



## LUXBEAM® RAPID SYSTEM – LRS-MC<sub>x</sub>-WX NIR

LUXBEAM® RAPID SYSTEM – LRS-MC<sub>x</sub>-WX NIR

# Maximum throughput in Powder Bed Fusion

As a new approach for polymer-based Powder Bed Fusion, VISITECH is introducing the LRS-MC<sub>x</sub>-WX light engine, providing unprecedented Near-IR power of more than 100 W in the projected 2D image. This is offering a path towards high productivity systems in Powder Bed Fusion as an alternative to classical Selective Laser Sintering (SLS) technologies, where the polymer material is heated up sequentially, point by point and layer by layer. The LUXBEAM® Rapid System LRS-MC<sub>x</sub>-WX-NIR rationalizes towards a pure layer by layer approach with instant 2D imaging.

### ACCELERATING POWDER BED FUSION

The water-cooled LRS-MC<sub>x</sub>-WX-NIR modules offer stackability for stitched images, in static as well as in step-and-flash or scrolling configurations. This enables for highest manufacturing throughput with single pass linear motion systems. Special alignment features grant pixel precise alignment of the modules. The system features the extremely robust and reliable high resolution DLP650LNIR WXGA chipset and operates with external fiber-coupled NIR laser from 800–1200 nm.



### LUXBEAM® RAPID SYSTEM – LRS-MC<sub>x</sub>-WX NIR

#### Recommended implementation

- Multihead scrolling systems
- Static systems

#### Resolution

- 1280 x 800 WXGA (NIR)

#### Laser Wavelengths

- From 800 -1200 nm

#### Optical Power Output

- Up to 120 Watts

#### Projection Lens Options

- 1.85x (830 nm)
- 16x (1064 nm)

#### Electronics

- LUXBEAM™ LB4600

# LUXBEAM® RAPID SYSTEM – LRS-MC<sub>x</sub>-WX NIR

Properties	
DMD Type	DLP650LNIR 0,65" WXGA (NIR)
Resolution	1280 x 800 px
Projector Output Power	Up to 120 W depending laser wavelength and input power
Laser Output Power	Fiber Laser between 800 and 1200 nm (not included)
Power Uniformity	> 90% native
Dimensions w/o lens	305 mm (H) x 92 mm (W) x 240 mm (L)
Total weight w/o PSU	4 kg
Power consumption	120 W (per module)
Cooling system	Liquid cooling (water)
Software	Complete API (Windows, Linux), platform independent web interface Advanced Control SW package (optional)

Electrical connections	Signal
Power supply	12 V DC
Gigabit Ethernet	1000BASE-T (IEEE 802.3)
Communication	Ethernet (platform independent web interface)
LED Safety Switch	LED enable/disable
Electrical Sync I/O	RS 485
Optical sync I/O	820 nm multimode fiber
Laser Fibre Connector	D80

Lens Options	Magnification	Working Distance [mm]	Pixel Pitch in Image [µm]	Native Image Size [mm²]
MCx 1,85x NIR (830 nm)	1.85 : 1	70.0	20,0	25.6 x 16.0
MCx 16x NIR (1064 nm)	16.2 : 1	210.0	175,0	224 x 140