



## PowerBox

COMPACT LASER CONTROLLER  
FOR LAMBDA BEAM LASER MODULES  
FOR INDUSTRIAL INTEGRATION

The PowerBox is a miniaturized laser controller for Lambda Beam lasers. It attaches directly to the laser head and is intended for industrial integration where small sizes and weights are important.

### KEY FEATURES:

- Attaches directly to the laser head
- Highly compact design
- Straightforward connection via screw-type terminal block
- Digital control via USB (RS-232 on request)
- Powered by 12 – 36 V DC
- Modulation input analog or digital 0 – 5 V DC - absolut maximum voltage rating =  $V_{CC}$
- Interlock on/off input

### OPERATION:

Important: To avoid damage, always connect the laser head to the laser controller before supplying power to the system.

The connection to the laser head can be locked by moving the slider on the D-SUB connector. The terminal block can be pulled out and removed from the controller.

All inputs are low if not connected. The "Ready" output indicates that power is supplied to the controller and the operating temperature is reached. To operate the laser continuously at maximum output power, please connect the three input pins (Interlock, TTL and analog modulation) to + 5 V or  $V_{CC}$ .

The laser starts operation with a five second delay, as required by CDRH regulation (modification available for OEM integration). Afterwards, you can turn the laser on and off instantly by using the TTL modulation input.

For USB operation, please refer to the Lambda Beam user manual.

### STATUS INDICATORS:

- green LED: Power on
- red LED: Laser emission possible  
(actual laser emission depends on input pins)

### Connectors

Screw terminal block:

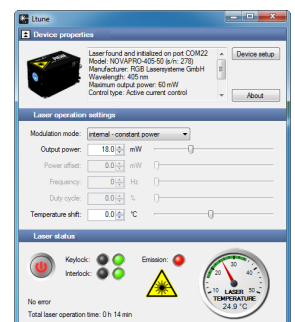
$V_{CC}$	Supply voltage
GND	Ground
INT	Interlock input
RDY	Ready output
TTL	Digital low-speed modulation input
AN	Analog low-speed modulation input

Other connectors:

Left coaxial MMCX	Digital modulation input
Right coaxial MMCX	Analog modulation input
USB	Laser system control

### 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.



All our products are RoHS compatible.

