Levante IR fs OPO

Femtosecond OPO with Automated Wavelength Tuning

Levante IR fs Optical Parametric Oscillator (OPO) is an ideal tool to extend the wavelength coverage of Coherent fs laser sources. A versatile tool for spectroscopy, material science, microscopy and other applications, it can be pumped with either the Fidelity HP or Chameleon Discovery laser systems.

The generation of the Signal and Idler pulses is jitter-free with respect to each other as well as to the pump pulse. High power Signal output is tunable between 1320 nm to 2000 nm while Idler output provides 2170 nm to 5000 nm range.

User-oriented design and automated wavelength tuning enable full PC control while easy-to-use data acquisition software and the TCP/IP-based interface allows for real-time data display and straightforward remote control setup or custom software.

FEATURES & BENEFITS

• Automated wavelength tuning
• Synchronous pumping scheme
• Full PC control
• TCP/IP standard Software Interface
• Integrated spectrometer for OPO Signal wavelength range

APPLICATIONS

• Ultrafast Spectroscopy
• Near Field Scanning Optical Microscopy (NSOM)
• Pump/probe Spectroscopy
• Semiconductor Inspection
• Material Science
• Multiphoton Excitation (MPE) Microscopy
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th>Pumped with Fidelity HP (10 W)</th>
<th>Pumped with Chameleon Discovery (fixed wavelength output, 3.5 W)</th>
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</thead>
<tbody>
<tr>
<td>Pump Wavelength (nm)</td>
<td>1040</td>
<td></td>
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<tr>
<td>Tuning Range*1 (nm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signal</td>
<td></td>
<td>1320 to 2000</td>
</tr>
<tr>
<td>Idler</td>
<td></td>
<td>2170 to 5000</td>
</tr>
<tr>
<td>Average Output Power (W)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signal, at 1500 nm</td>
<td>&gt;2</td>
<td>&gt;0.9</td>
</tr>
<tr>
<td>Idler, at 2500 nm</td>
<td>&gt;0.7</td>
<td>&gt;0.4</td>
</tr>
<tr>
<td>Typical Pulse Width after Compression (fs)</td>
<td>&lt;150</td>
<td></td>
</tr>
<tr>
<td>Pulse Repetition Rate*2 (MHz)</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Power Stability*3 (%rms)</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>Spatial Mode (Signal and Idler)</td>
<td>TEM00</td>
<td></td>
</tr>
<tr>
<td>Computer Interface</td>
<td>Standardized Software Interface (TCP/IP)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>88 kg (194 lbs.)</td>
<td></td>
</tr>
<tr>
<td>Dimensions (L x W x H)</td>
<td>1169 x 402 x 204 mm (46.0 x 15.8 x 8.0 in.)</td>
<td></td>
</tr>
</tbody>
</table>

*1 Wavelengths up to 15 μm are available on request via optional accessories.
*2 Synchronized to pump laser.
*3 Measured over 12 hours at 1700 nm, at constant environmental temperature.

**TYPICAL PERFORMANCE DATA**

**Levante IR Pumped with Fidelity HP (10 W, 80 MHz, 140 fs)**

![Output Power, Signal](image1)

![Output Power, Idler](image2)

![Typical Signal Power Stability (at 1600 nm)](image3)
**TYPICAL PERFORMANCE DATA**

Levante IR Pumped with Chameleon Discovery (fixed wavelength output, 1040 nm, 3.5 W)

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**Extensive Spectral Coverage by Chameleon Discovery and Wavelength Extension Accessories**

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[Graphs and diagrams related to TYPICAL PERFORMANCE DATA]
MECHANICAL SPECIFICATIONS

Levante IR

Front View

Rear View

Top View

125.0 mm (4.92 in.)
126 mm (4.96 in.)
79.0 mm (3.11 in.)
125.0 mm (4.92 in.)
125.0 mm (4.92 in.)
402.0 mm (15.83 in.)
1125.0 mm (44.29 in.)
1169.0 mm (46.02 in.)