



# AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS  
SINCE 1975

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## PERFORMANCE CHECKSHEET

Model: AVO-9A3-B-P-W4-AC18-P1B-T1B  
Type: Ultra-High-Speed Laser Diode Driver  
S.N.: 13496  
Date: October 20, 2016

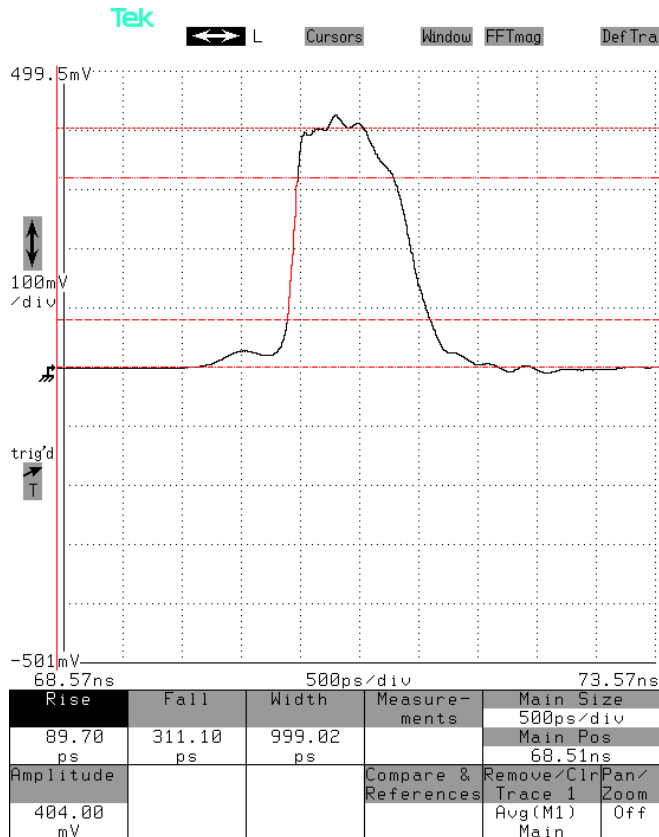
Output Amplitude: up to +43V, to 50Ω  
Pulse Width (FWHM): 0.4 – 4 ns  
Rise Time (20%-80%): ≤ 200 ps  
Fall Time (80%-20%): ≤ 450 ps  
PRF: 1 Hz – 1 MHz  
Jitter, Stability: OK  
Prime Power: 100-240V AC, 50-60 Hz.

Basic specifications: →

### Test Waveforms

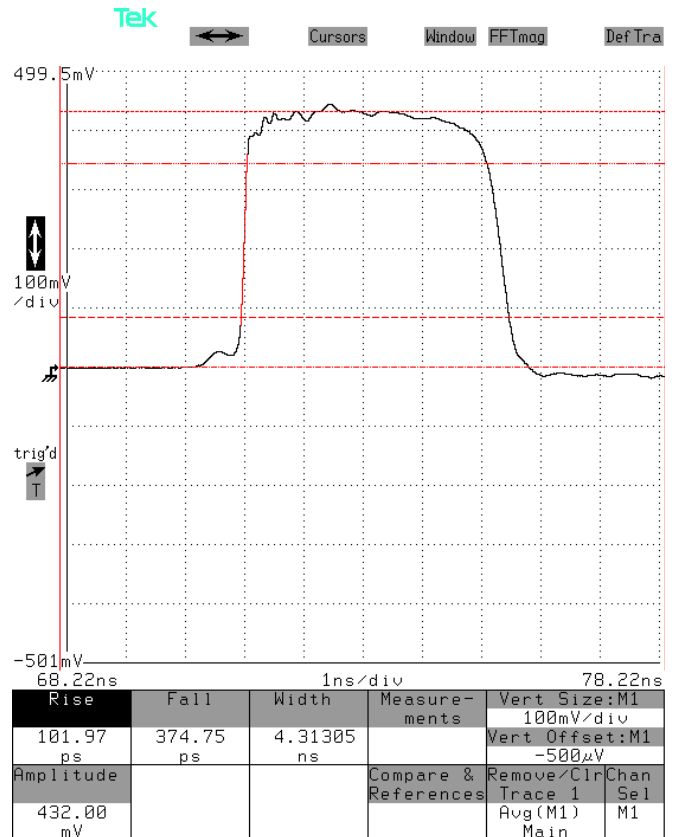
Mainframe output into 50 Ohm load at 10 kHz,  
1 ns, +40V,

