

Temperature Stabilised Laser Diode Module



HQML3 CW

Features

- Selectable operation mode: „power stabilized“ and „constant current“
- Customized emission spectrum (optional)
- Polarization better than 100:1 over the whole dynamic range (optional)
- Mechanical shutter
- Interlock-function by separate laser power line
- Optical power analog controllable or dimmable
- Commands and status information via RS 232
- Digital output „laser OK“ / digital input „laser ON/OFF“
- Integrated life time counter
- Diagnostic of diode aging
- Differentiated status display by two LEDs

Wavelength: 408, 445, 473, 488, 515, 532, 638, 650, 685 nm

Power output: up to 300 mW

Filter option for spectral clean-up

High power stability: <0.5% over 8h

Low optical noise: <1% RMS

Small footprint: 100 mm x 40 mm x 40 mm
driver included

Computer-controlled through RS232 port

Competitive price
through industrial
volume production



Applications

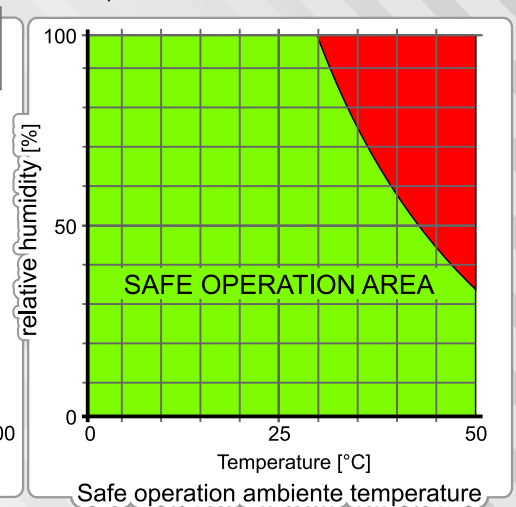
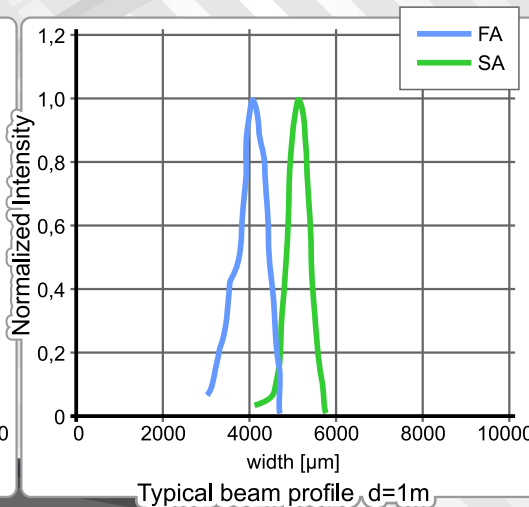
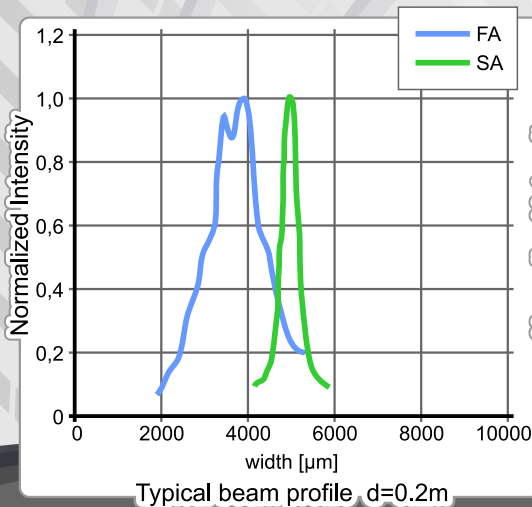
- Spectroscopy
- Fluorescence
- High-resolution printing
- Interferometry
- Medical Procedures
- Metrology
- Microscopy
- Machine vision
- Research & Development

The HQML3 cw Laser Diode Module is based on a flexible platform that encompasses the UV to NIR wavelength range using laser diodes and DPSS laser (for 532nm) technology. Wavelength, beam profile and output power are customer defined for user flexibility.

Available wavelengths are 408, 445, 473, 488, 515, 532, 638, 650 and 685nm, with an option to add filters into the device for spectral clean-up. Powers of up to 300mW are available, which can also be adjusted manually. An RS232 port provides access to command the unit and gives information on the unit status. The power unit (driven by 4.5 to 16V; max 2.5A) is integrated into the package providing the unit with a very small footprint of 100mm x 40mm x 40mm.

Electrical Characteristics

Parameter	Test Conditions	Min	Typ	Max	Unit
Power Supply		4.5	12	16	V
Current Consumption	T = 50°C			2.5	A
Turn ON Time			3		min
Operating Temperature		0		50	°C



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OPERATING MODES:

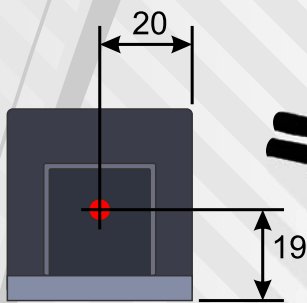
Basis operation (auto start CW with pre-set power)
Only one cable for input voltage cable necessary

+VS	supply voltage module (+)
+VL	supply voltage laser (+) without interlock: +VS and +VL parallel feed-in with interlock: +VL via external switch
GND	chassis (-)
LOK	output laser-status, GND-operated

Optional operation with additional functions
Additional control cable necessary

RxD	RS-232 receiving
TxD	RS-232 sending
GND	signal- and RS-232-GND
LOFF	input laser OFF
ACTRL	input analog control output power setting by external control voltage or output power setting by external potentiometer 1kOhm

Mechanical Drawing



Laser module dimensions
[mm]

Output Beam Characterization

