

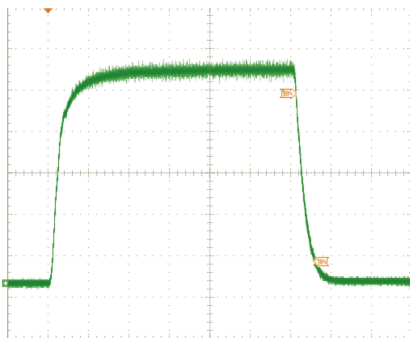


LDP-CW 250-40

Driver for Laser Diode Stacks (10 kW)



- Fast analog modulation
- High efficiency
- Compact design: 5 W / cm³
- Isolated control interface



Product Description

The LDP-CW 250-40 is a very efficient and compact driver for high power laser diodes and is available in two different versions: Standard and fast modulated (F). Both versions deliver a max. output voltage of 40 V with a current of up to 250 A. This 10 kW driver has an exceptional compact design leading to excellent power density of 5 W/cm³ and a high efficiency of up to 94 %.

The standard version features a very low current ripple of <0.8 %, minimal overshoot of <3 % with a maximum modulation frequency of 1 kHz. The F version increases the maximum modulation frequency to 50 kHz (-3 dB) with a pulse rise time of <20 μ s, while keeping the maximum overshoot below 3 %.

Technical Data*

Output current	10 A .. 250 A (300 A peak)
Compliance voltage	10 V .. 40 V
Efficiency	> 91 % @ 12 V, > 40 A
Current ripple	< 2.8 % (measured at 250 A)
Current overshoot	< 3.0 % (measured at 250 A)
Analog modulation	0 .. 50 kHz
Modulation voltage	0 .. 3 V (10 mV/A)
Current monitor	0 .. 3 V (10 mV/A)
Current rise time	< 20 μ s
Current fall time	< 20 μ s
Supply voltage power stage	20 .. 56 V, typ. 48 V
Supply voltage control stage	18 .. 25 V, typ. 48 V
Losses	280 W @ 12 V/250 A
Cooling	Water max. 45 °C
Power connection	Bus bars 5 x 10 mm
Control (18 V .. 60 V / 6 W)	Phoenix RM5.08
Modulation, current Monitor	SMC
Dimensions in mm	310 x 110 x 60
Weight	2.5 kg

* Specifications measured with a fast recovery diode instead of a laser diode and measured at a supply voltage of 24 V. Technical data is preliminary and subject to change without further notice.