



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

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