

PowerLine E Twin Configurations

The Smart Way of High-Speed Laser Marking

PowerLine E Twin configurations increase throughput significantly by using two laser markers instead of one. In particular, a Twin consists of two laser markers that enable simultaneous and asynchronous marking of one workpiece by two co-operating lasers. Throughput increases without a major redesign of the handling system or an extra marking station. It even allows retrofit of a Twin into handling systems originally designed for one laser marker only. The PowerLine Twin features soft- and hardware interfaces that are equivalent to the interfaces of a single laser marker. To the outside world a PowerLine E Twin is like a single laser marker – as easy to integrate and operate while featuring an enlarged marking field and doubled speed.

FEATURES & BENEFITS

- Two co-operating laser markers
- Simultaneous asynchronous marking
- Significant increase of throughput
- Minimal changes of handling design
- One supply unit and one chiller
- Special software features to precisely match marking quality

APPLICATIONS

- Marking of Semiconductor IC's
- Marking of Plastic Parts (carbonization, foaming, bleaching)
- Day and Night Design Marking
- Serialization Marking



PowerLine E Twin Configurations Datasheet

SPECIFICATIONS	PL E 30-1064 T	PL E 40-1064 T	PL E 12-532 T	PL E 20-532 T	PL E 25-532 T	PL E 20-355 T
Laser Type	DPSS					
Wavelength (nm)	1064	1064	532	532	532	355
Average CW Power (W)	2 x 25	2 x 40	-	-	-	-
Average Power (W)	2 x 20 (60 kHz)	2 x 35 (60 kHz)	2 x 6 (50 kHz)	2 x 12 (50 kHz)	2 x 18 (50 kHz)	2 x 2 (15 kHz)
Pulse Energy (mJ)	0.36 (at 60 kHz)	0.60 (at 60 kHz)	0.12 (at 50 kHz)	0.24 (at 50 kHz)	0.36 (at 50kHz)	0.1 (at 15 kHz)
Frequency Range (kHz)	cw, 0 to 200	cw, 30 to 200	5 to 200	15 to 200	15 to 200	15 to 100
Pulse Width (ns)	40 (at 60 kHz)	35 (at 60 kHz)	40 (at 50 kHz)	25 (at 50 kHz)	32 (at 50 kHz)	10 (at 15 kHz)
M ²	2 to 4	2 to 4	≤1.5	≤1.5	≤1.5	≤1.5
Beam Diameter (mm)	3.4 ±0.4	3.3 ±0.4	1.6 ±0.2	2.5 ±0.3	2.7 ±0.4	0.55
Cable (m), Laser Head - Supply Unit	5 (optional: 3)					
Weight (kg)	2 x 15					
Laser Head	16					
Supply Unit	55 (PowerLine E 40: 2 x 55 kg)					
Water/Air Chiller						
DPSS Laser Type	Vanadate					
Cooling	Water-air cooling. Ambient operating temperature: +15 to +35°C.					
Scanners	Range of scanners for general marking, on-axis alignment, high precision marking (digital encoder)					
Optical Z-Axis	Yes ¹ (option)					
Marking Field Size ²	180 mm x 300 mm or 240 mm x 360 mm (1064 nm, 532 nm)					
120 mm Scanner Pitch	160 mm x 280 mm or 210 mm x 330 mm (355 nm)					
130 mm Scanner Pitch	180 mm x 310 mm or 240 mm x 370 mm (1064 nm, 532 nm)					
	160 mm x 290 mm or 210 mm x 300 mm (355 nm)					
Positioning Help Laser	Optional for 1.064 nm and 532 nm models					
Physical Dimensions	Physical dimensions and working distance of the laser marker depend on the detailed configuration. Please refer to the technical drawing.					
Mounting of Laser Marker	Horizontal. Other mounting options on demand					
Supply Unit	19" rack mount unit, height: 3 rack units					
Water-Air Chiller	19" rack mount unit, height: 7 rack units / PowerLine E 40: Two chillers required (2 x 7 RU)					
Interfaces (PLC control)	Parallel interface (digital I/Os)					
Interfaces ³ (PC control)	LAN (TCP/IP), RS-232 ⁴					
Variable Data	Keyboard input, local file (lot file), barcode reader, via LAN (TCP/IP) ² , Matrix objects					
Standard Software	Visual Laser Marker (VLM), Visual Marking Controller (VMC2), Laser Console, RCU.exe					
Marking Objects	Vector graphics, text, logos, ring, bitmap, banding					
Barcodes	GS1 DataBar, Code 39, Code 128, EAN8, EAN13, UPC-A, UPC-E, BookLan and others					
2D Codes	ECC200, Code 49, Micro-PDF417 and other data matrix and QR codes					
Optional Software Features	MJC (Marker Job Control), HK (Host Coupling), CAD Extension, AI, PDF and PS Import, SECS/GEM					
OS-Single Board PC	Windows 10					
Certificates	PowerLine E laser markers are certified according to the following international standards: EN 60825-1:2014, EN 55011:2009/A1:2010, EN 61000-6-4:2007, EN 61000-6-2:2005, EN 61000-3-2:2014, EN 61000-3-3:2013, 47 CFR Part 18 ICES-003 Issue 4:2004 and fulfill the CDRH (radiation) standard.					

