



Laser diode

The laser diode driver LD-SMART was designed to operate our recently developed miniature passive q-switched laser systems ELM-series in modular and as extendable system. This device contains up to three temperature controllers for laser diode, laser crystal and second harmonic generation, which regulate the external thermoelectrical cooler (TEC, Peltier). The mode of laser diode operation can be changed between continuous wave, pulsed mode (with internal pulse generation or by external synchronization) or external analogue modulation. In case of external synchronisation, the laser driver is able to process a TTL input signal. A user friendly software to control the LD-SMART by an external PC is through USB or Bluetooth interface on a touch screen tablet provided. Furthermore, the communication protocol is documented, which allows a simple integration into existing systems. For more technical details please read the user manual.

We offer variety of laser diodes integrated in LD-SMART.

- 0808nm 6W cw +/-3nm
- 0808nm 8W cw +/-3nm
- 0808nm 15W cw +/-3nm
- 0808nm 20W cw +/-3nm
- 0830nm 1W cw +/-10nm
- 0830nm 2W cw +/-10nm
- 0915nm 8W cw +/-10nm
- 0940nm 8W cw +/-10nm
- 0975nm 8W cw +/-10nm



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LD-SMART

Parameter	Unit	Min.	Max.	Scale	Step
Control voltage	V	0	5	1	0.1
Control voltage min.	V	0	5	1	0.1
Control voltage max.	V	0	5	1	0.1
LD temperature	°C	0	100	1	1
LD pulse width (µs)	µs	10	1000	10	1
LD pulse repetition rate	Hz	0	10000	100	1
LD pulse delay (µs)	µs	0	1000	10	1
TEC high speed	Hz	0	1000	100	1
Temperature control	Hz	0	100	10	1
LD pulse width (µs)	µs	10	1000	10	1
LD pulse repetition rate	Hz	0	10000	100	1
LD pulse delay (µs)	µs	0	1000	10	1
TEC high speed	Hz	0	1000	100	1
Temperature control	Hz	0	100	10	1
LD pulse width (µs)	µs	10	1000	10	1
LD pulse repetition rate	Hz	0	10000	100	1
LD pulse delay (µs)	µs	0	1000	10	1
TEC high speed	Hz	0	1000	100	1
Temperature control	Hz	0	100	10	1

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specification

SPECIFICATIONS:
 Optical Spectral Range: 400 to 1700 nm
 Total avg. output power: 100W max.
 Operation mode: cw
 Power Density (400-1700nm): 1-100 W/cm²
 Output Filter: none
 Single mode



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ELMSC for super continuum generation

LD-SMART OEM (/fileadmin/user_upload/Electronics_2016.PDF)

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