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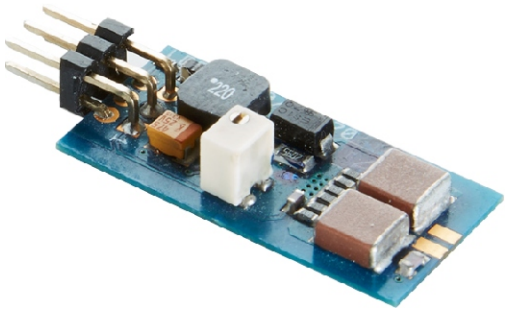
PicoLAS
FOCUSSING POWER TO THE POINT

Rev. 1905

LDP-V 10-70

Mini Driver for Short Pulse Laser Diodes



- Ultra compact OEM module: 32 x 15 mm
- 2.5 to 13 A output current
- < 4 ns rise time
- Pulse width control via trigger input (10 ns to 1 µs)
- Rep. rates from single shot to 100 kHz
- Single +15 V supply
- Current monitor
- Applications: LIDAR, Measurements, Ignition, Rangefinding, Biochemistry, ...

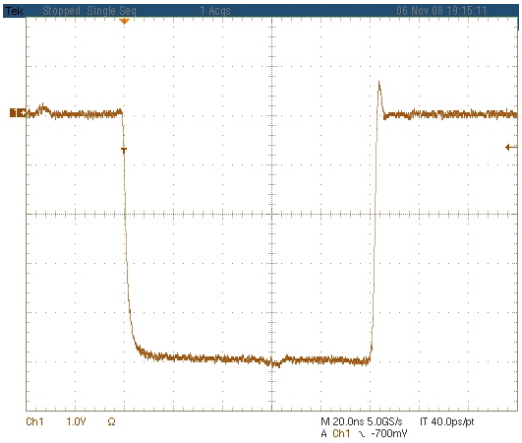


Figure: Current monitor output, scale: -2 A/Div

Product Description

The LDP-V 10-70 is the smallest available driver for nanosecond pulses. The device is optimized for size and functionality, integrating a HV-DC source and the pulsing stage into only 4.8 cm². Its typical application is driving pulsed laser diodes. Those can be mounted directly onto the LDP-V, eliminating the need for strip lines. The diode must be electrically isolated from earth (chassis) ground.
Despite its small size, the LDP-V is designed for ease of use. It eliminates the need for multiple peripheral supply units. A single 15 V DC supply and a trigger signal are all that is required for operation.

Technical Data*

Output current	2.5 .. 13 A
Max. output voltage	70 V
- int. high voltage	15 .. 70 V, 0.1 A, 3 W
Rise time	Typ. 3 ns, max. 4 ns
Trigger delay	Typ. 36 ns, max. 40 ns
Min. pulse width	10 ns
Max. pulse width	1 µs
Trigger range	Single shot to 100 khz** (refer to diagram with operating limits)
Max. duty factor	0.1 %
Trigger input	5 V into 50 Ω
Current monitor	2 A / V into 50 Ω
Supply voltage	+15 V 0.2 A
Max. power dissipation	2 W
Dimensions in mm	32 x 15 x 8
Weight	4 g
Operating temperature	-20 to +55 °C

* Measured into a short instead of laser diode. Technical data is subject to change without further notice.
** See manual for detailed information.

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PicoLAS
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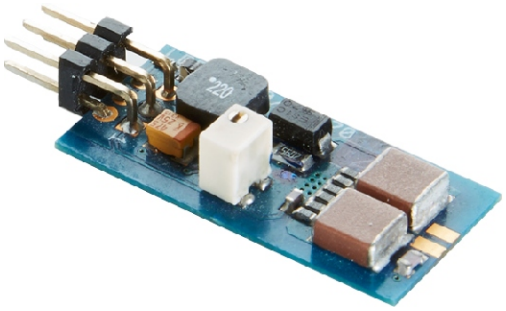
Rev. 1905

LDP-V 40-70

Ultra compact Driver Module for pulsed Lasers



- Ultra compact OEM module: 32 x 15 mm
- 8 .. 40 A output current
- < 7 ns rise time
- Pulse width control via trigger input (15 ns to 1 µs)
- Rep. rates from single shot to 100 kHz
- Single +15 V supply
- Current monitor
- Applications: LIDAR, Measurements, Ignition, Rangefinding, Biochemistry, ...

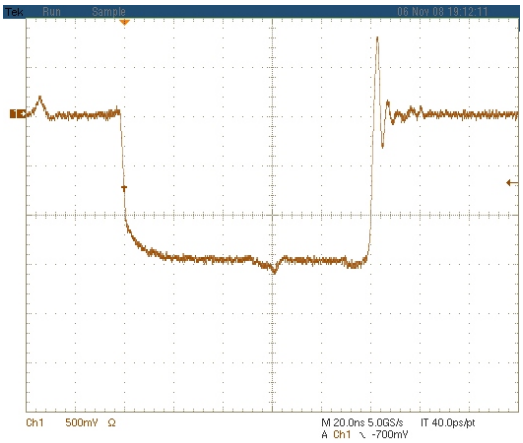


Figure: Current monitor output, scale: -10 A/Div

Product Description

The LDP-V 40-70 is the smallest available source for nanosecond pulses. The device is optimized for size and functionality, integrating a HV-DC source and the pulsing stage into only 4.8 cm². Its typical application is driving pulsed laser diodes. Those can be mounted directly onto the LDP-V, eliminating the need for strip lines. The diode must be electrically isolated from earth (chassis) ground.
Despite its small size, the LDP-V is designed for ease of use. It eliminates the need for multiple peripheral supply units. A single 15 V DC supply and a triggering signal are all which is required for operation.

