



### THOR-Laser

PL.T532.4000

#### Features

- \* 4000 mW at 532 nm
- \* Cost effective
- \* Compact housing
- \* Simple operation

#### Applications

- \* Optical pumping
- \* Spectroscopy
- \* Biomedicine
- \* Digital printing



#### Related Products

The diode pumped solid state laser system unifies high output power with TEM<sub>00</sub> beam quality and low divergence.

As the pumping diode is located inside the laser head, there is no fiber connection between laser head and power supply, which maximizes the laser system in flexibility and portability. This makes the laser ideal for integration in OEM applications.

For applications where high modulation frequencies are necessary,

Bandpassfilter



AOM



Cooling



the system can be supplied with an integrated acousto-optical modulator (AOM) as option, which allows modulation frequencies DC up to 2 MHz. In "stand alone" operation the laser can be controlled by a remote control panel to switch on and off the laser by interlock button.

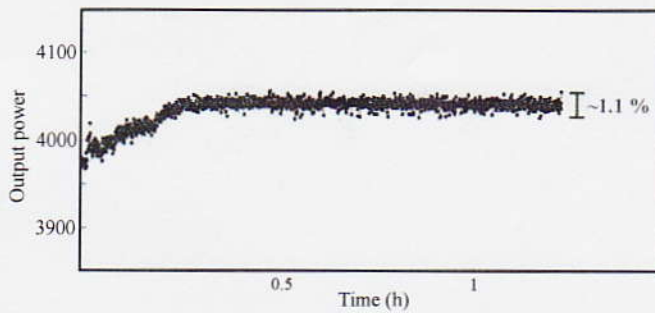
#### Specifications

<b>Optical</b>	Wavelength	nm	532
	Output power	W	4
	Beam diameter	mm	< 2.0
	Beam divergence	mrad	< 0.5
	Spatial mode		TEM <sub>00</sub> (M <sup>2</sup> < 1.2)
	Power stability	%	< +/-3 (over 1 h)
	Polarisation		> 1:100 (vertical)
<b>Electrical</b>	Power supply voltage	VDC	+24 / +5
	Operation current	A	< 25
	LD current control input	V	0 V/OFF to 5 V/ON
<b>Mechanical</b>	Dimension laser head	mm <sup>3</sup>	300 x 125 x 50
	Dimension power supply	mm <sup>3</sup>	244 x 170 x 50
	Weight laser head	kg	2.9
	Weight power supply	kg	2.2
<b>Environmental</b>	Cooling		must be attached to external heatsink
	Operating temperature	°C	+10 to +30 (at const. environment)
	Warm-up time	min	< 15
	Overtemperatur protection		Yes
	Protection class		typ. according IP42

Specifications are given for T = 22°C at constant environment and 4 W output power



### Power stability



With internal temperature stabilization via thermoelectric cooler, the laser operates over a wide environment temperature range with power stability  $< 3\%$  over 1 h (typ.  $< 2\%$ ).

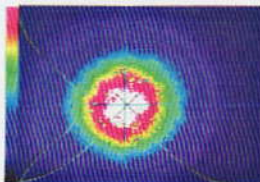
### Power control



The output power of the laser can be adjusted with an adapted remote control. It is easy to operate with following features:

- Display of laser diode current
- Potentiometer for set optical power during system adjustment
- Interlock ON / OFF
- Overtemperatur control

### Beam profile



High quality collimation optics realizes a beam divergence  $< 0.5$  mrad (typ.  $< 0.4$  mrad) with diameter  $< 2.0$  mm (typ.  $< 1.8$  mm) at laser output.



The laser system provides spatial  $TEM_{00}$  profile with typically  $M^2 < 1.2$  and circularity typically  $> 90\%$ .

Distance	Beam diameter *
1 m	$< 2.6$ mm
2 m	$< 3.4$ mm
5 m	$< 5.8$ mm

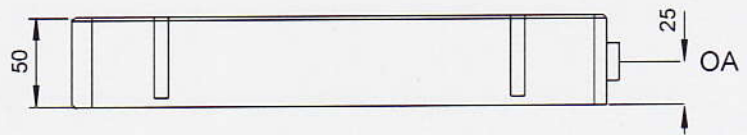
\* measured at  $1/e^2$

### Order information

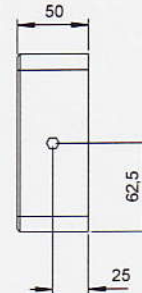
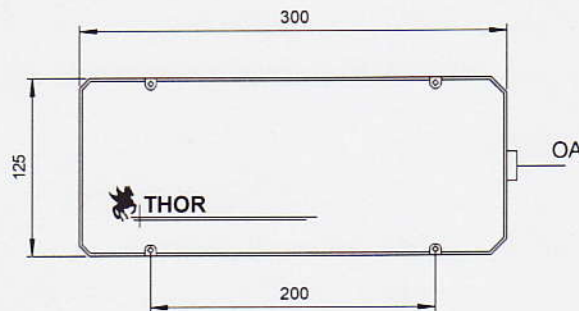
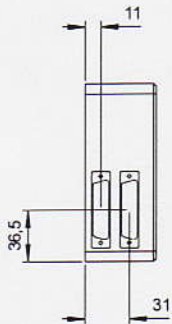
Model	Wavelength (nm)	Power (mW)	Beam diameter	Divergency (mrad)	Laser class
PL.T532.4000	532	4.000	$< 2.0$	$< 0.5$	4



