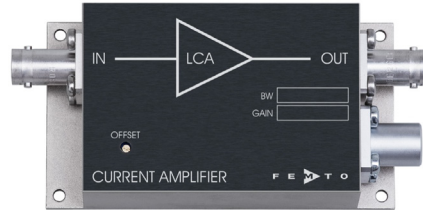


Datasheet

LCA-200K-20M

Ultra-Low-Noise Current Amplifier



Features

- **Bandwidth and Frequency Response Independent of Detector-Capacitance (up to 10 nF)**
- **Extremely Low Noise, 40 fA/√Hz Equivalent Input Noise Current**
- **Bandwidth DC ... 200 kHz**
- **Transimpedance (Gain)  $2 \times 10^7$  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, $T_a = 25^\circ\text{C}$
Gain	Transimpedance	$2 \times 10^7$ V/A (>10 k $\Omega$ Load)
	Accuracy	$\pm 1\%$
Frequency Response	Lower Cut-Off Frequency	DC
	Upper Cut-Off Frequency	200 kHz (-3 dB)
	Rise- / Fall-Time	2 $\mu\text{s}$ (10% - 90%)
	Gain Flatness	$\pm 0.1$ dB
Input	Equ. Input Noise Current	40 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	$\pm 150$ nA, Adjustable by Offset-Trimpot
	Max. Input Current	$\pm 500$ nA (Linear Amplification)
	Input Offset Voltage	< 1 mV
Output	DC Input Impedance	50 $\Omega$ (Virtual) // 5 pF
	Output Voltage	$\pm 10$ V (>10 k $\Omega$ Load)
	Output Impedance	50 $\Omega$ (Terminate with >10 k $\Omega$ for best Performance)
Power Supply	Max. Output Current	$\pm 10$ mA (Linear Amplification)
	Supply Voltage	$\pm 15$ V
Case	Supply Current	$\pm 40$ mA typ.
	Weight	210 gr. (0.5 lbs)
Temperature Range	Material	AlMg4.5Mn, nickel-plated
	Storage Temperature	-40 ... +100 °C
	Operating Temperature	0 ... +60 °C

SOPHISTICATED TOOLS FOR SIGNAL RECOVERY



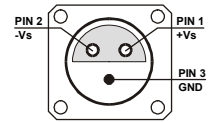
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**Datasheet**

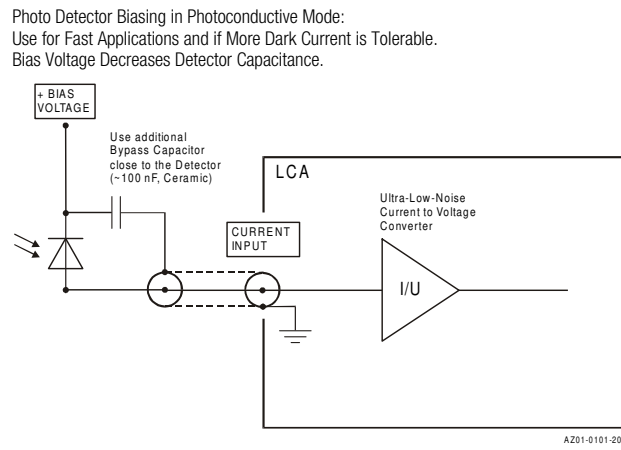
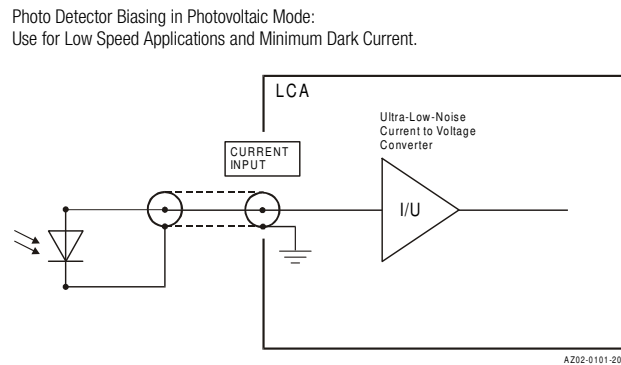
**LCA-200K-20M**

**Ultra-Low-Noise Current Amplifier**

Absolute Maximum Ratings	Input Voltage	$\pm 5$ V
	Power Supply Voltage	$\pm 22$ 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



SOPHISTICATED TOOLS FOR SIGNAL RECOVERY



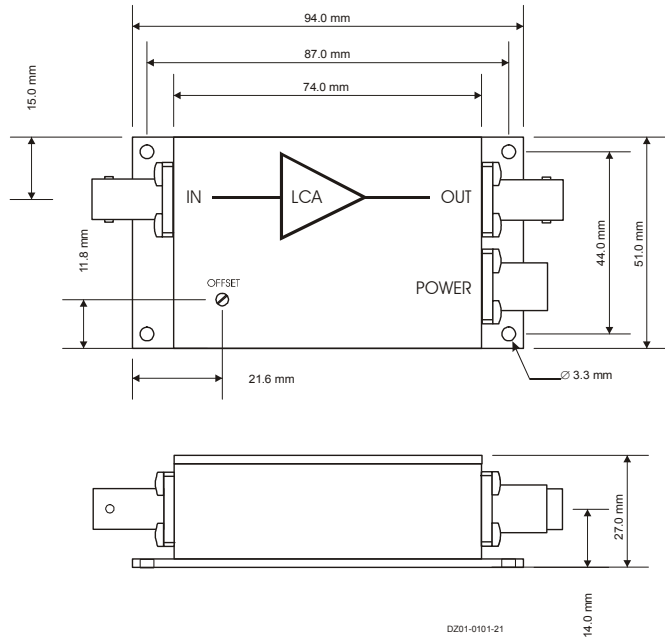
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**Datasheet**

**LCA-200K-20M**

**Ultra-Low-Noise Current Amplifier**

Dimensions



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**SOPHISTICATED TOOLS FOR SIGNAL RECOVERY**

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