PERFORMANCE CHECKSHEET

Model: AVO-9A3-B-P-P7-AC00
Type: Ultra-High-Speed Laser Diode Driver
S.N.: 13309
Date: July 31, 2015

Output Amplitude: up to +43V, to 50Ω
Pulse Width (FWHM): 0.4 – 2 ns
Rise Time (20%-80%): ≤ 200 ps
Fall Time (80%-20%): ≤ 300 ps
PRF: 1 Hz – 1 MHz
Jitter, Stability: OK
Prime Power: 100-240V AC, 50-60 Hz.

Test Waveforms

Mainframe output into 50 Ohm load at 10 kHz, 500 ps, +40V,

500 ps/div. 10 V/div (100 mV/div × 40 dB):

Mainframe output into 50 Ohm load at 1 MHz, 2 ns, +43V,

500 ps/div. 10 V/div (100 mV/div × 40 dB):
Test method: Short leads are soldered across two 10Ω chip resistors in parallel. A coaxial cable is soldered across the resistor. The signal lead is inserted into the anode pin socket. The ground lead is inserted into one of the other pin sockets (which are grounded). The total effective resistor is $5 \, \Omega \parallel 50 \, \Omega (R_{\text{SCOPE}}) = 4.5 \, \Omega$.

Top waveform: Voltage across the parallel combination of the 4.5 Ω effective resistance. It should be approximately $(+40\, \text{V} / 54.5\, \Omega) \times 4.5\, \Omega = +3.3\, \text{V}$ in amplitude, which agrees with the observed waveform.

Bottom waveform: “MI” output, approximately $+40\, \text{V} / 11$.

Both: 2 ns/div, 2 V/div (200 mV/div × 20 dB).