LiOM S6/7

Fiber-coupled LiDAR Laser

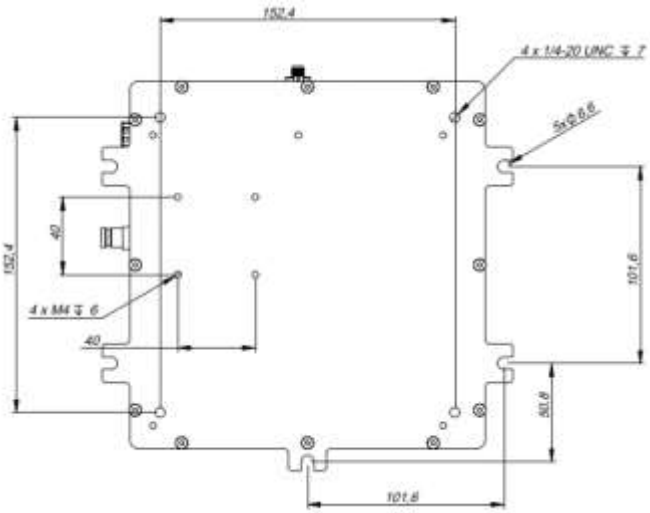
Features:

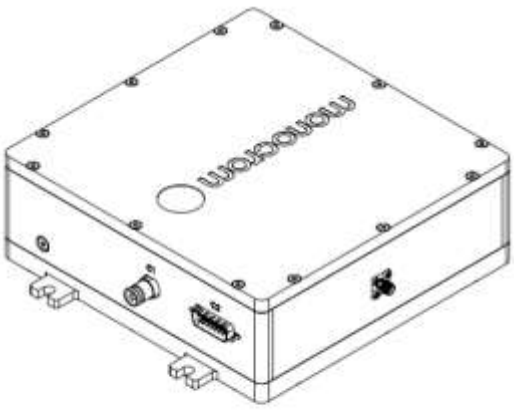
- Long lifetime
- High reliability
- Low thermal resistance
- Wide operational temperature up to 65 ºC

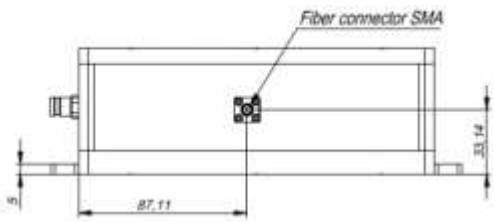
Suitable for:

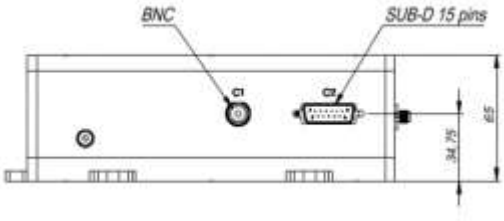
- Illumination
- Industrial
- LiDAR
- Range finding

Outline LiOM S6/7 (*)









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Product specification are subject to change without notice. For complete details, please contact your local MONOCROM sales representative.

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Laser parameters[1,2,3]	LiOM S6	LiOM S7
Type	fiber-coupled module	
Wavelength[4] [nm]	905 ± 5	
Spectral width (FWHM) [nm]	< 10	
Output power from fiber QCW [W]	500	1000
Slope efficiency [W/A]	~12	~24
Repetition rate [kHz]	up to 10	
Pulse length [ns]	100	
Max duty cycle [%]	0.1	
Electrical parameters		
Driver electronics	included	
Operating current [A]	< 2.5	< 4.5
Voltage @ connectors[5] [V]	15 – 24	
Charging Voltage[V] (optional)	0 – 100	
Electrical connection	SUB-D-13W3	
Trigger connection	SMA	
Trigger input	5 V TTL @ 50 Ohms	
Trigger signal duration	> 100 ns (500 ns are recommended)	
Optical fiber[6]		
Fiber core diameter [µm]	600 (1000)	1000 (1500)
Numerical aperture	0.22	
Fiber collimator	optional	
Clear aperture [mm]	optional	
Beam diameter[7] [mm]	optional	
Residual divergence[8] [º] / [mrad]	optional	
Fiber length [m]	2 – 3	
Detachable fiber connector	HP-SMA 905	
Other parameters		
Operating temperature [ºC]	non-condensing to 65	
Storage temperature [ºC]	between -10 and 75	
Recommended heat sink capacity [W]	30	
Recommended heat sink temperature [ºC]	20 ±2	
Lifetime [h]	> 2 10^4	
Laser class product (EN-60825)	4	

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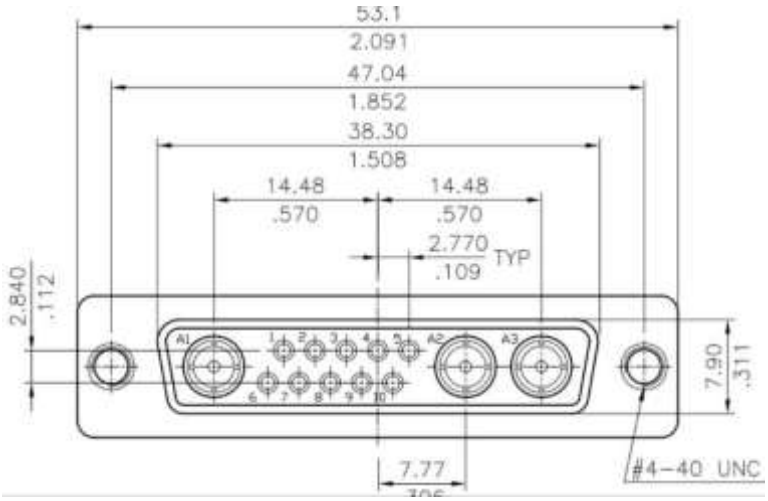
Pin layout for electrical connections between laser head and electronics

SUB-D-13W3	
Pin number	Description
A1	Power LD driver (coax.) 15 V / 4.5 A
A2	Power TEC (coax.)
A3	Trigger/Modulation IN
1	Laser ON/OFF
2	GND
3	10 kOhm NTC vs. ground (B = 3620)
4	GND
5	LD NTC +
6	LD NTC -
7	HV supply monitor (40 mV/V)
8	Current supply monitor (20 A/V)
9	PD+
10	PD-



(*) Outline only for reference. Dimensions may be different than stated here.

1. Specifications at 20 °C, at the beginning of the lifetime.
2. If any other requirements are needed, please contact us.
3. QCW: with integrated driver electronics: Duty cycle below 0.2%. Repetition rate, pulse length and injection current are influencing each other.
4. Other wavelengths are also available up on request.
5. Voltage from the power supply must be higher, as due to high current there will be a voltage drop in the cables.
6. Other specifications on request. Fiber core, fiber length and fiber connector can be adapted to customers' demands.
7. Beam diameter is determined via $1/e^2$ value.
8. Divergence is determined via FWHM value.

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