

LDP-C 120-40

Driver for High Power Laser Diodes

Rev. 1905

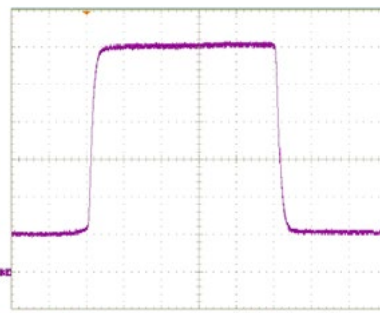


Figure: Current monitor output, scale: 20A/Div

- Output current: 10 .. 120 A
- Simmer current functionality
- Compliance voltage: 1 .. 40 V
- Analog modulation up to 4 kHz
- Optional housing available
- Stackprotector® and other protective features
- High efficiency

Technical Data*

Output current	10 .. 120 A
Max. compliance voltage	1 .. 40 V
Simmer current	0 .. 120 A
Max. output power	4800 W
Current ripple	0 .. 120 A **
Current overshoot	4800 W
Analog modulation (100 A _{pp})	< 1 %
Current settling time (full-scale)	< 1 %
Current setting input	< 4 kHz **
Current monitor	< 100 μs
Voltage monitor	0 .. 2.4 V external (50 A/V) 50 A/V ** 0.05 V/V **
Connectivity	LDP-C BOB PLB-21 USB 2.0
Supply voltage	24...48 V DC (at least 2 V above diode laser voltage)
Power dissipation @ 120 A / 12 V diode voltage	175 W
Dimensions in mm	103 x 180 x 69
Weight	850 g
Operating temperature	0 to +55 °C

* Specifications measured with a fast recovery diode instead of a laser diode. Technical data is subject to change without further notice.

** See manual for details

Product Description:

The LDP-C 120-40 is a compact and efficient current supply to drive stacked laser diodes. The operating range includes continuous current as well as analog modulation of the output current. If required, a simmer current from 0% to 100% of the output current can be set up easily.

The innovative current regulation concept of the LDP-C 120-40 produces, compared to the commonly used linear regulation concept, considerably less losses. Hence, only one supply voltage is needed for the control logic and the power stage.

The LDP-C 120-40 is suitable for a very wide range of applications. Especially several redundant protective features as well as a build in self-test enable the use for medical applications.

- Stackprotector® cuts the power stage from the supply
- Innovative current regulation concept actively prevents laser diode from overshoots and overcurrent
- A crowbar shorts the output in case of an error
- Integrated Soft Start
- Protection against transients through regulated current rise time
- Overtemperature shutdown
- Enable/Disable input
- Driver status output
- Protection of the laser diode against reverse currents

Optional Accessories: LDP-C BOB
PLB-21