LMM-RGB1 Combined Triple-Wavelength Laser System

Series Specifications:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Wavelength</td>
<td>473 nm, 532 nm, 635 nm</td>
</tr>
<tr>
<td>Output Type</td>
<td>CW</td>
</tr>
<tr>
<td>Laser Source Type</td>
<td>DPSS &amp; Diode</td>
</tr>
</tbody>
</table>

Overview:

The LMM-RGB1 Series of Combined-wavelength Diode-Pumped Solid-State (DPSS) / Diode Lasers are ideal for applications requiring red, green, and blue wavelengths to be emitted from a single laser module. These RGB laser systems are available from 500 mW to 1 W combined with a high level of long-term output power stability and long operating lifetime at an aggressively competitive cost.

These lasers are commonly used for laser light shows (entertainment) as well as a variety of scientific applications including, PIV, Raman Spectroscopy, and a broad spectrum of other applications. The driver is available as a complete FDA-compliant system or as an O.E.M. component with significantly reduced dimensions.

Available with TTL and Analog modulation, and in a wide array of output power and stability levels, Laserglow products are currently being used by some of the World's top universities and other prominent research facilities.

Key Features:

- Air cooled - no need for water cooling or external chiller
- Lightweight, compact design
- Efficient DPSS technology runs on standard AC power (85 - 264 V, 47 - 63 Hz)
- >10,000 hours continuous maintenance-free operating life
- TTL and Analog modulation (input via BNC connector) lab-spec models only
- Adjustable output power via lockable dial lab-spec models only
- LED display showing LD current, laser cavity temperature lab-spec models only
- FDA CDRH Compliant Class IIIb / Class IV enclosure
- 48-hour replacement coverage available for an additional fee on specific models

Package Includes:

- Laser Head
- Driver/Power Supply
- Power Cable
- BNC Connector (LabSpec models only)
- Keys, Safety Interlock
- Hard-shell Carrying Case
**Specifications:**
This spec sheet has been generated specifically for part number M32-3, per your request. Each column represents the specifications of the individual component lasers that make up the multi-wavelength system.

<table>
<thead>
<tr>
<th>Component Laser Wavelength (nm)</th>
<th>635</th>
<th>473</th>
<th>532</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power (mW)</td>
<td>&gt;200</td>
<td>&gt;200</td>
<td>&gt;200</td>
</tr>
<tr>
<td>Output Power Stability (%RMS/4h)</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>&lt;10</td>
</tr>
<tr>
<td>FDA Safety Class</td>
<td>IIIb</td>
<td>IIIb</td>
<td>IIIb</td>
</tr>
<tr>
<td>Divergence (mrad, full angle)</td>
<td>&lt;2.5</td>
<td>&lt;1.5</td>
<td>&lt;1.5</td>
</tr>
<tr>
<td>Beam Dimensions (mm, 1/e²)</td>
<td>5x8</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Longitudinal Modes</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
</tr>
<tr>
<td>M²</td>
<td>&lt;2</td>
<td>&lt;1.2</td>
<td></td>
</tr>
<tr>
<td>Storage Temperature Range (°C)</td>
<td>-10 to</td>
<td>-10 to</td>
<td>-10 to</td>
</tr>
<tr>
<td>Max. TTL Modulation Freq. (Hz)</td>
<td>10000</td>
<td>10000</td>
<td>10000</td>
</tr>
<tr>
<td>Modulation Input Signal</td>
<td>0-5 VDC</td>
<td>0-5 VDC</td>
<td>0-5 VDC</td>
</tr>
<tr>
<td>Total Power Consumption (W)</td>
<td>16</td>
<td>80</td>
<td>32</td>
</tr>
<tr>
<td>Max. Power Input Duty Cycle</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Standard Warranty (months)</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>MTTF (operational hours)</td>
<td>10000</td>
<td>10000</td>
<td>10000</td>
</tr>
</tbody>
</table>

CW: All specifications are based on performance at full output power and after the specified warmup period. Output characteristics may change if the laser is run at a different power level.

Q-Switched: Specifications are based on the laser pulsing at the specified design frequency. Output characteristics may change if the laser is run at a different frequency.
Power Supply Options:
These lasers are available with several different power supply options. The model that you have selected is highlighted below, and any other options are shown for easy reference.

<table>
<thead>
<tr>
<th>Power Supply Type:</th>
<th>SR</th>
<th>SF</th>
<th>SM</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDA-Compliant Standard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Power</td>
<td>85v to 264v</td>
<td>85v to 264v</td>
<td>85v to 264v</td>
</tr>
<tr>
<td>Power Supply Weight (kg)</td>
<td>1.2</td>
<td>2.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>133 (l) x 130 (w) x 65 (h)</td>
<td>238 (l) x 146 (w) x 102 (h)</td>
<td>133 (l) x 130 (w) x 65 (h)</td>
</tr>
</tbody>
</table>

Multi-wavelength lasers include a separate power supply for each wavelength. In some cases the power supply for each wavelength may be slightly different in size. If the dimensions of the power supply are a concern for you please inquire with us before placing your order.

*Power supply may not be exactly as shown, see dimensional drawings on next 2 pages.
*Dimensions for fiber-integrated (I_) include laser head packaged inside.

Regulatory Classification:
The model you have selected (M32-3) requires the following safety label(s):

![Safety Label Image]

This device is compliant with 21 CFR 1040.10 and 1040.11
LASER RADIATION. AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION
CLASS IV LASER PRODUCT

Maximum Power Output: > 500 mW
Wave length:

CLASS IV LASER PRODUCT

This device is compliant with 21 CFR 1040.10 and 1040.11
LASER RADIATION. AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION
CLASS IV LASER PRODUCT

Manufactured 07-2012, Toronto, Canada
Dimensional Drawing - Laser Form Factor: 3:

Lab/OEM Housing

344

Electrical connectors on rear

Aperture

Scale: 1:1

UNLESS OTHERWISE SPECIFIED:
TORNSHIPS: #2 FLAT
UNLESS OTHERWISE SPECIFIED:
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### Accessories:
The most popular accessories for model M32-3 are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
</table>
| ACALB237X   | Carrying Case-107  
Holds Lab/OEM 2/3 wavelength Labspec laser  
Full Details: [www.laserglow.com/ACA](http://www.laserglow.com/ACA) |
| ACFVISHXA   | FC/PC Fiber Coupler/Collimator for visible spectrum wavelengths (400 to 700 nm) (installed and aligned)  
11mm diameter input lens  
Full Details: [www.laserglow.com/ACF](http://www.laserglow.com/ACF) |
| ACSVISHXA   | SMA-905 Fiber Coupler/Collimator for visible spectrum wavelengths (400 to 700 nm) (installed and aligned)  
11mm diameter input lens  
Full Details: [www.laserglow.com/ACS](http://www.laserglow.com/ACS) |
| AFF2002XX   | Armored Fiber With FC/PC Connectors 200um Core Multimode 2m length  
Full Details: [www.laserglow.com/AFF](http://www.laserglow.com/AFF) |
| AFS2002XX   | Armored Fiber With SMA 905 Connectors 200um Core Multimode 2m length  
Full Details: [www.laserglow.com/AFS](http://www.laserglow.com/AFS) |

**FOR MORE INFORMATION PLEASE CONTACT:**
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E&OE: Data included in this sheet may be subject to change without notice.  
Please confirm critical specifications with our staff prior to ordering.