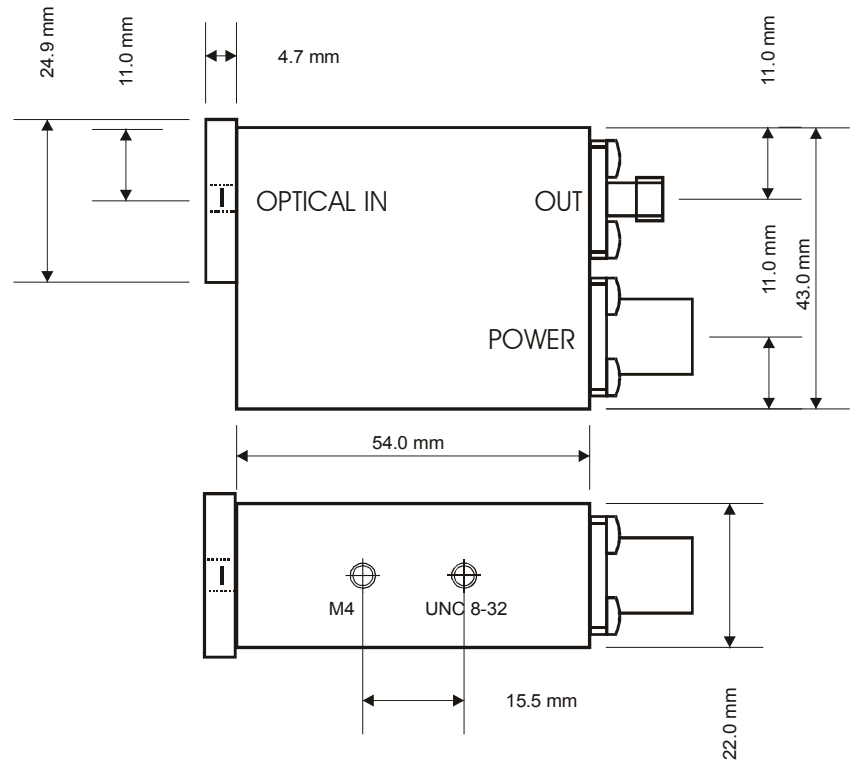
Absolute Maximum Ratings	Power Supply Voltage Optical Input Power	± 22 V 10 mW (averaged)
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Connectors	Input	optical, free space, 25 mm Ø round flange compatible with microbench systems
	Output	SMA
	Power Supply	LEMO series 1S, 3-pin fixed socket Pin 1: + 15V Pin 2: n.c. Pin 3: GND

## Ultra High Speed Photoreceiver with InGaAs Photodiode

Dimensions



DZ-HSA-X-S\_3.cdr

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