

# ORPHEUS | TWINS

## Dual Optical Parametric Amplifier

### FEATURES

- Two OPA units in a single compact housing
- 210 – 16000 nm tuning range
- Single-shot – 2 MHz repetition rate
- Up to 60 W pump power
- Up to 0.5 mJ pump pulse energy
- CEP stable mid-IR output option

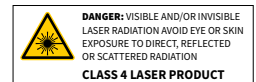


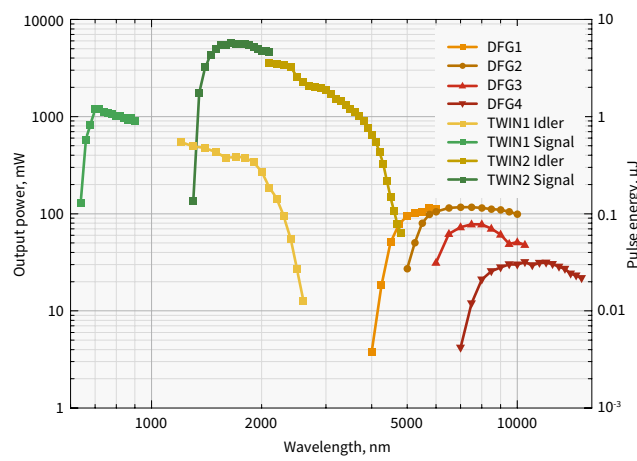
ORPHEUS-TWINS consists of two independently tunable optical parametric amplifiers (OPAs). The two channels can be separately configured to be a version of either ORPHEUS, ORPHEUS-ONE, ORPHEUS-F, or ORPHEUS-N-2H. Integrated

into a single housing, both share the same white-light seed enabling the generation of broadband mid-IR radiation with a passively stable carrier-envelope phase (CEP).

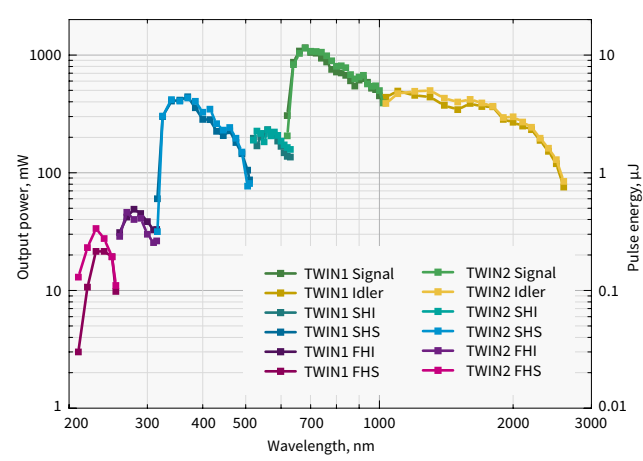
### SPECIFICATIONS

Model	<b>ORPHEUS-TWINS</b>
<b>OUTPUT FROM ORPHEUS-TWINS</b>	
Tuning range	Choice between ORPHEUS, ORPHEUS-F, ORPHEUS-N-2H, and ORPHEUS-ONE configurations
Output pulse energy	Depends on the configuration – check the specifications of the chosen models
Spectral bandwidth	Depends on configuration, up to 100 – 750 $\text{cm}^{-1}$
Pulse duration	Depends on configuration, down to 40 fs
Supported repetition rates	Single-shot – 2 MHz
<b>PUMP LASER REQUIREMENTS</b>	
Required pump laser	PHAROS or CARBIDE
Wavelength	1030 nm
Pump pulse energy	16 – 500 $\mu\text{J}$ (up to 2 mJ on requests)
Pulse duration	180 – 300 fs
<b>PHYSICAL DIMENSIONS</b>	
Full dimension, including wavelength separators (W × L × H)	810 × 430 × 164 mm
Full dimensions of system with PHAROS laser and beam routing units (W × L × H)	910 × 850 × 215 mm





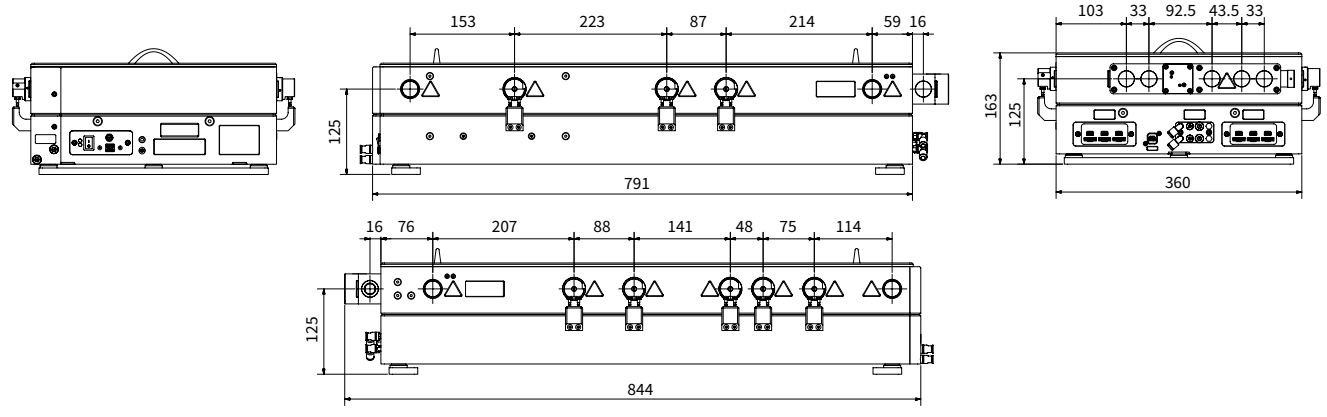
**ORPHEUS-TWINS (ONE/F configuration)**  
 tuning curves. Pump: 40 W, 40 µJ, 1000 kHz



**ORPHEUS-TWINS (ORPHEUS/ORPHEUS configuration)**  
 tuning curves. Pump: 20 W, 20 µJ, 100 kHz

For custom tuning curves visit <http://toolbox.lightcon.com/tools/tuningcurves/>

## DRAWINGS



ORPHEUS-TWINS drawings