Precision OEM Laser Diode Driver

(Rubigen / June 2012) Meerstetter Engineering presents a novel, compact OEM laser diode controller for CW, QCW und pulsed laser applications. The LDD-1121 supplies diodes with up to 15 A und 15 V, and in 1 mA resolution. The main features of this fully digital device are precision current control (±1 mA) and stability, virtually ripple-free current generation and overall power efficiency well above 90%. Output current can be modulated in the kHz range and chopped as pulses with steep slopes and high repetition frequencies. Critical system values monitoring is hardware-implemented (ensuring ultra fast switch-off times in case of violation), an NTC sensor input for laser diode temperature supervision comes as standard.

Optionally, the LDD-1121 can be equipped with hardware for photodiode laser power measurement, allowing – in conjunction with corresponding firmware – e.g. direct laser power feedback control. The LDD-1121 can be programmed and/or controller over isolated USB, RS485 or general I/O interfaces.

To facilitate evaluation, commissioning and integration of OEM laser diode precision control, all devices are shipped with a user-friendly PC software for USB configuration, control and diagnosis. The LDD-1121 is designed to team up with the TEC controller / Peltier driver TEC-1122. Both devices share identical physical dimensions, have the same power requirements, and are remotely controllable over a dedicated system bus per RS485 und digital I/O.

Meerstetter Engineering specializes in custom-specific solutions as well: in line with that philosophy, the LDD-1121’s hard- and firmware are highly configurable. One can expect to see this innovative and affordable OEM laser diode driver being used in a variety of settings.

Meerstetter Engineering is a family-owned electronics engineering company, developing and manufacturing power electronics, high-voltage technology and embedded systems. With laser-electronics as its specialty, Meerstetter Engineering also consults clients. e.g. to help them finding a custom laser solution.

Contact: Meerstetter Engineering GmbH 3113 Rubigen, Switzerland www.meerstetter.ch