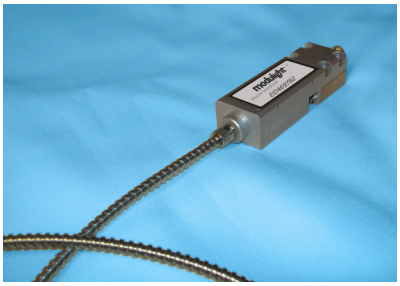
FiberLight

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

Overview

FiberLight is a compact fiber-coupled laser bar module designed for reliable CW operation at high power levels. Due to it's proprietary beam shaping technique, we can offer high brightness and coupling efficiency. Standard configuration includes a thermistor and female SMA-905 connector for fiber pigtail.

Additional features: fiber pigtail, monitoring photodiode, fiber sensor, and aiming beam.



Applications

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

Electro-optical Characteristics, Typical Values

Parameter	Symbol	ML1944 [1]	ML1958 [1]	ML1959 [2]	ML1960 [2]	ML1961 [2]	Unit
Wavelength	λ	635	635	650	1470	1550	nm
Optical Output Power	P_{OPT}	3	5	7	15	15	W
Operating Current	I_{OP}	8	18	25	60	75	A
Operating Voltage	V_{OP}	2.2	2.2	2.1	1.4	1.3	V
Threshold Current	I_{TH}	5	9	12	7	8	A

[1] 635 nm laser: Values are typical for CW operation @ 15°C.

[2] 650 nm and IR lasers: Values are typical for CW operation @ 20°C.

Fiber Pigtail Characteristics*

Parameter	Symbol	Typical Value	Unit
Core Diameter	$\varnothing_{CORE}$	400	µm
Fiber Numerical Aperture	NA	0.22	
Minimum Bending Radius	R_{MIN}	12	cm
Connector Type		SMA-905	

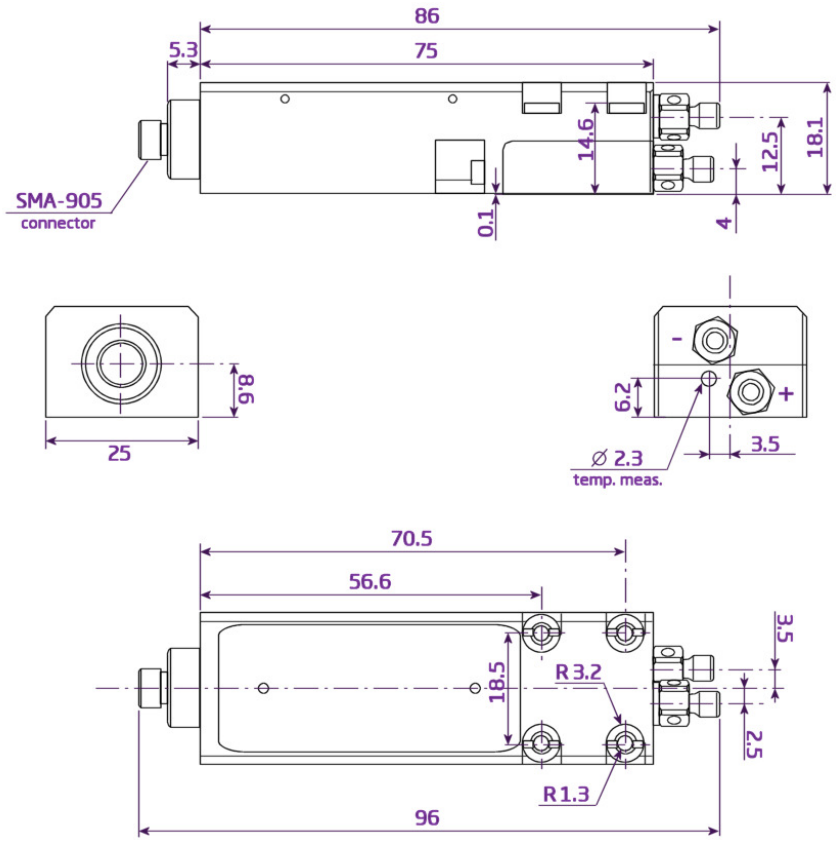
* Optional fiber supplied per customer request.

Absolute Maximum Ratings

Parameter	Symbol	ML1944 [1]	ML1958 [1]	ML1959 [1]	ML1960 [2]	ML1961 [2]	Unit
LD Reverse Voltage	V_{RLD}	0	0	0	0	0	V
LD Forward Current	I_{FLD}	10	20	30	70	80	A
Operating Temperature	T_{OP}	0…20 [1]	0…20 [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



All dimensions are millimeters (mm)

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.

Liability note