VectorLight™ 900

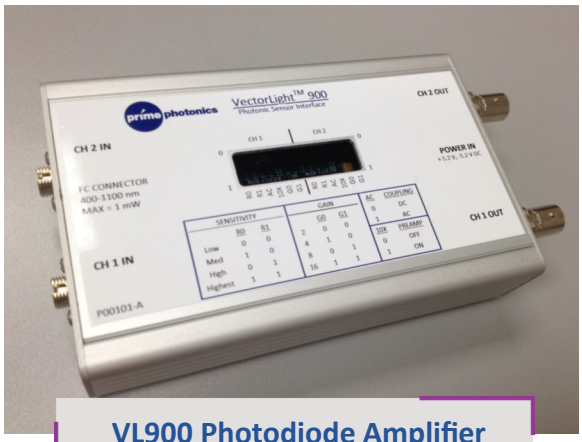
2-Channel Photodiode Amplifier Module

The VL900 is a two-channel fiber-coupled photodiode amplifier module with user-selectable coupling and a wide range of user-adjustable gain settings.

The module is an easy way to capture low-level fiber optic signals, amplify them, and stream them to standard data acquisition (DAQ) hardware.

The standard configuration uses FC/PC input connectors for the optical signal and BNC output connectors for the ouput analog voltage.

The module is powered by an external power puck providing +/-5 VDC.



VL900 Photodiode Amplifier

Typical AC Characteristics at Minimum Gain

Range	Overall Gain	Rise Time (ns)	Bandwidth (MHz)	RMS Noise (µV)	NEP (W/rtHz)
0	20,000	51	6.86	208	7.04E-12
1	40,000	100	3.47	215	5.12E-12
2	60,000	151	2.32	220	4.27E-12
3	80,000	191	1.83	222	3.64E-12

Typical AC Characteristics at Maximum Gain

Range	Overall Gain	Rise Time (ns)	Bandwidth (MHz)	RMS Noise (mV)	NEP (W/rtHz)
0	1,600,000	72	4.86	6.6	3.32E-12
1	3,200,000	114	3.07	7.6	2.40E-12
2	4,800,000	162	2.16	8.5	2.14E-12
3	6,400,000	200	1.75	8.9	1.86E-12

KEY PARAMETERS

Dimensions: 5.75”L x 3.06”W x 1.21”H

Weight: 240 g

Power: +5V input, 200 mA max

-5V input, 150 mA max

Gain linearity within one range: 2%

Gain linearity range to range at the same gain: 5%

DC offset voltage at minimum gain: +/- 4 mW

DC offset voltage at maximum gain: +/- 160 mW

Output voltage swing into 1 MOhm: +/- 3.5 V

Notes:

(1) AC characteristics measured with a 100 kHz square wave with a rise time of less than 6 ns.

(2) Full scope bandwidth of 600 MHz used for rise time measurements.

(3) Noise measurements made with a 20 MHz bandwidth.

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