

HEIM ELECTRONIC

HIGH POWER LASER DIODE DRIVER DL60-250

- Output Current: 1 - 60A
- Compliance voltage :
max 5.5V
- Pulsed current or CW range
- High efficiency
- Several protective features
- Very compact
- Custom specific models

Technical Data:

Input Voltage: min. 4.75Vdc..... max. 6.2V dc

Compliance voltage @ 60A:

$0,9 \times U_{input}$

Nominal output current: 60A
Current ripple: < 0.5% (300mApp)
Ripple frequency: = 2MHz
Efficiency: 87% - 95%
max. Output Power: 250W

Thermal impedance to case: < 2°C /W

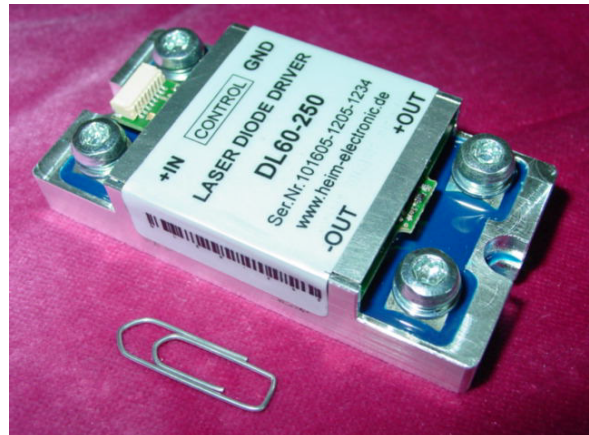
Overcurrent limit: <= 70A (user-specific)

Overvoltage limit: <= 120% from compliance
voltage (user-specific)

Overtemperature limit: 80°C (user-specific)

Current setting input: 0...3Vdc (20A/V):
Output current accuracy : 0,5%
Thermal stability: =< 150ppm / °C
Current monitor: 0...3Vdc (20A/V)
Current monitor accuracy : 0,5%
Current settling time (full scale): < 100µs

Dimensions: 80mm x 40mm x 18mm
Weight: 135g



Description:

The DL-60-250 is a switch-mode current-source in multi-channel technique with very high output current and very low current ripple. It is intended to drive laser diodes in industrial applications where rectangular pulsed currents or CW mode are needed. Analogue modulation is also possible.

Due to the multi-channel architecture the effective ripple frequency is very high (2Mhz). For good thermal performance, the DL-60-250 is incapsulated in a very compact aluminium case with two M4 mounting holes. The maximum CW output power is 250W at 20°C case temperature and derates linearly to 130W at 60°C case temperature. The inner temperature is converted in an analogue voltage and may be read out on the analogue interface connector, so the "thermal reserve" can be monitored.

In case of an overcurrent, overvoltage or overtemperature fault, the converter is stopped and the output is shorted to ground by a MOSFET. Simultaneously the "Power good" output (open collector) will be deactivated. Pulling the "Enable" input to ground, the driver will be disabled. Releasing the "Enable", the driver will be activated again and the "power good" output will be pulled to ground. The active status is optically monitored by a LED.

Custom-specific models for higher input voltages (up to 12Vdc) are possible.