¹ Both Ffms are adjusted individually but must focus on the same plane. No real-time focus adjustment. SmartMap3D is not supported.

² Other field sizes on demand.

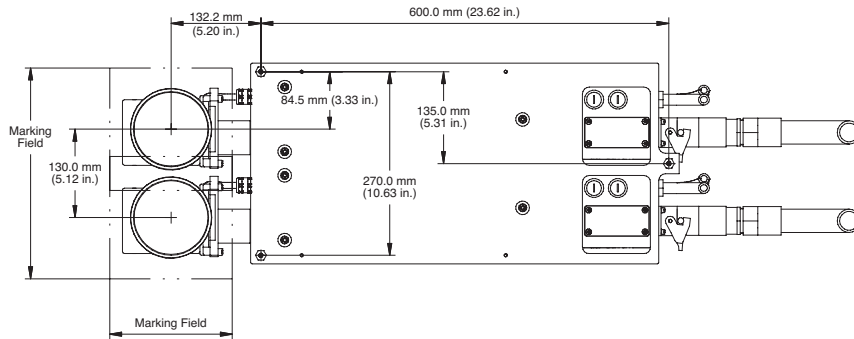
³ Requires Host Coupling HK, Marker Job Control (MJC) or SECS/GEM software feature.

⁴ Requires an RS-232-to-USB-adaptor.

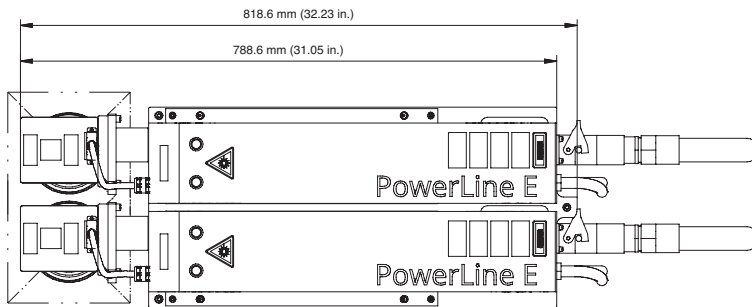
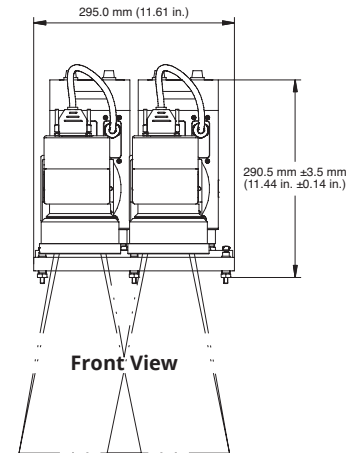
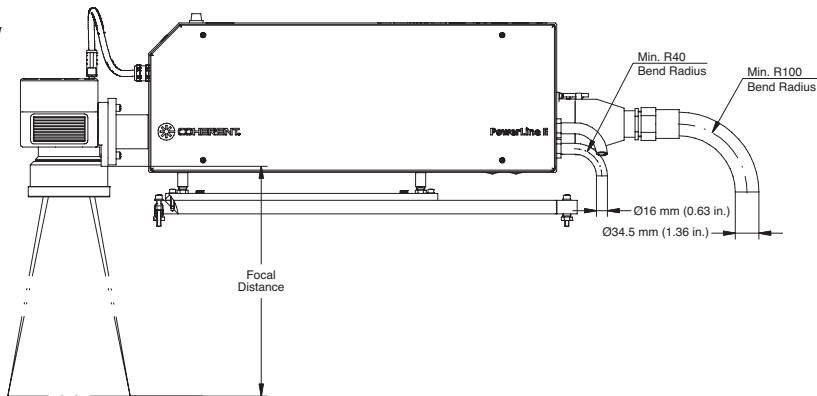
MECHANICAL SPECIFICATIONS

