

# BTY-T2-XHS

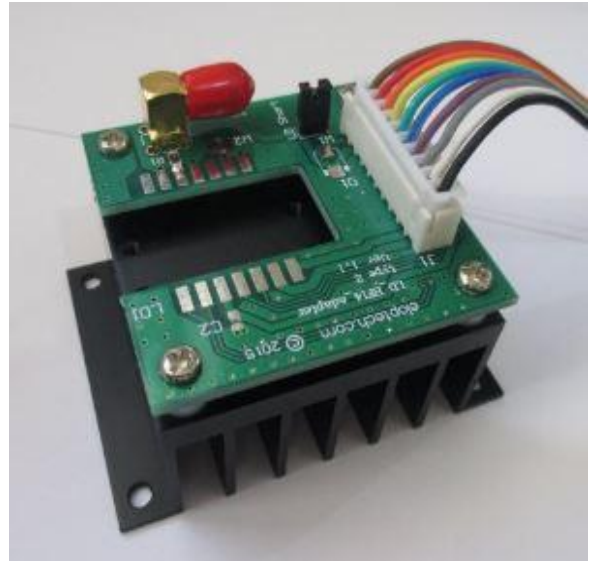
and BTY-T2-XHR right angle XH connector

## Type2 Butterfly Laser Diode Mount with RF modulation Input

The BTY-T2-XHS and BTY-T2-XHR laser diode mounts are designed for use with a 14-pin butterfly package Type2 Laser Diode. It features a small footprint high quality heat-sink that does not require forced convection for normal operation of most Laser Diodes. The mount has a single XH 10-pin male connector to allow quick and simple connectivity. It contains a Bias-T RF-modulation 50 ohm input with an SMA connector.

### Features

- Small footprint heat-sink that does not require forced air convection for most Laser diodes.
- 10-pin XH male connector to allow quick and simple connectivity.
- 50 ohms SMA RF modulation input.
- Includes a jumper that short-circuit the Laser Diode, keeping it protected when not in use.



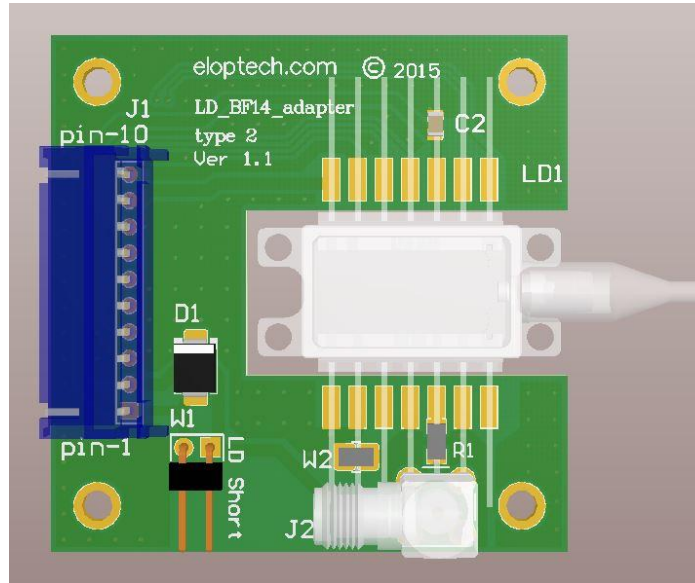
### Specifications

LD Configuration	AG/CG
LD Conf. with Modulation	AG
Polarity of PD	Floating
Max Laser Current	3A
Maximum TEC current	3A
Dimensions (LxWxH) mm	66 x 50 x 40
4 Mounting Holes 3.4mm d.	56 x 42