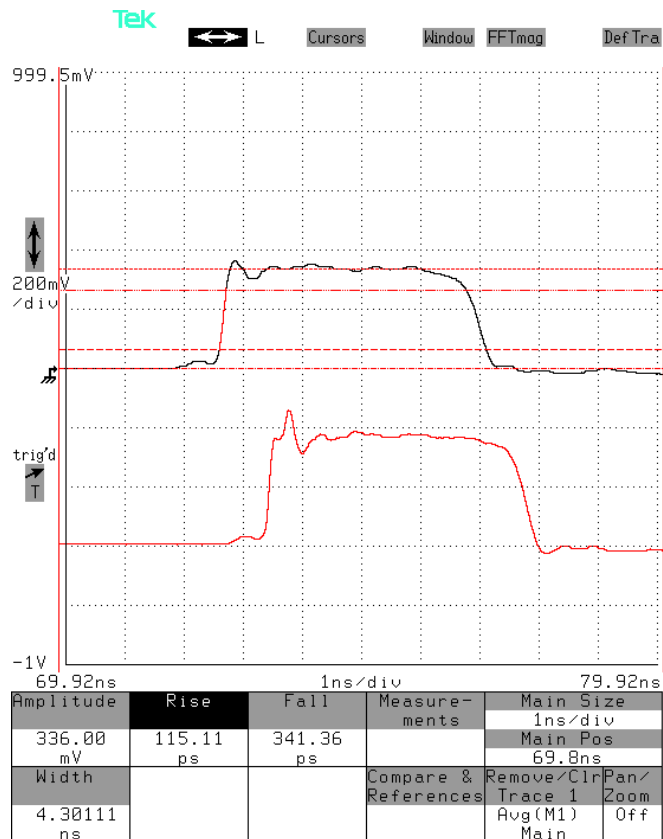
500 ps/div. 10 V/div (100 mV/div × 40 dB):



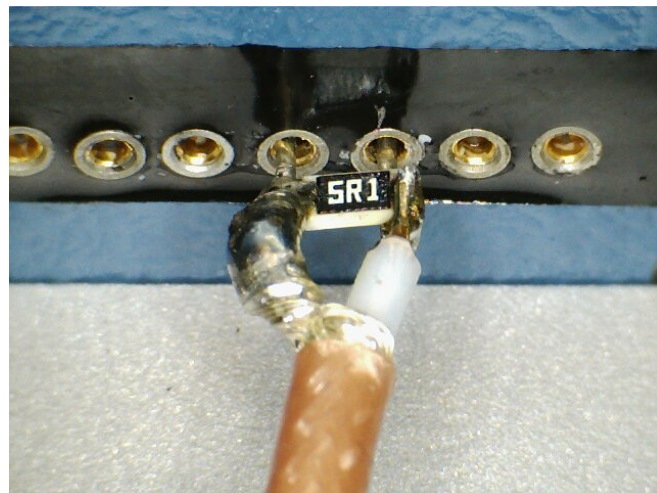
Mainframe output into 50 Ohm load at 100 kHz,  
>4 ns, +43V,

1 ns/div. 10 V/div (100 mV/div × 40 dB):





Test method: Short leads are soldered to a 5.1Ω chip resistor. A coaxial cable is soldered across the resistor. The signal lead is inserted into the anode pin socket. The grounded lead is inserted into the cathode pin socket. The total effective resistor is  $5.1 \Omega \parallel 50 \Omega (R_{SCOPE}) = 4.6 \Omega$ .



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

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

Both: 1 ns/div, 2 V/div (200 mV/div × 20 dB).