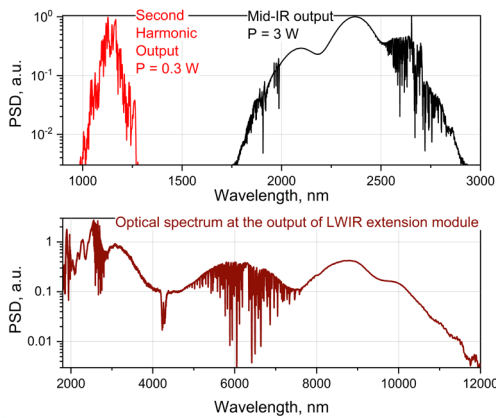


CLPF-2500-femtoCOMB

Femtosecond Mid-IR Optical Frequency Comb



Spectral Coverage Achieved with CLPF-2500-femtoCOMB



FEATURES

- ▶ Two Cycle Pulses with up to 4 W Power in 2-3 μm Band
- ▶ Sub Two Cycle Transients with up to 0.15 W Power in 6-12 μm Band
- ▶ Few Cycle Pulses with up to 0.5 W Power in 3-7 μm Band
- ▶ Complete Set of Electronics for Comb Stabilization
- ▶ Seamless Dual Comb Integration



APPLICATIONS

- ▶ Dual Comb Spectroscopy
- ▶ FTIR Spectroscopy
- ▶ Nano-imaging, Nano-spectroscopy
- ▶ Metrology
- ▶ Time-resolved Spectroscopy
- ▶ Studies of Ultrafast Dynamics
- ▶ Nonlinear Optics

IPG Photonics introduces an important addition to the family of middle-IR femtosecond lasers. **NEW CLPF-2500-femtoCOMB** optical frequency combs provide access to the entire visible through infrared spectral range (500 nm to 18 μm) with record-breaking Watt-level average power. CLPF-2500-femtoCOMB optical frequency combs are pumped by IPG efficient and reliable CW fiber lasers.

CLPF-2500-femtoCOMB optical frequency combs feature pulse repetition frequency and carrier envelope offset frequency stabilization. Optical lock to a stabilized 1064 nm laser and automated pulse repetition frequency tuning are offered as options for dual comb spectroscopy applications.

CLPF-2500-femtoCOMB

Femtosecond Mid-IR Optical Frequency Comb

Optical Characteristics	2f band*	f band *	0f band *
Central Wavelength, nm	1150	2400	9000
Spectral Bandwidth FWHM , nm	70	250	1500
Spectral Bandwidth (-20 dB level), THz	60	60	25
Average Power, W	0.3	3	0.3
Pulse Energy, nJ	4	40	4
Typ. Pulse Duration, fs	500	<24	<1000
Repetition Rate*, MHz		80	
Polarization		Linear	
Long Term Power Stability***, %		1	
Output Beam Mode, M ²	<2	<1.5	<2
Beam Diameter (FW, 1/e ²), mm	2±1	2.0±0.5	4±1
Beam Divergence, mrad	<5	<2.5	<5
Warm up Time, min		15 – 60	

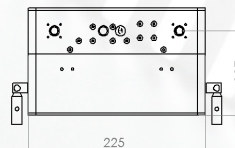
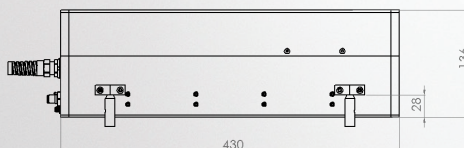
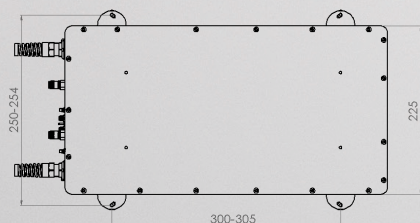
* The system is equipped with three optical outputs at mid-IR fundamental wavelength (f), near-IR second harmonic wavelength (f), and long-wave IR wavelengths (0f)

** Custom repetition rates are available upon request.

*** After 1 hour warm up, over 2 hours, ambient T ±2°C

General Characteristics

Integrated Pump Laser	IPG Photonics Erbium CW Fiber Laser
Pump Laser Dimensions (W × D × H), mm	448 × 403 × 132
Optical Head Dimensions (W × D × H), mm	225 × 430 × 136
Power Consumption, W	200 Typ.



+1 (508) 373-1100;
IPGPhotonics.com/contact
www.ipgphotonics.com

MAX. AVERAGE OUTPUT POWER: 4 W
 MAX. PEAK OUTPUT POWER: 2 GW
 PULSE DURATION: 20-100 fs
 PULSE REPETITION RATE: 80 MHz
 WAVELENGTH RANGE: 500-18000 nm

DANGER - INVISIBLE LASER
 RADIATION AVOID EYE OR SKIN
 EXPOSURE TO DIRECT OR
 SCATTERED RADIATION
 CLASS 4 LASER PRODUCT

IEC 60825-1:2014

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