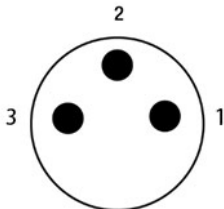
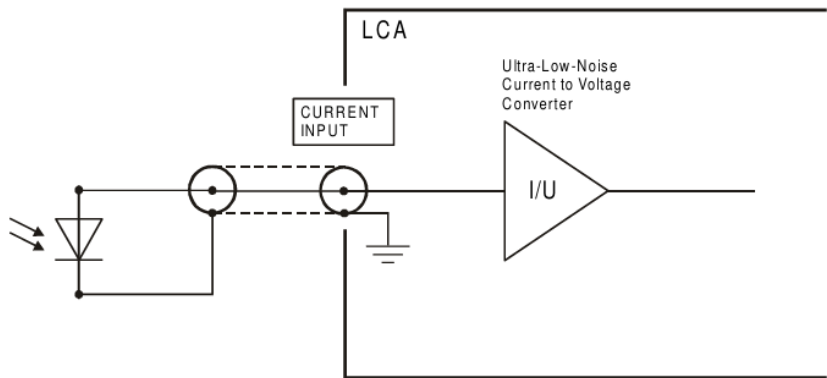
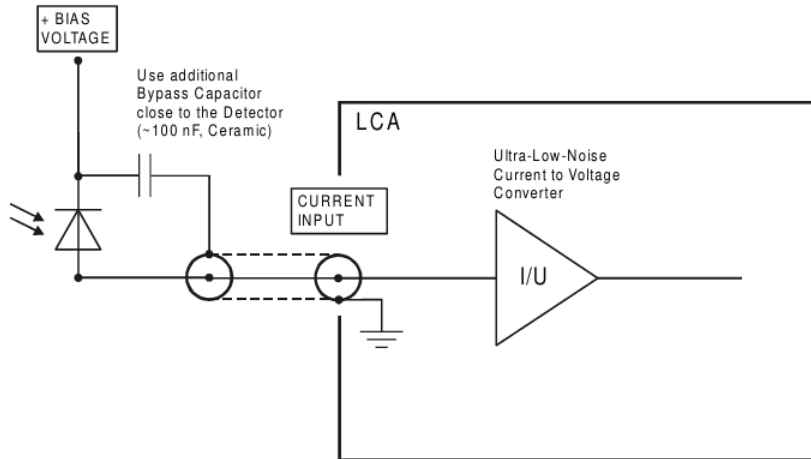


