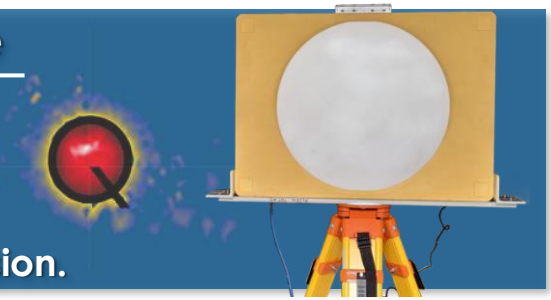


# ALIEN Laser Weapon Diagnostics Suite



**Confidence is key.  
Laser weapon beam diagnostics is our mission.**

## **Build warfighter confidence through increased HEL system repetitions.**

- Rapid assessment of laser weapon system performance with near real-time diagnostic feedback on the range.
- Survivable system, able to take multiple high power, high peak irradiance shots to diagnose laser weapon system health and performance.

## **Versatile diagnostics suite able to be employed for multiple use cases.**

- Dynamically deployable with platform agnostic mounting configurations.
- Able to provide diagnostic data via radio data link, direct fiber connection, or through onboard data recording.

## **Proven diagnostics that is easy to deploy.**

- ALIEN systems have been engaged hundreds of times at different laser weapon power and peak irradiance levels.
- The ALIEN system is packable and transportable in a small Pelican case.
- Basic ALIEN system and software training is simple and can take just a couple hours.

## **Easy to use HEL diagnostics**

### **Proven in both static and dynamic uses**

Our Airborne Laser and Irradiance Emission Node target form factor delivers simple, reusable, HEL beam diagnostic capability to the user. This easy to transport unit may be used in both static or dynamic HEL diagnostics through direct measurement of a HEL beam.

Whether measuring HEL performance on a brand-new HEL system or checking the performance of a deployed HEL system SLIM targets are ready to meet your HEL diagnostics needs.

**GUI Display  
For near real  
time laser  
spot viewing**



## **SLIM 8 Setup**

1. Install SemQuest GUI software.
2. Install target specific configuration file.
3. Setup target or integrate target to platform.
4. Ensure ALIEN system auto connects to GUI.
5. Configure shot file save location.
6. View live feed.
7. Initiate save shot prior to 'beam on' command.
8. Process data more in depth after the test.

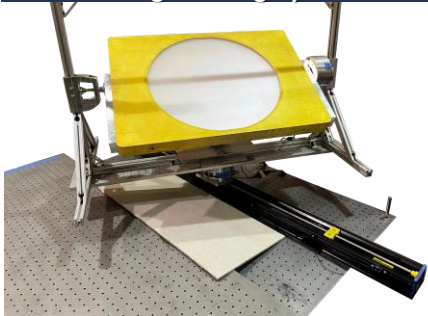


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ALIEN 2K Target During Dynamic HEL Test



ALIEN 2K During Shock and Vibe Testing



ALIEN 2K Setup for Outdoor Test



The SemQuest GUI software provides a near real time Quicklook display which can be used to provide laser diagnostics and assess laser lethality.

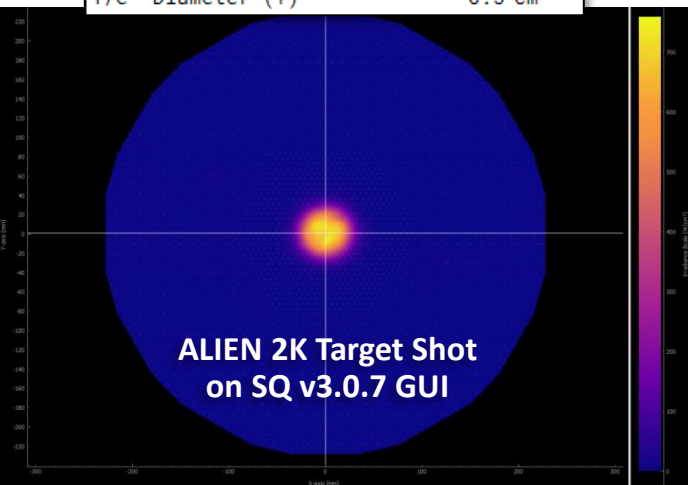
Power	18.9 kW
Peak Irradiance	749.4 W/cm <sup>2</sup>
1/e <sup>2</sup> Diameter (X)	6.9 cm
1/e <sup>2</sup> Diameter (Y)	6.5 cm

