

SparkLight

Turnkey laser platform 635...1550 nm

Overview

SparkLight turnkey laser platform is Modulight's response to users in search of a ready-to-use laser system. Accommodating most lasers in Modulight's product lineup, the turnkey laser platform offers all auxiliary devices required to operate a high-performance semiconductor laser array: cooling, constant current/power driving, digital supervisory circuit and easy-to-use user interface. The turnkey laser platform can be modified to power up a wide selection of lasers, from 635nm to 1550 nm, with a broad choice of output powers from 3 W to 50 W (laser specific). The platform is designed for reliable CW operation with optional low bandwidth modulation input. A SMA-905 connector ensures repeatable connection of the pigtail fiber.



Applications

Industrial	Medical
Laser marking	Photodynamic therapy
Materials processing	Aesthetic Treatments
Optical pumping	Surgery
Application development	Application development

Electro-optical Characteristics, Typical Values

Parameter	Symbol	ML1762	ML1857	ML1822	ML1820	ML1839	ML1821	Unit
Wavelength	λ	635	635	808	980	1470	1550	nm
Optical Output Power	P_{OPT}	3	5	50	35	12	12	W
Power Stability (24 hours)	δP	< 1	< 1	< 1	< 1	< 1	< 1	%
Fiber Core Diameter	\varnothing_{CORE}	365 ¹	365 ¹	365 ¹	365 ¹	365 ¹	365 ¹	μm
Fiber Numerical Aperture	NA	0.22	0.22	0.22	0.22	0.22	0.22	-
Modulation Bandwidth ²	ν	10	10	10	10	10	10	kHz

All the above values are typical for CW operation @ 15°C.

¹ Fiber core diameters 200...800 μm available per request.

² Optional feature

Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Relative Humidity	RH	95	%
Input Voltage	V _{IN}	88...132 / 176...264 ¹	VAC
Ambient Temperature	T _{AMB}	35 ²	°C
Storage Temperature	T _{STG}	-20...50	°C

¹ Selected by switch.

² A non-condensing environment must be ensured during operation.

Package Information

SparkLight turnkey platform is offered as three different versions: OEM system, rack mounted for industrial applications, and a desktop case with easy-to-use interface for research and industrial application development. 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.

Liability note

This document is sole property of Modulight, Inc. No part of this document may be copied without written acceptance of Modulight, Inc. All statements related to the products herein are believed to be reliable and accurate. However, the accuracy is not guaranteed and no responsibility is assumed for any inaccuracies or omissions. Modulight, Inc. reserves the right to make changes in the specifications at any time without prior notice.