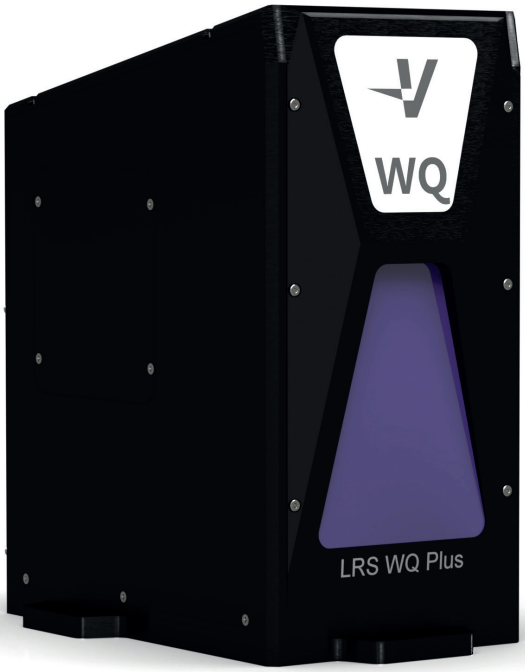

LUXBEAM® RAPID SYSTEM – PROFESSIONAL LINE

POWERFUL AND ROBUST AM SUBSYSTEMS WITH MULTIPLE CONFIGURATION OPTIONS

Power and resolution for static 3D printing

The LRS-Professional Line gives you the ultimate DLP®-based stereolithography subsystems for professional 3D printing and additive manufacturing systems. Resolution and power from the LRS-WQ Plus Series pair with 24/7 operation robustness and configuration options that meet all your professional additive manufacturing needs.

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LUXBEAM® RAPID SYSTEM – PROFESSIONAL LINE

WHEN PERFORMANCE MATTERS

The compact footprints contrast with the exceptional power output of the LRS-Professional Line light engines. In demanding additive manufacturing applications, Visitech subsystems provide productivity and perfection – and features the AM world's most powerful WQXGA DLP® light engine.

COMMON NEOS PLATFORM

Your power and resolution requirements determine the specific choice of light engine. Shared is the NEOS platform, on which the Professional Line is built. It signifies a common core that includes advanced and functional mechanical design – resulting in unsurpassed robustness for 24/7 operation.

The encapsulated optical core, liquid cooling, and industrial-grade Ethernet communication all support the Professional Line's durability. On the optical side, the light engines come with the latest field-replaceable Gen 5 LED technology and use Visitech's proprietary Bifrost™ LED module for optimal performance.

AM OPTIMIZED SOFTWARE

To ease integration into your AM machine, the Professional Line light engines come with the LUXBEAM Additive Manufacturing Application (LAMA™) Standard software, which is fully AM-optimized.

Power, resolution, and ultimate pixel control in additive manufacturing

LUXBEAM® RAPID SYSTEM – PROFESSIONAL LINE
Recommended implementation • High power static stacked configuration
Resolution • 2560 x 1600 WQXGA (LRS-WQ Plus Series)
LED Wavelengths • 460 nm / 405 nm / 385 nm / 365 nm
Optical Power Output • Up to 10W
Projection Lens Options • Multiple standard options available • More options under development • Options for customized lenses available
Platform • NEOS • Bifrost S
Electronics • LUXBEAM® LB6900 (LRS-WQ Plus Series)

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LRS-WQ PLUS SERIES

The LRS-WQ Plus series is a robust, reliable plug-and-play light engine system designed for professional 3D printing, static additive manufacturing, and prototyping applications. It combines high performance with flexibility to meet the evolving demands of the industry.

LRS-WQ PLUS - LIQUID COOLED

The LRS-WQ Plus is optimized for UV wavelengths from 365 to 460 nm, offering flexibility across different printing processes. Its liquid cooling system enhances LED temperature control, improving efficiency and providing up to 10 W of UV light power in image, making it suitable for static 3D printers with large build areas. The system supports pixel pitches from 1.9 microns up to 130 microns, allowing for A4-sized build areas while maintaining precision and efficiency.

