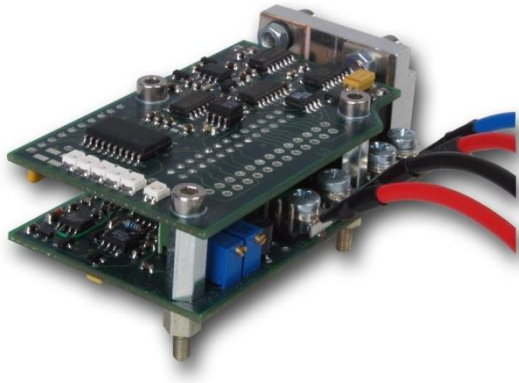


## DLD 008 SERIES HIGH POWER LASERDIODE-DRIVER



- laser current up to 8 A
- constant current / constant power mode
- single supply 5 V
- comprehensive transient protection
- digital / analog modulation up to 100 kHz
- 1  $\mu$ sec turn off time on fail
- status-indication by LED`s
- compact low cost OEM-unit

The **DLD 008 series of laserdiode drivers** provides its user with an extraordinary stable and low noise output **current of up to 8 A**.

3 different standard versions with output currents of 3, 5 and 8 A are available from stock.

Any current level within these ranges is **adjustable manually** on board as well as by an **external control voltage**.

The requested operating mode, i.e. **constant current** respective **constant power** is defined by a simple solder bridge on the control terminal.

A **modulation depth of up to 100%** is possible with pulsed as well as analog modulation. Frequency components from **DC to 100 kHz** are transmitted with high signal integrity.

An **adjustable current limit** with a very short response time offers the possibility of installing an individual and effective "firewall" against laser diode damage.

The driver is operated from a **single supply voltage of 5 V** with no special restraints on power quality. This feature allows to connect all single laserdiodes with operating voltages up to 2,5 V. Special driver versions enable the **series connection of up to 5 laser diodes**.

**Several integrated protection circuits permit operating the laserdiode without any risk, even under harsh conditions such as line break, power fail or strong electromagnetic disturbances.**

In any case the **time limit for a controlled turn off is well below 1  $\mu$ sec**.

The **laser current** can already be **preadjusted in the standby mode** of operation, whereas the laserdiode is disabled.

Terminals for an **external NTC** allow to notify critical temperature levels outside the driver. The laser diode can thus be switched off if the actual temperature approaches a dangerous level.

The **interlock loop** complies with the regulations by law concerning the **laser safety**.

A series of on-board **LED`s** shows the **actual state** of the driver.

## SPECIFICATIONS FOR THE DLD 008 SERIES

<b>operating modes</b>	constant current (CC) constant power (CP)
<b>laser current ranges</b>	version - 03: 0 ... 3 A version - 05: 0 ... 5 A version - 08: 0 ... 8 A
<b>adjustment of laser current</b>	manually by internal potentiometer electronically via control input + 1 V → full range <sup>1</sup>
<b>compliance voltage</b>	≥ 2,5 V @ max. output current
<b>analog modulation input</b>	analog modulation input DC to 100 kHz (-3 dB) input resistance 10 kΩ + 1V → full range <sup>1</sup>
<b>digital modulation input</b>	DC to 100 kHz TTL-compatible optically isolated
<b>monitor output laser current</b>	+ 1 V → full range <sup>1</sup> source resistance 0 Ω short circuit protected
<b>current slew rate @ power on</b>	10 A/sec
<b>turn off time on fail</b>	≤ 1 μsec <sup>2</sup> @ laser line break @ supply undervoltage ≤ 4,2 V @ overtemperature
<b>transient protection</b>	3 fast protection circuits EMC fi lters on DC input ESD protection of laser diode
<b>primary supply</b>	5 V ± 10 % current drawn equals the output current plus the standby current (typ. 70 mA)
<b>ambient temperature range</b>	- 10 °C .... + 35 °C
<b>dimensions</b>	71 x 41 x 25 mm

<sup>1</sup> other scaling on request

<sup>2</sup> laser loop inductance ≤ 1 μH

**Please note:** Specifications are subject to change without notice