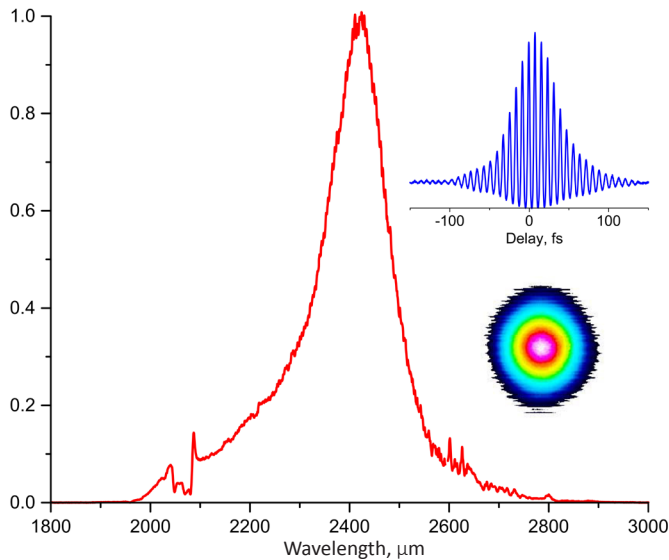


CLPF and CLPFT Series

Femtosecond Pulsed Cr:ZnSe/S Mid-IR Lasers



Laser Emission Spectrum and Autocorrelation Trace

NEW PRODUCT



IPG Photonics' NEW CLPF Cr:ZnSe/S ultrafast oscillators provide 40 fs pulses at a customer selected fixed wavelength in the range of 2.1-2.6 μm at 80-400 MHz pulse repetition rate with 2 W output power. The Kerr-lens mode-locked head is pumped by IPG's efficient and reliable CW fiber laser. The CLPF laser addresses a wide range of scientific and biomedical applications.

Future CLPF Series models with extended output power, wavelength range, automated wavelength tuning, CEP stabilization option and synchronization to an external clock or another oscillator are planned. Please discuss your needs with an IPG Photonics' representative.



Applications

- ▶ Multi-photon Imaging
- ▶ Supercontinuum Generation
- ▶ Spectroscopy
- ▶ Metrology
- ▶ Biomedical Applications
- ▶ High-harmonic Generation
- ▶ Mid-IR OPO Pumping
- ▶ Mid-IR Frequency Combs



Features

- ▶ Custom Fixed Central Wavelength
- ▶ Wavelength Tuning Option
- ▶ Pulse Duration from 40 fs
- ▶ Output Power up to 2 W
- ▶ SHG Option, up to 250 mW
- ▶ Power Amplifier Option
- ▶ Beam Quality $M^2 < 1.2$
- ▶ RF Output Monitoring Option
- ▶ Master-slave Piezo Synchronization Option

CLPF and CLPFT Series

Femtosecond Pulsed Cr:ZnSe/S Mid-IR Lasers

Optical Characteristics	CLPF-2400-10-70-1	CLPF-2400-5-50-1
Central Wavelength*, nm	2100-2600, typ. 2400	
Spectral Bandwidth FWHM, nm	50 - 150	
Maximum Average Power, W	> 1	
Pulse Energy, nJ	10 typ. @ 2.4 μ m	5 typ. @ 2.4 μ m
Repetition Rate**, MHz	80 - 200, typ. 80	200 - 400, typ. 200
Pulse Duration, fs	40 - 150, typ. 70	
Long Term Power Stability***, %	1	
Polarization	Linear, >100:1	
Output Beam Mode, M ²	≤ 1.2	
Beam Diameter (FW, 1/e ²), mm	1.5 \pm 0.5	
Beam Divergence, mrad	< 0.5	
Warm up Time, min	15	

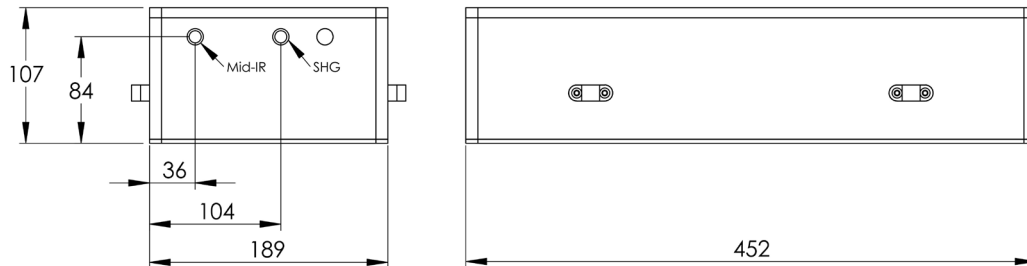
*Custom central wavelengths within 2.1-2.6 μ m range and wavelength tuning option are available upon request.

**Custom repetition rates are available upon request.

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

General Characteristics

Integrated Pump Laser	IPG Photonics Erbium CW Fiber Laser
Pump Laser Dimensions (WxDxH), mm	448 x 403 x 132
Optical Head Dimensions (WxDxH), mm	189 x 452 x 107
Supply Voltage 50-60 Hz, VAC	110 - 240
Power Consumption, W	200 typ.

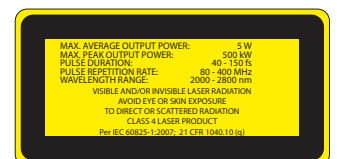


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