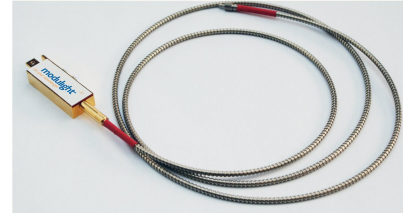


FiberLight

Fiber-coupled high-power laser module 635...1550 nm

Overview

FiberLight is a compact fiber-coupled laser bar (laser array) module designed for reliable CW operation at high power levels. Due to its proprietary beam shaping technique, we can offer high brightness and coupling efficiency. Options: Pigtail for aiming beam (terminated by SMA connector, others per request), photodiode for power monitoring.



Applications

Defense	Industrial	Medical
Illumination Range-finding	Laser marking Optical pumping Display applications	Photodynamic therapy Aesthetic Treatments Surgery

Electro-optical Characteristics, Typical Values

Parameter	Symbol	ML1847 ¹	ML1825 ²	ML1826 ²	ML1828 ²	ML1497 ²	Unit
Wavelength	λ	635	808	980	1470	1550	nm
Optical Output Power	P_{OPT}	3	35	35	12	12	W
Operating Current	I_{OP}	8	55	55	75	75	A
Threshold Current	I_{TH}	5	5	5	6	6	A

¹ Red laser: Values are typical for CW operation @ 15°C.

² IR lasers: Values are typical for CW operation @ 20°C.

Fiber Pigtail Characteristics

Parameter	Symbol	Typical Value	Unit
Core Diameter	\varnothing_{CORE}	365	μm
Cladding Diameter	\varnothing_{CLAD}	400	μm
Protective Tubing Diameter	\varnothing_{TUBE}	5.1	mm
Fiber Numerical Aperture	NA	0.22	
Fiber Length (module-to-connector)	l	1.5	m
Minimum Bending Radius (short-term)	R_{MIN1}	40	mm
Minimum Bending Radius (long-term)	R_{MIN2}	120	mm
Pigtail Core Material		Pure silica	
Pigtail Cladding Material		Fluorine doped silica	
Pigtail Protective Tubing Material		Stainless steel	
Connector at the fiber end		SMA-905	

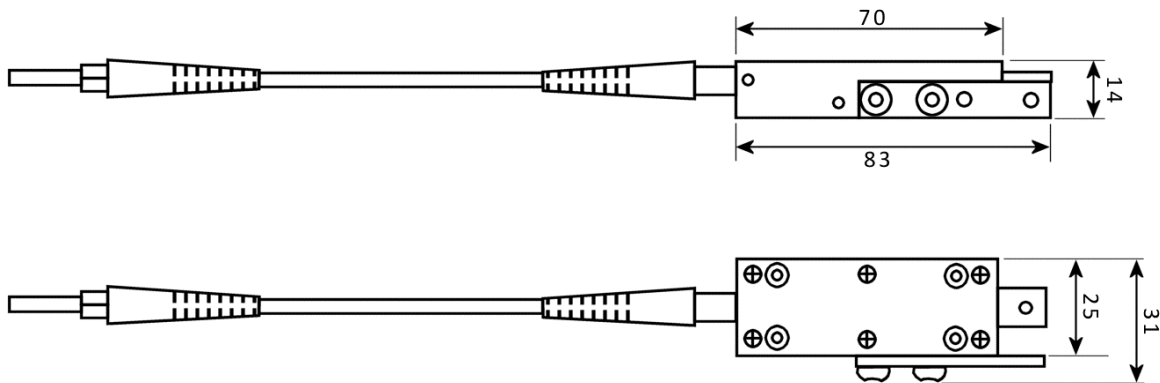
Absolute Maximum Ratings

Parameter	Symbol	ML1847	ML1825	ML1826	ML1828	ML1497	Unit
LD Reverse Voltage	V_{RLD}	0	0	0	0	0	V
LD Forward Current	I_{FLD}	10	65	65	90	90	A
Operating Temperature	T_{OP}	0...20 ¹	0...30 ¹	0...30 ¹	0...30 ¹	0...30 ¹	°C
Storage Temperature	T_{STG}	-20...50	-20...50	-20...50	-20...50	-20...50	°C

¹ A non-condensing environment should be ensured over the useful temperature range.

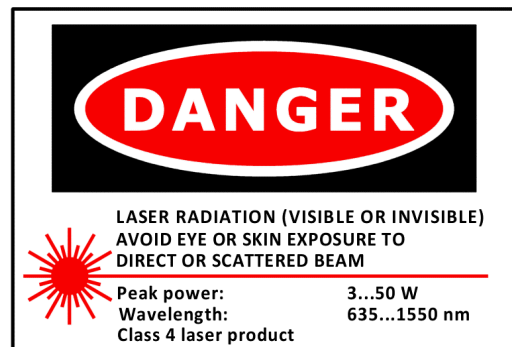
Package Information

The footprint of the package is 25 x 70 mm² + output fiber. The module should be placed on actively cooled heat sink. More specific package information is available per request.



Safety Information

- The laser light emitted from this laser device may be visible or invisible, depending on the laser selected. The laser light is harmful to the human eye. Avoid eye and skin exposure to the beam, both direct and reflected.
- Products are subject to the risks normally associated with sensitive electronic devices including static discharge, transients, and overload. Please ensure ESD protection prior to handling the products.
- These Modulight products are not intended for use in systems where product malfunction can reasonably be expected to result in personal injury.



Peak power and wavelength are for safety analysis only, not to present device performance.

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