Technical Data*

Output current	8 .. 40 A
Max. output voltage	70 V
- int. high voltage	15 .. 70 V, 0.1 A, 3 W
Rise time	Typ. 6 ns, max. 7 ns
Trigger delay	Typ. 36 ns, max. 40 ns
Min. pulse duration	15 ns
Max. pulse duration	1 µs
Trigger range	Single shot to 100 kHz** (refer to diagram with operating limits)
Max. duty factor	0.1 %
Trigger input	5 V into 50 Ω
Current monitor	20 A / V into 50 Ω
Supply voltage	+15 V 0.2 A
Max. power dissipation	2 W
Dimensions in mm	32 x 15 x 8
Weight	4 g
Operating temperature	-20 to +55 °C

* Measured into a short instead of laser diode. Technical data is subject to change without further notice.
** See manual for detailed information.

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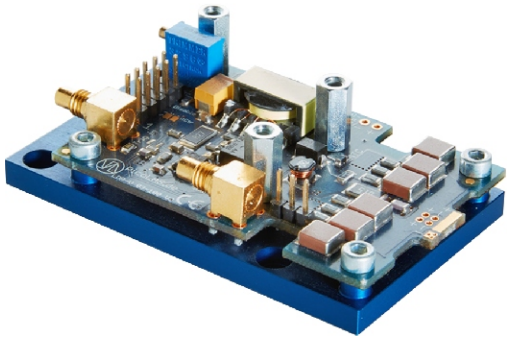
LDP-V 80-100 V3.3

Driver Module for pulsed Lasers



- Compact OEM module
- 5 to 80 A output current
- < 6 ns rise time
- Pulse width control via SMC trigger input (12 ns to 10 µs)
- Rep. rates from single shot to 2 MHz
- Single +15 .. 24 V supply
- Current monitor and isolated monitor
- Applications: LIDAR, Measurements, Ignition, Rangefinding, Biochemistry, ...

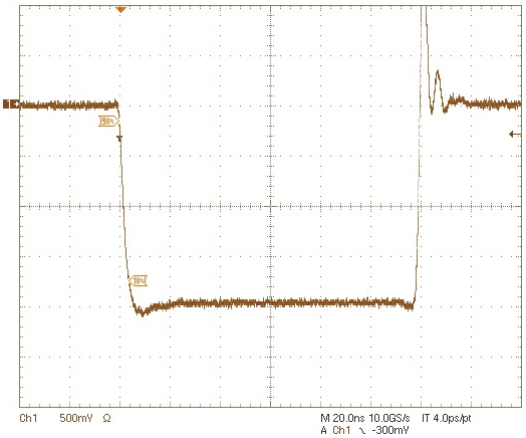


Figure: Current monitor output, scale: -10 A/Div

Technical Data*

Output current	5 .. 80 A
Max. output voltage	100 V
- int. high voltage	0 .. 100 V, 1 A, 15 W
Rise time	Typ. 4 ns, max. 6 ns
Trigger delay	Typ. 36 ns, max. 40 ns
Min. pulse duration	12 ns
Max. pulse duration	< 1 µs (@ 80 A)**
Trigger range	Single shot to 2 MHz** (refer to diagram with operating limits)
Trigger input	5 V into 50 Ω via SMC-jack
Trigger output	Galvanically isolated Rogowski coil
Current monitor	40 A/V into 50 Ω
Supply voltage	15 .. 24 V, 2.2 A Optional: 0 .. 100 V, 30 W (external high voltage)
Max. power dissipation	25 W
Dimensions in mm	75 x 44 x 20
Weight	76 g
Operating temperature	-20 to +55 °C

* Measured into a short instead of laser diode. Technical data is subject to change without further notice.
** See manual for detailed information.

Product Description

The LDP-V 80-100 is a small and inexpensive source for nanosecond pulses. The device is optimized for pulse repetition from single shot up to MHz repetition.
Its typical application is driving pulsed laser diodes. Those can be mounted directly onto the LDP-V, eliminating the need for strip lines. The diode must be electrically isolated from earth (chassis) ground.
Compatible packages: TO-18, TO-5, TO-52, 5.6 mm, 9 mm and similar.
Despite its small size, the LDP-V is designed for ease of use. It eliminates the need for multiple peripheral supply units. A single 15 .. 24 V DC supply and a triggering signal are all which is required for operation.
Additionally, you can upgrade the LDP-V with the PLCS-21 controller to enable USB 2.0 communication with a PC or the external operating unit PLB-21.
Do not use PLCS-21 with higher supply voltage than 15 V. If you use the PLCS-21 with higher voltage than 15 V the device will be damaged.

Optional Accessories: PLCS-21
PLB-21
LDP-V BOB
LDP-V KIT

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