

ORPHEUS-TWINS

Two Independently Tunable Optical Parametric Amplifiers

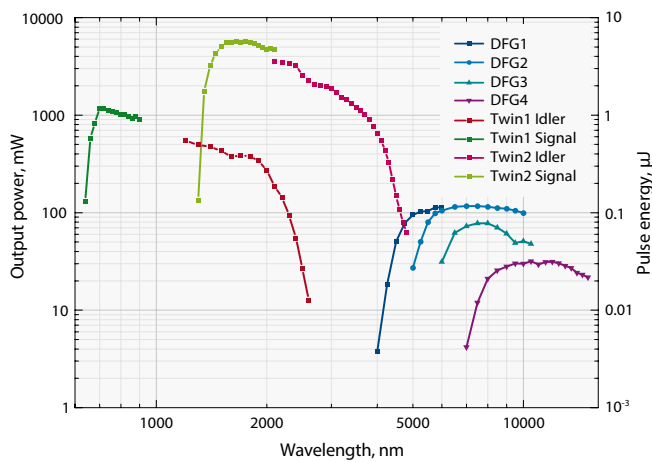


FEATURES

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

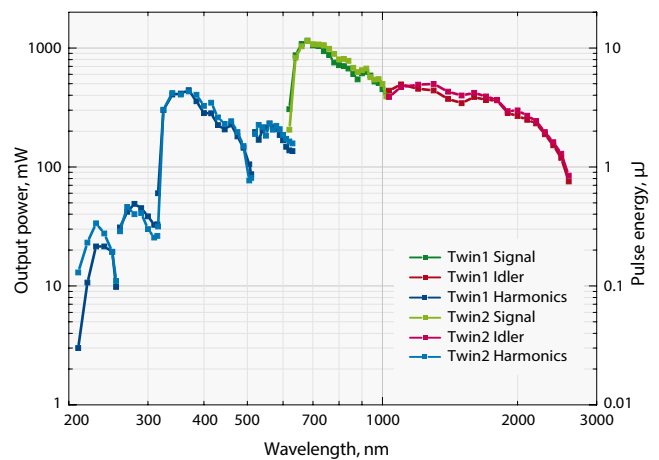
ORPHEUS-TWINS consists of two independently tunable optical parametric amplifiers designed for flexible pump parameters and OPA configuration. The two channels can be separately configured to be a version of either ORPHEUS, ORPHEUS-ONE, ORPHEUS-F or even ORPHEUS-N. Both OPA units are integrated into 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 broadband mid-infrared radiation, in the region of 4 μm – 16 μm, with a passively stable Carrier Envelope Phase (CEP).



ORPHEUS-TWINS

ORPHEUS-TWINS (ONE/F configuration)
output power conversion curve.
Pump: 40 W, 40 μJ, 1 000 kHz



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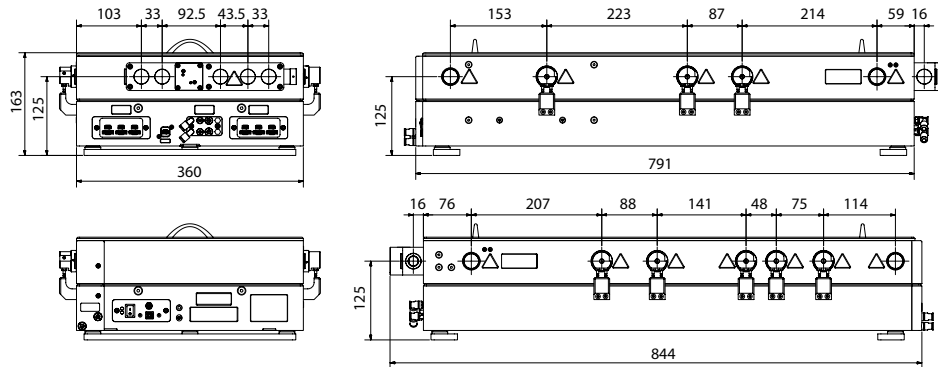
ORPHEUS-TWINS (ORPHEUS/ORPHEUS configuration)
output power conversion curve.
Pump: 20 W, 20 μJ, 100 kHz

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

SPECIFICATIONS

Required pump laser	PHAROS or CARBIDE
Accepted pump input pulse energy @ 1 030 nm, 180 – 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 ⁻¹
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



ORPHEUS-TWINS setup example