JK Fiber Lasers
A range of ytterbium fiber lasers for fine industrial processing

Advantages
- 50W - 300W CW output power
- Single mode fiber beam delivery
- Patented back reflection protection
- Integral rapid modulation & pulse shaping
- FiberView™ Software
- Range of cutting & welding heads
- Small footprint
- High reliability
- Low maintenance

Applications:
- Cutting
- Welding
- Micromachining
- Fine Cutting
- Selective Laser Sintering
- Cladding
The JK™ fiber laser range offers a definitive solution for a variety of industrial manufacturing and precision applications. Taking advantage of JK Lasers’ 40 years experience in industrial laser solutions, these lasers combine single-mode beam quality, high efficiency, patented processing technologies and a small footprint.

### Product Code Selection Guide

<table>
<thead>
<tr>
<th>Model</th>
<th>1 a, b, c</th>
<th>2 a, b, c</th>
</tr>
</thead>
<tbody>
<tr>
<td>JK200FL</td>
<td>EVW</td>
<td>5RWE</td>
</tr>
</tbody>
</table>

1. Options:
   - V: Visible Pointing Diode
   - T: Flat Top Beam Profile
   - W: Water Cooling

2. Length:
   - 2 metres
   - 5 metres (Standard)
   - 10 metres
   - 15 metres
   - 15 metres

3. Conduit Type:
   - R: Rugged
   - F: Flexible
   - P: PIPA fibre (with T option only)

4. O/P Optic:
   - W: Window
   - 25: 25mm focal length lens
   - 35: 35mm focal length lens
   - 50: 50µm PIPA fibre (with T option only)
   - 100: 100µm PIPA fibre (with T option only)

### Performance Data

<table>
<thead>
<tr>
<th>Model</th>
<th>JK50FL</th>
<th>JK100FL</th>
<th>JK200FL</th>
<th>JK300FL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Output Power (W)</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>300</td>
</tr>
<tr>
<td>Operating Modes</td>
<td>CW and Modulated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output power range</td>
<td>20 - 100%</td>
<td>10 - 100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long Term Output Power Stability</td>
<td>+/- 1% typical (+/- 3% specified)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wavelength (nm)</td>
<td>1080 Standard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linewidth (nm)</td>
<td>&lt;2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polarisation</td>
<td>Un-Polarised</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modulation Capability</td>
<td>Unlimited Pulse Shapes, Ramping, Process Cycle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Min. Rise / Fall Time (µs)</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Modulation Frequency (kHz)</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Fiber Optic Beam Delivery

| Output Fiber Type Options | Single Mode / 50µm / 100µm |
| Beam Quality / BPP (mm.rad) | TEM_00 M^2<1.1 / 2 / 5 TEM_00 M^2<1.3 |

### Electrical

| Electrical Supply (V ac / Hz) | 100 - 240±10% / 47 - 63 | 200 - 240±10% / 47 - 63 |
| Power consumption (W) | 250 | 400 | 800 | 1200 |

### Physical

| Height - Air cooled | 6U | 6U | 6U | 7U |
| Height - Water Cooled | 4U | 4U | 4U | See next generation data sheet |

### Environment / Cooling

| Ambient Temperature - Air Cooled (°C) | 5 - 35 | 5 - 30 | 5 - 25 |
| Water Temperature (°C) | 18 - 28 |
| Max. Water Pressure (Bar) | 6 |
| Max. Relative Humidity (°C) | 85% (20°C), 50% (40°C) |

### Interface

<table>
<thead>
<tr>
<th>Standard Interfaces</th>
<th>Serial - RS232, Ethernet</th>
<th>Parallel - Machine Interface</th>
</tr>
</thead>
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