

# LineBeam

## Large Format Polysilicon Annealing

Demand is rising for high definition and power efficient low temperature polysilicon (LTPS) display backplanes to be the foremost differentiator for mobile devices such as smartphones and tablets. LineBeam systems from Coherent are the enabling technology for mass manufacturing LTPS backplanes on large substrate panels with highest yield.

### FEATURES & BENEFITS

- 308 nm wavelength for high yield OLED and LCD polysilicon annealing
- Superior pulse stability and high depth of field to ensure a large process window
- Short and long axis beam homogeneity for maximum throughput and beam utilization
- Proven performance in leading large-scale OLED and LCD fabs
- Active control and observation modules for reproducible annealing results
- Line beam lengths scalable up to Gen 10.5 panel size

### APPLICATIONS

- Excimer Laser Annealing (ELA) of polysilicon backplanes for OLED and LCD

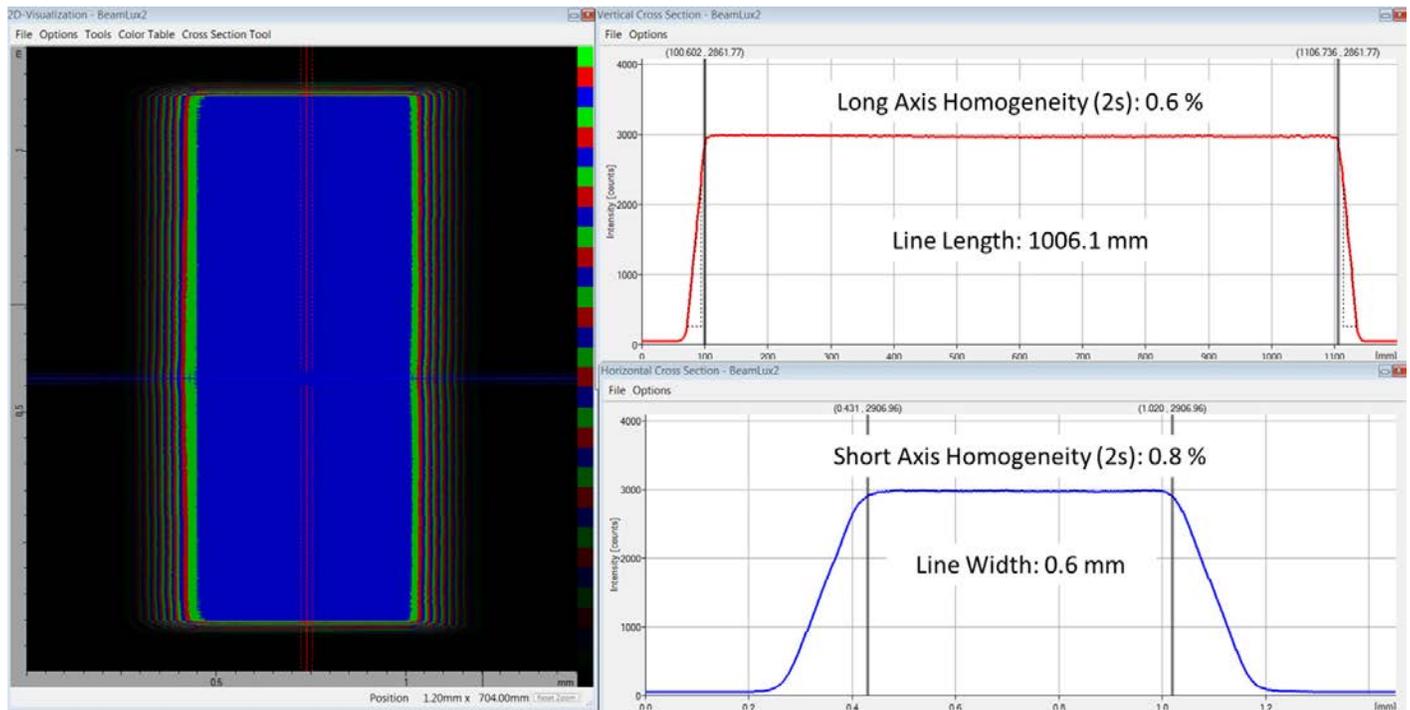


SPECIFICATIONS	Mass Production LineBeam Systems <sup>1</sup>			
Wavelength (nm)	308			
Line Length (mm)	750	1000	1300	1500
Beam Profile Type	Top-hat beam along both axes			
Depth of Focus (μm)	±150	±120	±120	±120

<sup>1</sup> R&D-LineBeam systems with smaller format available on request.

