

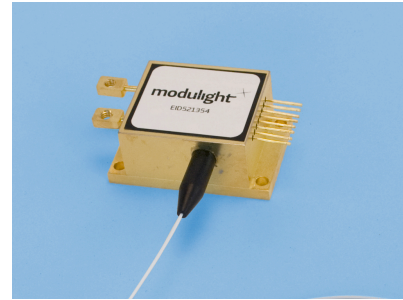
# 3-chip 635...690 nm modules

Fiber-coupled laser modules 635...690 nm

## Overview

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

Default output is 200  $\mu$ m NA=0.22 fiber terminated with SMA-905 connector. The package includes a thermistor, a TEC-element and a photodiode.



## Applications

Industrial	Medical
Illumination Imaging Pumping	Aesthetic Treatments Fluorescence Photodynamic Therapy

## Electro-optical Characteristics, Typical Values

Parameter	Symbol	ML2018	ML2019	ML1983	ML2071	Unit
Wavelength	$\lambda$	635	650	670	680	nm
Optical Output Power	$P_{OPT}$	1	2	2.5	2.5	W
Operating Current	$I_{OP}$	1.1	1.8	1.6	1.6	A
Operating Voltage	$V_{OP}$	6.9	6.9	6.7	6.7	V
Threshold Current	$I_{TH}$	0.6	0.65	0.66	0.66	A

ML2018 and ML2075 are specified for CW operation @ 15°C. ML2019 and ML2076 are specified for CW operation @ 20°C.

## Fiber Pigtail Characteristics

Parameter	Symbol	Typical Value	Unit
Core Diameter	$\varnothing_{CORE}$	200	$\mu$ 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

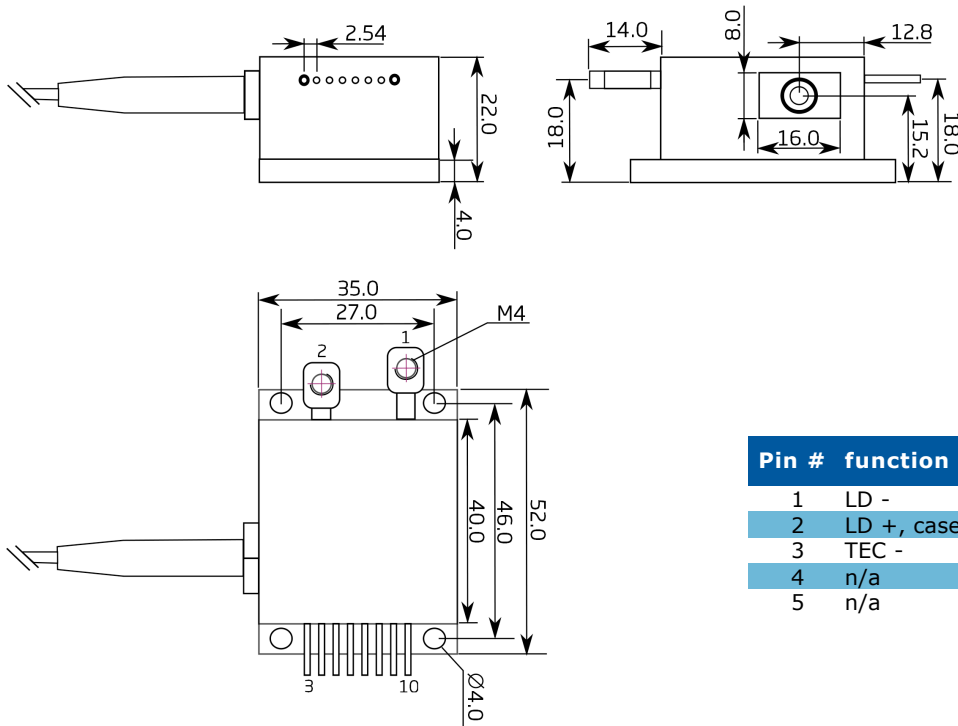
Parameter	Symbol	ML2018	ML2019	ML1983	ML2071	Unit
LD Reverse Voltage	$V_{RLD}$	0	0	0	0	V
LD Forward Current	$I_{FLD}$	1.3	2	1.8	1.8	A
Output Power	$P_{OPT}$	1.2	2.2	2.6	2.6	W
Laser Diode Temperature	$T_{LD}$	10...20	10...25	10...25	10...25	°C
Ambient Temperature	$T_{AMB}$	30	30	30	30	°C
Storage Temperature	$T_{STG}$	-20...50	-20...50	-20...50	-20...50	°C

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### Package Information

10-pin package with footprint of 35 x 52 mm. Height 22 mm.



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

### Safety Information

- The laser light emitted from this laser device is visible 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:	1...3 W
Wavelength:	635...690 nm
<b>Class 4 laser product</b>	

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

### Liability note

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