



PolarOnyx

- Capable of printing in more than a dozen alloys and ceramics, including tungsten and ceramic materials.
- Robust manufacturing floor platform
- Exceptional surface finish and resolution
- Excellent accuracy and repeatability
- Fully dense parts with superior mechanical properties
- Applications in Aerospace, defense and medical technology

PolarOnyx, Inc.,
 144 Old Lystra Road, unit 2,
 Chapel Hill, NC 27517
 Tel: 984 369 5688.

www.polaronyx.com
 sale@polaronyx.com

Tungsten-LAM



Tungsten-LAM (Laser Additive Manufacturing) is a powder-bed based additive manufacturing system. Equipped with high power and high energy femtosecond fiber laser, Tungsten-LAM is capable of manufacturing various materials, especially high melting temperature materials, such as tungsten. Tungsten-LAM is an ideal solution for industrial applications ranging from functional prototyping to rapid manufacturing. The printed parts are fully dense and have exceptional detail, surface finish and overall accuracy.

System Specifications

Laser	Femtosecond fiber laser with centered wavelength at 1030 nm
Laser power	40-200 W
Pulse Energy	< 50 μJ
Build envelop volume size	100x100x100mm
Layer thickness	> 5 μm
Operational beam focus	>20 μm
Scan speed	Up to 2 m/s
Processing environment	Inert gas
CAD read format	STL
Control software	PolarOnyx developed
Total dimension	~1800x800x1900mm (LxWxH)
Materials	Tungsten, Ceramic, Stainless steel, Tool steel, Titanium, Aluminum, Inconel, Super alloys
Power consumption	3 kVA – 110 V
Enclosure	Class I