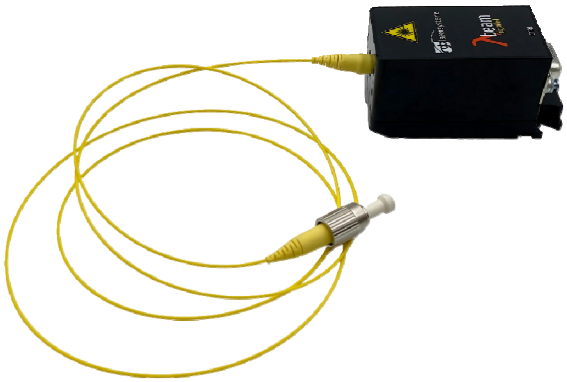
rgb lasersystems

lambda beam pigtailed

COMPACT LASER MODULES WITH FIXED FIBER.
FOR INDUSTRIAL INTEGRATION AND SCIENTIFIC APPLICATIONS



KEY FEATURES:
* Output powers **up to 300mW**
* Broad selection of wavelenghts; fine-tuneable
* Temperature-stabilized
* Single-mode/Polarization-maintaining available
* Wavelength-stabilized 785nm system available

Features	Lambda beam pigtailed
Wavelength	**405 nm to 1550 nm**
Back reflexion suppression	Internal 8°-Angle-Cleaved fiber
Connector	FC/PC or FC/APC
Beam mode	TEM00 (except multi-mode lasers)
Beam alignment	< 5 mrad and < 0.1 mm (compared to base mount)
Noise	< 2 % RMS
Power stability	< 1 % (10h)
Temp. accuracy	< 10 mK
Warm-up time	Ready for use after 5s, calibrated operation after 5 min
Drive mode	Active current control
Modulation	Adjustable constant power; analog or digital external modulation up to 1.5 MHz
Control modes	Power, temperature and modulation mode via USB

The actual emission wavelength may deviate from the specified wavelength by up to ± 5 nm (± 1 nm on request). It depends on the actual output power and can be fine-tuned by adjusting the temperature (execpt for wavelength-stabilized lasers).

SINGLE MODE FIBER	
Wavelength nm	Maximum output power mW
405	10
450	25
488	20
505	15
515	25
520	15, 40
633	50
635	2.5, 8
637	50, 70
642	20
658	7.5, 20, 40, 60
660	50
670	2.5
685	15
705	15
730	15
785	10, 20, 100
808	60, 100
820	80
830	10
852	30, 60, 100
880	3
904	3
915	40
940	30
960	100
980	15, 60
1064	50
1550	1.5, 50

MULTI MODE FIBER	
Wavelength nm	Maximum output power mW
405	300
635	7.5
658	22.5

POLARIZATION-MAINTAINING FIBER	
Wavelength nm	Maximum output power mW
635	2.5
642	20
785	6.5
830	10
1550	22.5

SINGLE MODE FIBER & COLLIMATOR	
Wavelength nm	Maximum output power mW
405	30

VHG STABILIZED SINGLE MODE FIBER	
Wavelength nm	Maximum output power mW
785	50

Laser Controller

The Lambda Beam pigtailed laser head requires a laser controller to provide power and control all operating parameters. For scientific applications and prototyping we recommend using our PowerController. For industrial integration we also offer the highly compact PowerBox to be directly attached to the laser head or connected via a customized cable.

Power Controller

Modulation input	analog and digital 0 - 5 V DC
Modulation	up to 0.5 MHz
Digital interface	USB*1 (RS-232 optional)
Further control inputs	Interlock, key switch, modulation mode switch
Cable length	80 cm (default)
Power consumption	12 V DC, up to 2A (depending on laser output power)
AC adapter (included)	100 - 240 V AC, 50 - 60 Hz
Dimensions	85.0 x 85.0 x 32.5 mm (technical drawing available)
Weight	416 g

Powerbox

Modulation input	analog and digital 0 - 5 V DC
Modulation	up to 1.5 MHz
Digital interface	USB*1 (RS-232 optional)
Further control inputs	Interlock
Power consumption	12 - 36 V DC, up to 2A (depending on laser output power)
Dimensions	39.0 x 39.0 x 32.5 mm (technical drawing available)
Weight	69 g

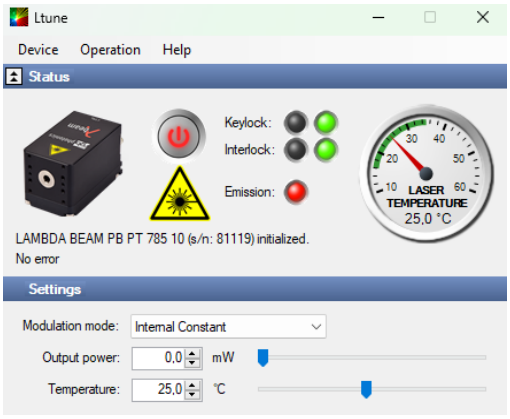
For more details, please see the PowerBox data sheet

*1 Digital connection is not required for operation

Options and accessories

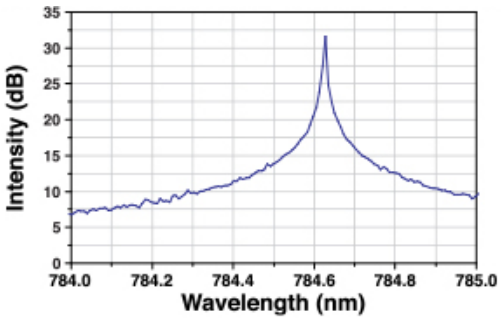
- Water cooling base plate
- Heatsink labor kit
- Cooling Ice kit
- RS-232 interface

Ltune control software



All operating parameters can be monitored and controlled from a PC using the Ltune laser control software for Windows. Alternatively, the laser can easily be controlled from your own application software. Please refer to the user manual for a detailed description of the communication protocol. You can find downloads on our website

Typical emission spectrum



This is a typical emission spectrum of a VHG-stabilized 785nm 50mW pigtail Laser

Ask us for further technical specifications and test reports

Please contact us if your requirements are not matched by these specifications. Custom modifications are available for any quantities. All specifications are subject to change without notice. The latest versions can be found on our website.

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