

LDP-C/CW 80-40 NextGen

Driver for High Power Laser Diodes



PicoLAS

FOCUSSING POWER TO THE POINT

Rev.2401



vertical 10 A/div, horizontal 100 μ s/div
pulse: 500 μ s @ 50 A

Product description

The LDP-C/CW 80-40 NextGen 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. The innovative current regulation concept of the LDP-C/CW 80-40 NextGen produces, compared to the commonly used linear regulation concept, considerably less losses.

This and its wide input voltage range makes the LDP-C/CW 80-40 NextGen suitable for a very wide range of applications while several redundant protective features as well as a build in self-test provides safety for usage in medical applications.

- » Output current: 10 .. 80 A
- » Compliance voltage: 1 .. 40 V
- » Analog modulation up to 4 kHz
- » Pulse repetition frequency up to 200 kHz
- » Stackprotector® and other protective features
- » High efficiency

Technica data*

Output current	10 .. 80 A
Max. compliance voltage	1 .. 40 V
Max. output power	3200 W
Current ripple	< 1 %
Current overshoot	< 1 %
Analog modulation (100 A _{pp})	< 4 kHz **
Pulse repetiton frequency	< 200 kHz
Current settling time (full-scale)	< 100 μ s (using Enable) < 10 μ s (using Trigger)
Current setting input	0 .. 2.0 V external (50 A/V)
Current monitor	50 A/V**
Voltage monitor	0.1 V/V**
Connectivity	LDP-C BOB, PLB-21 Ethernet***
Supply voltage	24 .. 48 V DC (at least 2 V above diode laser voltage)
Power dissipation @ 120 A / 12 V diode voltage	175 W abs.max
Dimensions in mm	180 x 100 x 74 mm
Weight	1510 g
Operating temperature	0 to +55° C

Technical data is subject to change without further notice.

* Specifications measured with a fast recovery diode instead of a laser diode.

** See manual for details

*** Currently not suitable for productive use.

More information:

- » 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

Accessory

- » LDP-C BOB
- » PLB-21