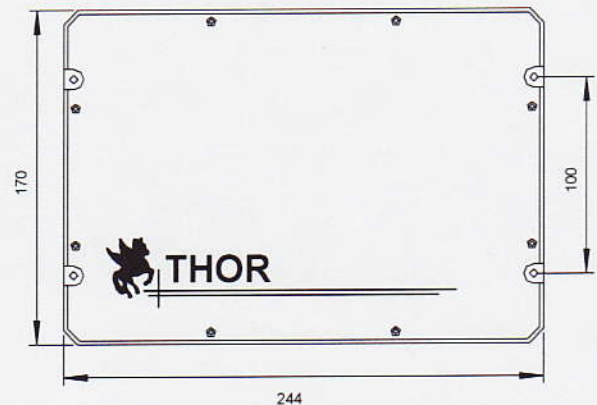
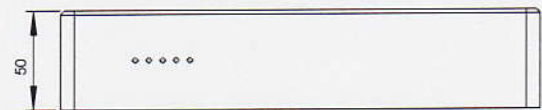
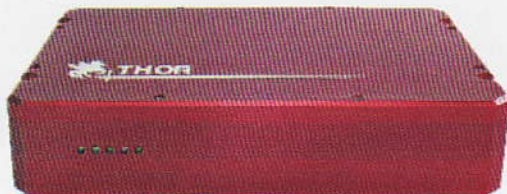
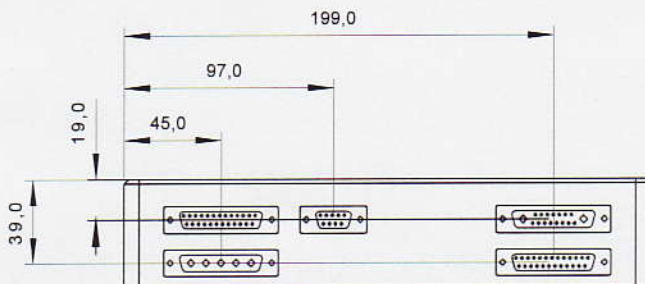
### Laser head



All dimensions are given in mm



### Electronic driver



All dimensions are given in mm

### Power supply unit (option)

**Model: PL.PS230-24/5**



Input voltage	90 - 250 VAC
Output voltage	24 VDC; 5 VDC
Dimensions	250 x 145 x 50 mm <sup>3</sup>
Power consumption	< 350 Watt
Weight	1.6 kg



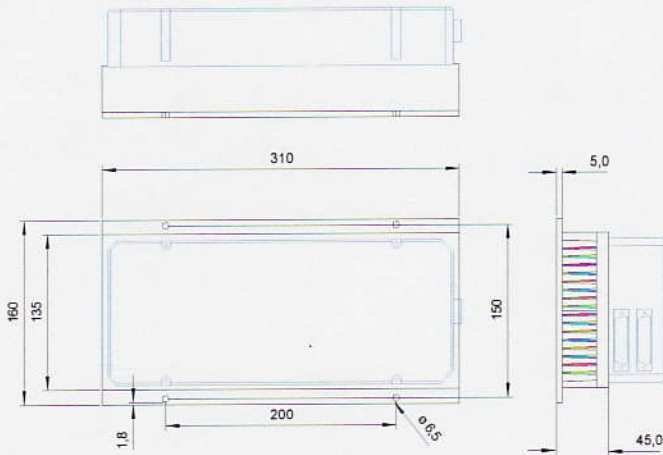
PEGASUS reserves the right to make changes in specifications without any notice



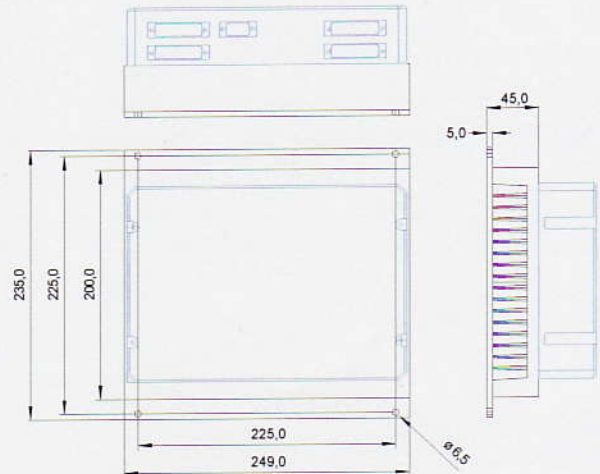
### Air cooling accessories

Laser head and driver must be externally heat sunk via baseplate. Adapted conduction or water cooling modules with optimized heat capacity are designed for easy installation. The air cooler can operate properly at environment temperatures up to 35 °C.

For laser head  
**PL.LMK.300.TH**

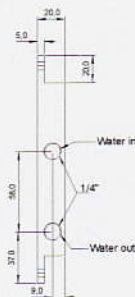
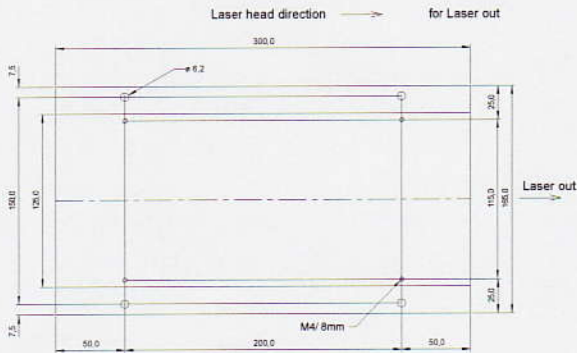


For electronic driver  
**PL.LMT.244.TH**



### Water cooling accessories

For laser head  
**PL.WMK.300.TH**



For electronic driver  
**PL.WMT.244.TH**

