

BLUEHALO

Laser Instrumented Diagnostic Suite (LIDS)



LIDS
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SS
StepSERVO
Applied
Motion
Products
HT34-SS50GA

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Overview

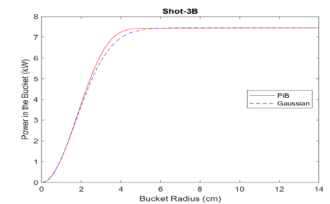
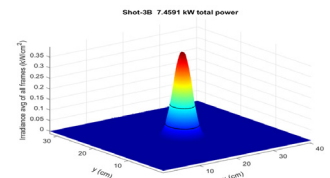
- Complete suite of HEL performance instrumentation and atmospheric characterization sensors
- Quick-look data available between shots, with complete test results available within 24 hours
- System fully integrated to 30' trailer for transport and repositioning on range
- Quickly diagnose HEL beam performance at relevant ranges prior to costly flight tests
- Test and correlate HEL performance through varying atmospheric conditions
- Multi-stage alignment concept allows wide range of test concept geometry

Atmospheric Measurement Specifications

- Meteorological measurements: Wind speed and direction, temperature, pressure, relative humidity, etc.
- Optical turbulence via MZA Delta Pro
- Aerosol concentration via Aerosol Devices MAGIC CPC
- Sensor data integrated to Laser Environmental Effects Definition and Reference (LEEDR) to report
 - Molecular absorption and scattering
 - Aerosol absorption and scattering
 - Total transmission percentage

Laser Measurement Specifications

- Laser power measurement up to 150 kW at 20 kW/cm² using ball calorimeter.
- Spot sizes from 1-10cm 1/e² diameter. 30cm clear area to allow for jitter/wander and aimpoint error.
- 1200x1024 beam irradiance profiles at 100fps. 0.29mm/pixel. 14bit pixel depth. Wavelength range 1040-1080nm
- Quick look data products:
 - Power vs. Time
 - 2D Irradiance vs. Time
- Post-test data products:
 - Power vs. Time
 - 2D Irradiance vs. Time
 - Max Power
 - Power-in-the-bucket
 - Peak Beam Irradiance
 - Spot Size
 - Centroid and Centroid Drift
 - Jitter
 - Total Fluence



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Developed under contract with TRMC