



LuOcean P2

Factsheet

The Lumics LuOcean P2 diode laser series offers OEM integrators an excellent product to manufacture state-of-the-art end-user laser systems.

The easy integration and safe use of these laser components in combination with several accessories and features promotes cost efficiency in both development and manufacturing.

The Lumics LuOcean P2 modules are equipped with single emitters, which have a long service life. The modules can be passive cooled and are well protected from external influences by the housing. Users can connect SMA fibers to the modules and benefit from a small footprint.

Applications for the P2 laser modules can be found in numerous applications such as in the industry for material processing.

FEATURES & FUNCTIONS

- 760 / 785 / 808 / 940 / 975 / 1064 / 1470 nm as single-wavelength module
- 200 / 400 / 600 μm NA 0.22 fiber
- Emitter electrically in series
- Temperature sensor

OPTIONS

- Power monitor (up to two)
- Fiber monitor
- User-exchangeable exit window
- Red pilot beam
- Controllable pilot intensity
- OEM LD driver
- Compatible fibers



Lumics

We manufacture diode lasers.

Optical and Electrical Characteristics for Single Wavelength Modules (Typical specification)

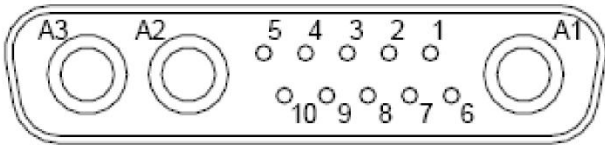
Wavelength [nm]	Fiber core diameter [μm]	Max Power [W]	I _{op} [A]	V _{op} [V]	Fiber core diameter [μm]	Max Power [W]	I _{op} [A]	V _{op} [V]	Fiber core diameter [μm]	Max Power [W]	I _{op} [A]	V _{op} [V]
760									600	On request		
785	200	On request							600	On request		
808	200	65	7	24	400	90	11	24	600	100	13	25
890									600	On request		
940	200	160	16	22	400	240	25	24	600	270	28	24
975	200	160	16	22	400	240	25	24	600	270	28	24
1064	200	130	15	23	400	200	20	23	600	230	26	23
1470	200	50	13	20	400	75	20	20				

General Parameters / Options / Accessories / Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Mechanical Characteristics					
Weight of Laser Module			1200		g
Pilot Beam (optional, see notes)					
Pilot Beam Output Power (adjustable)	red	0	1	3	mW
Pilot Beam Wavelength	red		635 ± 10		nm
Pilot Beam Operating Voltage	red	4.8	5	5.2	V
Pilot Beam Operating Current	red			≤ 35	mA
Pilot Beam Intensity Control Voltage	red	0 (max. Intensity)		5 (min. Intensity)	V
Sensors (optional)					
Power Monitor Supply Voltage		10	12	14	V
Power Monitor Signal Voltage		0	4 (at max. Power)		V
Fiber Detection Sensor Supply Voltage		10	12	14	V
Fiber Detection Sensor Signal Voltage		0	12	14	V
Temperature Sensor		Standard: NTC (10 k); Optional: PT100 or LM35			
Operating Conditions					
Storage Temperature	T _s	-10			°C
Internal Operating and (Ambient) Temperature, CW	T _{op c.w.}	10 (5)	25 (20)	35 (40)	°C
Humidity / Non-condensing Atmosphere				90	%
Thermal Heat Sink Resistance				0.1	K/W
Maximum Fiber Flange Temperature				50	°C
Water flux (industrial water, not DI water) at 18°C				1.5	l/min

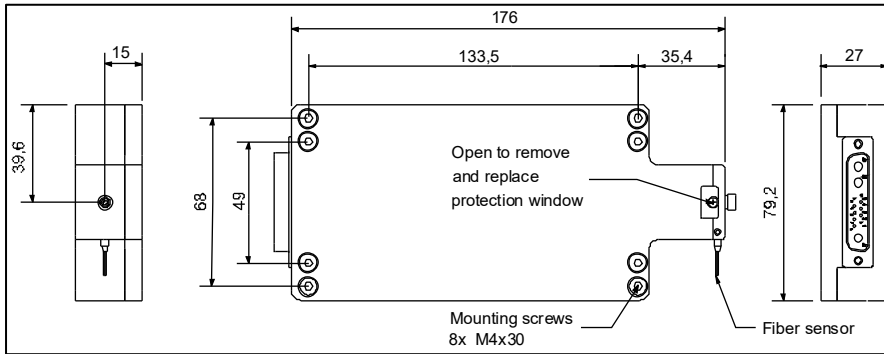
Connector

13w3 Male Power and Signal Connector

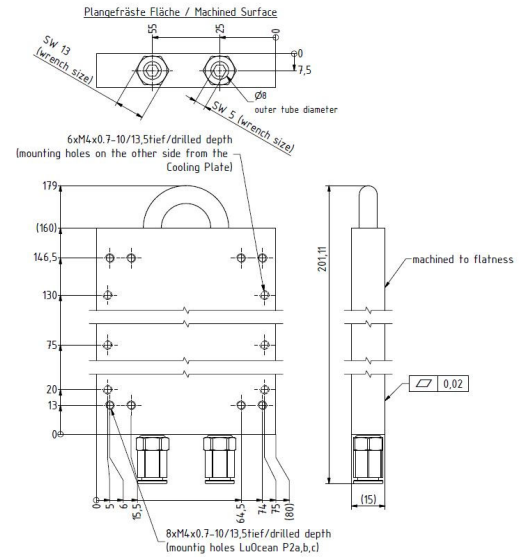


PIN	Configuration
1	Pilot power control (0-5)V or 2 nd LM35 signal or 2 nd NTC or 2 nd PT100 *
2	2 nd LM35 5V or 2 nd NTC or 2 nd PT100 * or signal internal fiber sensor
3	Monitor diode cathode or internal fiber sensor 12V*
4	LM35 (GND1), Monitor diode (GND1), internal fiber sensor (GND1)
5	1 st LM35 signal or 1 st NTC or 1 st PT100 *
6	Monitor diode signal 2 * (4V)
7	Monitor diode signal 1 * (4V)
8	Pilot laser (GND2)
9	1 st LM35 5V or 1 st NTC or 1 st PT100
10	Pilot laser 8V (green) or 5V (red) *
A1	Laser diode (+)
A2	Laser diode cathode (-)
A3	Second laser diode (+) with common cathode
(*)	Optional

Module Drawing (Dimensions in mm)



Water Connections



Notes

1. Lumics GmbH is fully compliant with RoHS.
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