**GHZ OPO-X Optical Parametric Oscillator**

**Tunable Femtosecond Pulses with GHZ Repetition Rate**

- GHZ OPO-X by APE is a GHZ Optical Parametric Oscillator (OPO) providing tunable femtosecond pulses in the near-infrared (NIR), visible (VIS) as well as infrared (IR) wavelength region.

- It is an ideal choice to add new wavelength ranges to GHZ repetition rate Ti:Sapphire lasers, such as *taccor tune* made by *Laser Quantum*.

- GHz repetition rate OPO for Ti:Sa lasers
- Completely automated and fully computer controlled
- Tunable from < 530 ... 740 nm (VIS), 1000 ... 1600 nm (NIR) and 1750 ... 4100 nm (IR)
- TCP/IP remote control with standardized command set for easy programming
- Integrated high resolution spectrometer and power performance monitoring
**GHz OPO-X Specifications**

### Required Pump Source

- **Pump Laser Type**: GHz Ti:Sa Laser; e.g. *taccor tune* by Laser Quantum; other types possible on request
- **Pump Wavelength**: 750 - 850 nm

### OPO Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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<tbody>
<tr>
<td><strong>Tuning Range</strong></td>
<td>1000 ... &gt; 1500 nm (typically 1600 nm) (Signal)</td>
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<tr>
<td></td>
<td>1750 ... 4100 nm (Idler) *</td>
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<tr>
<td></td>
<td>&lt; 530 ... 740 nm (VIS) *</td>
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<tr>
<td>**Output Power **</td>
<td>&gt; 250 mW at 1200 nm (Signal); &gt; 100 mW at 1900 nm (Idler); &gt; 150 mW at 600 nm (VIS)</td>
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<tr>
<td><strong>Pulse Width</strong></td>
<td>Typ. 200 fs</td>
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<tr>
<td><strong>Time Bandwidth Product</strong></td>
<td>Typ. 0.6</td>
</tr>
<tr>
<td><strong>Repetition Rate</strong></td>
<td>Equal to the repetition rate of the pump laser, ~ 1 GHz</td>
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<tr>
<td><strong>Polarization</strong></td>
<td>Signal, Idler: Horizontal, linear; VIS: Vertical, linear</td>
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<tr>
<td><strong>Beam Quality M²</strong></td>
<td>&lt; 1.2 (Signal, VIS)</td>
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<tr>
<td><strong>Divergence</strong></td>
<td>Typ. 0.8 mrad (Signal)</td>
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</tbody>
</table>

*Available as option **At pumping power > 1.8 W

### Power vs. Wavelength (typical)

![Power vs. Wavelength Chart](chart.png)

**Options**

- IR Idler access (1750 ... 4100 nm)
- VIS (< 530 ... 740 nm) generation with intracavity SHG
- Pulse compressor

**Dimensions**

1169 mm x 205 mm x 402 mm (W x H x D)

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