



RLTMDL-785 1-2500mW

- IR Diode Laser System
- 785 nm
- Temperature-controlled
- CE certified
- 1 Year warranty



Description

RLTMDL-785 is a series of 785 nm temperature-stabilized (**TEC**) diode laser systems, emitting at a wavelength of 785 nm, with a multi-mode beam profile and output power stability of <3%. It features a separate laser head and power supply unit, supporting a wide input voltage range of 85-264 VAC and safety interlock. Adjustable output power, fiber coupling, modulation input and enhanced power stability of down to <0.5% are available as optional features.

RLTMDL-785 is RoHS compliant, CE certified, and comes with a **1 Year warranty**

Electro-Optical Characteristics

T_{CASE} = 25°C

Parameter	Values	Unit
Wavelength	785±10	nm
Output Power	1 – 2500	mW
Operating Mode	CW	
Transverse Mode	Multimode	
Power Stability (rms, over 4 hours)	< 3% , < 2%* , < 1%* , < 0.5%*	
Beam Diameter at aperture (1/e ²)	~5.0 x 8.0	mm
Beam Divergence (full angle)	< 3.0	mrad
Warm-up time	< 5	min
Beam Height (from base plate)	24.8	mm
Operating Temperature	10 - 35	°C
Power Supply (85-264 VAC)	PSU-FDA (included)	
Expected Lifetime	10000	hours

* optional available





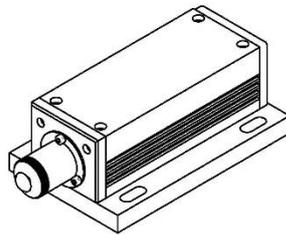
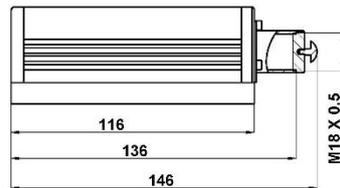
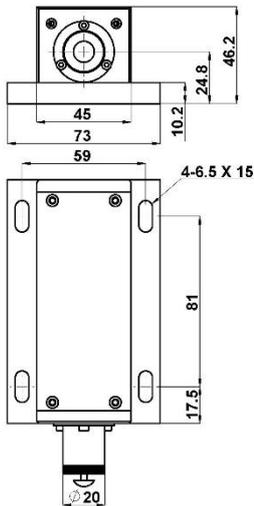
Options

Options	Description
PSU-LED	85-264 VAC power supply with current display and adjustable output power, frequency 1 Hz - 30 kHz (*)
PSU-A-D	100-240 VAC digitally controlled power supply with LCD display, constant current and constant power mode operation, frequency 30 - 100 kHz (*)
PSU-OEM	5 VDC power supply for system integration
RS-232	Remote interface for controlling the laser via software
Modulation input	TTL or Analog input with <1 kHz, <10 kHz, <30 kHz, or <100 kHz (on request)
Multi-mode fiber coupling	100, 200, 400, 600, or 1000 μ m multi-mode fiber with metal shielding and SMA905 or FC/PC connector
Fiber optic collimator	Focusable beam at fiber end
Beam expander optic	2x, 3x, 5x, 10x
Line generating lens	Powel lens with 5°, 7°, 10°, 30°, 45°, 60°, 75°, or 90° fan angle
Shutter	Mechanical shutter (r/f time ~1.5 ms, delay 5 ms, exposure min. 5 ms)

* optional available

Outline Dimensions

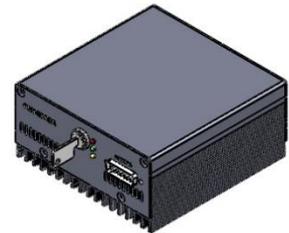
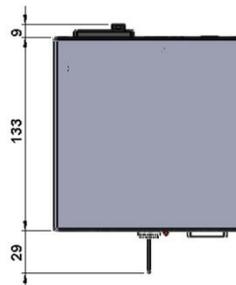
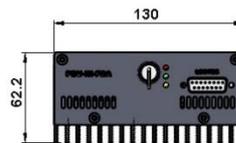
Laser Head



146 x 73 x 46.2 mm³, 0.7 kg

PSU-FDA

fixed output power



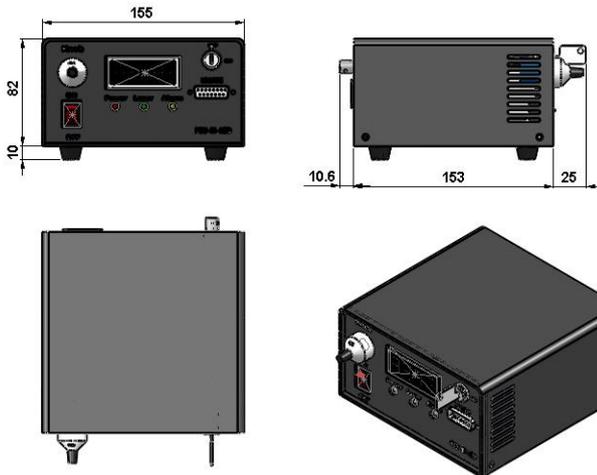
171 x 130 x 62.2 mm³, 1.2 kg



Outline Dimensions

PSU-LED

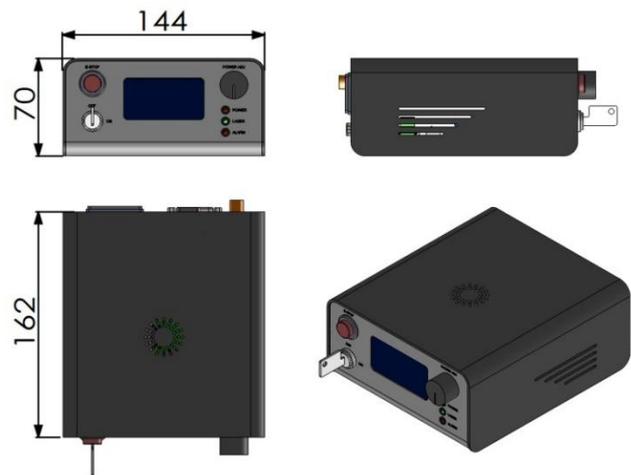
adjustable output power



188.6 x 155 x 92 mm³, 1.5 kg

PSU-A-D

adjustable output power, LCD



162 x 144 x 70 mm³, 1.0 kg

General Notes

- The laser head should be mounted on a flat, thermally dissipating surface and/or head sink to maintain a high-level of heat dissipation and reliability. Failure to comply with this procedure may cause permanent damage to the laser.
- Environmental temperature should be stable or only drift slowly within the allowed range of 10°C - 35°C. Abrupt changes in room temperature can affect the laser and deteriorate its performance and stability.
- The air duct must not be blocked, and it is required to have at least 5-10cm of free space for unobstructed air flow.
- If the laser system needs to be installed into equipment, please make sure there is sufficient airflow around the laser head. If necessary, additional fans may be used to help heat dissipation.

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