StarFiber 100/200/400/600

Fiber Laser for Fine Welding, Cutting, and Drilling

The Coherent-ROFIN StarFiber laser is robust, compact, and satisfies all criteria for optimized industrial laser material processing.

For laser joining, StarFiber allows very small seam geometries at very high welding speeds. The welded joints show maximum strength with minimal heat input to the workpiece.

Laser fine cutting and drilling with StarFiber results in clean cuts with low heat affected zones and high edge qualities.

FEATURES & BENEFITS

• 100 to 600 W
• High efficiency
• Available with scanner and fixed optics
• Coherent-ROFIN SmartWeld™ technology for optimized welding properties
• Easy to integrate
• Convenient operator control through innovative control unit (RCU)

APPLICATIONS

• Fine Welding
• Fine Cutting
## SPECIFICATIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>StarFiber 100</th>
<th>StarFiber 200</th>
<th>StarFiber 400</th>
<th>StarFiber 600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength (nm)</td>
<td>1070</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output Power (W) (Max.)</td>
<td>100</td>
<td>200</td>
<td>400</td>
<td>600</td>
</tr>
<tr>
<td>Pulse Frequency (kHz)</td>
<td>Single-Shot up to 170</td>
<td>Single-Shot up to 170</td>
<td>Single-Shot up to 50</td>
<td>Single-Shot up to 5</td>
</tr>
<tr>
<td>Pulse Width (μs) (FWHM)</td>
<td>0.5 to CW</td>
<td>0.5 to CW</td>
<td>1.0 to CW</td>
<td>1.0 to CW</td>
</tr>
<tr>
<td>Beam Diameter (mm) (1/e²)</td>
<td>5.0 ±0.5</td>
<td>5.0 ±0.5</td>
<td>Diverging</td>
<td>Diverging</td>
</tr>
<tr>
<td>Beam Divergence (mrad) (full angle)</td>
<td>Collimated</td>
<td>Collimated</td>
<td>&lt;150</td>
<td>&lt;140</td>
</tr>
<tr>
<td>Beam Quality (M²)</td>
<td>&lt;1.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free Fiber Length (m)</td>
<td>4.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiber Connection</td>
<td>QCS</td>
<td>QCS</td>
<td>RQB</td>
<td>QBH</td>
</tr>
</tbody>
</table>

## ENVIRONMENTAL AND ELECTRICAL OPERATING CONDITIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Voltage (VAC/A)</td>
<td>208 to 240 V</td>
</tr>
<tr>
<td>Line Frequency (Hz)</td>
<td>50/60</td>
</tr>
<tr>
<td>Power Consumption (kW) (Max.)</td>
<td>1.5, 2.25, 2.7, 3.5</td>
</tr>
<tr>
<td>Power Supply Weight</td>
<td>120, 120, 130, 250</td>
</tr>
<tr>
<td>Power Supply Dimensions (L x W x H)</td>
<td>1149.0 x 575.4 x 1114.0 mm (45.24 x 22.65 x 43.86 in.)</td>
</tr>
</tbody>
</table>

## STANDARDIZED INTERFACES

Parameter set via 24 V parallel I/O, communication via Ethernet, analog (0-10 V)

Safety shutter according to DIN EN 13849-1

## OPTIONS

- Application packages:
  - Fine welding with scanner or fixed optics
  - Fine cutting with fixed optics
- Process visualization via camera
- Remote maintenance
AVAILABLE SCANNER AND FIXED OPTICS

Application Package “Fine Welding” (Scanner Optics)

Application Package “Fine Welding” (Fixed Optics)  Application Package “Fine Cutting”
MECHANICAL SPECIFICATIONS

StarFiber

Front View

Space for Air Ventilation (Min.)
150.0 mm (5.91 in.)

Rear View

575.4 mm (22.65 in.)
562.0 mm (22.125 in.)

Side View

1149.0 mm (45.24 in.)
980.0 mm (38.58 in.)
849.0 mm (33.43 in.)
995.0 mm (39.17 in.)

Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice.

Coherent offers a limited warranty for all StarFiber 100/200/400/600 Lasers. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.

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