PowerLine E 40-1064 T / E 25-532 T*

Bottom View



Side View



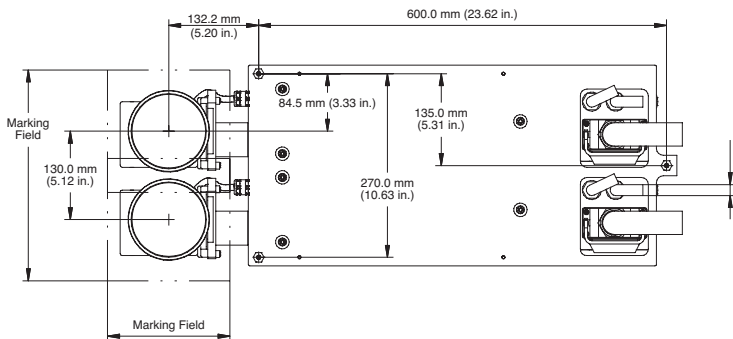
Top View

* 130 mm scanner pitch. 120 mm scanner pitch possible, too, if objective size allows.

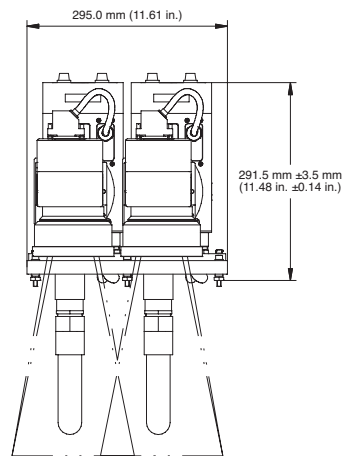
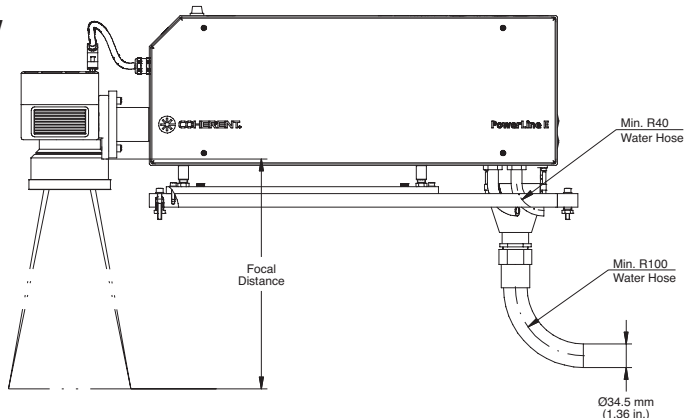
MECHANICAL SPECIFICATIONS

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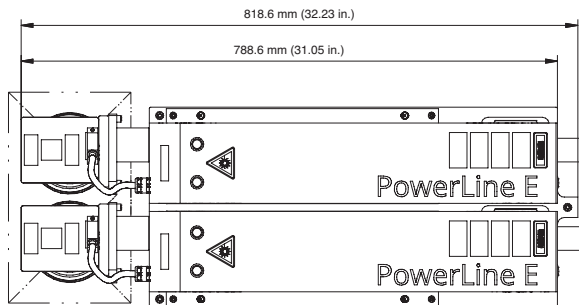
Bottom View



