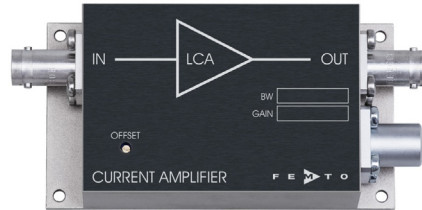


Datasheet

LCA-400K-10M

Ultra-Low-Noise Current Amplifier



Features

- **Bandwidth and Frequency Response Independent of Detector-Capacitance (up to 1 nF)**
- **Extremely Low Noise, 65 fA/√Hz Equivalent Input Noise Current**
- **Bandwidth DC ... 400 kHz**
- **Transimpedance (Gain) 1×10^7 V/A**

Applications

- **Photodiode- and Photomultiplier-Amplifier**
- **Spectroscopy**
- **Charge-Amplifier**
- **Ionisation Detectors**
- **Preamplifier for Lock-Ins, A/D-Converters, etc.**

Specifications

	Test Conditions	$V_s = \pm 15$ V, $T_a = 25^\circ$ C
Gain	Transimpedance	1×10^7 V/A (>10 k Ω Load)
	Accuracy	$\pm 1\%$
Frequency Response	Lower Cut-Off Frequency	DC
	Upper Cut-Off Frequency	400 kHz (-3 dB)
	Rise- / Fall-Time	1 μ s (10% - 90%)
	Gain Flatness	± 0.1 dB
Input	Equ. Input Noise Current	65 fA/√Hz (@ 10 kHz)
	Equ. Input Noise Voltage	5 nV/√Hz (@ 10 kHz)
	Input Bias Current	2 pA typ.
	Input Bias Current Drift	Factor 1.7 / 10 K
	Offset Current Compensation	± 300 nA, Adjustable by Offset-Trimpot
	Max. Input Current	± 1 μ A (Linear Amplification)
	Input Offset Voltage	< 1 mV
	DC Input Impedance	50 Ω (Virtual) // 5 pF
Output	Output Voltage	± 10 V (>10 k Ω Load)
	Output Impedance	50 Ω (Terminate with >10 k Ω for best Performance)
	Max. Output Current	± 10 mA (Linear Amplification)
Power Supply	Supply Voltage	± 15 V
	Supply Current	± 40 mA typ.
Case	Weight	210 gr. (0.5 lbs)
	Material	AlMg4.5Mn, nickel-plated
Temperature Range	Storage Temperature	-40 ... +100 $^\circ$ C
	Operating Temperature	0 ... +60 $^\circ$ C

SOPHISTICATED TOOLS FOR SIGNAL RECOVERY



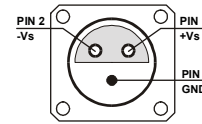
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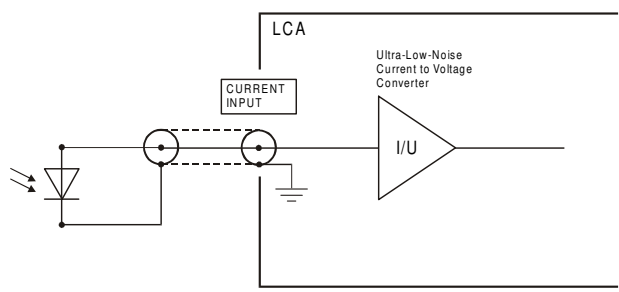
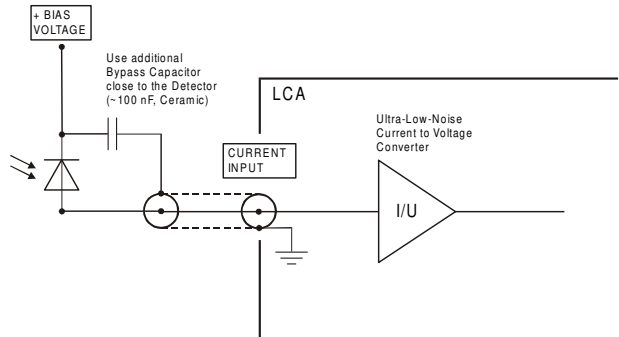
Datasheet

LCA-400K-10M

Ultra-Low-Noise Current Amplifier

Absolute Maximum Ratings	Input Voltage	$\pm 5\text{ V}$
	Power Supply Voltage	$\pm 22\text{ V}$
Connectors	Input	BNC
	Output	BNC
	Power Supply	LEMO Series 1S, 3-pin Fixed Socket
		Pin 1: +15V
		Pin 2: -15V
	Pin 3: GND	



Application Diagrams	<p>Photo Detector Biasing in Photovoltaic Mode: Use for Low Speed Applications and Minimum Dark Current.</p>  <p style="text-align: right;">A202-0101-20</p> <p>Photo Detector Biasing in Photoconductive Mode: Use for Fast Applications and if More Dark Current is Tolerable. Bias Voltage Decreases Detector Capacitance.</p>  <p style="text-align: right;">A201-0101-20</p>
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SOPHISTICATED TOOLS FOR SIGNAL RECOVERY



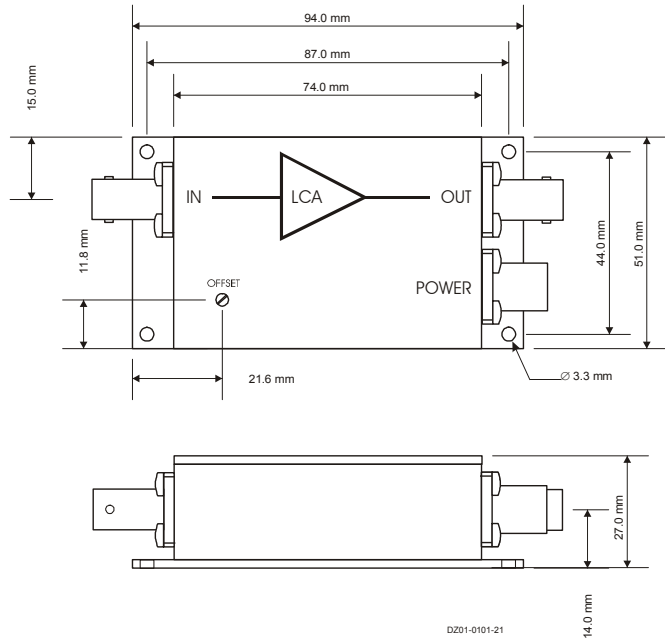
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Datasheet

LCA-400K-10M

Ultra-Low-Noise Current Amplifier

Dimensions



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SOPHISTICATED TOOLS FOR SIGNAL RECOVERY

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