

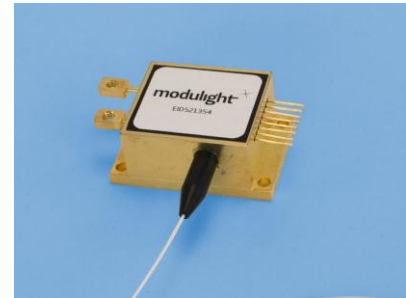
Multi-chip IR laser modules

Fiber-coupled laser modules 808...1550 nm

Overview

Modulight's new addition to FiberLight laser series comprises of multi-chip diode laser modules in the wavelength range of 808...1550 nm. The package is robust and it has a small footprint of 35 x 52 mm and height of 20...22 mm.

By default the output is a 200 μm NA=0.22 fiber pigtail. Also a receptacle type output is available per request. Optionally, a thermistor, a TEC-element, a photodiode, an aiming beam and a fiber detector can be added to the package.



Applications

Industrial	Medical
Illumination Imaging Pumping	Aesthetic Treatments Surgery Dental

Electro-optical Characteristics, Typical Values

Parameter	Symbol	ML2067	ML2020	ML2060	ML2021	ML2022	ML2027	Unit
Wavelength	λ	808	808	976	976	1470	1550	nm
Optical Output Power	P_{OPT}	18	30	18	30	2	2.5	W
Operating Current	I_{OP}	10	10	11	10	3	3	A
Operating Voltage	V_{OP}	5.8	7.8	3.6	7.8	4.2	5.5	V
Threshold Current	I_{TH}	1.5	1.2	1.2	1.2	0.3	0.4	A

808...976 nm products (ML2067, ML2020, ML2060, ML2021) are specified for CW operation @ 25°C.
1470...1550nm products (ML2022 and ML2027) are specified for CW operation @ 20°C

Fiber Pigtail Characteristics

Parameter	Symbol	Typical Value	Unit
Core Diameter	\varnothing_{CORE}	200	μm
Fiber Numerical Aperture	NA	0.22	-
Standard fiber Length	L	100	cm
Connector at the fiber end ¹	-	SMA-905 / ST / FC / no connector	-
Minimum Bend Radius	d	50	mm

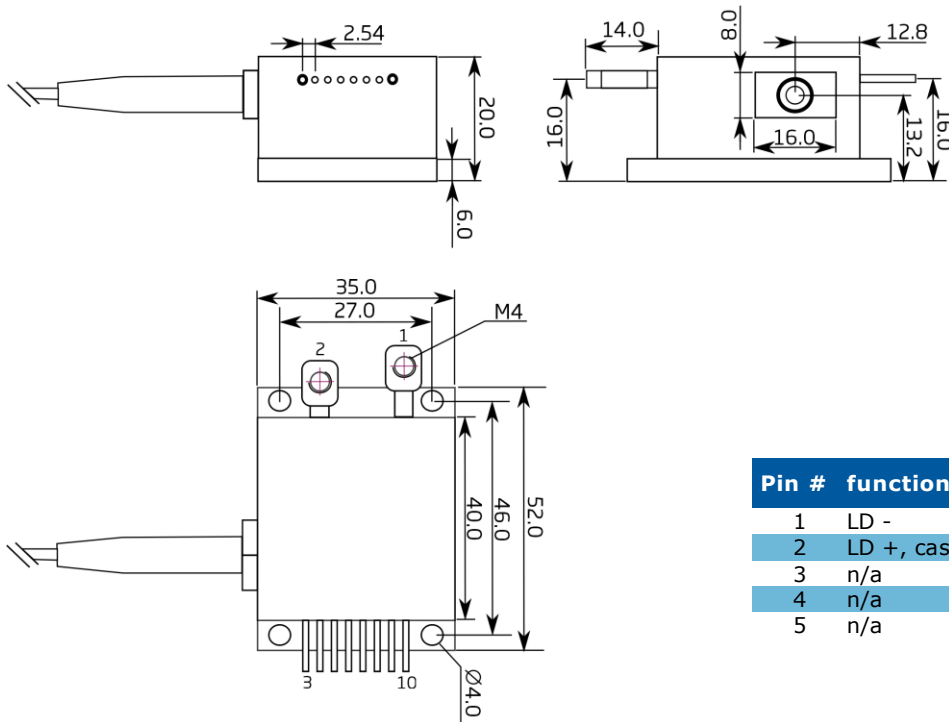
¹ Standard connector: SMA-905. Other connectors and fibers are available per request.

Absolute Maximum Ratings

Parameter	Symbol	ML2067	ML2020	ML2060	ML2021	ML2022	ML2027	Unit
LD Reverse Voltage	V_{RLD}	6	8	6	8	0	0	V
LD Forward Current	I_{FLD}	12	12	12	12	4	3.5	A
Output Power	P_{OPT}	20	32	19	35	2.2	2.6	W
Laser Diode Temperature	T_{AMB}	10...30	10...30	10...30	10...30	10...25	10...25	°C
Ambient Temperature	T_{AMB}	30	30	30	30	30	30	°C
Storage Temperature	T_{STG}	-20...50	-20...50	-20...50	-20...50	-20...50	-20...50	°C

Package Information

10-pin package dimensions are 35 x 52 x 20 mm. Please note that 1470...1550 nm products include TEC by default, and the height of the module is 22 mm. Please contact Modulight Sales for further information.



Pin #	function	Pin #	function
1	LD -	6	n/a
2	LD +, case	7	PD (n)
3	n/a	8	PD (p)
4	n/a	9	thermistor
5	n/a	10	thermistor

Safety Information

- The laser light emitted from this laser device is invisible and 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.

DANGER

VISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED BEAM

Peak power:	2...30 W
Wavelength:	808...1550 nm
Class 4 laser product	

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

Liability note

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