



R&D ULTRAFAST LASERS LTD.

## FemtoRainbow 100 OPO

Femtosecond tunable synchronously pumped optical parametric oscillator



- *Ti:Sapphire laser wavelength conversion*
- *Synchronously pumped at ~76 MHz*
- *Output is widely tunable from 1010 to 1260 nm*
- *Output power from up to 100 mW*
- *15 nm to 30 nm spectral width (FWHM)*
- *KTP or PPLN crystal based conversion*
- *Wavelength stabilization by computer control*

**FemtoRainbow 100 OPO** is a femtosecond pulse, widely tunable, synchronously pumped infrared OPO developed for spectroscopic applications (e.g., for transient absorption measurements). The FemtoRainbow IR OPO can be pumped by our FemtoRose 100 TUN tunable Ti:Sapphire laser at various wavelengths at a repetition rate of ~76 MHz. Frequency conversion is made by a KTP or PPLN crystal. The actual output wavelength depends on the PPLN crystal period, pump wavelength, the mirror set and the output coupler used. Customized output wavelengths are available upon request.

### System specifications

|                      |                              |
|----------------------|------------------------------|
| Output Power:        | Up to 100 mW                 |
| Tuning Range:        | 1010 nm to 1260 nm           |
| Pulse Duration:      | ~100 fs                      |
| Repetition rate:     | ~76 MHz (same as pump laser) |
| Beam diameter:       | 2 mm                         |
| Spatial mode:        | TEM <sub>00</sub>            |
| Polarization:        | horizontal                   |
| Physical dimensions: | 100 x 45 x 15 cm             |

### Pump laser requirements

FemtoRose 100 TUN tunable Ti:Sapphire laser or equivalent

|                   |                                   |
|-------------------|-----------------------------------|
| Pump power:       | 300 mW to 800 mW                  |
| Wavelength range: | 700 nm to 900 nm (for tunability) |
| Repetition rate:  | ~ 76 MHz (nominal)                |
| Polarization:     | horizontal                        |