

Electrical properties

Rated voltage range	AC 100–240 V
Rated frequencies	50/60 Hz
Rated current max.	3 A / 230 V respectively 6.3 A / 100 V
Max. power consumption	630 W, typically < 400 W
Main supply overvoltage	Category II
Grounding equipment conductor	Required
Electrical safety	In accordance with IEC 61010-1:2010
Laser safety	Class 1, internal laser class 4 according to IEC 60825-1:2014

Ambient conditions

Operating conditions	Indoors
Operating temperature	21°C ± 2°C
Temperature stability	± 1°K/h
Maximum relative humidity	60%
Sound pressure level	55 dB
Air pressure for internal vibration isolation	Not required

Weights and measures

Total weight	124 kg
Dimensions (W x L x H)	58.5 x 71 x 65 cm ³
Minimum wall distance	5 cm



Specifications

Accessible writing area	Up to 120 x 100 mm ²		
Horizontal and vertical resolution	≤ 10 nm		
Max. travel distance z-axis	49 mm		
Objectives	40x/1.4	20x/0.7	10x/0.4
Horizontal feature size ⁽¹⁾	< 150 nm	< 280 nm	< 490 nm
Vertical feature size ⁽¹⁾	< 350 nm	< 1.9 μm	< 6.1 μm
Highest resolution XY ⁽²⁾	< 100 nm		
Highest resolution Z ⁽³⁾	< 100 nm		
Field of view ⁽⁴⁾	Ø 0.5 mm	Ø 1 mm	Ø 2 mm
Writing speed (typically)	150 mm/s	300 mm/s	600 mm/s
Throughput – galvo-mode (typically)	0.025 mm ³ /h	0.125 mm ³ /h	2 mm ³ /h
Throughput – adaptive resolution (typically)	0.125 mm ³ /h	1.13 mm ³ /h	20 mm ³ /h

Femtosecond laser

Max. average power	400 mW
Pulse length	90 fs
Center wavelength	515 nm
Repetition rate	80 MHz

Software

THINK3D

⁽¹⁾ Calculated Full Width Half Maximum (FWHM) for printing power twice the threshold, see Zipfel et al “Nonlinear magic” doi:10.1038/nbt899.

⁽²⁾ Smallest free hanging line.

⁽³⁾ By submerging voxel in substrate.

⁽⁴⁾ Based on a field number of 20.

