

## Key Features and advantages

- Self-contained enclosure combines and incorporates:
  - Device mount (for Butterfly or DIL LD/SLED/SOA, user-interchangeable)
  - Device current driver and TEC driver
  - Sophisticated control electronics and firmware
- No special laser-controller and/or TEC cables required
- External modulation capability
- USB computer interface and user-friendly JAVA software that combines:
  - Installation and configuration wizard
  - Virtual instrument user interface offering full device control, real-time readouts,
  - parameter setting and updating, data logging, error signaling and diagnostics
  - Safety key-switch option available



## General Description

The Compact Laser Diode Driver (cLDD) is an all-in-one unit that combines (a) a user interchangeable mount appropriate for a laser diode, SLED, SOA or similar device, (b) a low noise current driver and (c) a TEC controller, all in a self-contained enclosure of exceptional design, engineering and convenience.

The product includes a USB port and a user-friendly JAVA software application for realtime device monitoring, control and data logging, and can be operated in 3 ways:

- stand-alone, using the built-in keypad and display to change and/or monitor the mode of operation - either *constant current* or *constant power* - and/or the set points for device current, power and temperature, or
- connected to a computer via its USB port and fully controlled by the included JAVA software application that provides a virtual instrument user interface offering real-time readouts and data logging, or
- as part of an automated setup via its USB port and either the included software application or available LabView™ drivers that can also be provided on request.

At any time, the selected mode of operation - *constant current* or *constant power* -, device current, power and temperature can be changed from either the included software application or the built-in keypad/display. EM4 suggests that the included software application be used initially to input device configuration, alarm and safety parameter values, as the equipment incorporates hardware device protection features like slow current ramp-up, current and temperature limits that should be preset for each specific device. External modulation capability of the device current is included as standard feature.

The Compact Laser Diode Driver is equipped with either a 14 pin Butterfly mount (including routing boards for Type I, Type II and custom pinout devices) or a DIL mount. The mounts are user-interchangeable and can be purchased separately. The cLDD can be mounted on 1" grid or metric surfaces, horizontally or vertically, using provided parts.

The Compact Laser Diode Driver is available with a key switch option. The key switch is positioned between the DC power supply and the Compact Laser Diode Driver. In the "Off" position all DC power to the Driver is cutoff and the Driver is disabled. The key may be removed when in the "Off" position. In the "On" position the DC power is available to the Driver and the Driver then works normally. In the "On" position the key cannot be removed.

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For pricing and delivery information, please contact EM4 inc. direct at +1 781 275 75 01, sales@em4inc.com or any of the representatives listed at www.em4inc.com.

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## Typical Specifications

Device current	Max. 1 A (Max. 2 A as option)
TEC driver current	Max. 4 A
External analog modulation	>500 kHz (3 dB), AC coupled
External Power Supply	100-240 V AC, 50-60 Hz, to 5 V DC, 5A
Dimensions (WxDxH)	135 mm x 200 mm x 45 mm
	(with 14 pin Butterfly mount included)

## Software installation wizard and control application



As a standard feature of the Compact Laser Diode Driver, EM4's user-friendly JAVA software application allows an easy initial configuration of the mounted laser diode, SLED or SOA. As standard feature, Windows and Linux are supported, but EM4 can also provide LabView™ drivers. Using the software application, the user can input device safety parameter values, establish and change the desired mode of operation - either *constant current* or *constant power* - and/or the set points for device current, power and temperature. Configuration files are saved to the user's computer, for later use. The application also provides a virtual instrument user interface offering real-time readouts through which the operation of the mounted device can be fully monitored and controlled.

## Included items

- Compact Laser Diode Driver, equipped with chosen device mount. For Butterfly mount options, three routing boards are included: Type I, Type II and user configurable
- External AC/DC Power Supply (110-240 V AC to 5 V DC, 5 A) (-KS version has key switch on DC output side)
- CD-ROM with User Guide, JAVA installation wizard and control application
- Mounting brackets and screws

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# Compact Laser Diode Driver

## Ordering Information

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Part number: **EM451-[DC]-[DM]-[KS]** Sample: **EM451-1-B-KS**

[DC] Device current

- 1 Max. 1 A
- 2 Max. 2 A

[DM] Device mount

- B With 14 pin Butterfly mount (for DC=1 or DC=2)
- D With DIL mount (for DC=1 only)
- I With 14 pin Butterfly mount. User-interchangeable DIL mount also provided (for DC=1 only)

[KS]

- KS With Safety Key Switch
- NS Without Safety Key Switch

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