



Argos™

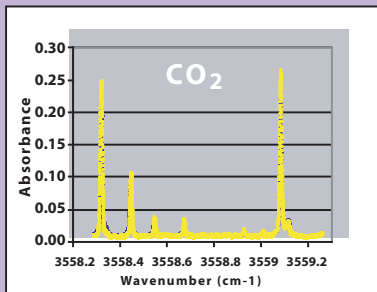
Model 2400 SF Series Tunable, Single-Frequency, Mid-Infrared Source Widely tunable, high-power, CW OPO for spectroscopy

The Aculight® Argos SF is a single-frequency, continuous-wave optical parametric oscillator (OPO) designed for mid-infrared spectroscopy. The device operates at room temperature with up to 3 Watts of continuously tunable idler output. Interchangeable, pre-aligned, wavelength converter modules generate any idler wavelength from 2.3 to 3.9 μm . The Argos provides mode-hop-free continuous scanning over a broad spectral range. An example scan for CO₂ is shown below. The device also produces up to 5 Watts of single-frequency, signal wavelength output from 1.4 to 2.0 μm . Two different models are offered, providing different output power levels.



Applications

- Spectroscopy
- Sensors
- IR communications
- Surgery



Typical OPO spectral scan

Features

- Robust fiber laser pump source
- Interchangeable wavelength modules
- Up to 800cm⁻¹ tuning per module

Typical performance and characteristics

	2400-SF-15	2400-SF-5
Parameter	Specification	
Mode of operation	CW	
Idler wavelength coverage	Module A: 2.3 to 2.5 μm Module B: 2.5 to 3.2 μm Module C: 3.2 to 3.9 μm	
Signal wavelength coverage*	Module A: 1.85 to 1.98 μm Module B: 1.60 to 1.85 μm Module C: 1.46 to 1.60 μm	
Linewidth**	< 1MHz	
Beam quality	$M^2 < 1.1$	
Signal power output	> 1 Watt	> 10 mW
Idler power output	> 1 Watt	> 300 mW
Power stability	< 5% rms	
Mode-hop-free tuning range	50 GHz	
Maximum tuning rate***	Up to 300 Hz	
Dimensions	10"H x 19"W x 19"D (control / pump unit – 2x 3U 19" equipment racks) 4.9"H x 7.5"W x 13.9"D OPO head	
Cooling	Forced air	
Power	100-240 VAC 50 – 60 Hz	

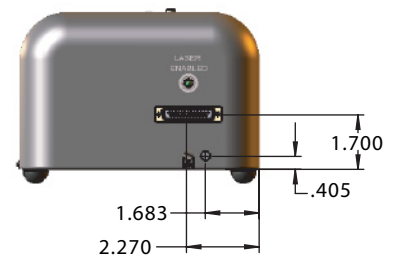
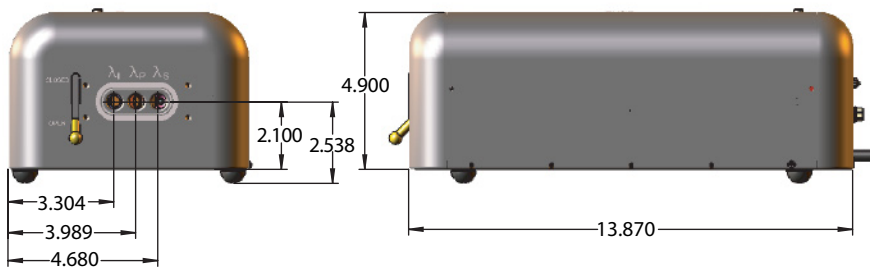
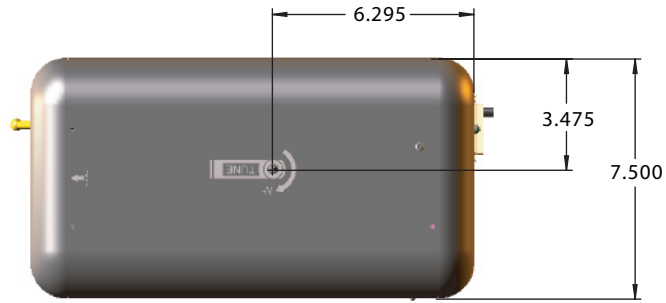
Specifications subject to change without notice

*Mode-hop-free tuning characteristics apply to idler only

**Linewidth of < 60 kHz measured on 500 μs timescale

***Higher modulation frequencies are available with smaller range

Mechanical Dimensions (inches)



Argos™

Widely Tunable, High-Power OPO



VISIBLE AND INVISIBLE LASER RADIATION
 AVOID EYE OR SKIN EXPOSURE TO
 DIRECT OR SCATTERED RADIATION
 CLASS 4 LASER PRODUCT

