

Datasheet

LCA-S-400K-SI

Low Noise 400 kHz Photoreceiver
with Si PIN Photodiode



The photoreceiver will be delivered without post holder and post.

Features	<ul style="list-style-type: none"> • Large Area Si PIN Detector, 3.0 mm Active Diameter • Spectral Range 320 ... 1060 nm • Amplifier Transimpedance Gain 1.0×10^7 V/A • Max. Conversion Gain 5.9×10^8 V/W @ 920 nm • Bandwidth DC ... 400 kHz 																																												
Applications	<ul style="list-style-type: none"> • Spectroscopy • General Purpose Opto-Electronic Measurements • Optical Front-End for Oscilloscopes, A/D Converters and Lock-In Amplifiers 																																												
Specifications	<p><i>Test Conditions</i> $V_s = \pm 15$ V, $T_a = 25^\circ$ C, load impedance ≥ 100 kΩ</p> <table border="0"> <tr> <td>Gain</td> <td>Transimpedance</td> <td>1.0×10^7 V/A</td> <td></td> </tr> <tr> <td></td> <td>Max. Conversion Gain</td> <td>5.9×10^8 V/W</td> <td>(@ 920 nm)</td> </tr> <tr> <td>Frequency Response</td> <td>Lower Cut-Off Frequency</td> <td>DC</td> <td></td> </tr> <tr> <td></td> <td>Upper Cut-Off Frequency (-3 dB)</td> <td>400 kHz</td> <td></td> </tr> <tr> <td></td> <td>Rise/Fall Time (10% - 90%)</td> <td>900 ns</td> <td></td> </tr> <tr> <td>Detector</td> <td>Detector Material</td> <td>Si PIN photodiode</td> <td></td> </tr> <tr> <td></td> <td>Active Area</td> <td>\varnothing 3.0 mm</td> <td></td> </tr> <tr> <td></td> <td>Spectral Response</td> <td>320 ... 1060 nm</td> <td></td> </tr> <tr> <td>Input</td> <td>Input Offset Compensation Range</td> <td>± 300 nA</td> <td>adjustable by offset trim-pot</td> </tr> <tr> <td></td> <td>Optical Saturation Power</td> <td>1.6 μW</td> <td>(@ 920 nm)</td> </tr> <tr> <td></td> <td>NEP</td> <td>120 fW/\sqrtHz</td> <td>(@ 920 nm, 10 kHz)</td> </tr> </table>	Gain	Transimpedance	1.0×10^7 V/A			Max. Conversion Gain	5.9×10^8 V/W	(@ 920 nm)	Frequency Response	Lower Cut-Off Frequency	DC			Upper Cut-Off Frequency (-3 dB)	400 kHz			Rise/Fall Time (10% - 90%)	900 ns		Detector	Detector Material	Si PIN photodiode			Active Area	\varnothing 3.0 mm			Spectral Response	320 ... 1060 nm		Input	Input Offset Compensation Range	± 300 nA	adjustable by offset trim-pot		Optical Saturation Power	1.6 μ W	(@ 920 nm)		NEP	120 fW/ \sqrt Hz	(@ 920 nm, 10 kHz)
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SOPHISTICATED TOOLS FOR SIGNAL RECOVERY



DE-LCA-S-400K-SI_R11/LK/JM/20FEB2019

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LCA-S-400K-SI

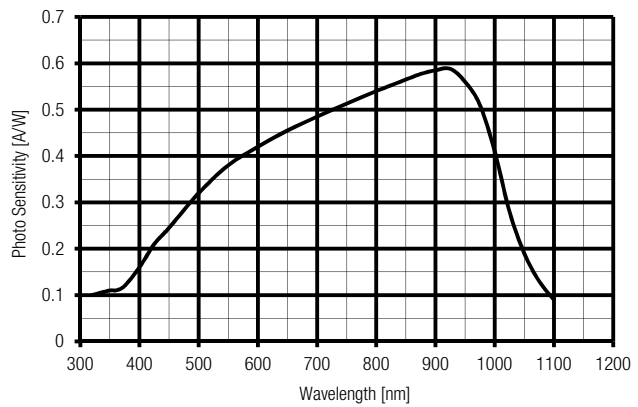
**Low Noise 400 kHz Photoreceiver
with Si PIN Photodiode**

Specifications (continued)

Output	Output Voltage Range	± 10 V
	Max. Output Current	± 30 mA
	Output Impedance	50 Ω (terminate with ≥ 100 kΩ for best performance)
	Output Noise	ca. 10 mV _{pp} (1.6 mV _{RMS}) (no signal on detector)
Power Supply	Supply Voltage	± 15 V
	Supply Current	± 40 mA typ. (depends on operating conditions, recommended power supply capability minimum ± 150 mA)
Case	Weight	210 g (0.5 lbs)
	Material	AlMg4.5Mn, nickel-plated
Temperature Range	Storage Temperature	- 40 ... + 100 °C
	Operating Temperature	0 ... + 60 °C

Absolute Maximum Ratings	Optical Input Power	10 mW
	Power Supply Voltage	± 22 V

Spectral Response



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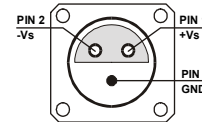


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**Low Noise 400 kHz Photoreceiver
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Connectors	Input	25 mm round flange for free space applications (fiber optic input available as customized unit)
	Output	BNC
	Power Supply	LEMO series 1S, 3-pin fixed socket Pin 1: +15V Pin 2: -15V Pin 3: GND



Available Models	LCA-S-400K-SI-FS LCA-S	free space input customized version available on request
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Dimensions

all measures in mm unless otherwise noted

DZ-LCA-S-400K-SI_R1

FEMTO Messtechnik GmbH
Klosterstr. 64
10179 Berlin · Germany
Phone: +49 30 280 4711-0
Fax: +49 30 280 4711-11
Email: info@femto.de
www.femto.de

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