BDL and BFP
Fiber Coupled Diode Laser Modules

Features
5W to 400W CW
up to 2 kW pulsed operation
100 to 600μm
Smallest footprint
Conduction cooled
Long lifetime
Multi-wavelength
Custom Mil-spec solutions

Applications
Solid-state laser pumping
Fiber laser pumping
Medical lasers
Material processing
Illumination
Instrumentation
Ranging

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SOLUZIONI LASER INNOVATIVE
BDL and BFP diode laser modules are based on diode arrays and multi-single emitter design respectively and they can be configured for offering a wide range of available wavelengths and power levels. They can operate both in CW mode and in pulsed mode.

The integrated optical design, accurate test and selection of high quality semiconductor materials and efficient thermal management make these devices the ideal choice for applications requiring reliability, long lifetime and simple conductive cooling in a small footprint.

BDL packages are coupled to standard SMA patch cables; custom pigtailng or free space collimated output are also available. Five standard packages [A, D, E, F and K] can be provided with different output power and options, as described in the table below.

<table>
<thead>
<tr>
<th>Available standard package</th>
<th>BDL A</th>
<th>BDL D</th>
<th>BDL E</th>
<th>BDL F</th>
<th>BDL K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max CW Output power</td>
<td>45 W</td>
<td>90 W</td>
<td>150 W</td>
<td>200 W</td>
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<tr>
<td>Center wavelengths</td>
<td>808 - 88X - 915 - 940 - 976 - 980 - 1064</td>
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<tr>
<td>Central wavelength tolerance</td>
<td>1 to 10 nm</td>
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<tr>
<td>Spectral width (FWHM)</td>
<td>1 to 5 nm</td>
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<tr>
<td>Fiber connector</td>
<td>SMA 905 (option: FC - ST - Custom Patch Cable and Pigtail)</td>
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<tr>
<td>Fiber core diameter</td>
<td>200 - 400 - 600 - 800 nm</td>
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<tr>
<td>Fiber NA</td>
<td>0.22 or 0.15</td>
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<tr>
<td>Operating temperature</td>
<td>15 to 35(^\circ) (option: extended operating range)</td>
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<tr>
<td>Storage temperature</td>
<td>-20 to 60(^\circ) (option: extended operating range)</td>
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<tr>
<td>Built-in thermistor</td>
<td>NTC - 10 kOhm - 25(^\circ) C</td>
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<tr>
<td>Cooling</td>
<td>Conductive (option: water cooled)</td>
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<tr>
<td>Electro-optical efficiency</td>
<td>Up to 45%</td>
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</tbody>
</table>

*BDL Type D

OPTIONS AVAILABLE:

Red aiming beam
Monitoring photodiode
Fiber presence sensor
Integrated TE coolers
Custom fiber optics and connectors
Integrated current and temperature control
BFP modules are particularly suited for pumping applications, ensuring very long lifetime, low current operation and the highest brightness in a miniaturized package; they can be coupled to standard optical connectors and can include a variety of accessories from aiming beam to integrated controllers, aimed to medical, industrial, scientific and aerospace direct applications. Customized Mil spec models can be designed, manufactured and qualified. Multi-wavelength solutions (MDL) are well suited for a variety of medical applications; up to four different wavelengths can be available in one module. Models with free-space collimated or line-shaped output are also available.

*2kW - 915nm Pulsed Module*
International distributors:

North America
Canada
USA

Figure 1-2: Various models of Luce, Sol, Wedge, and Onda lasers. Presentation text for Luce, Sol, Wedge, and Onda lasers.(2,4),(996,993)

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Bright Solutions Srl
Via Artigiani 27
27010 Cura Carpignano (Pv) Italy
T (+39) 0382 583091 F (+39) 0382 583690
www.brightsolutions.it info@brightsolutions.it sales@brightsolutions.it