

# Ultra High-Speed Photoreceiver with InGaAs-PIN Photodiode



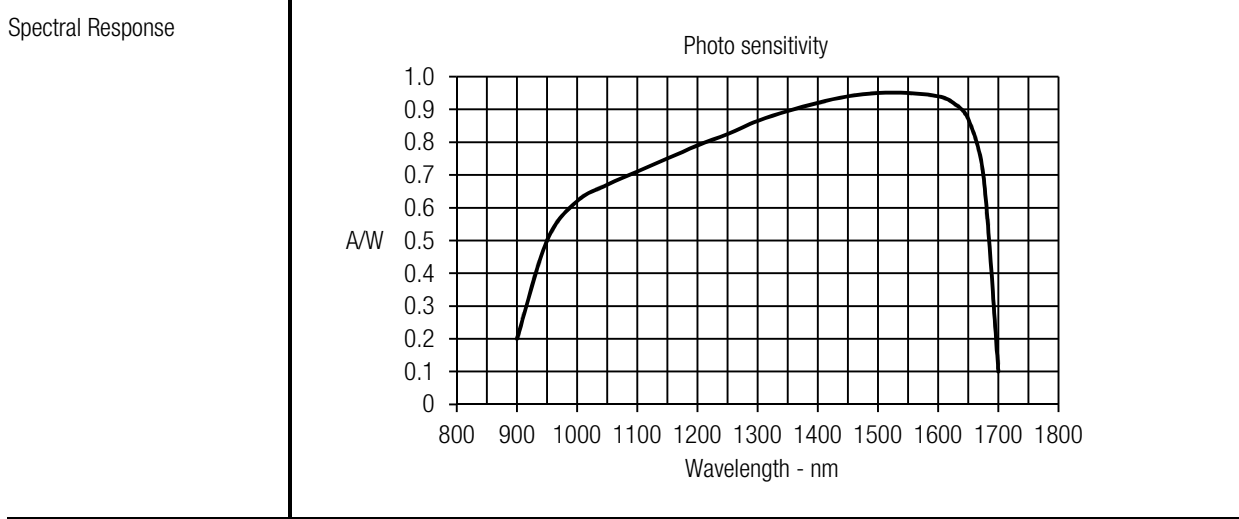
The picture shows the HSPR-X-I-2G-IN-FS with free space input. The photoreceiver will be delivered without post holder and post.

<p>Features</p>	<ul style="list-style-type: none"> <li>• <b>Bandwidth 10 kHz ... 2 GHz</b></li> <li>• <b>InGaAs-PIN detector</b></li> <li>• <b>Spectral range 900 ... 1700 nm</b></li> <li>• <b>Amplifier transimpedance (gain) <math>5 \times 10^3</math> V/A (inverting)</b></li> <li>• <b>Conversion gain <math>4.75 \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>																																			
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Specifications (continued)		
Output	Output impedance	50 Ω (designed for 50 Ω load)
	Output VSWR	1.4 : 1 (@ f < 2.5 GHz)
	Output return loss	15.5 dB (@ f < 2.5 GHz)
	Max. output voltage	2.0 V <sub>PP</sub> (@ 50 Ω load, for linear amplification)
	Output noise	typ. 2.5 mV <sub>RMS</sub> or 17 mV <sub>PP</sub> * (measurement BW: 4 GHz)
	* The peak-to-peak output noise is derived from the RMS noise as follows: V <sub>PP</sub> = V <sub>RMS</sub> × 6.6 (99.9% of the time the output noise voltage will be within the specified peak-to-peak value.)	
Power Supply	Supply voltage	+15 V, 150 mA typ. (depends on operating conditions, recommended power supply capability minimum 200 mA)
Case	Weight	100 g (0.23 lbs)
	Material	AlMg4.5Mn, nickel-plated
Temperature Range	Storage temperature	-40 ... +100 °C
	Operating temperature	0 ... +60 °C

Absolute Maximum Ratings	Power supply voltage	±18.5 V
	Optical input power	12 mW (averaged)



Connectors	Input	HSPR-X-I-2G-IN-FS 25 mm round flange for free space applications
		HSPR-X-I-2G-IN-FC FC fiber optic receptacle
	Output	SMA jack (female)
	Power supply	Lemo® series 1S, 3-pin fixed socket (mating plug type: FFA.1S.303.CLAC52)
		Pin 1: +15 V
		Pin 2: NC
		Pin 3: GND

**Ultra High-Speed Photoreceiver  
with InGaAs-PIN Photodiode**

Available Models	HSPR-X-I-2G-IN-FS HSPR-X-I-2G-IN-FC HSPR-X-S	free space input fiber optic receptacle customized versions available on request
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Dimensions	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>HSPR-X-I-2G-IN-FS</p> </div> <div style="text-align: center;"> <p>HSPR-X-I-2G-IN-FC</p> </div> </div> <p style="text-align: right; margin-top: 10px;">All measures in mm unless otherwise noted.</p>	
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