

LUXBEAM® LLS1000

Maskless Direct Imaging, below 1 μm

LLS1000 brings DLP-based Direct Imaging into the sub-micron node — the resolution semiconductor-adjacent and advanced-packaging lines need, at production throughput. One photohead, integrated by your machine, built in-house from optics to firmware.

IN PRODUCTION

Sub-micron, in [real production](#)

Not a lab result — a production reality. LLS1000 holds 1 μm line/space at full throughput in machines shipping today: one vertically-built imaging head, optics to firmware.



Full specification

IMAGING & LAYOUT

Resolution	1 μm
Light source	405 / 375 nm laser
Throughput — $\varnothing 300$ mm wafer	~32 s · 112 wph
Throughput — 515 × 510 mm panel	~110 s/side · 32 pph
Test substrate	Resist
Typical applications	Finest RDL for CPO and photonic interposers, glass-core fine RDL, mask writing
Substrate / panel	Wafers, 310×310, glass
Segment	Advanced packaging

INTEGRATION

Mechanical mount	OEM-defined kinematic
Cooling	Liquid (LASER)
Power	24 V DC + aux
Control interface	Ethernet (LURIA) · GPIO
Data path	10 GbE pattern streaming
Pattern formats	GDSII · OASIS · raster
Real-time features	Die-shift · stitch-free · autofocus
Operating environment	Class 1000 · 22±2 °C · 45±5 % RH

Throughput measured single-pass on Ø300 mm resist; panel figures on 515×510 mm. Real-world numbers depend on resist and energy density — consult the datasheet for verified values under your process.

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Specifications are subject to change. The official product datasheet remains the authoritative reference.