Specifications (ALIEN SWAP)

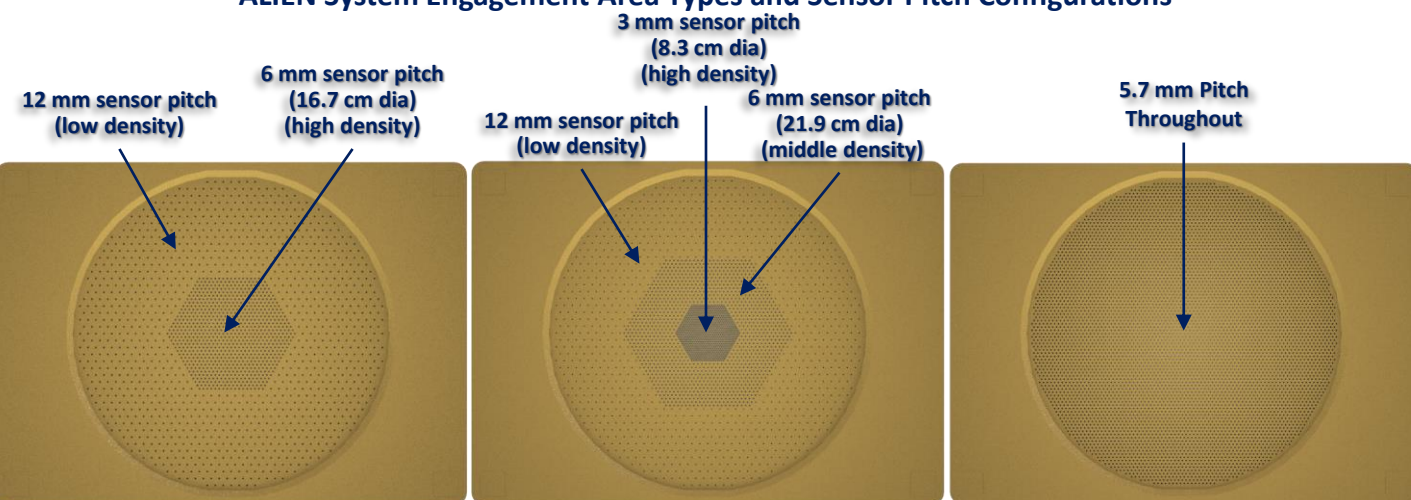
System Name (sensor pitch)	ALIEN 2K (6 & 12 mm)	ALIEN 3K (3, 6, & 12 mm)	ALIEN 6K (5.7mm)
System Dimensions L x W x H	10.2' x 8.5' x 8.5'	10.2' x 8.5' x 8.5'	10.2' x 8.5' x 8.5'
System Weight (aluminum)	14.9 kg (33 lbs)	14.9 kg (33 lbs)	15.8 kg (35 lbs)
<b>Power Consumption</b>			
Ethernet Data Setup	15 Watts	15 Watts	29 Watts
Radio Data Setup	39 Watts	39 Watts	53 Watts
Radio Data & NESB Power Setup	159 Watts	159 Watts	177 Watts

Specifications (ALIEN Sensor Info)

System Name (sensor pitch)	ALIEN 2K (6 & 12 mm)	ALIEN 3K (3, 6, & 12 mm)	ALIEN 6K (5.7mm)
Number of Sensors	2,000	3,000	6,000
Peak Irradiance Record (kW/cm <sup>2</sup> )	22.6	Pending	Pending
Peak Beam Fluence Record (kJ/cm <sup>2</sup> )	452.9	Pending	Pending



ALIEN System Engagement Area Types and Sensor Pitch Configurations



2K 6 & 12 mm Pitch ~2K Sensors

3K 3, 6 & 12 mm Pitch ~3K Sensors

6K 5.7 mm Pitch ~6K Sensors

**Acknowledgement:** This material is based upon work supported by the U.S. Army Program Executive Office, Simulation, Training and Instrumentation (PEO STRI), Test Resource Management Center (TRMC) Test and Evaluation/Science & Technology (T&E/S&T) Program. These projects are funded by the T&E/S&T Program through the U.S. Army Program Executive Office for Simulation, Training and Instrumentation (PEO STRI) Instrumentation Management Office (IMO).

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