VISITECH

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LUXBEAM® LRS 8KA LASER 405

Grow your **output,** keep your resolution

The static projection system that combines over 35 million addressable pixel positions with more than 30 W of 405 nm laser power – giving machine builders a large build area, fine detail and production-scale speed from a single light engine.

8192 × 4352	30 W	99%	4K
XPR RESOLUTION	LASER OUTPUT AT 405 NM	POWER UNIFORMITY	NATIVE RESOLUTION

LUXBEAM® LRS 8KA LASER 405

Power, resolution and ultimate pixel control



The LRS 8KA is Visitech's flagship static projection system for additive manufacturing. Built around a native 4096 × 2176 DMD, advanced UV optics and a proprietary optical actuator, it delivers 8192 × 4352 resolution - more than 35 million addressable pixel positions - while maintaining the precision and stability of a true native 4K architecture.

Designed for demanding additive manufacturing systems, the LRS 8KA Laser 405 supports a range of projection lenses, allowing machine builders to optimize build size, resolution and throughput for their application. A single engine can cover a large build area at full resolution, while two engines can be stacked for even larger systems.

RECOMMENDED USE

- Production-scale static additive manufacturing
- Single-engine large-area systems
- Dual-engine stacked configurations

Why a single laser module?

- Pre-aligned
- Factory-calibrated
- Ready for integration

At the heart of the LRS 8KA Laser 405 is a laser module that generates more than 30 W of optical power in a single integrated unit. Visitech ships every module pre-aligned, factory-calibrated, and ready for integration. When service is required, operators can replace the field-serviceable module and return the system to production without rebuilding or recalibrating the optical system.

Full specification

IMAGING

DMD Type	0.98" TRUE 4K
Resolution	8192 x 4352 pixels (4096 x 2176 native)
Pixel pitch	50–200 µm
Image size	204.8–819.2 × 108.8–435.2 mm
Image plane	22282–356516 mm^2
Operation Mode	TI XPR mode
Power Uniformity	> 99% after Software Correction
Contrast Ratio	Up to 1000:1

LIGHT & POWER

Projector Output Power	More than 30 W of Laser Power at 405 nm
Wavelength	405 nm
Laser Options	405 nm
Laser Driver	LRS Laser Module 405 nm; Constant Flux with Optical Feedback
Power Consumption	600 W
Power Supply	48 V DC

MECHANICAL & THERMAL

Dimensions w/o Lens	132 mm (H) x 260 mm (W) x 324 mm (L, 342 mm w/ mounting tabs)
Total Weight	11,4 kg (w/o lens and PSU)
Cooling System	Liquid Cooling
Frame Sync	External Frame Synchronization

PLATFORM & SOFTWARE	
Software	LAMA Standard (included)
Image Data	Single Image Pattern Upload with LAMA
Communication	Ethernet (platform independent web interface)
UV / IR Safety	Laser Safety Switch (enable/disable)

Lens options

PL LRS 8KA L lens options for the LRS 8KA Laser 405: working distance, mounting distance, pixel pitch and native image size.

LENS MODEL	PIXEL PITCH	NATIVE IMAGE	MOUNTING DIST.	WORKING DIST.
PL LRS 8KA L 9.3	50 µm	204.8 × 108.8 mm²	494 mm	319 mm
PL LRS 8KA L 13.9	75 µm	307.2 × 163.2 mm²	634 mm	470 mm
PL LRS 8KA L 37.0	200 µm	819.2 × 435.2 mm²	861 mm	697 mm

Pixel pitch is native; XPR actuation halves the effective pitch (25, 37.5 and 100 µm). Working and mounting distances are nominal. Figures are for discussion and to be confirmed per application.

Specifications are subject to change. The official product datasheet remains the authoritative reference.