

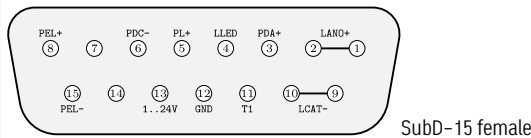
# Tabletop Laser & Peltier Controller

Type: ds11-la1.5v14-pa02v14-t8545-v6-119



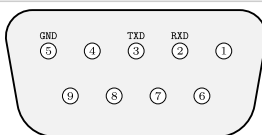
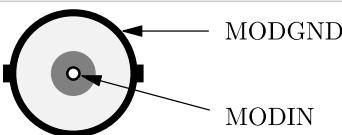
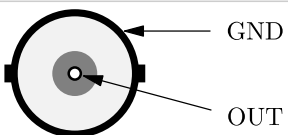
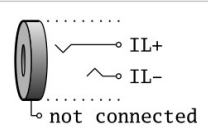
- Laser max.: 1.5A – 14V, noise reduced
- TEC max.: 2A – 14V
- t-rise-fall <2µs (optional <1µs)
- Supply Voltage: 100~230VAC – 50/60Hz
- External, Analog and Digital Modulation
- Internal Pulse Generator
- Continuouse Pulses, Single Pulse, Pulse Bursts,
- Internal or External Triggered
- Bias Current 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



PIN.No	Abbr.	Function
1;2	LANO+	Laser Diode Anode (+)
3	PDA+	Photo Diode Anode (+) <sup>1)</sup>
4	LLED	Laser Active LED – Anode (+), 5V over 470R, v.s. GND
5	PL+	Pilot Laser (+), v.s. GND
6	PDC-	Photo Diode Cathode (-) <sup>1)</sup>
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 (-)

<sup>1)</sup> Photodiode inputs are free floating; they are internally clamped with 10kΩ; LPCA – command measures the voltage over this resistor; it can measure max. 4V, i.e. I<sub>max</sub>. 400µA→4V; you may freely increase this range by externally adding a resistor.

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-Socket Input-Impdanz 10kOhm Digital Modulation with TTL-Pegel Analog Mod. 0-4[V] => 0-I <sub>max</sub> [A]	BNC-Socket, current monitor 0-I <sub>max</sub> [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)

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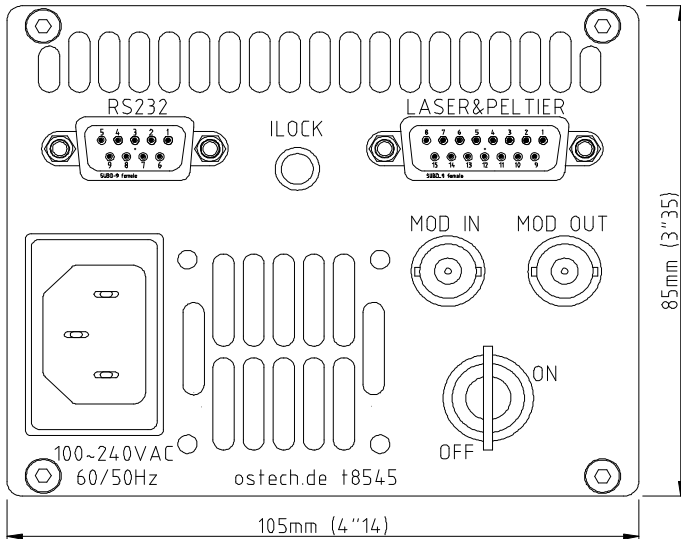


fig: ds11-t85-rear; length 200mm (8")

### Revision overview:

23.01.2009: "v0" - version 0, new setup  
 2015.10.16: "v5" - Pinout conform to t8535  
 2017.11.01: "v6" - Photodiode input now in free floating version, all devices have reduced noise level

### 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