



The quality  
control  
solution for  
precision  
metal parts



# PrintRite<sup>3D</sup><sup>®</sup>

*Real-Time Melt Pool Analytics*



# PrintRite<sup>3D</sup>® – Leading Quality Innovation

Don't just look for defects or discover them after it's too late. Get notified, analyze and adjust the machine process in real time. Only PrintRite<sup>3D</sup>® from Sigma Labs enables all that.

- Real-time melt pool thermal quality monitoring and notification
- Thermal signature anomaly detection and automatic risk-level classification
- Statistical process sampling and advanced analytics

Save valuable time and money by improving

machine process consistency, reducing (even eliminating) the need for destructive CT testing or inconsistent scans of complex parts.

Achieve high confidence in a repeatable manufacturing process and build integrity. Quality at scale, that's what we do.

- Lower additive manufacturing costs, improve yield and profit margin
- Trusted, independent third-party QA
- Plant-wide machine retrofit or OEM integrated install



## PrintRite<sup>3D</sup>® Product Specifications

Resolution	100 micron
Speed	200 kilohertz
Wavelength	300 - 1000 nanometer
Data File Size (filtered)	Average 10 megabytes per layer
Data Processing Time	Average 20 seconds per layer
Data Processing Rate	Interlayer
Server Performance	10 terabyte multi-core 2u w/ co-processor
Host Machine Connections	Laser power, laser drive, XY protocol
Sensor Array Dimensions	200 x 200 x 150 mm
HMI Server Cabinet Dimensions	580 x 580 x 810 mm



# Why PrintRite3D®?

With additive manufacturing, it's the small things (you can't see) that add up to big, expensive problems. PrintRite3D® allows additive manufacturers to identify and fix machine inconsistencies to optimize quality and save time and money.

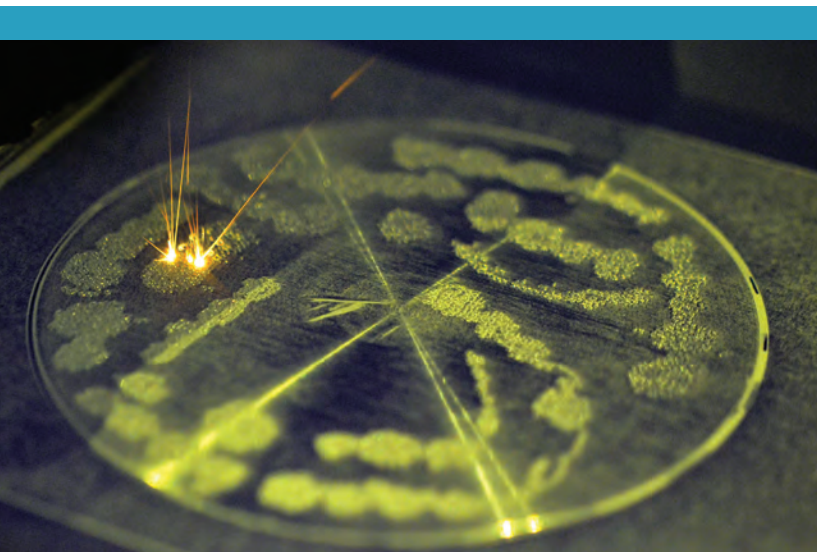
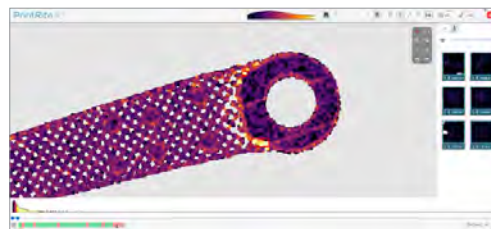
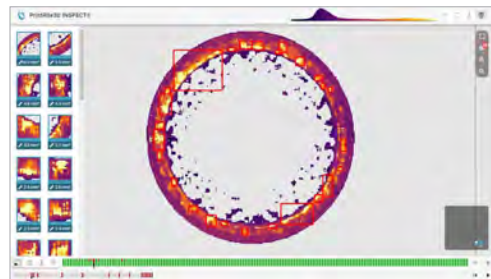
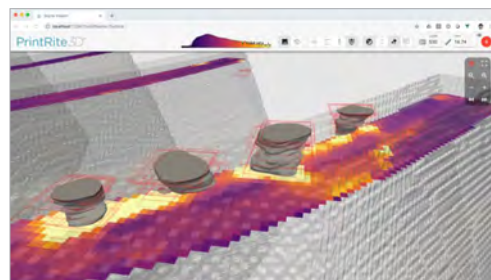
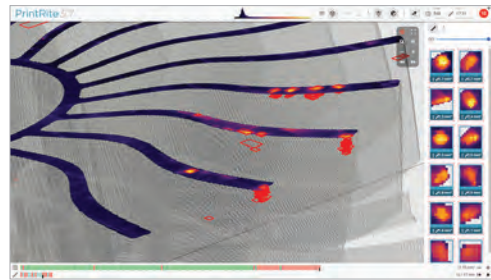
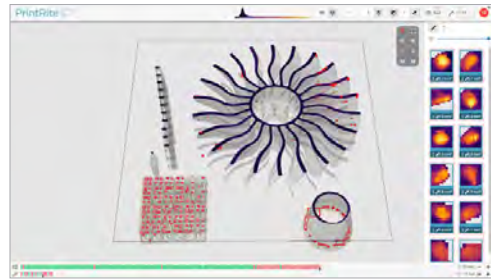
All in real time. During the 3D manufacturing process.

Sigma Labs' proprietary PrintRite3D® solution uses thermal signature properties from the melt pool to detect and identify anomalies. With PrintRite3D® you know with assurance you have produced high-quality parts. Consistently. Each and every time.

Gain confidence in your process repeatability from one build to the next. Detect potential part anomalies without costly CT scans.

PrintRite3D® is the quality control solution for precision metal parts.

Visit [SigmaLabsInc.com](http://SigmaLabsInc.com) for a demo.





## SIGMA LABS

*Real-Time Melt Pool Analytics*

What happens when you combine leading experts from many different science disciplines—Metallurgy, Physics, Signal Processing, Mechanical Engineering, Optics, Software AI and ML, Data Analytics and Visualization—into a single product?

You get the most accurate, comprehensive and reliable quality assurance solution for additive manufacturing of precision metal parts.

## PrintRite<sup>3D</sup><sup>®</sup>

Engineered, manufactured and qualified for use in highly demanding production environments within aerospace, defense, automobile, oil and gas, and other industries.

Visit [SigmaLabsInc.com](http://SigmaLabsInc.com) or contact [sales@sigmalabsinc.com](mailto:sales@sigmalabsinc.com) to learn more.



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