

3D Systems: SLA® 5000 System

Technology: Stereolithography (SL) process

Material Class: Liquid; Photo Reactive

Benefits

- Large part size capability — to 20 x 20 x 23 inches
- Excellent entry point for large part capability
- Excellent part quality
- Reliable operation
- Flexible and versatile applications
- Low “per part” costs

Applications

- Plastic prototyping for design verification and testing
- Precision patterns for investment and sand casting
- Pre-production tooling patterns
- Parts for manufacturing aids, vendor solicitation and limited production runs
- Manufacture and pre-production jigs and fixturing

Outstanding feature set for production of larger-sized, high quality prototypes, patterns or parts.

This 20 x 20 x 23 inch part size capable SLA® system incorporates many advanced features that many users find an ideal mix of large part capacity, outstanding part quality, flexibility, ease-of-use, reliability and performance in a cost-effective large frame system.

Sophisticated technology in a mid-range system.

Utilizing a reliable, long-life solid-state laser and high precision optics, the SLA 5000 system offers stable power and economical, long-life operation. This system includes the same vat size as the premium SLA 7000 system for the largest available part size envelope and capacity. Patented SmartSweep™ technology reduces unnecessary, time-consuming vat sweeping motions for high-efficiency part building. Thin 0.002 in (.05 mm) build layer* capability delivers parts with a smooth surface finish for greatly reduced post-processing time or effort. An automatic material dispensing system maintains the vat resin level for added ease-of-use and convenience.

Tackle a full range of solid imaging applications.

Choose from the family of Accura general purpose or specialty SL materials, offering diverse mechanical properties to provide broad range of modeling, prototyping, tooling or parts' production application capability. Produce durable, functional prototypes with Accura SI 40 material, or high quality patterns for casting or molding with Accura SI 10 material. And, with the convenient roll-away vat systems used on all SLA systems, you can quickly switch materials between builds.

Easy-to-use software for maximum control of your build jobs.

Included with each system is Windows-based 3D Lightyear™ file preparation software so your designers and engineers can prepare build jobs for the SLA system. Also included is Buildstation™ control software for comprehensive control of the build job parameters, and unattended “push-button” part building operation.

Improve your bottom line with this proven solution.

In virtually all manufacturing industries and for fiercely competitive companies both big and small, the SLA 5000 system is proven to reduce product development time and costs, and help them deliver improved quality products to market ahead of their competition.

* Dependent upon part geometry, build parameters and material

SLA 5000 System Specifications

Standards and Regulations: This SLA system conforms to Federal Laser Product Performance Standards 21CFR1040.10 Class I laser in normal operation. During field service emission levels can correspond to Class IV laser product. The SLA 5000 system complies with CE requirements.

LASER	
Type	Solid state frequency tripled Nd:YVO ₄
Wavelength	354.7 nm
Power at vat at 5000 hours	216 mW
Laser warranty	5,000 hours or 12 months (whichever comes first)
RECOATING SYSTEM	
Process	Zephyr™ recoating system
Build layer capability*	Minimum — 0.05 mm (0.002 inch) Typical — 0.10 mm (0.004 inch)
OPTICAL & SCANNING	
Beam (diameter @ 1/e ²)	0.20 - 0.30 mm (0.008 - 0.012 in)
Maximum recommended part drawing speed	5.0 m/sec (200 in/sec)
ELEVATOR	
Vertical resolution	0.00177 mm (0.00007 in)
Position repeatability	± 0.013 mm (0.0005 in)
Maximum part weight	68.04 kg (150 lb)
VAT CAPACITY**	
Volume	253.6 L (67 U.S. gal)
Maximum build envelope	508 x 508 x 584 mm XYZ (20 x 20 x 23 in)
Interchangeable vat	Yes
SOFTWARE	
3D Lightyear file preparation software and Buildstation control software	
Operating system	Windows
Network type and protocol	Ethernet, IEEE 802.3 using TCP/IP and NDFS
POWER	
200 - 240 VAC, 50/60 Hz, single phase 15 amps	
AMBIENT TEMPERATURE	
Temperature range	20 - 26°C (68 - 79°F)
Maximum change rate	1°C/hour (1.8°F/hour)
Relative humidity	Less than 50%, non-condensing
SIZE	
<i>Crated:</i>	
Process module	W1.55 x D2.10 x H2.36 m (W61 x D83 x H93 in)
Accessory kit	W1.22 x D1.22 x H1.35 m (W48 x D48 x H53 in)
<i>Uncrated:</i>	
Process module	W1.88 x D1.19 x H2.02 m (W74 x D47 x H79.5 in)
Accessory kit	N/A
WEIGHT	
<i>Crated:</i>	
Process module	1363 kg (3000 lb)
Accessory kit	322 kg (709 lb)
<i>Uncrated:</i>	
Process module	1318 kg (2900 lb)
Accessory kit	284 kg (624 lb)
OPTIONS	
Additional interchangeable vats and depths (low-volume vats)**	
Additional platforms	
SYSTEM WARRANTY	
One year from installation date. Includes parts, labor, and 3D Systems® software upgrades	
* Dependent upon part geometry, build parameters and material.	
** Other vat sizes available	