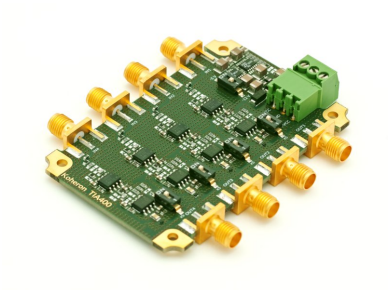
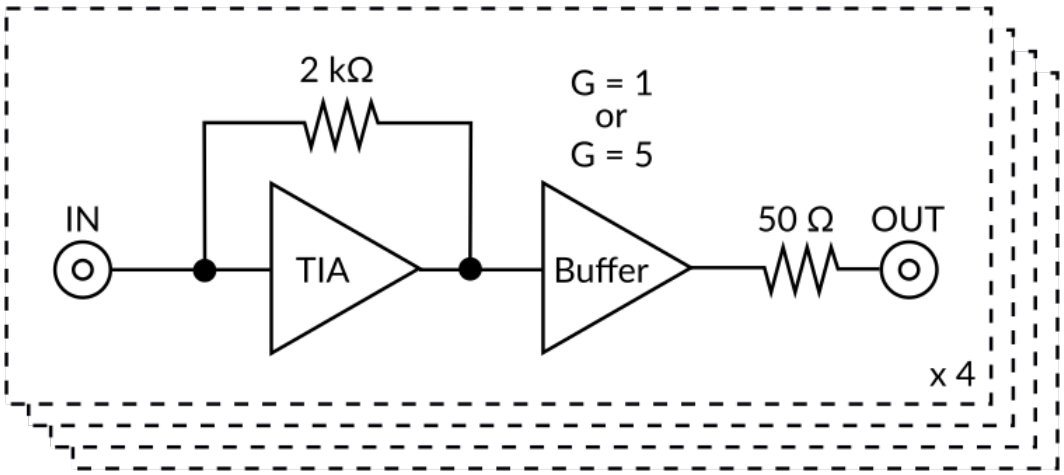


Koheron TIA400 is a quad-channel transimpedance amplifier (TIA) with a bandwidth of 2 MHz and an input-referred current noise of 5 pA/√Hz. It is compatible with photodiodes with up to 200 pF input capacitance (including cable capacitance). Thanks to its multiple channels and its large input current range (up to ± 4 mA), it is well suited for system monitoring of optical powers.
The 1-channel version of Koheron TIA400 is Koheron TIA100 transimpedance amplifier.

Specifications

	TIA400-2k
Transimpedance gain	2 kV/A or 10 kV/A
3 dB bandwidth C_{in} = 5 pF	2 MHz
Input	
Input current range	±4 mA
Input current noise density 1 MHz, C_{in} = 5 pF	5 pA/√Hz
Maximum input capacitance	200 pF
Coupling	DC
Output	
Output impedance	50 Ω
Output buffer gain	1 or 5
Output voltage range high impedance	-8 V to 8 V
Output voltage range 50 Ω	-2 V to 2 V
Power supplies	
Positive supply voltage	11.5 V to 13 V
Negative supply voltage bipolar output	-13 V to -11.5 V
Negative supply voltage unipolar output	-6 V to -4.5 V
Supply current per rail	320 mA
Quiescent current per rail	55 mA
Other	
Outside dimensions	79 mm x 66 mm x 13 mm
Weight	36 g
Operating temperature	0 °C to 50 °C

Functional diagram

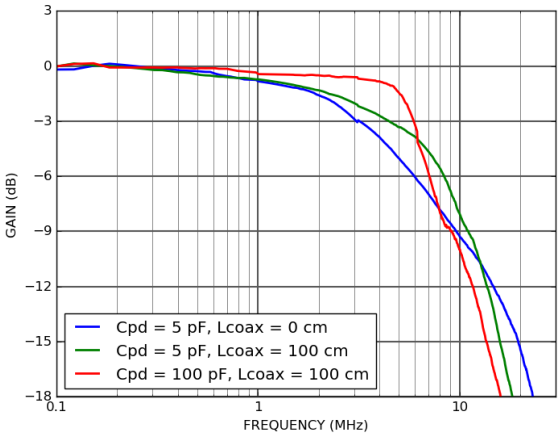


TIA400 functional diagram

Characterization

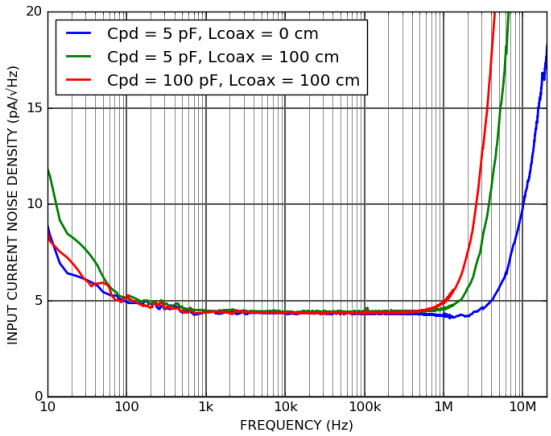
The frequency response and the input current noise density are shown for different photodiodes (capacitance Cpd) and input coaxial cable lengths (Lcoax, typical capacitance 1 pF/cm).

Frequency response



TIA400-2k frequency response

Input current noise density



TIA400-2k input current noise density

Ordering codes

PRODUCT NUMBER	ATTRIBUTE
TIA400-2k	None