ML6500

small all-inclusive laser system

ML6500 is a laser system which contains one built-in laser. ML6500 includes all necessary electronics, wrapped up in a conveniently small package. ML6500 is controlled by a PC software or directly by analog/digital signals. ML6500 products are available in Modulight’s unique wavelength range from 400 to 2000 nm.

Laser light source – small and easy

ML6500 is a very small plug-and-play laser system for users that don’t have time or interest for all the complexity with drivers, cooling, power supplies, etc. Just unbox it, and take into use!

ML6500 has one built-in laser. When ordering, you may request the wavelength from the below tables, or ask Modulight sales team for more options from the wavelength range 400–2000 nm.

The laser light output comes conveniently from a receptacle fiber with a standard SMA-905 connector.

ML6500 comes with a PC software with elegant graphic UI, or alternatively it can be directly controlled by analog and digital control signals. Therefore it’s also suitable for the needs of system integrators.

Applications

- illumination
- photodynamic therapy
- pharmaceutical research
- diagnostics
- fluorescence microscopy
- dentistry
- optical pumping
- measurement & analysis

Visible wavelengths

<table>
<thead>
<tr>
<th>Wavelength</th>
<th>405 nm</th>
<th>425 nm</th>
<th>445 nm</th>
<th>473 nm</th>
<th>520 nm</th>
<th>630 nm</th>
<th>635 nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical Output Power</td>
<td>800 mW</td>
<td>100 mW</td>
<td>1.1 W</td>
<td>600 mW</td>
<td>700 mW</td>
<td>800 mW</td>
<td>1.5 W</td>
</tr>
<tr>
<td>Output fiber Ø&lt;sub&gt;c&lt;/sub&gt;</td>
<td>105 µm</td>
<td>105 µm</td>
<td>105 µm</td>
<td>105 µm</td>
<td>105 µm</td>
<td>105 µm</td>
<td>200 µm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wavelength</th>
<th>652 nm</th>
<th>658 nm</th>
<th>662 nm</th>
<th>665 nm</th>
<th>670 nm</th>
<th>680 nm</th>
<th>689 nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical Output Power</td>
<td>2 W</td>
<td>2.5 W</td>
<td>2.5 W</td>
<td>2.5 W</td>
<td>2.5 W</td>
<td>2.5 W</td>
<td>2.5 W</td>
</tr>
<tr>
<td>Output fiber Ø&lt;sub&gt;c&lt;/sub&gt;</td>
<td>200 µm</td>
<td>200 µm</td>
<td>200 µm</td>
<td>200 µm</td>
<td>200 µm</td>
<td>200 µm</td>
<td>200 µm</td>
</tr>
</tbody>
</table>

Infrared wavelengths

<table>
<thead>
<tr>
<th>Wavelength</th>
<th>753 nm</th>
<th>810 nm</th>
<th>915 nm</th>
<th>980 nm</th>
<th>1064 nm</th>
<th>1470 nm</th>
<th>1550 nm</th>
<th>1650 nm</th>
<th>1940 nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical Output Power</td>
<td>3.5 W</td>
<td>8 W</td>
<td>10 W</td>
<td>10 W</td>
<td>9 W</td>
<td>1.5 W</td>
<td>1 W</td>
<td>500 mW</td>
<td>500 mW</td>
</tr>
<tr>
<td>Output fiber Ø&lt;sub&gt;c&lt;/sub&gt;</td>
<td>200 µm</td>
<td>200 µm</td>
<td>200 µm</td>
<td>105 µm</td>
<td>200 µm</td>
<td>200 µm</td>
<td>105 µm</td>
<td>200 µm</td>
<td>105 µm</td>
</tr>
</tbody>
</table>
**Package information**

The housing of ML6500 is made of anodized aluminum.

The connectors (power, control, interlock) are located in the back. The SMA-905 connector for laser light output is on the front side, next to the indicator LED.

**Accessories**

**Power supply** - The ML6500 devices are powered by supplying a DC voltage for the control electronics of the ML6500 unit. Modulight supplies compatible accessory DC power supplies that match the voltage and power requirements of each device.

**Cooling module** - The ML6500 device has internal temperature control for controlling the operation temperature of the laser component. In most cases, the heat generated by the laser component needs to be transferred efficiently from the exterior of the system. This goal can be easily achieved with cooling modules that are designed to be operated with ML6500 and have sufficient cooling capacity for removing the excess heat.

**PC control software** - ML6500 devices are equipped with an external control capability. Together with optional PC software the user controls the laser system via a USB connection. The software enables easy access to control the laser operating parameters such as illumination time, optical output power and input current for the ML6500 laser module.
**Compliance management** - Modulight can assist the customer in compiling a sufficient design and manufacturing environment information to support in pursuing filing and approval for CE mark or other approvals for the system with ML6500 product incorporated. The ML6500 product is designed to comply with IEC60825 requirements, but it needs an additional STOP button and certification as a part of the final system.

**Calibration service** - The ML6500 devices are factory calibrated using NIST traceable calibration methods. Modulight recommends a 12-month calibration interval for the laser modules to verify and possibly adjust the output power of the laser module.

**Safety information**

The laser light emitted from this laser device is visible or invisible, and it can be 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**

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.