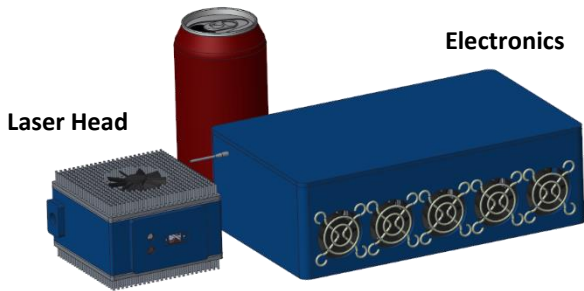


## Technical Summary

Areté has developed a compact and efficient Ultra-Violet laser source capable of operating over a wide range of pulsing conditions (duty-cycle and PRF) suitable for airborne applications. The design has been tested in brassboard hardware and a prototype is being developed.



Parameter	Value
Wavelength and Total Average Power	1064 nm 20 W
	532 nm 10 W
	355 nm 10 W
	266 nm 5 W (est.)
	SWIR or MWIR OPO (depends on pulse parameters and specific wavelengths)
Pulse repetition frequency	10 kHz to 1 MHz
Pulse width – FWHM	~3.0 ns
Power consumption	~200W
Volume (Laser + Electronics)	0.1 ft <sup>3</sup>
Cooling	Forced Air, Conduction

## Government Applications

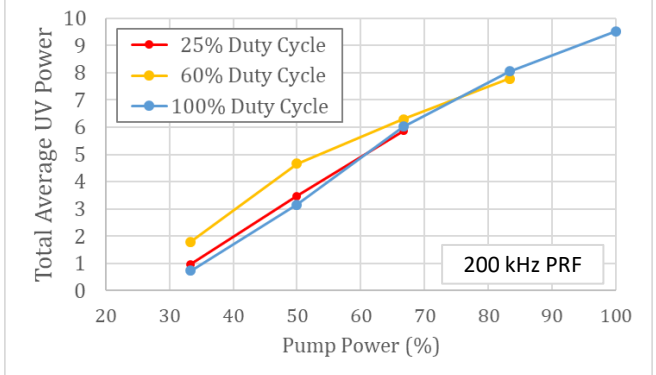
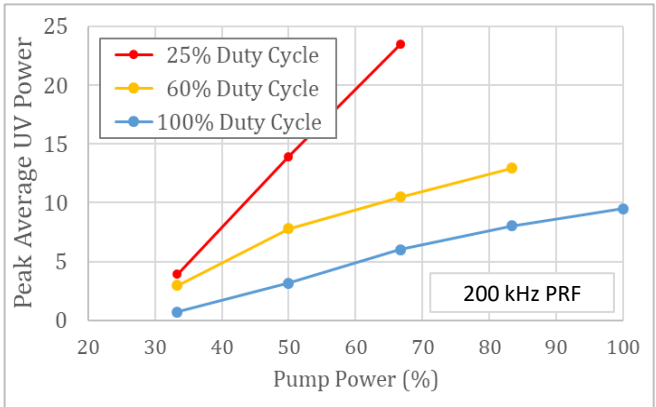
- Air Platforms
- Advanced chemicals sensors based on Raman spectroscopy
- Laser identification detection and ranging (LIDAR)

## Operational Capabilities

High-power UV laser emitter in a low SWAP package, enabling deployment on aircraft. Present capabilities include:

- Average output power up to **10 W in the UV or 10 W Visible or 20W IR**
- Q-switched laser, variable PRF up to ~ 1 MHz
- Wall-plug **efficiency >5% to UV**
- Excellent beam quality
- Laser head size: less than 68 cubic inches
- All forced air cooling (no water)

## Performance Data



## Commercial Applications

- Bio/Chemical Detection
- Atomic Clocks
- Materials Processing / Raman Spectroscopy
- Medical Diagnostics
- Water Purification