



User Manual

LDP-C BOB V 3.1

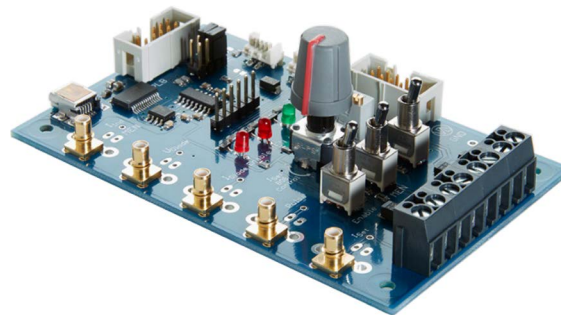


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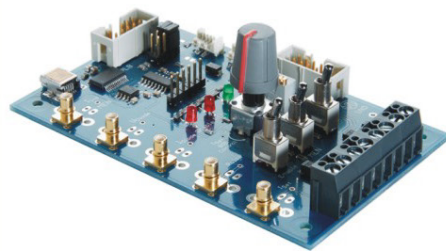
PicoLAS

FOCUSING POWER TO THE POINT

LDP-C BOB V3.1

Breakout Board for LDP-C/ -CW/ -QCW Series

Rev. 1905



- Compatible with all LDP-C/ -CW/ -QCW drivers
- Easy access to all monitor signals
- Connector for trigger input
- Status LEDs
- Current setpoint poti
- Enable switch

Product Description

The LDP-C BOB provides an easy access to all control signals of the LDP-C/ -CW/ -QCW series. Laser diode current, laser diode voltage as well as inductor current monitor signals are lead to SMC jacks for easy connection of an oscilloscope. A SMC connector for the trigger input is also available. The enable signal is connected to a switch to activate the driver easily. By using the poti the current setpoint can be configured very quickly. Two LEDs indicate the status of the driver. The BOB is powered by the driver. Thus, no additional power supply is required.

Technical Data*

Supply voltage	None (supplied through the driver)
Dimensions in mm	67 x 100 x 32
Weight	54 g
Operating temperature	-20 to +55 °C

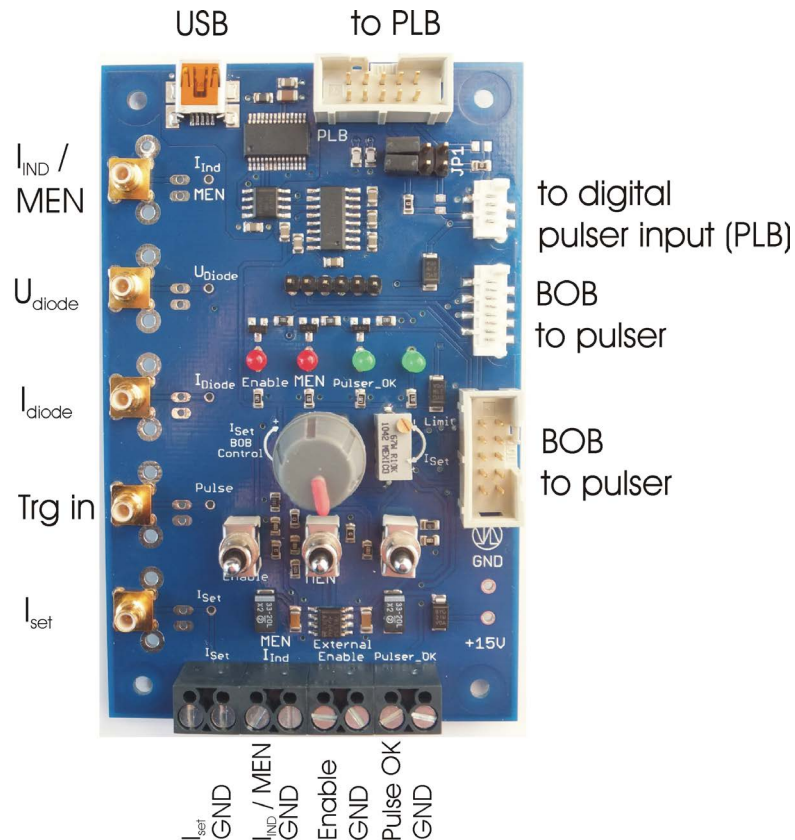
* Technical data is subject to change without further notice.

Compatible Products: LDP-C Series
LDP-CW Series
LDP-QCW Series

Connectors of the Breakout Board (BOB)

The LDP-C BOB provides an easy access to all control signals of the LDP-C, LDP-CW and LDP-QCW driver series.

For a detailed description of all signals as well as maximum signal levels, please refer to the respective datasheet and manual of the driver.



BOB to pulser (“pulser” = driver)

The “to pulser” connectors are used to connect the LDP-C BOB to the PicoLAS drivers. The upper two white connectors are used to connect with the LDP-CW 20-50 / PL-TEC 2-1024 while the lower one is fully compatible with the BOB V2 standard.

