

LIMO1300-F200-SL808/915/940/980-EX1503

40 Bar Industrial Laser System, Water Cooled

LIMO
Lissotschenko Mikrooptik



40 Bar Industrial Laser System with chiller and power supply in a 23 HU high 19"-Rack

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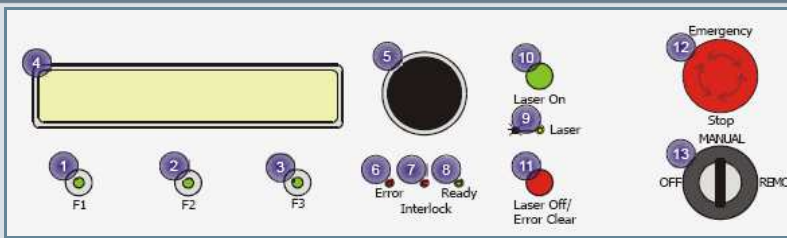
Technical Data Supply Unit	
General description	<ul style="list-style-type: none"> - mobile rack-system, 19 inch, 23HU - laser warning light - 1 main power cord for the voltage supply, integrated power sharing for all devices, external power on or by main switch, emergency-stop - manual operation by control unit or remote operation by standard industrial interfaces
Size WxHxD (mm) incl. warning light	565 x 1200 x 800
Input voltage of complete system	3 phase + N + PE; 400V AC \pm 10%, 50/60 Hz, <16A; CEE-plug
Operation/storage conditions (°C)	+5 to +40; max. humidity 90%, non condensing tap water parameters for the water-water-chiller: min. 20 l/min @ 15 °C water temperature
Operating modes	<ul style="list-style-type: none"> - cw - pulsed (min. pulse width 100μs) - profile mode (single-, multi profile)
Control unit	<ul style="list-style-type: none"> - display - handwheel for menu navigation - key switch (3 modes: off, manual, remote) - start- / stop button for manual operation - emergency-stop-button
Interfaces	<ul style="list-style-type: none"> - pyrometer - can-bus - RS232 - SPS-Interface - interlock - emergency-stop - laser warning lights
Diode laser control	<ul style="list-style-type: none"> - laser power - laser temperature
Technical Data Laser Module	
CW - output power (W)	> 1300
Center wavelength λ (nm)	808, 915, 940 and 980
Tolerance of λ (nm)	\pm 10 per wavelength
Fibre data (core diameter; N.A.; fibre-optic connector)	200; 0,22; LLK-B
Typical operation current (start of lifetime) (A)	50
Typical threshold current (A)	6
Typical electro-optical efficiency, EOE (%)	36
Typical wall-plug efficiency, WPE, including chiller (%)	30
Expected lifetime (h)	20.000
Warranty (years)	2, 3 ¹⁾
Distinctive feature	passive, microchannel-free watercooling

1) 3 years warranty at known operation conditions and type of application (individual decision)

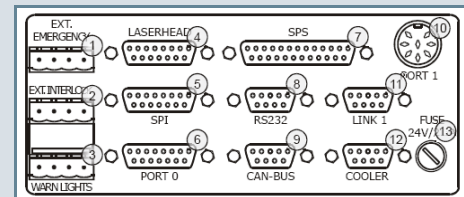
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Operation panel



Operation and control interfaces

Product description

- Turnkey laser system
- Easy integration into production machines
- Best wall-plug-efficiency of 30% (in comparison to all known laser sources with the same power level, used for cutting and welding, i.e. fibre-lasers, CO2-lasers, diodelasers)
- Complete control of diode laser operation, easy exchangeable laser module
- Optimized passive water cooling, no deionized water necessary
- Quasi maintenance-free, 1x / year inspection of cooling water circuit (particle filter)
- Safe operation by strict conformity to safety standards
- Optional equipment: optical fibres in different lengths / versions, process heads for laser cutting, welding, hard soldering, surface treatment (i.e. for laser repair or thermal spray processes).

Considerations in Safety and Operation

The laser light emitted from this laser diode is invisible and may be harmful to the human eye. Avoid looking directly into the laser diode, into the collimated beam along its optical axis, or directly into the fibre when the device is in operation.

ESD PROTECTION – Electrostatic discharge is the primary cause of unexpected laser diode failure. Take extreme precaution to prevent ESD. Use wrist straps, grounded work surfaces and rigorous antistatic techniques when handling laser diodes.

Operating the laser diode outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with the component must be employed such that the maximum peak optical power cannot be exceeded.

Output powers in excess of specification will accelerate device aging.

Operation at higher temperatures will accelerate device aging.

All data provided are typically measured with a diode heat sink temperature of 25 °C. All measurements are made with a LIMO reference fibre 200 µm, length 10 m, and AR coated. Copyright © 2011 LIMO GmbH. All rights reserved. All LIMO products are patent pending. Subject to change without notice. Oktober 2011

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