

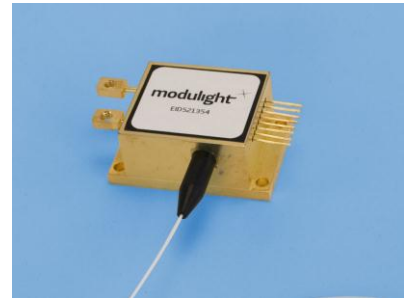
# Multi-chip IR laser modules

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  $\mu\text{m}$  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

Illumination  
Imaging  
Pumping

### Medical

Aesthetic Treatments  
Surgery  
Dental

## Electro-optical Characteristics, Typical Values

Parameter	Symbol	ML2067	ML2020	ML2060	ML2021	ML2022	ML2027	Unit
Wavelength	$\lambda$	808	808	976	976	1470	1550	nm
Optical Output Power	$P_{\text{OPT}}$	18	30	18	30	2	2.5	W
Operating Current	$I_{\text{OP}}$	10	10	11	10	3	3	A
Operating Voltage	$V_{\text{OP}}$	5.8	7.8	3.6	7.8	4.2	5.5	V
Threshold Current	$I_{\text{TH}}$	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	$\varnothing_{\text{CORE}}$	200	$\mu\text{m}$
Fiber Numerical Aperture	NA	0.22	-
Standard fiber Length	L	100	cm
Connector at the fiber end <sup>1</sup>	-	SMA-905 / ST / FC / no connector	-
Minimum Bend Radius	d	50	mm

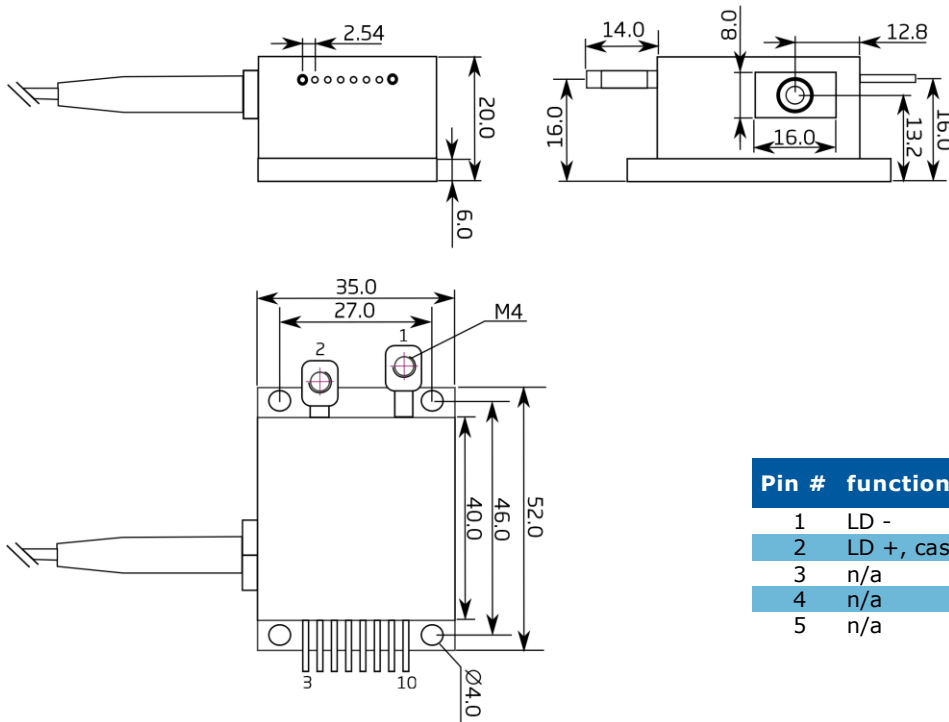
<sup>1</sup> Standard connector: SMA-905. Other connectors and fibers are available per request.

## Absolute Maximum Ratings

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



### Liability note

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