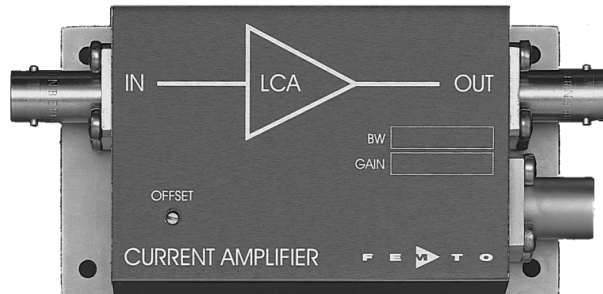




Datasheet

LCA-40K-100M

Ultra-Low-Noise Current Amplifier



Features	<ul style="list-style-type: none"> • Bandwidth and Frequency Response Independent of Detector-Capacitance (up to 10 nF) • Extremely Low Noise, 19 fA/√Hz Equivalent Input Noise Current • Bandwidth DC ... 40 kHz • Transimpedance (Gain) 1 x 10⁸ V/A 	
Applications	<ul style="list-style-type: none"> • Photodiode- and Photomultiplier-Amplifier • Spectroscopy • Charge-Amplifier • Ionisation Detectors • Preamplifier for Lock-Ins, A/D-Converters, etc. 	
Specifications	<p><i>Test Conditions</i></p> <p>Gain</p> <p>Frequency Response</p> <p>Input</p> <p>Output</p> <p>Power Supply</p> <p>Case</p> <p>Temperature Range</p>	<p><i>Vs = ± 15 V, Ta = 25°C</i></p> <p>Transimpedance Accuracy 1 x 10⁸ V/A (>10 kΩ Load) ± 1%</p> <p>Lower Cut-Off Frequency DC</p> <p>Upper Cut-Off Frequency 40 kHz (- 3 dB)</p> <p>Rise- / Fall-Time 10 μs (10% - 90%)</p> <p>Gain Flatness ± 0.1 dB</p> <p>Equ. Input Noise Current 19 fA/√Hz (@ 10 kHz)</p> <p>Equ. Input Noise Voltage 5 nV/√Hz (@ 10 kHz)</p> <p>Input Bias Current 2 pA typ.</p> <p>Input Bias Current Drift Factor 1.7 / 10 K</p> <p>Offset Current Compensation ± 30 nA, Adjustable by Offset-Trimpot</p> <p>Max. Input Current ± 100 nA (Linear Amplification)</p> <p>Input Offset Voltage < 1 mV</p> <p>DC Input Impedance 50 Ω (Virtual) // 5 pF</p> <p>Output Voltage ± 10 V (>10 kΩ Load)</p> <p>Output Impedance 50 Ω (Terminate with >10 kΩ for best Performance)</p> <p>Max. Output Current ± 10 mA (Linear Amplification)</p> <p>Supply Voltage ± 15 V</p> <p>Supply Current ± 40 mA typ.</p> <p>Weight 210 gr. (0.5 lbs)</p> <p>Material AIMg4.5Mn, nickel-plated</p> <p>Storage Temperature -40 ... +100 °C</p> <p>Operating Temperature 0 ... +60 °C</p>
Absolute Maximum Ratings	<p>Input Voltage</p> <p>Power Supply Voltage</p>	<p>± 5 V</p> <p>± 22 V</p>