## LineBeam Performance

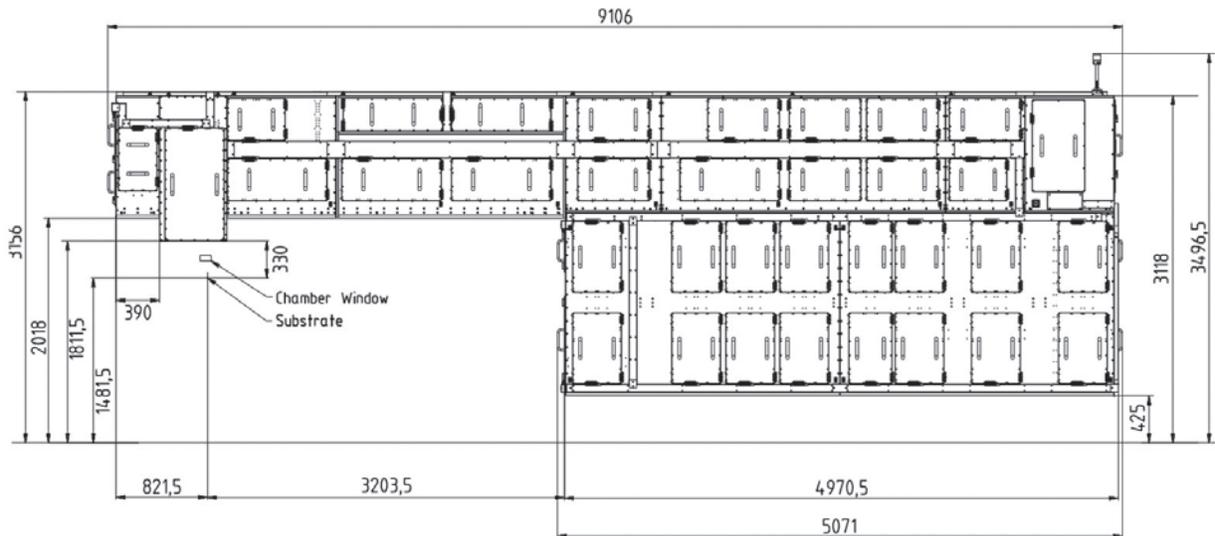
Example of LB1000 2D-beam profile, short and long axis cross sections in the substrate plane.



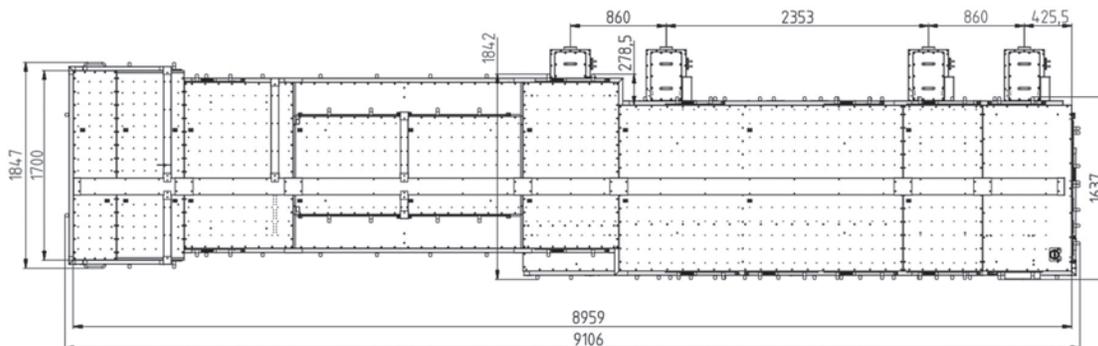
## MECHANICAL SPECIFICATIONS

### Large LineBeam System Example (Up to Gen 10.5)

Front View



Top View



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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice. Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all LineBeam Systems. For full details of this warranty coverage, please refer to the Service section at [www.coherent.com](http://www.coherent.com) or contact your local Sales or Service Representative. MC-010-18-0M1119Rev.A Copyright ©2019 Coherent, Inc.

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