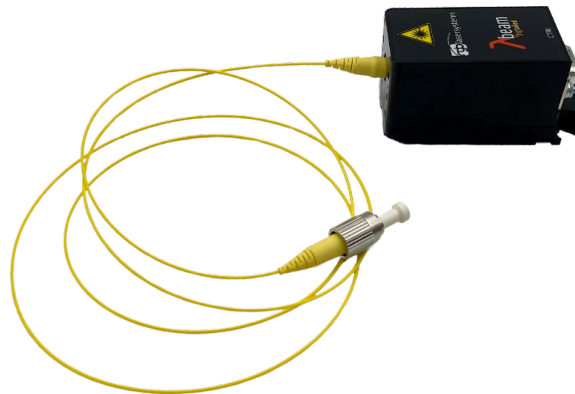




COMPACT LASER MODULES WITH FIXED FIBER.  
FOR INDUSTRIAL INTEGRATION AND SCIENTIFIC APPLICATIONS



**KEY FEATURES:**

- \* Output powers **up to 300mW**
- \* Broad selection of wavelengths; 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  $\pm 5$  nm ( $\pm 1$  nm on request). It depends on the actual output power and can be fine-tuned by adjusting the temperature (except for wavelength-stabilized lasers).

| SINGLE MODE FIBER |                         |
|-------------------|-------------------------|
| Wavelength nm     | Maximum output power mW |
| 405               | 10                      |
| 450               | 25                      |
| 488               | 20                      |
| 515               | 3                       |
| 520               | 15                      |
| 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                      |
| 820               | 80                      |
| 830               | 10, 30                  |
| 852               | 30, 60                  |
| 880               | 3                       |
| 904               | 3                       |
| 915               | 40                      |
| 940               | 30                      |
| 980               | 15, 60                  |
| 1064              | 50                      |
| 1310              | 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                            | 6.25                    |
| 830                            | 10                      |
| 1310                           | 2.5                     |
| 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

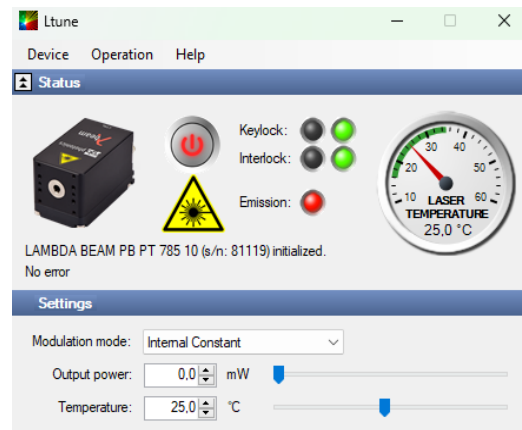
\*1 Digital connection is not required for operation

## Options and accessories

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

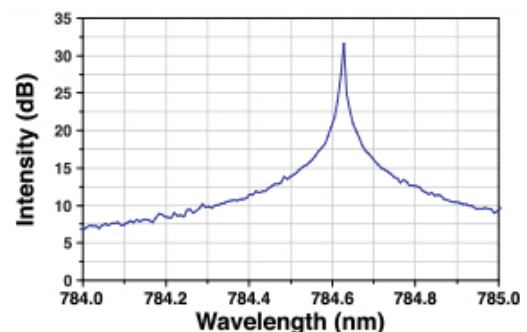


## Ltune control software



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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