OPA 9400/9800 Series

Optical Parametric Amplifiers for RegA 9000/9050
Regenerative Amplifier Accessory

Features

• Variable repetition-rate
• Multiple synchronized output beams
• Whitelight continuum seed for ease of tuning
• Difference-frequency generation (DFG) options extend tuning to the mid-IR region

Mechanical Specifications

**OPA 9400/9450**
Physical dimensions of Laser Head (L x W x H)
720 x 408 x 195 mm
(28.8 x 16.3 x 7.8 in.)

**OPA 9800/9850**
Physical dimensions of Laser Head (L x W x H)
720 x 408 x 195 mm
(28.8 x 16.3 x 7.8 in.)

Superior Reliability & Performance
OPA 9400/9800 Series™
Optical Parametric Amplifiers for RegA 9000/9050 Regenerative Amplifier Accessory

System Specifications

<table>
<thead>
<tr>
<th></th>
<th>OPA 9400</th>
<th>OPA 9450</th>
<th>OPA 9800</th>
<th>OPA 9850</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repetition-Rate (kHz)</td>
<td></td>
<td>250</td>
<td></td>
<td></td>
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<tr>
<td>Pulse Energy (nJ)</td>
<td>80</td>
<td>160</td>
<td></td>
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<tr>
<td>Average Power (mW)</td>
<td>20</td>
<td></td>
<td>40</td>
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<tr>
<td>Signal Output (nm)</td>
<td>480 to 700</td>
<td>1200 to 1600</td>
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<tr>
<td>Idler Output (nm)</td>
<td>933 to 2300</td>
<td>1600 to 2400</td>
<td></td>
<td></td>
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<tr>
<td>Pulse Width</td>
<td>&lt;225 fs AC</td>
<td>See Note 4</td>
<td>&lt;225 fs</td>
<td>See Note 4</td>
</tr>
<tr>
<td>Noise (% )</td>
<td>±2.0</td>
<td></td>
<td>±2.0</td>
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<tr>
<td>Stability (% )</td>
<td>±2.0</td>
<td></td>
<td>±2.0</td>
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<tr>
<td>M²</td>
<td>&lt;2.0</td>
<td></td>
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1 Specifications based on output of one OPA, 10W Verdi pumping a RegA 9000/9050, and either Mira/Verdi or Vitesse seeding.
2 Same specifications apply for two simultaneously pumped OPAs at 100 kHz.
3 Power drift over one hour (after 15-minute warm-up); crystal temperature controlled with supplied chiller; room temperature stable <±1°C.
4 Compressible to pump pulse width using external pulse compressor (not provided).

OPA 9450 Power Stability
(Pumped by RegA 9040)

OPA 9450 Output Spectra Across
Tuning Range (pumped by RegA 9040)

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

Coherent’s scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all OPA 9400/9800 accessories. 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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