

# ARIES-2™

## HIGH POWER, FIXED WAVELENGTH

DRS Daylight's years of experience and field-proven performance in high-power mid-IR lasers come together in the Aries-2 family of products. The Aries-2 is a fixed-wavelength, high-power laser that offers a user-specified center wavelength and output power up to 2 W. Aries-2 provides CW or pulsed operation with internal or external amplitude modulation. It is CDRH compliant and is CE certified.

All Aries-2 systems come with a SideKick™ laser controller and a GUI and SDK to give you everything you need for productivity out of the box.

### HIGHLIGHTS

- Optical power of up to 2 W
- Center wavelength choices include 4.0, 4.6, 8.7, and 10.5  $\mu\text{m}$
- CW or pulsed output
- Superb  $\text{TEM}_{00}$  beam quality allows fiber coupling
- Superior power stability ( $< 2\%$  rms, 1 hr)
- Amplitude modulation up to 1 MHz
- SideKick™ controller, GUI, and SDK included with all systems
- Proprietary HFQD™ circuitry to protect your chips

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## APPLICATIONS

- Stand-Off Explosive Detection
- Chemical Agent Detection
- Infrared Detector Testing
- Multispectral Active Imaging
- Infrared Countermeasures
- Free-Space Communications
- Infrared Scene Generation
- Optical Fiber Testing

## SPECIFICATIONS

OPERATION MODE	
Pulsed or CW	

SPECIFICATIONS	
Center Wavelength Availability	4-11 $\mu\text{m}^*$
Spatial Mode	TEM <sub>00</sub> (nominal)
Beam Divergence	< 4 mrad** (full angle, 1/e <sup>2</sup> intensity width)
Beam Diameter	< 5 mm <sup>2</sup> (1/e <sup>2</sup> intensity width)
Ellipticity	< 1.5
Pulse Repetition Frequency	CW to 1 MHz
Rise/Fall Time (10-90%)	< 100 ns
QCL Compliance Voltage	< 17 VDC
QCL Operating Current	< 3 A
Operating Range (Case Temp)	15 - 55 °C
Dimensions (LxWxH)	14 x 7 x 8.6 cm

PERFORMANCE EXAMPLES	
Center Wavelength ( $\mu\text{m}$ )	Optical Power (W)
4.0	1.0
4.6	2.0
8.7	1.0
10.5	0.3

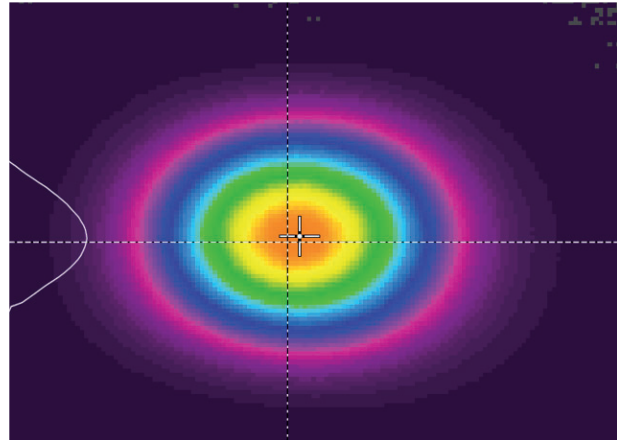
\* Call for specific wavelength availability

\*\* Measured at 4  $\mu\text{m}$ ; scales with wavelength - please inquire

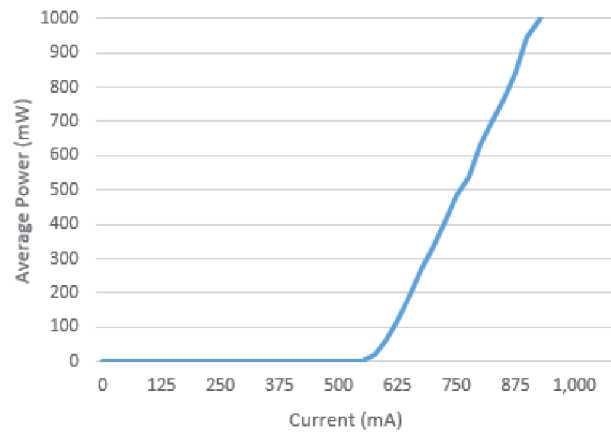
Forced air and liquid cooling accessories required for higher duty cycles

Water cooling required for CW operation or pulsed duty cycles > 5%

## BEAM PROFILE



## POWER CURVE



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



COMPLIES WITH 21 CFR 1040.10 AND 1040.11 EXCEPT FOR DEVIATIONS PURSUANT TO LASER NOTICE NO. 50, DATED JUNE 24, 2007. COMPLIES WITH IEC 60825-01

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