When using the BOB with the LDP-CW 20-50 / PL-TEC 2-1024 both connectors to the driver must be used in order for the LDP-C BOB to work properly as it draws its power from the PLB connection.

To digital pulser input (“pulser” = driver)

This connector is used to connect a PLB-21 with the driver connector. The jumper block is used to determine whether the digital input is routed to the PLB-21 connector (to PLB) or the USB connector.

USB

This connector is used to connect the “to digital input” connector to a PC. The jumper block is used to determine whether the digital input is routed to the PLB-21 connector (to PLB) or the USB connector.

I_{IND} / MEN

The measured diode current is fed to this SMC Jack. When the connected driver uses the MEN signal, this can be applied here.

If this connector is used to monitor the diode current or to apply the MEN signal, the MEN switch must be set to middle position.

U_{diode}

The measured diode voltage is fed to this SMC Jack.

Trg In

An external trigger can be applied here, if the connected driver supports this.

I_{set}

The external current setpoint voltage can be applied here.

Pulser OK (“pulser” = driver)

The pulser_ok signal is fed to this 2 pin screw terminal.

LEDs

The LDP-C BOB is equipped with four LEDs, which have the following functions (from left to right):

Enable

This LED indicates the state of the ENABLE signal.

MEN

This LED indicates if the MEN signal is given. Please note that the MEN pin is shared with the inductor current signal in some drivers. When the inductor current signal is used the LED might flash according to the measured current.

PULSER OK (“pulser” = driver)

This LED indicates the state of the pulser ok signal.

Switches

The LDP-C BOB is equipped with three switches which are described below (from left to right). All switches support the three states: up – middle – down.

Enable

Upper position: driver enabled.
Middle position: driver disabled.
Lower position: driver disabled.

Master Enable

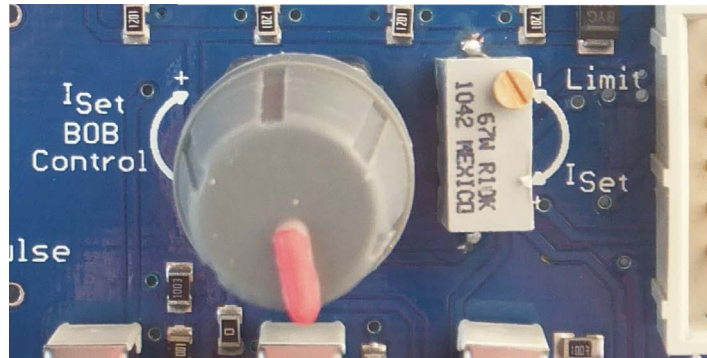
Upper position: driver enabled.
Middle position: driver disabled.
Lower position: driver disabled.

I_{set} Control

Upper position: setpoint input of the driver is connected to the I_{set} BOB Control Poti.
Middle position: setpoint input of the driver is connected to the external setpoint input.
Lower position: setpoint input is tied to GND, which equals a setpoint of 0 A.

Potis

The LDP-C BOB has two Potis: The current setpoint control (left) and the current limiter control (right). Both Potis are used when the I_{set} control switch is in the upper position.



BOB I_{set} Limit Poti:

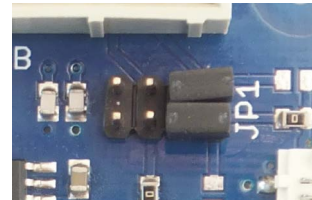
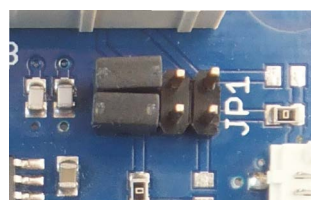
The BOB I_{set} Limit Poti sets the maximum setpoint current that can be provided by the I_{set} BOB Control Poti. This is necessary to adapt the BOB to the different input scales of the compatible drivers.

How to set up the I_{set} Limit Poti:

- 1.) Connect the BOB to the desired driver.
- 2.) Disable the driver and apply the power supply.
- 3.) Turn I_{set} BOB Control Poti fully clockwise (maximum).
- 4.) Connect a Voltmeter to the External I_{set} input.
- 5.) Adjust the I_{set} Limit Poti so that the measured voltage at the external I_{set} input equals the maximum setpoint input voltage specified in the driver datasheet. (i. e. LDP-C 40-05: 1.6 V)
- 6.) Turn the I_{set} BOB Control Poti fully counter clockwise (minimum). Disconnect the Voltmeter. The driver and the BOB are ready for use.

Jumper

The jumper block in the upper right corner of the LDP-C BOB controls whether the "PLB to Pulser" connector is routed to the "BOB to PLB" (left picture) or to the USB connector (right picture).



Ordering Information

The LDP-C BOB is available in four different versions as shown in the table below:

LDP-C BOB-V3.1-	Jacks	USB Converter
-BNC	horizontal BNC	not available
-SMC	vertical SMC	not available
-BNC-USB	horizontal BNC	available
-SMC-USB	vertical SMC	available

