CORELASE

H-LASE SERIES

kW OEM FIBER LASER MODULES WITH INTEGRATED DIODE PUMPS

H-LASE FIBER LASER SERIES

FLEXIBLE

The new H-LASE series provides customers **unique freedom to design** the most ideal electronics and control software for their specific high power welding cutting or drilling application. This superior flexibility results in **increased total performance** and **reduced cost and size**.

SCALABLE

H-LASE fiber laser module is based on up to 2 kW single oscillator. Scalable output powers up to 8 kW with **best-in-class power range (1–100%)** provide functionality and flexibility needed in high precision processing with wide range of materials. **Modular design** enables intelligent and cost effective solution.

EFFICIENT

The new OEM series is providing **high beam quality** (BPP < 0.4 single mode) throughout the whole dynamic operating range. **Industry leading optical to optical conversion efficiency** (typical > 80%) enables **high wall plug efficiency** for the system.

H-LASE SPECIFICATIONS

H-LASE	1,5 kW	2 kW SM	2 kW MM	4 kW	6 kW	8 kW
Power rating (W)	1 500	2 000	2 000	4 000	6 000	8 000
Output power tunabilit	1–100%					
Center wavelength	1070 nm ± 5 nm					
Delivery fiber core	20 µm	20 µm	50 µm / 100 µm	50 µm / 100 µm	100 µm	100 µm
Beam Parameter Product (BPP)[1]	< 0.4 mm x mrad	< 0.4 mm x mrad	< 2.5 / < 4 mm x mrad	< 2.5 / < 4 mm x mrad	< 4 mm x mrad	< 4 mm x mrad
Output connector	QBH					
Delivery fiber length[2]	10 m	5 m	20 m	20 m	20 m	20 m
Number of laser cavities	1	1	1	2 + combiner	3 + combiner	4 + combiner
Electrical Specifications						
Input current max. (A) / module	40	40	40	40	40	40
Input voltage max. (V) / module	Dependent on configuration and application					
Electrical-optical efficiency	> 38%	> 38%	> 38%	> 38%	> 38%	> 38%
Minimum rise /fall time[3]	20 µs					
Interfaces	Integrated power and temperature monitoring sensors					
Cooling interface						
Flow rate	Water cooling, 25 liter / minute / module, +25 ± 1°C					
Fiber Laser Combiner	Water cooling, 5 liter / minute / module, +25 ± 1°C					
QBH Delivery Cable	Water cooling, 1.7 liter / minute / module, +25 ± 1°C					
Mechanical Interface						
Dimensions[4]	3 U and 596 mm deep	3 U and 596 mm deep	3 U and 596 mm deep	7 U and 596 mm deep	10 U and 596 mm deep	13 U and 596 mm deep
	19" rack	19" rack	19" rack	19" rack	19" rack	19" rack
Weight	~ 45 kg	~ 45 kg	~ 45 kg	~ 120 kg	~ 165 kg	~ 210 kg
Options						
Optics	External optics and coupling units (Optoskand)					

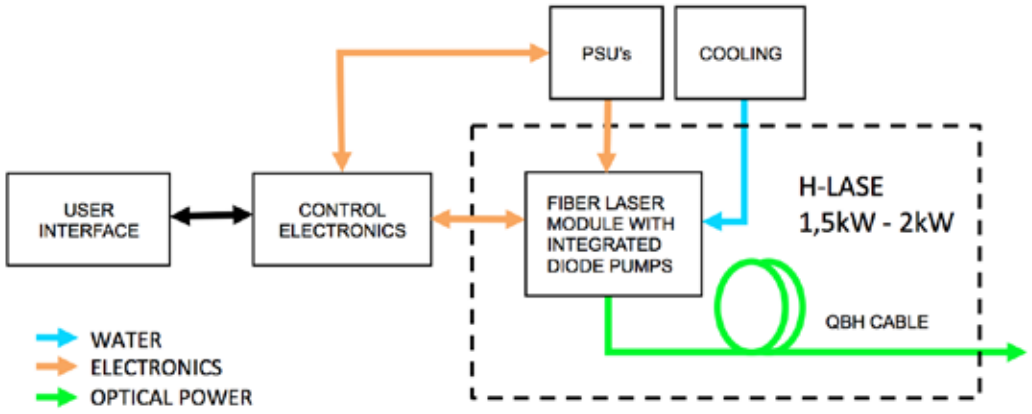
[1] Typical value, check details from factory
[2] With Optoskand QBH connector, check details from factory
[3] Typical value, dependent on power supply
[4] Up to 2 kW delivered as single units, for 4 kW, 6 kW and 8 kW check details from factory

H-LASE INTEGRATION

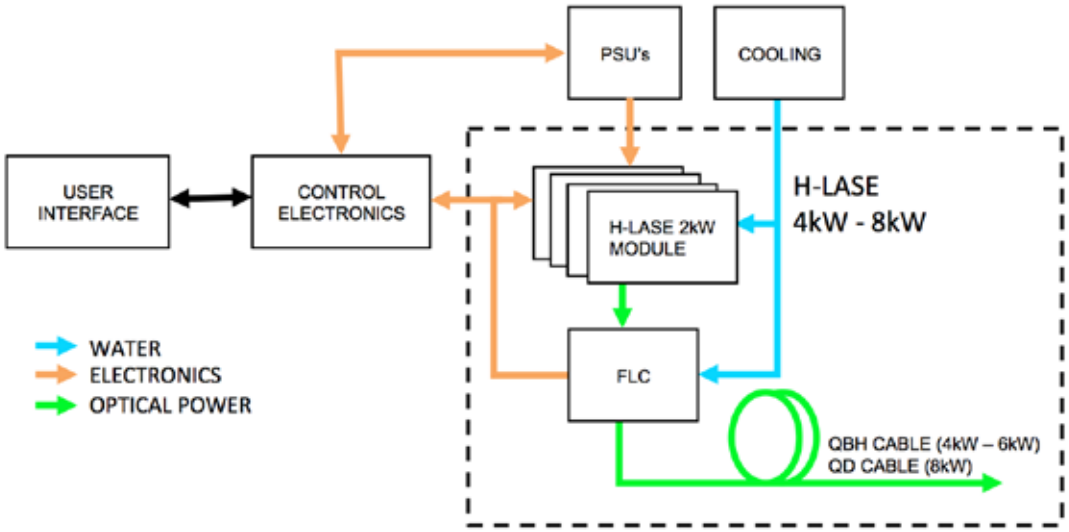
H-LASE WITHIN CUSTOMER'S SYSTEM

PROCESS AUTOMATION SYSTEM e.g CUTTING SYSTEM

H-LASE 1,5 kW–2 kW



H-LASE 4 kW–8 kW



H-LASE SERIES

APPLICATIONS

- Welding
- Cutting
- Drilling
- Cladding
- Annealing
- Heat treatment

BENEFITS

- Superior freedom in system design
- Industry leading operating power range 1–100%
- Modular concept with scalable output powers
- Allows true real time closed loop power control
- Enables processing of sensitive and tough materials including bright metals

FEATURES

- High power OEM configuration, up to 8 kW
- Based on up to 2 kW single oscillator
- High beam quality
- High electrical-optical efficiency over full range of output powers
- High back reflection resistance
- Integrated power and temperature monitoring sensors

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