Side View



Front View

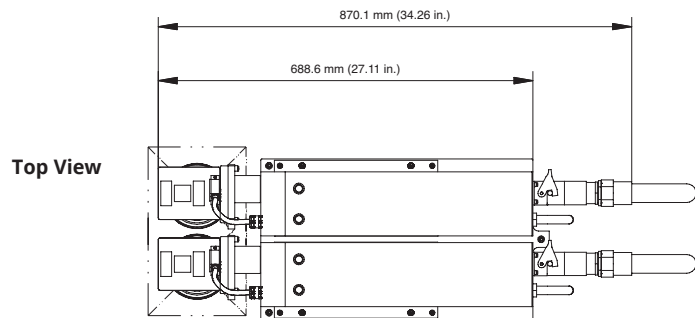
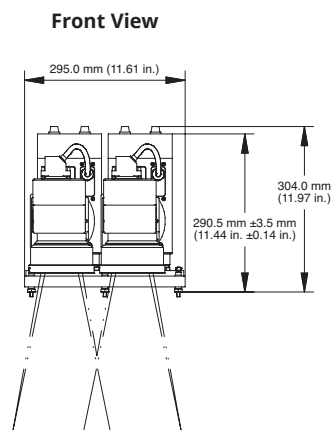
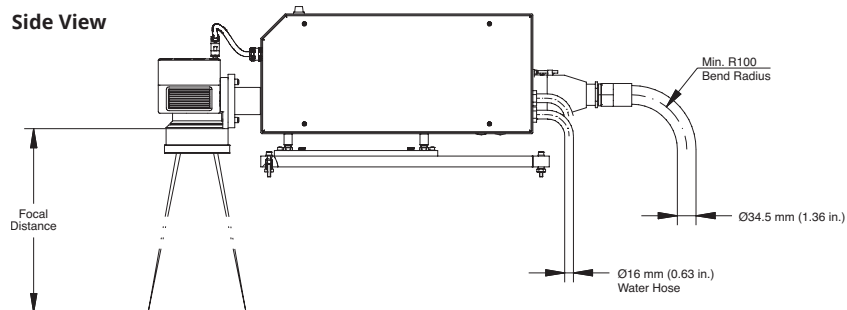
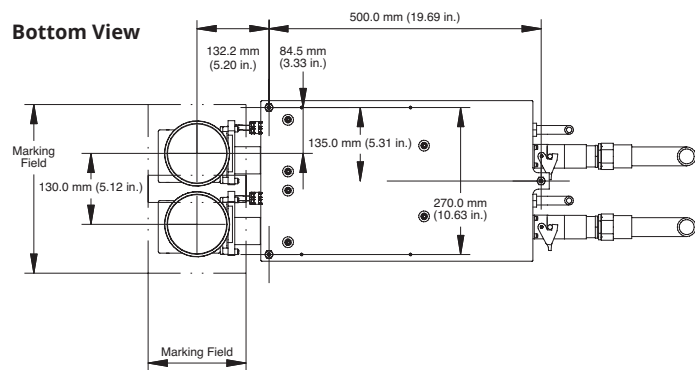


