

Variable Current Amplifier

Model VCA100

Non-inverting Transimpedance Amplifier
Suitable for large area photodiodes



- 6 gain settings: 10^4 , 10^5 , 10^6 , 10^7 , 10^8 , 10^9 V/A
- Universal usage for all kinds of current measurements
- For photodiodes with up to 4400 pF guaranteed zero edge overshoot
- With overload indication for positive output voltages
- Very low input current noise
- Output is short-circuit protected and can be loaded with $50 \Omega^*$
- Robust metal frame with 2 BNC connectors
- Stabilized *high quality power supply (24 V) included*

Gain (V/A)	10^4	10^5	10^6	10^7	10^8	10^9
Bandwidth # (-3 dB)	2,82 MHz	892 kHz	282 kHz	89,2 kHz	28,2 kHz	8,92 kHz
Rise time # (10...90%)	124 ns	392 ns	1,24 μ s	3,92 μ s	12,4 μ s	39,2 μ s
Input noise ($\sqrt{\text{Hz}}$)	1,26 pA	400 fA	127 fA	41 fA	16 fA	10,8 fA

* Maximum output voltage: ± 6 V for $\geq 1 \text{ k}\Omega$ / $\pm 1,6$ V for 100Ω / $\pm 0,8$ V for 50Ω

For a photodiode capacity of 10 pF

Custom-made amplifiers for special photodiodes:

- Maximum frequency bandwidths (up 8 MHz) and optimization of rise time
- Only value of photodiode (parallel) capacity is needed
- Zero edge overshoot is guaranteed for the specified photodiode capacity
- Additional costs 90,- Euro

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