Firefly-IR
Compact, Widely Tunable, Pulsed Mid-Infrared Laser Source

Applications
- Molecular spectroscopy
- Remote sensing of hydrocarbons
- Stand-off detection of threat agents and fugitive gas emissions
- Environmental survey and monitoring

Features
- Extremely broad tuning range
- Class-leading peak and average power
- Automated alignment, maintenance free operation
- High repetition rate enables rapid data acquisition and real time imaging
- Instrument control by Ethernet (ICE)

Available in various tuning range, power and linewidth options. Customization and a pulse burst modulation accessory are also available. Please inquire.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Low Power</th>
<th>High Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuning Range Options (^{[2]})</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Idler Tuning Range (^{[2]})</td>
<td>2.5-3.7µm</td>
<td>3.7-4.5µm</td>
</tr>
<tr>
<td>Signal Tuning Range (^{[2]})</td>
<td>1.5-1.8µm</td>
<td>1.4-1.5µm</td>
</tr>
<tr>
<td>Output Power</td>
<td>&gt;80mW(^{[3]})</td>
<td>&gt;50mW(^{[4]})</td>
</tr>
<tr>
<td>Linewidth</td>
<td>&lt;10cm(^{-1})</td>
<td>&lt;5cm(^{-1})</td>
</tr>
<tr>
<td>Pulse Duration</td>
<td>&lt; 10 ns (FWHM)</td>
<td>&lt; 10 ns (FWHM)</td>
</tr>
<tr>
<td>Pulse Repetition Rate (^{[7]})</td>
<td>150kHz</td>
<td>150kHz</td>
</tr>
<tr>
<td>Beam Divergence (full angle) (^{[4]})</td>
<td>&lt; 3mR</td>
<td>&lt; 3mR</td>
</tr>
<tr>
<td>Beam Diameter</td>
<td>&lt; 4.5mm(^{[6]})</td>
<td>&lt; 2mm</td>
</tr>
<tr>
<td>Dimensions (L x W x H)</td>
<td>347 x 143 x 69mm</td>
<td>341 x 204 x 75mm</td>
</tr>
</tbody>
</table>

Notes
1. Factory configured as range A or B. For 4.5-4.7µm please contact factory.
2. Factory configured. Default is idler only. Signal only or signal+idler options are available.
3. Specified at 3µm (and at 1.65µm if signal configured).
4. Specified at 4µm (and at 1.45µm if signal configured).
5. Factory configured, 3cm-1 line narrowed version available with 60% of broadband output power.
6. As 1/e\(^2\) intensity full width.
8. ± 15%

M Squared Laser's laser products are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Centre of Devices and Radiological Health on all systems ordered for shipment after October 1st, 2003.

0818.1
M Squared Laser's laser products are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Centre of Devices and Radiological Health on all systems ordered for shipment after October 1st, 2003.

M Squared Headquarters
1 Kelvin Campus, West of Scotland Science Park, Glasgow, G20 0SP, United Kingdom
Phone +44 (0)141 945 0500 | Fax +44 (0)141 945 0505 | sales@m2lasers.com | m2lasers.com | @m2lasers

M Squared Lasers, Inc
West Coast, USA: +1 650 798 5040
East Coast, USA: +1-617-401-2368

Distributors
Japan Ocean Photonics +81-3-6278-9470
P.R. China PulsePower Tech. Ltd +86-10-6256-5117

A complete list of our global locations is available on our website.