

# ORPHEUS-TWINS

## Two Independently Tunable Optical Parametric Amplifiers

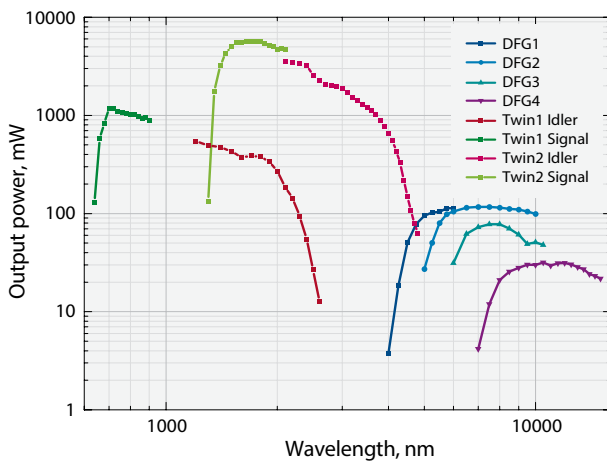


### FEATURES

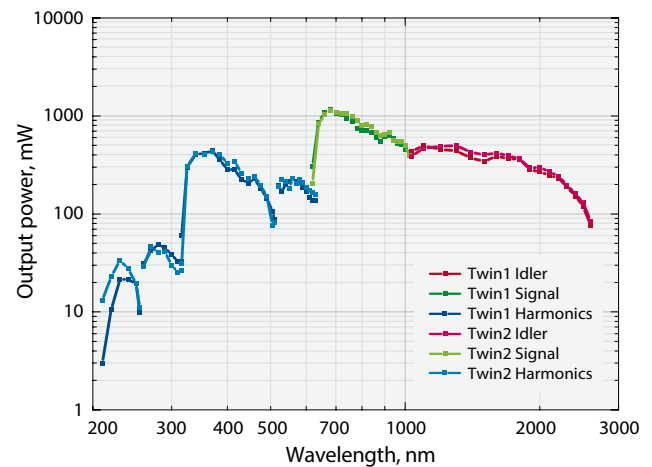
- Two OPA units in a single compact housing
- 210 nm – 16 μm tunable wavelength
- Single pulse – 1 MHz repetition rate
- Up to 0.5 mJ pump energy (2 mJ upon request)
- Broadband and short-pulse (<100 fs) versions available
- Possibility of generating CEP stable mid-infrared output
- Integrated spectrometers for monitoring the output wavelength of OPA

ORPHEUS-TWINS – two independently tunable optical parametric amplifiers designed for flexible pump parameters and OPA configuration. The two channels can be separately configured to be a version of either ORPHEUS, ORPHEUS-ONE, ORPHEUS-F or even ORPHEUS-N. Both OPA units are integrated into a single housing and share the same white light seed for

amplification. The design of this OPA enables hands free wavelength tuning, optional automated wavelength separation and the possibility of generating broad band mid-infrared radiation, in the region of 4 μm – 16 μm, with a passively stable Carrier Envelope Phase (CEP).



ORPHEUS-TWINS (ONE/F configuration)  
output power conversion curve.  
Pump: CARBIDE 38 W @ 1 MHz

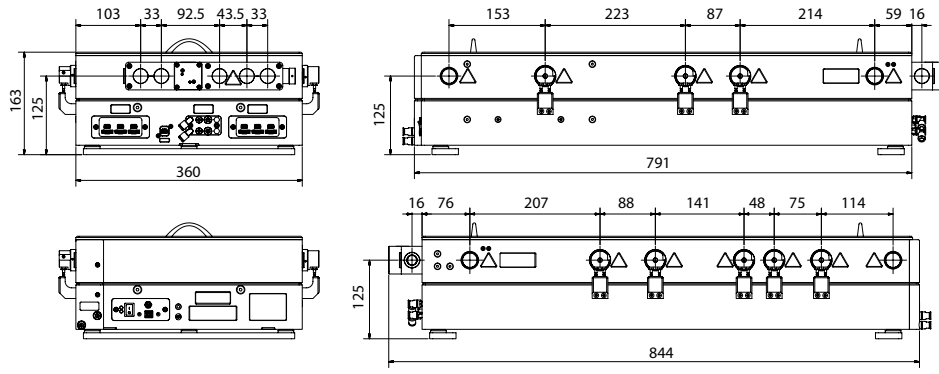


ORPHEUS-TWINS (ORPHEUS/ORPHEUS configuration)  
output power conversion curve.  
Pump: PHAROS 19 W @ 100 kHz

### SPECIFICATIONS

Required pump laser	PHAROS or CARBIDE
Accepted pump input pulse energy @ 1030 nm, 180 fs – 300 fs pulse duration	8 μJ – 2 mJ
Supported repetition rates	Single pulse – 1 MHz
Tuning range	Choice between ORPHEUS, ORPHEUS-F, ORPHEUS-N-2H or ORPHEUS-ONE configurations
Output pulse energy	Depends on the configuration – check the specifications of the chosen models
Pulse bandwidth	Depends on configuration, up to 100 – 750 cm <sup>-1</sup>
Pulse duration	Depends on configuration, down to 40 fs

Dimensions	W x L x H
Full dimension of the ORPHEUS Twins, including wavelength separation	810 x 430 x 164 mm
Full dimensions of the PHAROS+ORPHEUS Twins system with beam routing units	910 x 850 x 215 mm



ORPHEUS-TWINS outline drawings