Top View

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MECHANICAL SPECIFICATIONS

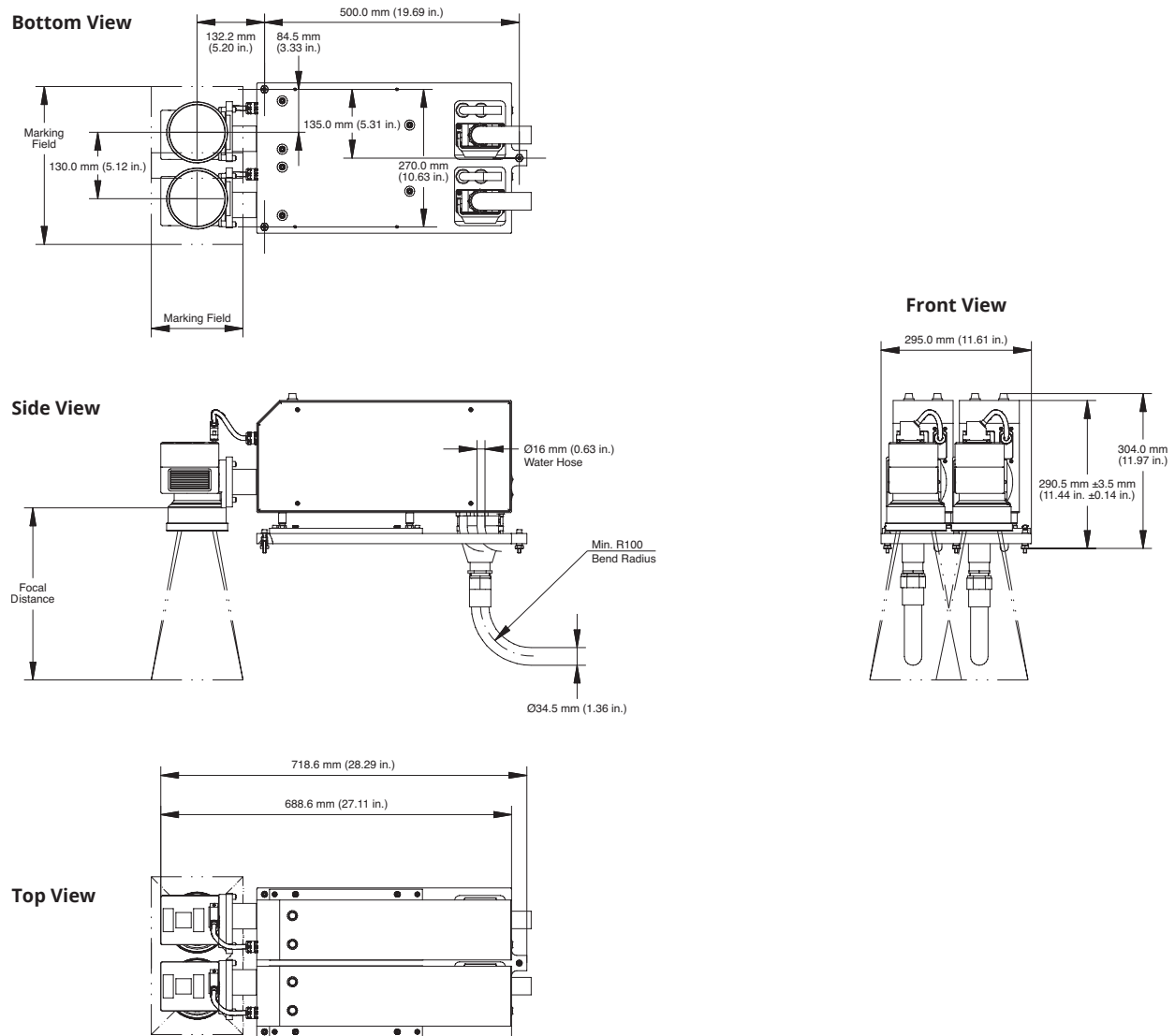
PowerLine E 20-1064 T / E 30-1064 T / E 12-532 T / E 20-532 T / E 25-532 T / E 20-355 T*



* 130 mm scanner pitch. 120 mm scanner pitch possible, too, if objective size allows.

MECHANICAL SPECIFICATIONS

PowerLine E 20-1064 T / E 30-1064 T / E 12-532 T / E 20-532 T / E 25-532 T / E 20-355 T*



* 130 mm scanner pitch. 120 mm scanner pitch possible, too, if objective size allows.



Coherent, Inc.,
 5100 Patrick Henry Drive Santa Clara, CA 95054
 p. (800) 527-3786 | (408) 764-4983
 f. (408) 764-4646

tech.sales@coherent.com www.coherent.com

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 PowerLine E Twin Configurations Lasers. For full details of this warranty coverage, please refer to the Service section at www.coherent.com or contact your local Sales or Service Representative. MC-057-19-0M0221 Rev.A Copyright ©2021 Coherent, Inc.