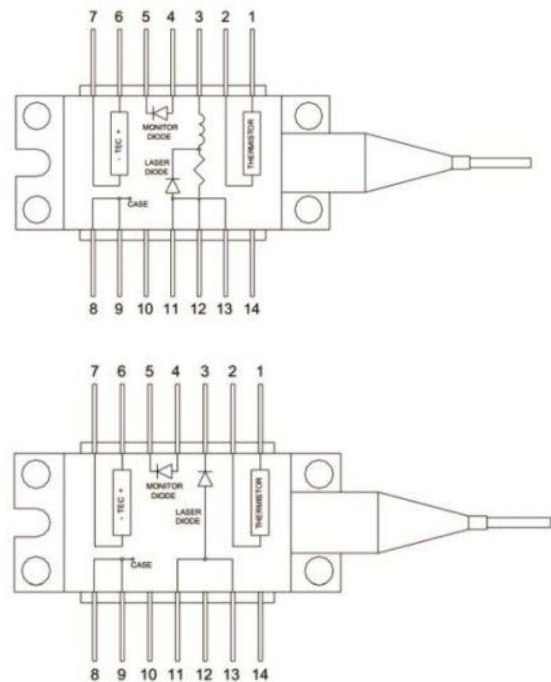
## 10-pin XH male connector Pinout J1

1	LD Cathode (-)
2	LD Anode (+)
3	Case Ground
4	PD Anode (+)
5	PD Cathode(-)
6	Thermistor
7	Thermistor
8	Case Ground
9	TEC (-)
10	TEC (+)



## BFY Type2 Laser Diode PinAssignment

1	Thermistor
2	Thermistor
3	LD Cathode (-)
4	PD Anode (+)
5	PD Cathode (-)
6	TEC (+)
7	TEC (-)
8	Case Ground
9	Case Ground
10	NC
11	LD Anode (+)
12	Modulation
13	LD Anode (+)
14	NC



Type2 with no modulation input

## SMA connector

PIN	Bias T RF input
GND	LD Anode (+) (10)

When using the RF modulation Please notice that the RF Generator GND is connected to the LD Anode (+) LD Pin 10. So please use a current source with an AG configuration which corresponds to a GND connected to the LD Anode(pins 11,13) and a negative output connected to the LD Cathode (-).

When using the RF modulation, it is strongly recommended that **W2** on the PCB will be shorted by a solder bead, which will connect the LD Anode (pins 11,13) to the mount GND.

The Bias-T designed performance should be from below 50Mhz to 1Ghz but it is also dependent on the LD RF input Impedance. RF modulation is AC coupled via a series resistor input matching 50 ohm. Response is 20ma/V. The max of +/- 4Vpp will give +/-80ma.

## **Installation**

Laser diodes produce heat. In order to maintain constant temperature a TEC is integrated into the 14-pin butterfly package. To utilize the TEC make sure to have good thermal contact between the 14-pin butterfly package and the Mount heat sink. The use of thermal interface material between the package and the heat sink is strongly recommended. A good quality thermal grease or thermal interface pad can be used for this purpose.

After applying the thermal grease between the laser package and the heat sink, the package should be mounted into the Mount. The Laser diode may be damaged by ESD, make sure to take precaution and work in an ESD safe environment. The package should be secured to the heat sink using 4 M2.5 screws. The screws should be tightened evenly in two stages. The package can be permanently distorted and damaged if the screws are tightened unevenly or over tightened.

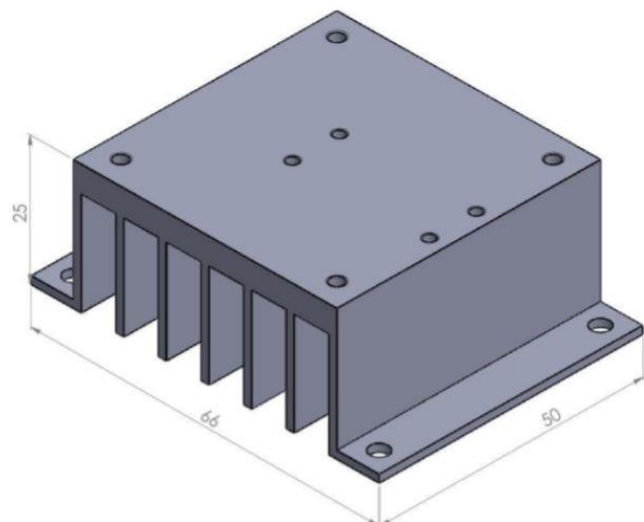
W1 jumper is installed by default and is protecting the Laser Diode from ESD damage by shortening it. Install W1 jumper when Laser Diode is disconnected from the current source to protect from ESD damage.

Make sure to remove jumper W1 after connecting the mount to the laser current source.

## **Heat sink dimensions and mounting holes**

The Mount has 4 holes of 3.4mm on its base to secure it to a working surface.

The length between the holes is 42mm on the 50mm side and 58mm on the 66mm side.



Warranty: Limited to Mount value.

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