COHERENT

LaserCam-HR II

High-Resolution Laser Beam Profiling System

LaserCam-HR II is our second generation of digital USB 2.0 bus-powered, high-resolution, large-area cameras. The LaserCam-HR II family includes 1/2-inch and 2/3-inch format CCD cameras that provide greater dynamic range and lower noise than the previous generation. The cameras include Coherent's BeamView software package, long recognized as a flexible, fast, and user friendly beam diagnostics software platform.

Important Considerations:

- Ease-of-use connectivity
- USB bus-powered low voltage operation
- Broad spectral range:
  - 190 nm to 1100 nm
  - 400 nm to 1100 nm (with LDFP)
  - 190 nm to 355 nm (with BIP-12F)
- Large dynamic range
- Digital output through USB 2.0 eliminates the need for an interface card (frame-grabber)
- High-accuracy beam diameter calculations
- Excellent beam spatial uniformity
- Variable camera exposure time
- Compact size
- High-speed image capture rates (up to 15 frames per second)
- Pass/Fail TTL level output
- RS-232 and TCP/IP communication protocols
- RoHS compliant

LaserCam-HR II Features:

- **USB 2.0, 12-bit and 14-bit digital output**
- **Large-area arrays**
- **Compact 68 x 68 x 43 mm package**
- **Metric and English mounts included**
- **CW and pulsed operation including external triggering**
- **Variable exposure time**
- **User-variable trigger delay**
- **C-mount thread for additional accessories**

LaserCam-HR II Applications:

- **Scientific**
- **UV Lasers**
- **Telecommunication Sources**
- **Military Laser Systems**

www.Coherent.com/LaserCam-HRII

Superior Reliability & Performance

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Device Specifications

	LaserCam-HR II 1/2-inch	LaserCam-HR II 2/3-inch
Sensor Elements (pixels)	1280 x 1024	
Pixel Size (µm)	4.6 x 4.6	6.5 x 6.5
Sensor Active Area (mm)(H x V)	5.9 x 4.8	8.3 x 6.6
Camera Bit Depth	12-bit	14-bit
Spectral Range (nm)		
without LDFP	190 to 1100[1]	
with LDFP included	400 to 1100	
with BIP-12F accessory	190 to 355	
Recommended Beam Diameters (mm)	0.15 to 4.0[2]	0.2 to 6.0[2]
Glassless Sensor	Low Distortion Face Plate is removable	
Low-Distortion Face Plate	Laser-grade ND filter	
(LDFP, LDFP-UV)	OD = 2.5 at 632.8 nm	
Electrical Interface	USB 2.0	
Capture Modes	Continuous (CW), pulsed	
Variable Exposure Time	1 msec to 500 msec, default at 5 msec	
Pulsed Mode Trigger Methods	Trigger In (TTL)	
Trigger Delay (µs)	75	20
Maximum Pulse Trigger in Rate (Hz)	200 (without averaging adjacent pulses)	
Maximum Frame Rate (FPS)		
Live video, no calculations	15	15
Capture with calculations	10	10
Damage Threshold		
without LDFP	32 mJ/cm^2 at 1064 nm	
CW Saturation		
with LDFP	13 mW/cm^2 at 633 nm	5 mW/cm^2 at 633 nm
without LDFP	5 µW/cm^2 at 633 nm	2 µW/cm^2 at 633 nm
with LDFP	70 mW/cm^2 at 1064 nm	25 mW/cm^2 at 1064 nm
without LDFP	340 µW/cm^2 at 1064 nm	125 µW/cm^2 at 1064 nm
Pulsed Saturation		
with LDFP	0.4 mJ/cm^2 at 1064 nm	0.15 mJ/cm^2 at 1064 nm
without LDFP	2 µJ/cm^2 at 1064 nm	0.7 µJ/cm^2 at 1064 nm
USB 2.0 Cable	10 ft. standard A/B cable included	
Trigger Connector	BNC receptacle (trigger cable included)	
Part Number	1282868	1282870

[1] There is a risk of degradation in the range of 190 nm to 300 nm due to DUV exposure. The optional BIP-12F UV-to-visible fluorescence converter can be used to prevent drift.

[2] It is possible to measure beams <0.2 mm in diameter, but resolution is reduced.

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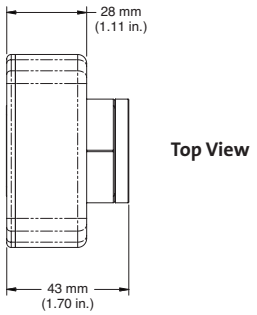
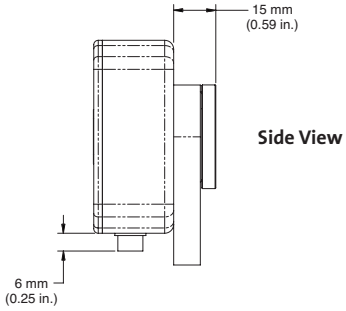
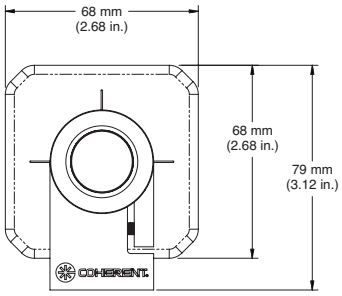
Mechanical Specifications



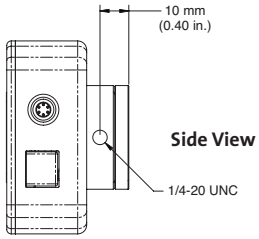
Top View



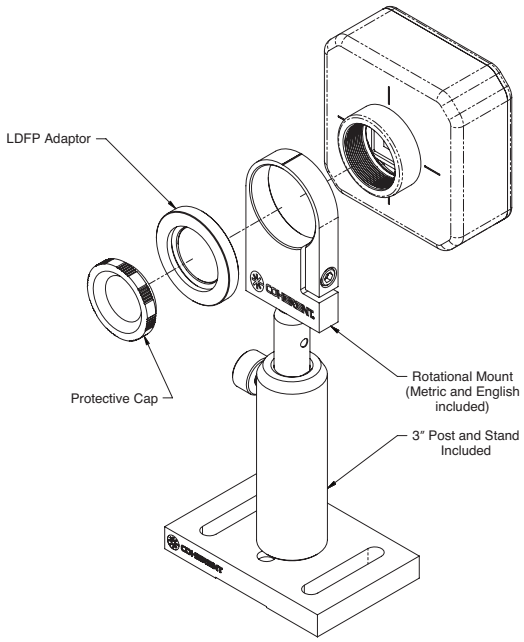
Side View



Front View



Side View



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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice.

Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all LaserCam-HR II beam diagnostic cameras. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.