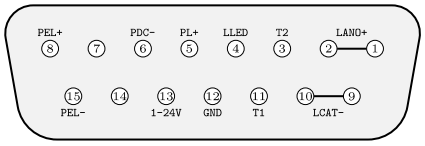
Tabletop Laser & Peltier Controller

Type: ds11-la04v014-pa04v14-t8545-460

Laser max. : 4A – 14V
TEC max. : 4A – 14V
- t-rise-fall <10µs (optional <1µs)
- Supply Voltage: 100~230VAC – 50/60Hz
- External, Analog and Digital Modulation
- Internal Pulse Generator
  Continuouse Pulses, Single Pulse, Pulse Bursts,
  Internal or External Triggered
- Bias Current option
- Pilot Laser Support
- External Supply max. 1..22V – 800mA for Fan etc.
- Photo Diode Current Monitor max. 4mA
- optional additional TEC stage

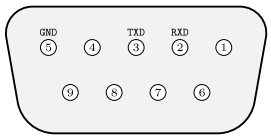
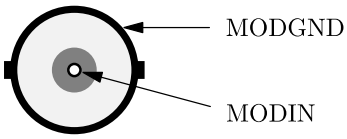
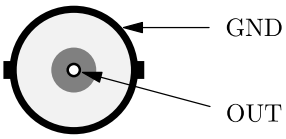
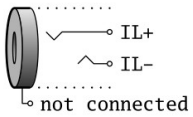
Laser & Peltier Connector



SubD15-female

PIN.No	Abbr.	Function
1;2	LANO+	Laser Diode Anode (+)
3	T2	Temperature Sensor 2 Input, default NTC10kΩ, v.s. GND
4	LLED	Laser Active LED - Anode (+), 5V over 470R, v.s. GND
5	PL+	Pilot Laser (+), v.s. GND
6	PDC-	Photo Diode Cathode (-) [1]
8	PEL+	Peltier element (+)
9;10	LCAT-	Laser Diode Kathode (-)
11	T1	Temperature Sensor 1 Input, default NTC10kΩ, v.s. GND
12	GND	Common Ground
13	1-24V	1 to 24V Supply, max. 500mA, vs. GND, supports fan etc.
15	PEL-	Peltier element (-)

Annotation: The laser ignores by default the 2nd temp. sensor state. If you want to activate this you need to send "2SMC4" command over the RS232.

RS232 Connector	AMOD/DMOD-IN Connector	MOD-OUT Connector	Interlock Connector
			
SubD-9 female Standard RS232-Connector 9600-Baud-8N1 (No Null-Modem Cable !)	BNC-Socked Input-Impdanz 10kOhm Digital Modulation with TTL-Pegel Analog Mod. 0-4[V] => 0-Imax[A]	BNC-Socked, current monitor 0-Imax[A] -> 0-4[V] Take care for laser isolation if you connect GND potential to an oscilloscope f.e.	Jack Connector 3.5mm Laser runs only if closed (ca. 5mA over 2V -> R <= 400R)

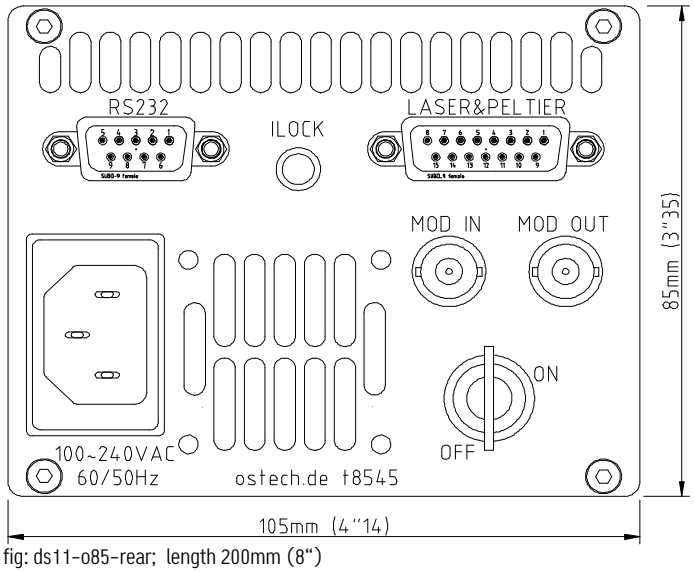


fig: ds11-o85-rear; length 200mm (8")

Revision overview:

01.04.2010: "v0" - derived from type 38
28.04.2011: Photo Diode max. Current increased from 2mA to 4mA
16.01.2015: "v1" - TEC uses only Pin 8 and 15 optional 2nd TEC on Pin 7 and 14, now always support 2 temp. Sensors
18.03.2019: "v2" - max. Laser Voltage increased to 14V
14.03.2023: "v3" - from t8535 to t8545

References:

http://www.ostech.de/en/products/laser-drivers/ds11-t85
http://www.ostech.de/en/downloads/manuals/ds-en.pdf
http://www.ostech.de/en/downloads/labview

Accessories

- kab-lpa08-16pol-subd15m-oe-1.5m-39
  cable 16x0.35qmm SUBD15-Gold-6,5A/Pin to open end length 1m5
- acc-converter-usb-to-rs232-1m5-iso-417
  RS232 to USB converter optical isolated with FTDI-Chip cable 1.5m
- hsp-06-btf-v0-631
  butterfly-mount for-btf14-housing, including-passive-cooler-block with integrated-fan, layout-0 Qmax-6W rth-2,2°C/W