FLEXPOINT® Machine Vision Lasers
MVgiga Series

The FLEXPOINT® MVgiga series are the most powerful machine vision lasers offered by LASER COMPONENTS.

The lasers emit up to 1 W at different wavelengths (higher powers will be offered shortly). The lasers produce a crisp line with uniform intensity and adjustable focus. A wide range of fan angles is available.

Features

- uniform line intensity
- focusable
- high power
- custom modules available
- universal tool for industrial inspection and 3D triangulation
- TEC

Specifications

Basic properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spectral range</td>
<td>405/450/638/650/675/808/830/905/915/975 nm, other wavelengths on request, (stability: ≤ 0,25 nm/°C)</td>
</tr>
<tr>
<td>Output power</td>
<td>up to 1 W (wavelength dependent)</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>24 V ± 3 V (reverse voltage protection)</td>
</tr>
<tr>
<td>Current consumption</td>
<td>≤ 1500 mA @ 24 V (≤ 3000 mA short-time at starting)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0 °C to +60 °C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-20 °C to +60 °C</td>
</tr>
<tr>
<td>Modulation</td>
<td>digital (0–10 kHz, active high), higher frequency on request, dimmable</td>
</tr>
<tr>
<td>Power stability</td>
<td>≤ 5% (after warm up at 25 °C)</td>
</tr>
<tr>
<td>TEC stability</td>
<td>± 1 °C (optional: temperature adjustment)</td>
</tr>
<tr>
<td>LED display</td>
<td>Green: supply voltage ON, White: Laser ON</td>
</tr>
<tr>
<td>Safety</td>
<td>keylock</td>
</tr>
</tbody>
</table>

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Laser Diodes
BLAU OPTOELEKTRONIK
LASER COMPONENTS
### Beam properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beam profile</td>
<td>Laser line with uniform intensity distribution</td>
</tr>
<tr>
<td>Working distance</td>
<td>50 mm to ∞ (focusable by allen key)</td>
</tr>
<tr>
<td>Boresight deviation</td>
<td>≤ 10 mrad (relative to the base plate)</td>
</tr>
<tr>
<td>Pointing stability</td>
<td>≤ 10 µrad/°C</td>
</tr>
<tr>
<td>Fan angle</td>
<td>5°/10°/15°/20°/30°/45°/60°/75°/90°/96°</td>
</tr>
<tr>
<td>Line thickness</td>
<td>≤ 500 µm in 1 m distance</td>
</tr>
<tr>
<td>Line intensity variation</td>
<td>± 20% (within 80% of the line)</td>
</tr>
<tr>
<td>Line straightness</td>
<td>± 0.1%</td>
</tr>
</tbody>
</table>

### Mechanical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing material</td>
<td>Aluminum (anodized, potential free)</td>
</tr>
<tr>
<td>Housing size</td>
<td>50 x 50 x 150 mm (Width x Height x Length), excl. fixing holes</td>
</tr>
<tr>
<td>Pin definition</td>
<td>8pin M12 connector (check manual for pin assignment)</td>
</tr>
<tr>
<td>Laser class</td>
<td>3B</td>
</tr>
</tbody>
</table>

![Diagram of the MVgiga Series laser](image)
# FLEXPOINT® Machine Vision Lasers

## MVgiga Series

<table>
<thead>
<tr>
<th>Series</th>
<th>Wave-length (nm)</th>
<th>Output Power (mW)</th>
<th>Power Options</th>
<th>Fan angle (degree)</th>
<th>Focus (x in mm)</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP</td>
<td>XXX</td>
<td>XXX</td>
<td>X</td>
<td>XX</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

- Wavelengths: 405, 450, 638, 650, 675, 808, 830, 905, 915, 975
- Output Power: 1 to 1000 mW
- Power Options:
  - P= Potentiometer integrated (Power Adjustment)
  - D= Dimmable by third wire (Power Adjustment)
  - M= Modulation by third wire (digital 0 V= laser off, 5 V= laser on)
- Focusable: FXX= Focussed to XX

### Options

- 5, 10, 15, 20, 30, 45, 60, 75, 90

### Examples:

- Line width
- Supply voltage
- Spot size
- OEM customer name
- Working distance

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**Ordering Code FLEXPOINT® MVgiga Series**

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