LUXBEAM® RAPID SYSTEM – LRS-WQ

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Maximum power for static 3D Print systems

The LUXBEAM® Rapid System LRS-WQ is a DLP® based stereo lithography sub-system specifically designed for professional 3D Printing and additive prototyping/manufacturing systems. With the robust and reliable high resolution DLP9000 WQXGA chip, the LRS-WQ offers long lifetime and low maintenance costs. The system is configurable with numerous imaging lenses at different magnifications, providing anything from 1,9 micron native pixel pitch up to 130 micron in image, corresponding to an A4 sized build area.

MAXIMUM OPTICAL POWER IN IMAGE

The LRS-WQ comprises an UV-optimized optical system and a selection of different high power LEDBEAM™ UV LED light sources, ranging from 365 to visible blue 460 nm and providing up to 7 Watts optical power in the image. The LRS-WQ Light Engine is a proven and reliable plug-and-play system/module. With its integrated CPU and industry standard Ethernet communication interface, it provides advanced internal communication, logging communication, status tracking and other logging features.

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Recommended implementation
• High power static configuration

Resolution
• 2560 x 1600 WQXGA

LED Wavelengths
• R, G, B
• 405 nm / 380 nm / 365 nm

Optical Power Output
• Up to 7,5 W

Projection Lens Options
• 0.3x, 0.5x, 1.0x, 2.0x
• 4.6x, 5.6x, 8.3x
• 9.9x, 11.7x, 17.3x
• 5.3x (VIS only)

Electronics
• Luxbeam™ LB9000 Controller Board
• Integrated CPU with Web Interface

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creating images – together

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Properties	
DMD Type	DLP9000 0,9" WQXGA
Resolution	WQXGA 2560 x 1600 px
Projector Output Power	Up to 7,5 W depending on LED selection
LED Options	Monochrome R, G, B, 4ß5 nm, 380 nm, 365 nm
Power Uniformity	>90% native
Dimensions w/o lens	245 mm (L) x 282 mm (W) x 128 mm (H)
Total weight w/o PSU	4 kg
Power consumption	250 W (varies with exposure scheme)
Cooling system	Air cooling (fan)
Software	Complete API (Windows, Linux), platform independent web interface

Electrical connections	Signal
Power supply	12 V DC
Video Data	HDMI (Ethernet depends on operating mode)
Communication	Ethernet (platform independent web interface)
LED Safety Switch	LED enable/disable
Electrical Sync In and Out	Interface for external frame synchronization, BNC

Lens Options	Magnification	Working Distance [mm]	Pixel Pitch in Image [μm]	Native Image Size [mm²]
LRS-03 UV	0.25 : 1	16.0	1.9	4.8 x 3.0
LRS-05 UV	0.5 : 1	50.0	3.8	9.7 x 6.0
LRS-10 UV	1.0 : 1	71.0	7.6	19.3 x 12.1
LRS-20 UV	2.0 : 1	90.0	15.1	38.6 x 24.1
LRS-50 UV	4.6 : 1	177.8	35	90 x 56
LRS-90n UV	8.3 : 1	375.0	62.5	160 x 100
LRS-107 UV	9.9 : 1	493.0	75	192 x 120
LRS-126n UV	11,7 : 1	575.0	88	225 x 141
LRS-187 UV	17.3 : 1	884.0	132	338 x 211
LRS-57 VIS	5.3 : 1	161.0	40	102 x 64

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