

Category: Current to Voltage Converters

## **CIRCUIT IDEAS FOR DESIGNERS**

Schematic no. iv\_17004.0

## **High Precision Current to Voltage Converter**

## **Description**

Net current generated by the photodiode (I) is forced through feedback resistor (RF), assuming zero leakage current through the input of the buffer amplifier. This develops an output voltage equal to (I x RF) at the output of the amplifier. In this example, the output also drives a load RL of  $100 \mathrm{K}\Omega$ . Some of the errors produced by this circuit are the amplifier input-leakage current, typically about 1 to  $10 \mathrm{pA}$ , and the input offset voltage, typically about 1 to  $5 \mathrm{mV}$ . If it is important to minimize these errors, use an EPAD® op amp such as ALD1722, which has a maximum input current of  $10 \mathrm{pA}$  and maximum input offset voltage of only  $90 \mu \mathrm{V}$ .

For full schematic diagram and notes, please register and login at aldinc.com

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