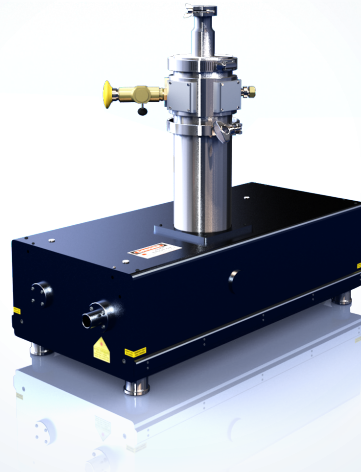


FLT Series

Fe:ZnSe/S Tunable Mid-IR Laser



Applications

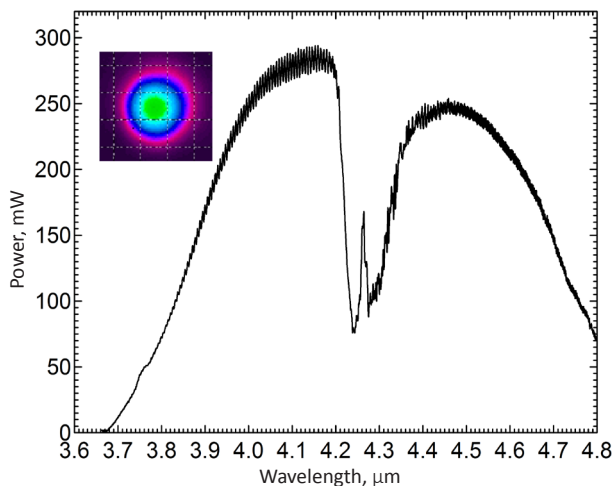
- ▶ Spectroscopy
- ▶ Sensing
- ▶ Medical
- ▶ Seeding or Pumping Mid-IR OPOs
- ▶ Defense



Features

- ▶ Tuning Range 3.7 - 4.8 μm
- ▶ TEM_{00} Beam Mode
- ▶ Output Power > 300 mW
- ▶ Linear Polarization

Tuning Curve of FLT Series Laser¹



¹The dip between 4.2-4.4 μm , due to intracavity CO_2 absorption, can be eliminated via cavity purging with inert gas.

IPG's FLT is a tunable Fe:ZnSe/S continuous wave laser featuring a narrow linewidth and a cryogenic cooling system. It provides > 100 mW of output power across a 3.7 - 4.8 μm tuning range, generating > 300 mW at the peak of the tuning curve. The spectral linewidth is < 1 nm with a beam mode of TEM_{00} . The FLT laser is pumped by IPG Photonics' efficient and reliable erbium fiber laser. IPG's FLT laser is used in a number of applications including pumping Mid-IR OPOs, spectroscopy, sensing, medical and defense.

FLT Series

Fe:ZnSe/S Tunable Mid-IR Laser

Optical Characteristics

Mode of Operation	CW, tunable wavelength
Wavelength Range, nm	3700 - 4800
Spectral Linewidth, nm	< 1
Average Output Power, mW	> 50 across tuning range, > 300 at 4.2 μm
Polarization	Linear or Horizontal
Beam Mode Quality, M ²	> 1.2
Beam Diameter* (FW, 1/e ²), mm	3 typ.
Beam Divergence, mrad	2 typ.
Warm up Time, min	15 from standby, 60 min from cold start

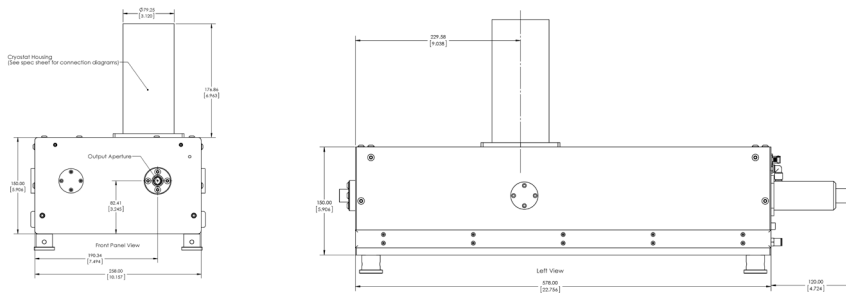
*Beam diameter may be adjusted to meet customer specifications.

General Characteristics

Pump Laser **	IPG Photonics CW Erbium or Thulium Fiber Laser
Pump Laser Dimensions (WxDxH), mm	448 x 403 x 132
Optical Head Dimensions (WxDxH), mm	258 x 578 x 150
Gain Element Operation Temperature***, K	77 - 220
Supply Voltage, 50 - 60 Hz, VAC	110 - 240
Power Consumption, W	200 typ.

**Pump laser model depends on the combination of parameters.

***Optimal operating temperature of a gain element depends on wavelength.

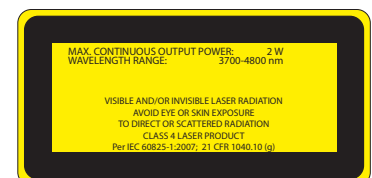


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