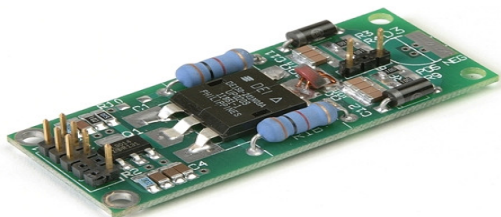


PCO-7110 FIXED PULSE WIDTH LASER DIODE DRIVER MODULE



- **Fixed Pulse Width**
- **Repetition Frequency to 50kHz**
- **$\leq 2.5\text{nS}$ Rise Time**
- **Compact Economical OEM**
- **Pulsed Current Monitor Output**

The PCO-7110 is a compact, economical OEM pulsed laser diode driver module. It is designed to provide extremely fast, high current pulses to drive laser diodes in range finder, LIDAR, atmospheric communications and other applications requiring high current, nanosecond pulses.

Two standard models are offered in the PCO-7110 product line, providing pulse currents ranging from 4A to 50A, and pulse widths from 4 nanoseconds to 15 nanoseconds, at frequencies as high as 50KHz. Mounting pads are provided to mount the laser diode directly to the driver. The four-hole mounting pattern accepts TO-18, TO-5, TO-52, 5.6MM, and 9MM packages (EG&G Optoelectronics R, S, T and U packages), as well as other packages of similar dimensions and lead spacing, mounted perpendicular to the

driver circuit board. To facilitate different packages and mounting preferences, there are two solder pads on the end of the board to accept various laser diode packages mounted on axis to the driver. Furthermore, the diode can be connected remotely from the driver using a low-impedance stripline interconnection between the mounting pads and the leads of the laser diode. A current monitor output may be viewed with an oscilloscope, providing a straightforward means to observe the diode current waveform in real-time.

Specifications

PCO-7110 Model	40-4	50-15
Pulse Output Current Range (Controlled By Input High Voltage Amplitude)	4A to 40A*	5A to 50A*
Maximum High Voltage Input	195V	
Pulse Width FWHM at Maximum Output Current	4nS \pm 1nS	15nS \pm 2nS
Rise Time (10% to 90% Typical)	<2nS	2.5nS
Maximum Pulse Recurrence Frequency. Controlled by Input Trigger	50kHz	11kHz
Maximum Duty Cycle	0.02%	0.0165%
Jitter (1st Sigma)	<1nS	
Throughput Delay (Delay From Input Trigger To Output Pulse)	33nS Typical	
Maximum Overshoot at Maximum Output Current	5%	
Output Current Monitor	10A/V Into 50 Ohms	
Trigger Input	+5V Into 50 Ohms 50nS to 100nS	
Support Power	+15V at 2mA	
Mechanical		
Length	2.45 in (62.2mm)	
Width	1.0 in (25.4mm)	
Height	0.3 in (7.5mm)	
Weight (Approximate)	10 Grams	
Operating Temperature	0°C to 70°C	
<p>ALL SPECIFICATIONS MEASURED INTO A SHORTED LOAD AND MEASURED WITH CURRENT MONITOR SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE LASER DIODE NOT INCLUDED * MAXIMUM OUTPUT CURRENT MUST BY DERATED BY 15% AT OPERATING TEMPERATURES ABOVE 60° C</p>		

