**Precision Pulse Control**
The PCO-7125 is a compact and economical OEM pulsed-current laser diode driver module. It is designed to provide extremely fast high-current pulses for driving laser diodes in range finder, LIDAR, atmospheric communications and other applications requiring high-current nanosecond pulses. This module offers variable output current from 500 mA to 5000 mA with pulse widths from 30 ns to 1 µs at frequencies up to 865 kHz.

**Laser Diode Connection**
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, 5.6 mm, and 9 mm packages.

To facilitate various packages and mounting preferences, two solder pads at the end of the board accept various laser diode packages mounted on-axis to the driver. Alternately, low-inductance strip line cable can be used to connect the board to a remotely-located diode.

**System Operation**
The DC high voltage and +12 VDC power supplies are connected via J1, a six-pin male header connector, using the supplied control cable. Pulse current depends on HV supply voltage over the range of 0 V to +200 V (maximum). Externally-generated pulses are fed to the gate input via J1. The width and repetition rate of the gate pulses directly set the timing of the output pulses.

A current monitor output is provided to observe the diode current in real time with an oscilloscope.

Four mounting holes are provided.

**Ordering Information**
- PCO-7125 Module
- Included Control Cable PCA-7000
- Optional Current Monitor Cable PCA-9245

For more information: **970.493.1901** or **sales@directedenergy.com**

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**Pulse Amplitude**
- Output current range: 500 mA to 5000 mA
- Pulse width: 30 ns to 1000 ns
- Rise time and Fall time: ≤ 17 ns \(^*2\)
- Frequency: 54 ns typical
- Throughput delay: Single shot to 865 kHz
- Housekeeping power required: 12 V ± 250 mV, 80 mA
- Maximum high voltage input: 200 V DC, 100 mA, ≤ 25 W \(^*1\)
- Compliance voltage: 5 V

**Gate**
- Gate input: +5 V
- Gate pulse width: 30 ns to 1000 ns
- Termination impedance: 50 Ω
- Gate Connector: J1 Pin 2

**Input connector**
- Gate input: J1 Pin 2
- +12 VDC input: J1 Pin 4
- High voltage input: J1 Pin 6
- Return: J1 Pins 1, 3, 5

**Current monitor**
- Current monitor scaling: 2 A/V typical
- Current monitor output impedance: 50 Ω
- Current monitor connector: J2 (SMB)

**Output connection**
- Four-hole mounting pattern accepts TO-18, TO-5, TO-52, 5.6 mm, and 9 mm packages

**General**
- Size (LxWxH): 63.6 mm x 38.2 mm x 14.2 mm
- Weight (approximate): 15 g
- Mounting hole spacing: 54.55 mm x 30.8 mm
- Hole diameter: 3.25 mm
- Operating Temperature: 0 °C to 35 °C
- Cooling: Air cooled

**Notes**
- \(^*1\) Driving a shorted load at maximum SOA level.
- \(^*2\) For output currents above 500 mA.
- All specifications are measured after the module is thermally stabilized (15 minutes), driving a shorted load and using the current monitor connection.
- Specifications are subject to change without notice.
- Warranty: One year parts and labor on defects in materials and workmanship.

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CAUTION:
Permanente damage will occur if the instrument is operated above the appropriate SOA line in the graph below.