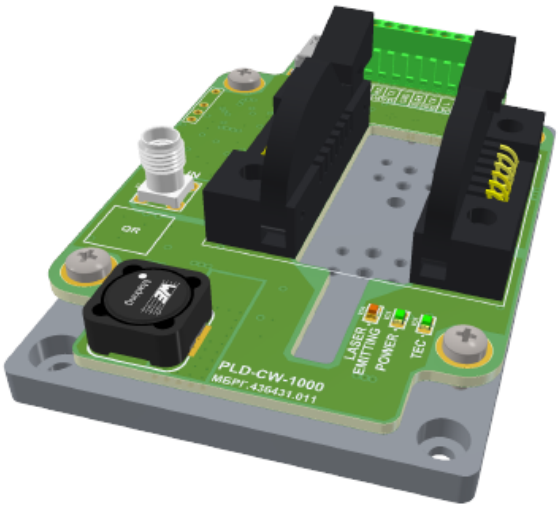
PLD-CW-1000-ZIF-TII

CONSTANT CURRENT LASER DIODE DRIVER

Key Features



- **Special Design for 10/14 pin Butterfly Laser Diode**
- **Constant Current mode**
- **Output Current up to 1000 mA**
- **Compliance voltage up to 3 V**
- **Low current ripple**
- **High current stability**
- **USB, RS-232, CAN, UART interfaces**
- **LabView compatible**
- **Python libraries**
- **Analog RF Modulation**
- **Optical power stabilization mode**
- **On-Board TEC Controller**
- **5Vdc Input Power**
- **Completed by Heatsink**
- **Compact Size 85 mm x 60 mm x 21 mm**

Description

The PLD-CW-1000-ZIF-TII is a constant current laser diode driver for powering 14-pin butterfly laser diode modules for applications, which require operation in low-signal RF modulation mode. The driver provides precision low ripple constant current regulation.

The driver circuitry operates from a single 5Vdc power source. The driver supplies a bidirectional proportional-integral-derivative (PID) thermoelectric cooler controller (TEC) with current capability of 1.5A and voltage capability of 4V.

The main parameters of PLD-CW-1000-ZIF-TII (output current, temperature set, monitor photodiode signal) are controlled by computer interface. The GUI can control multiple drivers connected by CAN/USB hub.

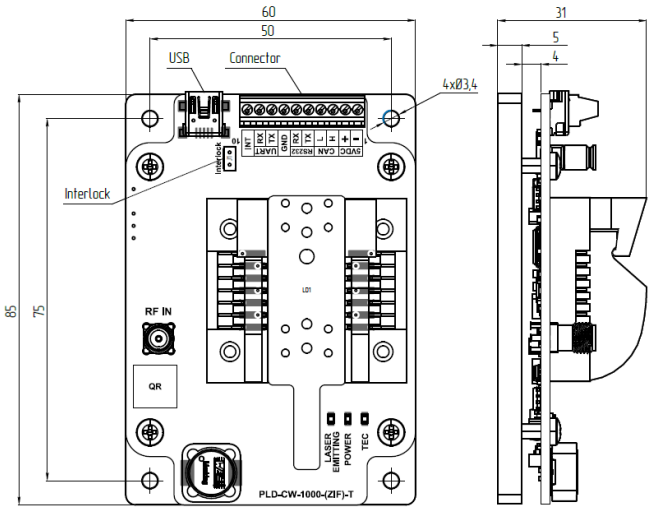
The PLD-CW-1000-ZIF-TII has push-in connector for easy connecting butterfly laser diode directly into driver board and large heat sink for stable heat dissipation.

Specifications

Parameter	Min.	Typ.	Max.	Units
INPUT				
Voltage	4.8	5.0	5.2	V
Current	-	-	2	A
RF modulation*	0.005	-	200	MHz
OUTPUT				
Current	-	-	1000	mA
Current Regulation Step	-	0.1	-	mA
Current Ripple	-	-	1	%
Current Stability	-	-	0.2	%
Current Set Accuracy	-	-	1	%
Compliance Voltage	1	-	3	V
TEC current setting range	-1.5	-	+1.5	A
TEC Voltage	1		4	V
TEC Temperature Set	5	25	50	ºC
TEC Temperature Step	-	0.1	-	ºC
TEC Temperature Accuracy	-	-	0.1	%
TEMPERATURE				
Operating	+10	-	+50	ºC
Storage	-20	-	+70	ºC
Humidity, Non-Condensing	-	-	95	%
CONNECTIONS				
Power and interface connector	Terminal block (1-282834-0 TE connectivity)			
USB	Mini-USB, Type B (1734035-1 TE connectivity)			
Interlock	Terminal block (282834-2 TE connectivity)			
MECHANICAL				
Size	85 mm x 60 mm x 31 mm			
Weight, not more	160 g			

* Performance depends upon laser diode characteristics

Dimensions and Connections



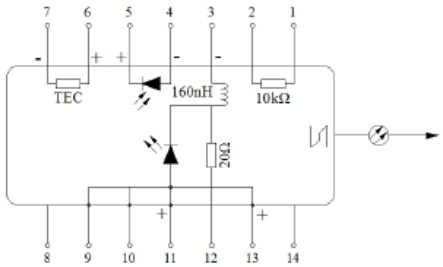
PIN	Name		Description
1	-	5VDC	Device ground
2	+		Power input
3	H	CAN	CAN bus high
4	L		CAN bus low
5	TX	RS232	RS232 port transmit
6	RX		RS232 port reception
7	GND		Device ground
8	TX	UART	UART port transmit
9	RX		UART port reception
10	INT		INTERLOCK

INTERLOCK

Connect to the external interlock circuit. Open: device is locked, Closed: device is operational. Internally pulled up to 3.3V by 1 kΩ resistor. Use open collector or dry contact. **Note:** The laser emission can only be started when the interlock circuit is closed

Compatible Laser Pinout

14 pin butterfly package Type 2 (Telecom)



1	Thermistor
2	Thermistor
3	Laser dc Bias (Cathode) (–)
4	Monitor PD Anode (-)
5	Monitor PD Cathode (+)
6	Thermoelectric Cooler (+)
7	Thermoelectric Cooler (–)
8	NC
9	Case Ground
10	Case Ground
11	Laser Anode (+), Case Ground
12	Laser RF Cathode (-)
13	Laser Anode (+), Case Ground
14	NC