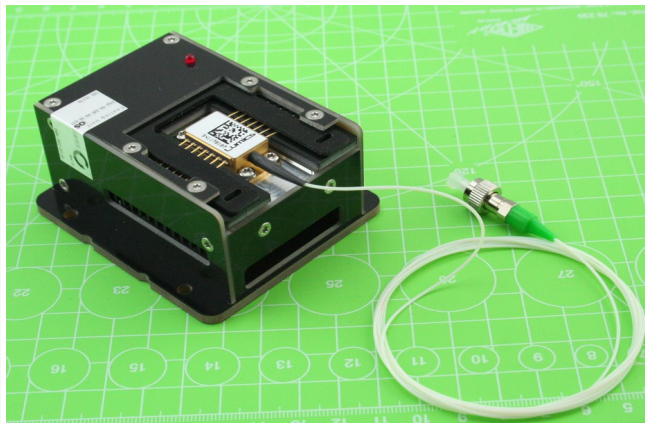


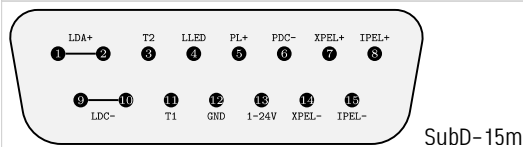
butterfly cooler mounts or blocks

Types: hsp-06-btf-v1-631 / hsp-12-btf-v1-635 / hsa-10-btf-v1-636



- mounting of 14pin butterfly modules, direct mounting of diode lasers to cooling block with integrated TEC modules,
 - free butterfly pinouts possible on request, see table btf14 pinouts
 - high flexible and durable graphite sheet, thickness 70µm
- Type 631: Rth 1.2K/W fan data-12V-0,6W
passive cooler, for lasers with internal TEC
- Type 635: is now identical to 631
- Type 636: Qmax 10W fan data-12V-1W
active cooler, with internal TEC but also with external TEC-stage
- Type 704: like Type 636 adapted for eaglyard laser

Supply connector



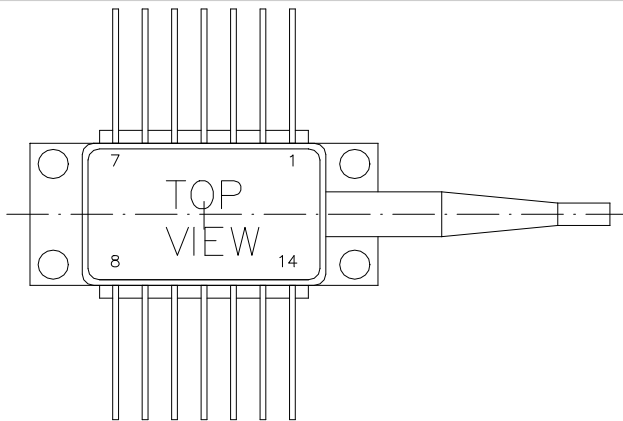
PinNo.	abbr.	function		Layout-4
1; 2	LDA+	Laser diode Anode (+)	LDA+	Laser diode Anode (+)
9; 10	LDC-	Laser diode Cathode (-)	LDC-	Laser diode Cathode (-)
4	LEDA+	LaserON-LED-Anode (+) ca. 5mA vs. GND	LEDA+	LaserON-LED-Anode (+) vs. GND
5	PL+	Pilot laser (+) vs. GND	PHD+	Photo diode Anode (+)
6	PDC-	Photo diode Kathode (-) Anode at GND	PHD-	Photo diode Kathode (-)
8	IPEL+	TEC (+) internal Butterfly TEC	IPEL+	TEC+ internal Butterfly TEC
15	IPEL-	TEC (-) internal Butterfly TEC	IPEL-	TEC- internal Butterfly TEC
3	2TSEN	2nd external temp. sensor Input vs. GND	NTC	NTC
11	1TSEN	1st internal temp. sensor Input vs. GND	NTC	NTC
12	GND	Common Ground	GND	Common Ground
13	+24V	1.2V..24V Supply for fan etc. vs. GND	+24V	1.2V..24V Supply for fan etc., max. 300mA vs. GND
7	XPEL+	TEC (+) external TEC (only Type 636 and 704)		
14	XPEL-	TEC (-) external TEC (only Type 636 and 704)		

Pinout f.e. compatible to Drivers:

- laser max 1.5A and 1 TEC stage
tabletop-version type-119
oem-version type-289
- laser max. 4A and 1 TEC stage
tabletop-version type-460
oem-version type-30
- all devices optional also with a 2nd TEC stage

butterfly cooler mounts or blocks

BTF14 Pinouts (Layouts can be freely preconfigured)



Pinout compatible to Drivers:
 tabletop-version type 119 (laser max. 1.5A and 1TEC stage)
 tabletop-version type 460 (laser max. 4A and 1TEC stage)
 oem-version type 30 (laser max. 4A and 1TEC stage)
 (optional with 2nd TEC stage for Type 636)

Layout-0 most common standard, f.e. lumics, eagleyard
 Layout-1 f.e. gooch&Housego
 Layout-2 f.e. gooch&Housego EM4

please request for your layout!