With its integrated CPU and industry-standard Ethernet communication, the LRS-WQ Plus is designed to offer reliable, long-term performance for high-throughput manufacturing environments. This versatility, combined with its ability to maintain consistent high-power output, ensures that the LRS-WQ Plus will meet the demands of industrial-scale production while providing flexibility for various applications.

PRODUCTIVITY BENEFITS WITH LAMA PRO SOFTWARE

More power reduces your layer exposure time, allowing your machine higher print speeds. Higher resolution produces more detail, resulting in a larger print field area and a smoother surface for your printed parts. The LRS-Professional Line projectors can also be stacked and stitched. Combining multiple static projectors and stitching the images together with extreme precision creates vast build field areas with the highest detail. This is a profound benefit of Visitech's LAMA Pro software, which provides edge blending for seamless stitching of images in large build area.

FUTURE REFINEMENTS

Visixtech is currently advancing its additive manufacturing technology with new subsystems built on the NEOS platform, delivering unmatched robustness and reliability for the professional AM market. Our engineering focus is on increasing productivity, speed, and resolution.

The 8K resolution and dual LED capabilities in development will bring superior precision and efficiency to our LRS Professional Line of projectors, allowing for scalable build areas and enhanced accuracy. This scalability will enable larger batch sizes while maintaining the high precision required for high-throughput manufacturing.

Additionally, integrated real-time warping and positioning will ensure consistent quality and adaptability. These innovations are being designed to meet the evolving demands of the industry, offering flexible, high-performance solutions for complex manufacturing processes. Each product will also be supported by a versatile range of lenses and configurations to suit specific industry needs.

LUXBEAM® RAPID SYSTEM – PROFESSIONAL LINE

Properties	LRS-WQ Plus
DMD Type	DLP9000 0,9" WQXGA
Resolution	WQXGA 2560 x 1600 px
Operation Mode	Native pixel mode
Projector Output Power	Up to 10W (460/405 nm), 10W (385 nm), 8W (365 nm)
LED Options	460 nm / 405 nm / 385 nm / 365 nm
LED Driver	Bifrost S
	Constant flux with Optical Feedback
Power Uniformity	> 99% after software correction
Contrast Ratio	Up to 1000:1
Dimensions w/o lens	215 mm (H) x 105 mm (W) x 188 mm (L)
Total weight	4 kg (w/o lens and PSU)
Power consumption	Max 300W
Cooling system	Liquid Cooling (Air Cooling on request)
Software	LAMA Standard (included)

Electrical connections	Signal
Power supply	48 V DC
Image Data	Single Image Pattern Upload with LAMA
Communication	Ethernet (platform independent web interface)
UV / IR Safety	LED Safety Switch (enable/disable)
Frame Sync	External frame synchronization

Lens Options	LRS-WQ Plus			
	Pixel Pitch in Image [µm]	Native Image Size W x H [mm²]	Working Distance [mm]	Mounting Distance [mm]
PL LRS 0.3 HC 405nm	1.9	4.9 x 3.0	16	268
PL LRS 0.5 HC	3.8	9.7 x 6.0	50	269
PL LRS 1.0 HC	7.6	19.5 x 12.1	71	269
PL LRS 2.0 HC	15.1	38.7 x 24.2	90	269
PL LRS 3.6	28.0	71.7 x 44.8	148	237
PL LRS 4.6	35.0	89.6 x 56.0	178	281
PL LRS 8.3	63.0	161.3 x 100.8	375	469
PL LRS 9.9	75.0	192.0 x 120.0	493	564
PL LRS 11.7	90.0	230.4 x 144,0	575	668
PL LRS 17.2	130.0	332.8 x 208,0	884	976
PL LRS 5.3 VIS	40.0	102.4 x 64.0	161	376

All specifications and features subject to change

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