

Low Noise 400 kHz Photoreceiver with InGaAs PIN Photodiode

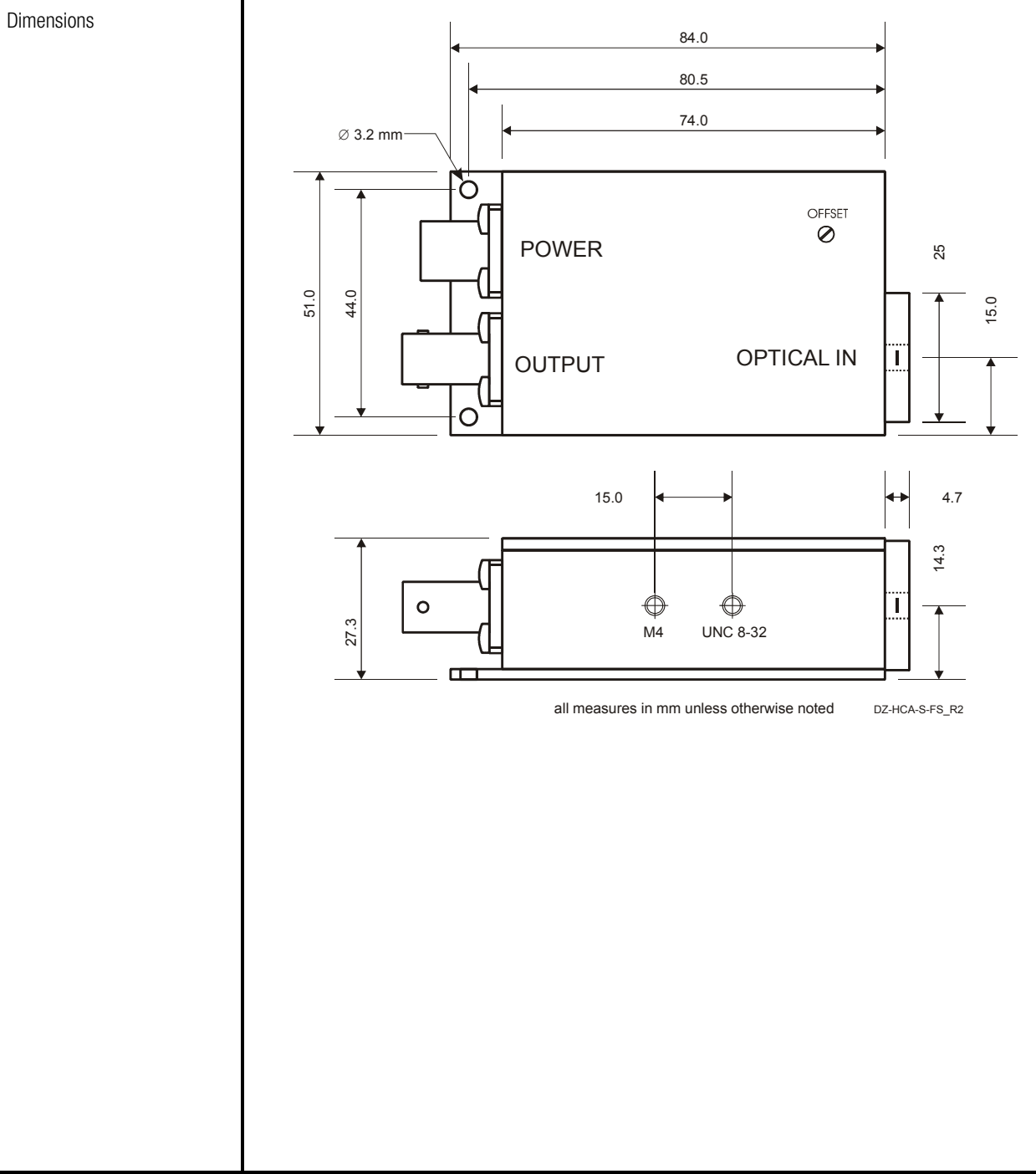


The photoreceiver will be delivered without post holder and post.

<p>Features</p>	<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 																																												
<p>Applications</p>	<ul style="list-style-type: none"> • Spectroscopy • General Purpose Opto-Electronic Measurements • Optical Front-End for Oscilloscopes, A/D Converters and Lock-In Amplifiers 																																												
<p>Specifications</p>	<table border="0"> <tr> <td></td> <td><i>Test Conditions</i></td> <td colspan="2"><i>V_s = ± 15 V, T_a = 25°C</i></td> </tr> <tr> <td rowspan="2">Gain</td> <td>Transimpedance</td> <td>1.0×10^7 V/A</td> <td>(@ ≥ 1 MΩ load)</td> </tr> <tr> <td>Max. Conversion Gain</td> <td>9.5×10^6 V/W</td> <td>(@ 1550 nm)</td> </tr> <tr> <td rowspan="4">Frequency Response</td> <td>Lower Cut-Off Frequency</td> <td>DC</td> <td></td> </tr> <tr> <td>Upper Cut-Off Frequency (- 3 dB)</td> <td>400 kHz</td> <td></td> </tr> <tr> <td>Rise/Fall Time (10% - 90%)</td> <td>1 μs</td> <td></td> </tr> <tr> <td>Gain Flatness</td> <td>± 0.5 dB</td> <td></td> </tr> <tr> <td rowspan="3">Detector</td> <td>Detector Material</td> <td colspan="2">InGaAs PIN photodiode</td> </tr> <tr> <td>Active Area</td> <td colspan="2">Ø 0.5 mm</td> </tr> <tr> <td>Spectral Response</td> <td colspan="2">900 ... 1700 nm</td> </tr> <tr> <td rowspan="3">Input</td> <td>Input Offset Compensation Range</td> <td colspan="2">± 300 nA, adjustable by offset trimpot</td> </tr> <tr> <td>Optical Saturation Power</td> <td colspan="2">1 μW (for linear amplification, @ 1550 nm)</td> </tr> <tr> <td>Min. NEP</td> <td>$75 \text{ fW}/\sqrt{\text{Hz}}$</td> <td>(@ 1550 nm, 10 kHz)</td> </tr> </table>		<i>Test Conditions</i>	<i>V_s = ± 15 V, T_a = 25°C</i>		Gain	Transimpedance	1.0×10^7 V/A	(@ ≥ 1 MΩ 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	Input Offset Compensation Range	± 300 nA, adjustable by offset trimpot		Optical Saturation Power	1 μW (for linear amplification, @ 1550 nm)		Min. NEP	$75 \text{ fW}/\sqrt{\text{Hz}}$	(@ 1550 nm, 10 kHz)
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Available Models	LCA-S-400K-IN-FS LCA-S	free space input customized version available on request
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