Pin No	Layout-0 (default)	Layout-1	Layout-2	Layout-3 (Eaglyard)	Layout-4 (like Layout-0 but no GND connects)		
1	TEC+	TEC+	TEC+	n.c.	TEC+		
2	NTC _{GND}	NTC _{GND}	NTC _{GND}	n.c.	NTC		
3	PHD+ _{GND}	KAT	PHD+ _{GND}	n.c.	PHD+		
4	PHD-	PHD+ _{GND}	PHD-	n.c.	PHD-		
5	NTC	PHD-	NTC	n.c.	NTC		
6	n.c.	TEC+	PHD-	n.c.	n.c.		
7	n.c.	TEC-	PHD+ _{GND}	n.c.	n.c.		
8	n.c.	n.c.	n.c.	PHD-	n.c.		
9	ANO	n.c.	KAT	PHD+ _{GND}	ANO		
10	ANO	n.c.	ANO	ANO	ANO		
11	KAT	ANO	KAT	KAT	KAT		
12	KAT	KAT	n.c.	n.c.	KAT		
13	n.c.	ANO	n.c.	CASE	n.c.		
14	TEC-	n.c.	TEC-	n.c.	TEC-		

GND - internally connected to GND at Supply Connector for usage with OsTech devices

(PHD- photo diode kathode / PHD+ photo diode anode / n.c. no connection or case / KAT cathode / ANO anode / TEC thermoelectric cooler)

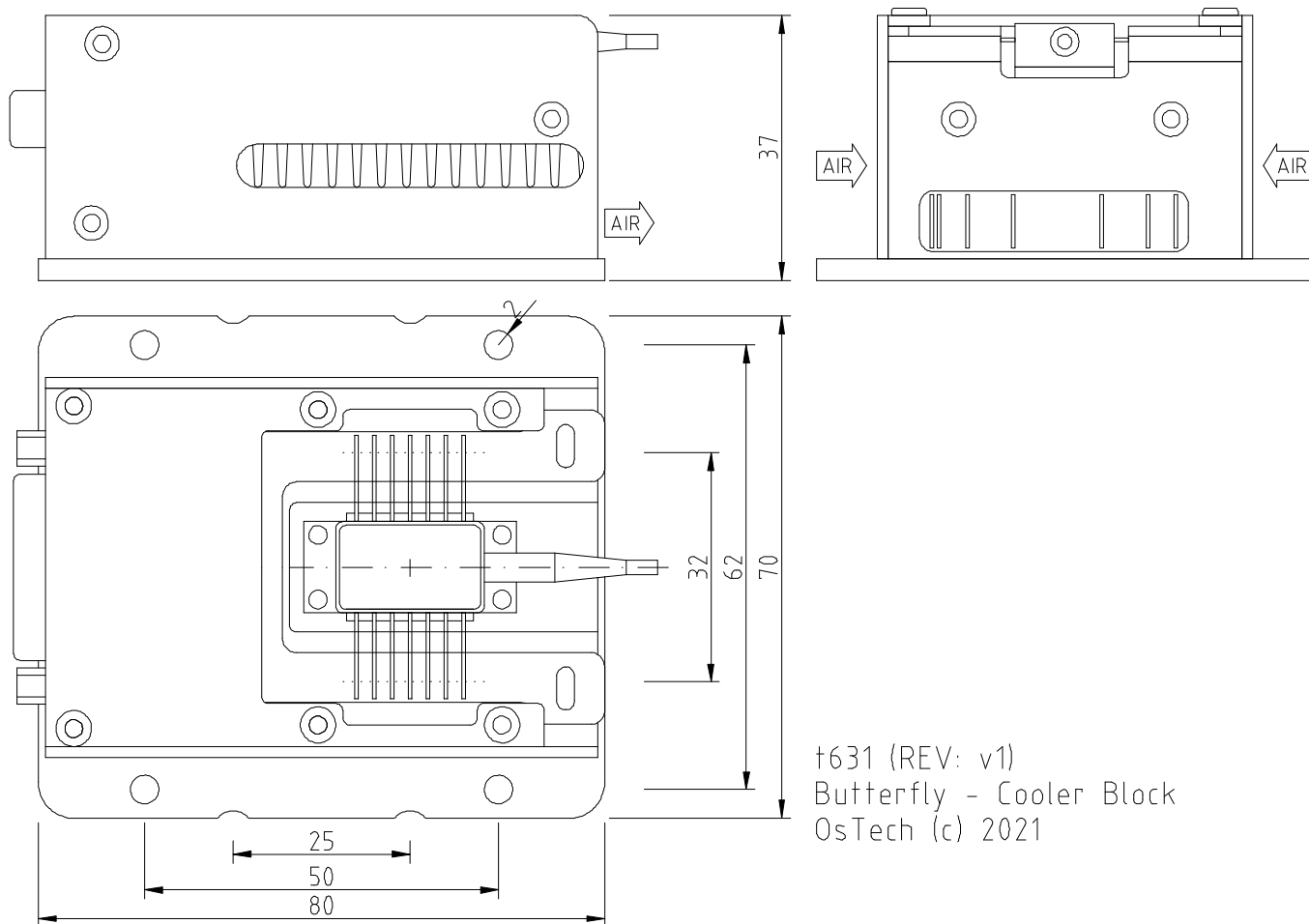
Revision overview:

2015.10.10: "v0" - derived from type-501
 2021.11.10: "v1" - new housing with better thermal behavior

References:

<http://www.ostech.de/en/products/heatsinks/hsx-btf-series>
<http://www.ostech.de/en/downloads/manuals/ds-en.pdf>
<http://www.ostech.de/en/downloads/labview>

butterfly cooler mounts or blocks



t631 (REV: v1)
Butterfly - Cooler Block
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