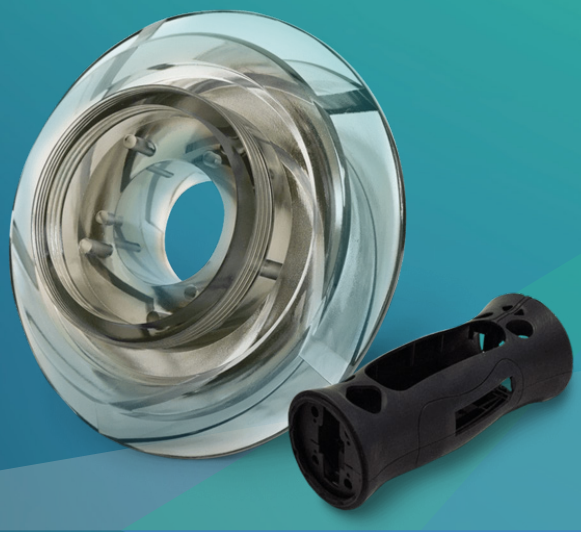
3D SYSTEMS On Demand

Stereolithography (SLA)

Stereolithography (SLA) builds parts directly by converting liquid plastic materials and composites into solid cross-sections, layer by layer, using an ultraviolet laser.



The SLA process – invented by the founder and CEO of 3D Systems was established over 30 years ago – it produces highly accurate parts, at high resolution, in a wide variety of materials.

Whether you are looking for small, intricate electronic connectors or large volume instrument panels for your next concept vehicle, SLA parts can fulfill your requirements – even if that's optical transparency, high-temperature, high stiffness or other qualities and functions.

- Unmatched knowledge and experience: 3D Systems invented SLA in 1984
- Own range of printers, materials and software
- Very large parts (up to 1.5m in one piece)
- Deep know-how covering the complete process chain

Lead Times

Standard: 4 to 5 days
Special: Next day/same day

Applications

General

- Appearance and Proof of Concept Prototypes
- Design Evaluation Models (Form & Fit)
- Design Verification Models
- Wind-Tunnel Test Models

Tooling and Patterns

- Investment Casting Patterns
- Jigs and Fixtures
- Cast Urethane/Vacuum Casting master patterns

Biocompatible Materials

- Surgical tools/guides
- Dental appliances
- Hearing aids

Dimensional Limitations

Up to 1,500 x 750 x 550mm / 59 x 30 x 22" in a single piece.

Larger parts are possible using a variety of mechanical and chemical bonding techniques.

Finishing & Post Processing

3D Systems offers a wide range of finishing and post build options for SLA. From basic support removal and clean up, through sanding and polishing and into priming, paint and full presentation model making services.

General

- High accuracy parts
- Smooth surface finish
- Large component size
- Excellent resolution build
- Short lead times

Material Dependent

- Transparency for optical applications and functional test
- High rigidity/stiffness
- High impact strength
- High temperature performance
- Water resistance

Materials

3D Systems offers a vast range of SLA materials:

Accura 25
Flexible, accurate, aesthetics of molded polypropylene (PP)

Accura 48HTR
Temperature and moisture resistant, for demanding uses

Accura 55
Rigid, accurate plastic, aesthetics of molded ABS

Accura 60
Hard, clear plastic, aesthetics of molded polycarbonate (PC)

Accura ABS Black
Simulates and replaces CNC-machined black ABS parts

Accura ABS White
Simulate and replace CNC-machined white ABS parts

Accura 25
High-resolution, accurate master patterns

Accura Bluestone
Composite material for stable, high stiffness parts

Accura CastPro
Highly accurate with excellent humidity/moisture resistance

Accura CastPro Free
Highly accurate, excellent moisture resistance, free of heavy metals

Accura CeraMAX Composite
Ceramic reinforced composite, high abrasion resistance

Accura ClearVue
High clarity plastic, multitude of applications

Accura ClearVue Free
High clarity plastic, free of heavy metals)

Accura e-Stone
Accurate and durable dental model material

Accura HPC
High production speeds with exceptional stiffness/rigidity

Accura PEAK
Stiff plastic material for heat-resistant components

Accura Phoenix
Thermally resistant plastic, for high clarity parts

Accura PP White
Flexible and tough, like polypropylene (PP)

Accura Sapphire
High-resolution material for accurate master patterns

Accura SL 5530
Temperature and moisture resistant

Accura SL Y-C 9300
Translucent plastic for selectively highlighting vital structures

Accura Xtreme
Ultra-tough gray plastic, replaces CNC-machined polypropylene and ABS

Accura Xtreme White 200
Ultra-tough white plastic, replaces CNC-machined polypropylene and ABS

VisiJet SL Black
Simulates and replaces CNC-machined black ABS articles

Contact our team to explore the options best suited to your project's requirements

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3dsystems.com/ondemand