Pulsed Nd:YAG Laser for highspeed welding

- Deep penetration welding of challenging materials and material combinations
- High throughput
- High speed SHADOW® welding
- Single shot contour welding
- Ideal for battery and solar collector welding
### Specifications for Laser Source FLS CL

<table>
<thead>
<tr>
<th>Laser Source</th>
<th>542CL</th>
<th>542CL-HP</th>
<th>542CL</th>
<th>542CL-HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cavity</td>
<td>307</td>
<td>307</td>
<td>502</td>
<td>502</td>
</tr>
<tr>
<td>Wavelength</td>
<td>1064 nm</td>
<td>1064 nm</td>
<td>1064 nm</td>
<td>1064 nm</td>
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<tr>
<td>Pulse length</td>
<td>0.2 – 100 ms</td>
<td>0.2 – 200 ms</td>
<td>0.2 – 100 ms</td>
<td>0.2 – 200 ms</td>
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<tr>
<td>Pulse repetition rate</td>
<td>0.1 – 1000 Hz</td>
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<tr>
<td>Pulse energy max.</td>
<td>60 J</td>
<td>110 J</td>
<td>70 J</td>
<td>110 J</td>
</tr>
<tr>
<td>Peak power at 1 ms max.</td>
<td>8 kW</td>
<td>16 kW</td>
<td>10 kW</td>
<td>16 kW</td>
</tr>
<tr>
<td>Average power max.</td>
<td>400 W</td>
<td>400 W</td>
<td>500 W</td>
<td>500 W</td>
</tr>
</tbody>
</table>

**Fiber Optic Beam Delivery**
- Number of outputs: 1–4 ports
- Modes: energy or time sharing
- Fiber core diameter: 400/600 µm, 600 µm
- Fiber length: 5/10 m, max. 80 m

**Line Power**
- Configuration: 3-phase + ground ±10%
- Multitap transformer for: 380 V, 400 V, 480 V
- Power consumption: 19 kVA
- Line frequency: 50 Hz or 60 Hz

**Cooling**
- Water inlet max.: 20°C / 8 bar
- Pressure drop to outlet, min.: 4 bar
- Cooling power max.: 15 kW

**Weight**
- Laser unit: 600 kg

**Ambient conditions**
- Ambient temperature max.: 10 – 35 °C
- Relative humidity max.: 80 %

**Emissions**
- Heat dissipation approx.: 0.4 kW + beam power
- Noise at 1m, idle: 65 dBA

**Compliance with standards**
- CE compliant, FDA compliant

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Specifications subject to change without notice.