Low-Noise Current Amplifier (Transimpedance Amplifiers) LCA
低噪声电流放大器（跨阻放大器）

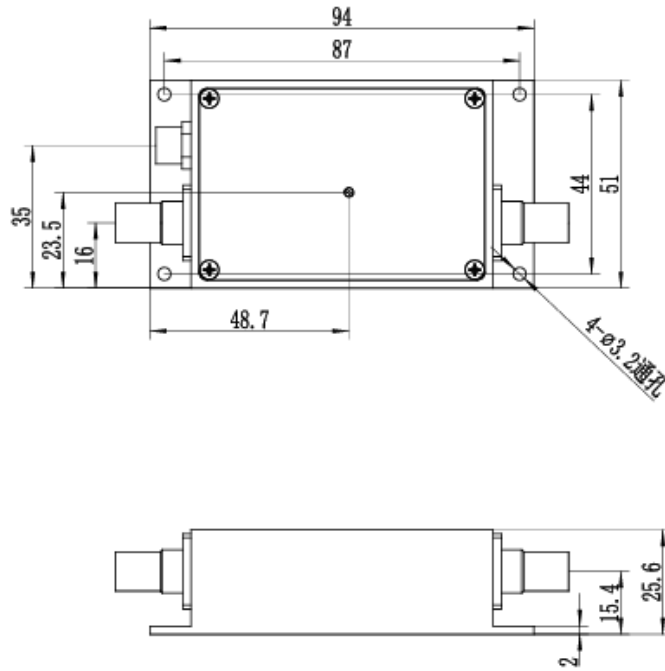
LCA-20k-200M



| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|--|------|---|----|---|--|----------------|------|---------|--|-------------------|--|--------------------------|----|--|--|---|--|------------------|--|----------------------------|--|--------------------------|--|---------------|--|--------------------|----|---|--|---|--|---------------------------|----|---------------------|--|-----------------------------|----|---------|--|-------------|----|------------------------------------|--|------------------------------------|
| 特征 | <ul style="list-style-type: none"> ● 带宽：DC-20KHz ● 上升/下降时间：20us ● 增益：$2 \times 10^8 \text{V/A}$ (>10 kΩ负载) ● 极低噪声，等效输入噪声电流 15 fA/$\sqrt{\text{Hz}}$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 应用领域 | <ul style="list-style-type: none"> ● 光电二极管与光电倍增管放大器 ● 光谱分析系统 ● 离子检测设备 ● 用于锁相放大器、模数转换器等的前置放大器 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 规格 | <table border="0"> <tr> <td>测试条件</td> <td>$V_s = \pm 12\text{V}$, $T_a = 25^\circ\text{C}$</td> </tr> <tr> <td>增益</td> <td>跨阻增益 $2 \times 10^8 \text{V/A}$ (>10 kΩ负载)</td> </tr> <tr> <td></td> <td>增益精度 $\pm 3\%$</td> </tr> <tr> <td>频率响应</td> <td>频率下限 DC</td> </tr> <tr> <td></td> <td>频率上限 20KHz (-3dB)</td> </tr> <tr> <td></td> <td>上升/下降时间 20us (10% - 90%)</td> </tr> <tr> <td>输入</td> <td>输入噪声电流 15fA/$\sqrt{\text{Hz}}$ (@10kHz)</td> </tr> <tr> <td></td> <td>输入噪声电压 4.0nV/$\sqrt{\text{Hz}}$ (@10kHz)</td> </tr> <tr> <td></td> <td>输入偏置电流 2 pA typ.</td> </tr> <tr> <td></td> <td>偏置电流补偿 $\pm 0.15\text{nA}$</td> </tr> <tr> <td></td> <td>最大输入电流 $\pm 50\text{nA}$</td> </tr> <tr> <td></td> <td>输入偏置电压 < 2 mV</td> </tr> <tr> <td></td> <td>直流输入阻抗 50 Ω</td> </tr> <tr> <td>输出</td> <td>输出最大电压范围 $\pm 10\text{V}$ (>10 kΩ负载)</td> </tr> <tr> <td></td> <td>输出阻抗 50Ω (最佳性能, 请使用>10 kΩ)</td> </tr> <tr> <td></td> <td>最大输出电流 $\pm 100\text{mA}$</td> </tr> <tr> <td>供电</td> <td>电压 $\pm 12\text{V}$</td> </tr> <tr> <td></td> <td>电流 $\pm 100\text{mA}$, 典型值</td> </tr> <tr> <td>外壳</td> <td>重量 105g</td> </tr> <tr> <td></td> <td>材料 6061 铝合金</td> </tr> <tr> <td>温度</td> <td>存储温度 $-40 \dots +85^\circ\text{C}$</td> </tr> <tr> <td></td> <td>工作温度 $-20 \dots +60^\circ\text{C}$</td> </tr> </table> | 测试条件 | $V_s = \pm 12\text{V}$, $T_a = 25^\circ\text{C}$ | 增益 | 跨阻增益 $2 \times 10^8 \text{V/A}$ (>10 k Ω 负载) | | 增益精度 $\pm 3\%$ | 频率响应 | 频率下限 DC | | 频率上限 20KHz (-3dB) | | 上升/下降时间 20us (10% - 90%) | 输入 | 输入噪声电流 15fA/ $\sqrt{\text{Hz}}$ (@10kHz) | | 输入噪声电压 4.0nV/ $\sqrt{\text{Hz}}$ (@10kHz) | | 输入偏置电流 2 pA typ. | | 偏置电流补偿 $\pm 0.15\text{nA}$ | | 最大输入电流 $\pm 50\text{nA}$ | | 输入偏置电压 < 2 mV | | 直流输入阻抗 50 Ω | 输出 | 输出最大电压范围 $\pm 10\text{V}$ (>10 k Ω 负载) | | 输出阻抗 50 Ω (最佳性能, 请使用>10 k Ω) | | 最大输出电流 $\pm 100\text{mA}$ | 供电 | 电压 $\pm 12\text{V}$ | | 电流 $\pm 100\text{mA}$, 典型值 | 外壳 | 重量 105g | | 材料 6061 铝合金 | 温度 | 存储温度 $-40 \dots +85^\circ\text{C}$ | | 工作温度 $-20 \dots +60^\circ\text{C}$ |
| 测试条件 | $V_s = \pm 12\text{V}$, $T_a = 25^\circ\text{C}$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 增益 | 跨阻增益 $2 \times 10^8 \text{V/A}$ (>10 k Ω 负载) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 增益精度 $\pm 3\%$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 频率响应 | 频率下限 DC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 频率上限 20KHz (-3dB) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 上升/下降时间 20us (10% - 90%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 输入 | 输入噪声电流 15fA/ $\sqrt{\text{Hz}}$ (@10kHz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 输入噪声电压 4.0nV/ $\sqrt{\text{Hz}}$ (@10kHz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 输入偏置电流 2 pA typ. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 偏置电流补偿 $\pm 0.15\text{nA}$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 最大输入电流 $\pm 50\text{nA}$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 输入偏置电压 < 2 mV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 直流输入阻抗 50 Ω | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 输出 | 输出最大电压范围 $\pm 10\text{V}$ (>10 k Ω 负载) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 输出阻抗 50 Ω (最佳性能, 请使用>10 k Ω) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 最大输出电流 $\pm 100\text{mA}$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 供电 | 电压 $\pm 12\text{V}$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 电流 $\pm 100\text{mA}$, 典型值 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 外壳 | 重量 105g | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 材料 6061 铝合金 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 温度 | 存储温度 $-40 \dots +85^\circ\text{C}$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 工作温度 $-20 \dots +60^\circ\text{C}$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|---------|--|
| 绝对最大额定值 | 输入电压 $\pm 5V$ 供电电压 $\pm 20V$ |
| 连接器 | 输入 BNC 母头 输出 BNC 母头 电源接口 M8 航空接头, 3 芯, 母头  <ul style="list-style-type: none"> 1 = Brown (+12 V) 2 = Black (GND) 3 = Blue (-12 V) |
| 应用框图 | <p>光伏模式下的光电探测器偏置：用于低速应用和最小暗电流。</p>  <p>光导模式下的光电探测器偏置：用于快速应用以及如果能够容忍更多暗电流，偏置电压会降低探测器电容。</p>  |

尺寸



发货清单

| 序号 | 名称 | 规格参数 | 数量 | 备注 |
|----|----------|-------------------|----|------|
| 1 | 低噪声电流放大器 | / | 1 | |
| 2 | 电源线 | 3 芯屏蔽线, M8 公头, 2m | 1 | 不含电源 |
| 3 | 射频线 | RG316-BNC-JJ, 1m | 1 | |