Nanosecond Lasers

PYTHON

Solid-State Laser for Display Annealing

PYTHON lowers the cost and improves the throughput of low-temperature polysilicon annealing in the production of OLED flat panel displays. This is achieved by using high-reliability, diode-pumped, solid-state laser technology to precisely duplicate the output of a VYPER excimer laser – including pulse energy, repetition rate, beam size, and beam intensity distribution.

PYTHON fits existing Coherent LineBeam 750, 1000, 1300, and 1500 systems, and requires virtually no modification to existing ELA processes. This ensures an effortless transition to this higher reliability, lower cost laser source.

FEATURES

- Outstanding reliability
- 50% reduction in operating costs
- No change to the process of record
- Unmatched energy stability

APPLICATIONS

- Laser Annealing

COHERENT

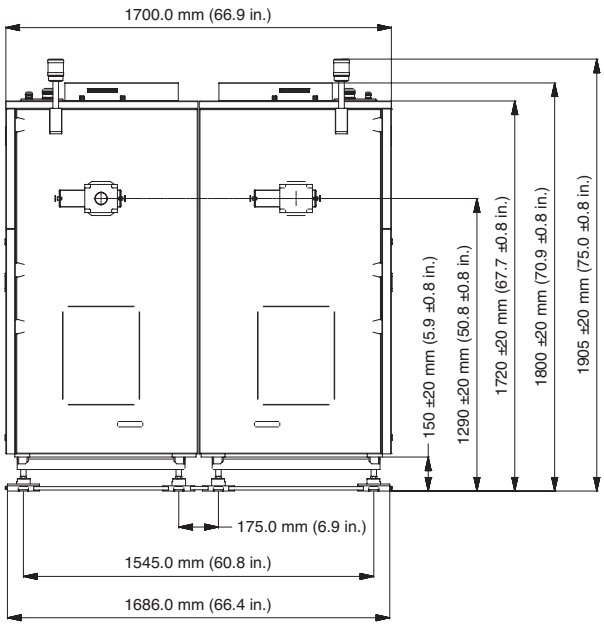
Specifications[1]	PYTHON	TwinPYTHON
Part Number	2270257	2259560
Wavelength (nm)	355	355
Maximum Stabilized Pulse Energy (mJ)	2000	4000
Maximum Stabilized Average Power (W)	1200	2400
Maximum Repetition Rate (Hz)	600	600
Sum Energy Stability (sigma, %)	≤0.25	≤0.20
Pulse Duration[1] (FWHM, ns)	30 ±5	30 ±5
Beam Dimensions (FWHM, V x H, mm^2)	35 ±4 x 14.5 +3/-6	35 ±4 x 14.5 +3/-6
Beam Divergence (FWHM, V x H, $mrad^2$)	4.5 ±1 x 1.0 ±0.3	4.5 ±1 x 1.0 ±0.3
Weight	≤4400 kg/9700 lbs.	≤8800 kg/19,400 lbs.
Cooling	Water, up to 2 x 70 l/min. (2 x 18.5 gal./min.), 10 to 13°C	Water, up to 4 x 70 l/min. (4 x 18.5 gal./min.), 10 to 13°C
Electrical	2x 36 kVA, 3-phase, 400 VAC, 50 or 60 Hz	4x 36 kVA, 3-phase, 400 VAC, 50 or 60 Hz
Dimensions[2] (L x W x H)	2800 x 1700 x 1720 mm (110.0 x 66.9 x 67.7 in.)	2800 x 4913 x 1720 mm (110 x 193.4 x 67.7 in.)

Notes:
1. Configurable double hump.
2. Including warning lights: H = 1905 mm (75.0 in.).

Mechanical Specifications

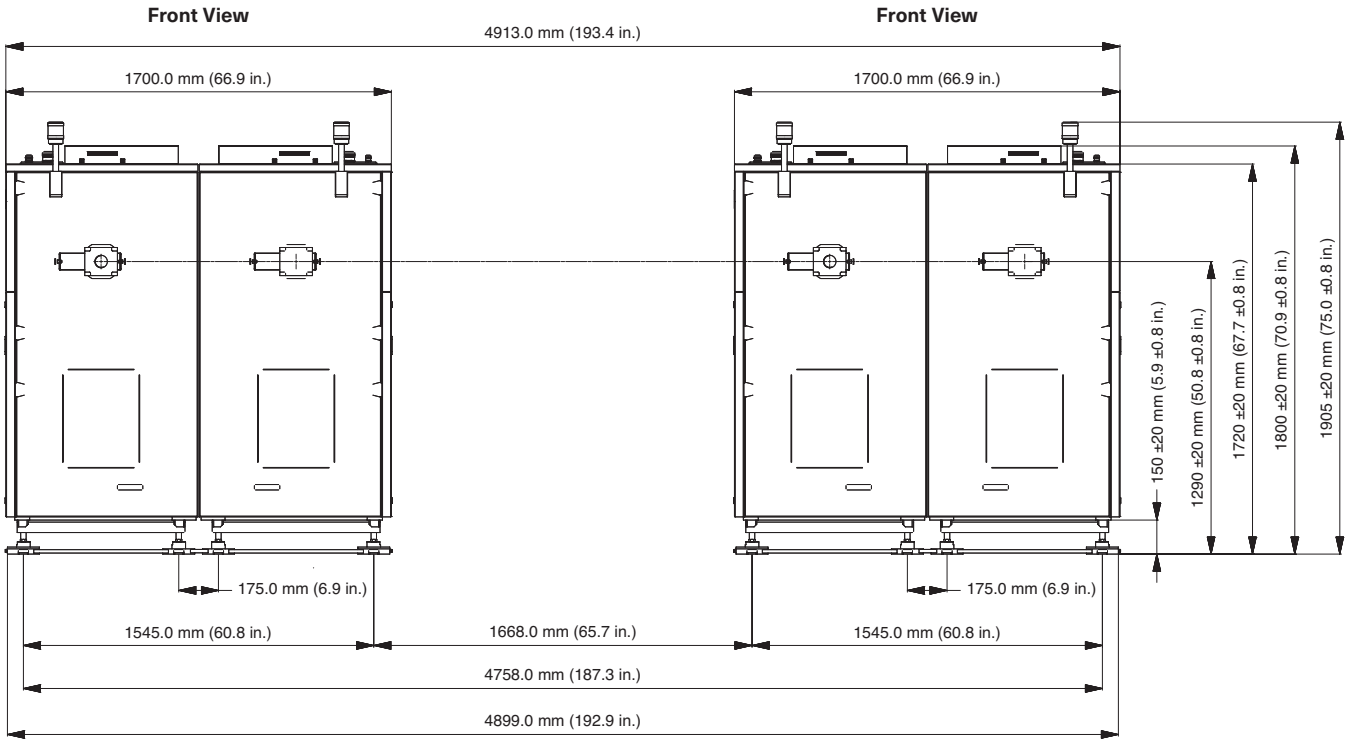
PYTHON

Front View



TwinPYTHON

Front View **Front View**



For more information
www.coherent.com