



BMF
BOSTON MICRO FABRICATION

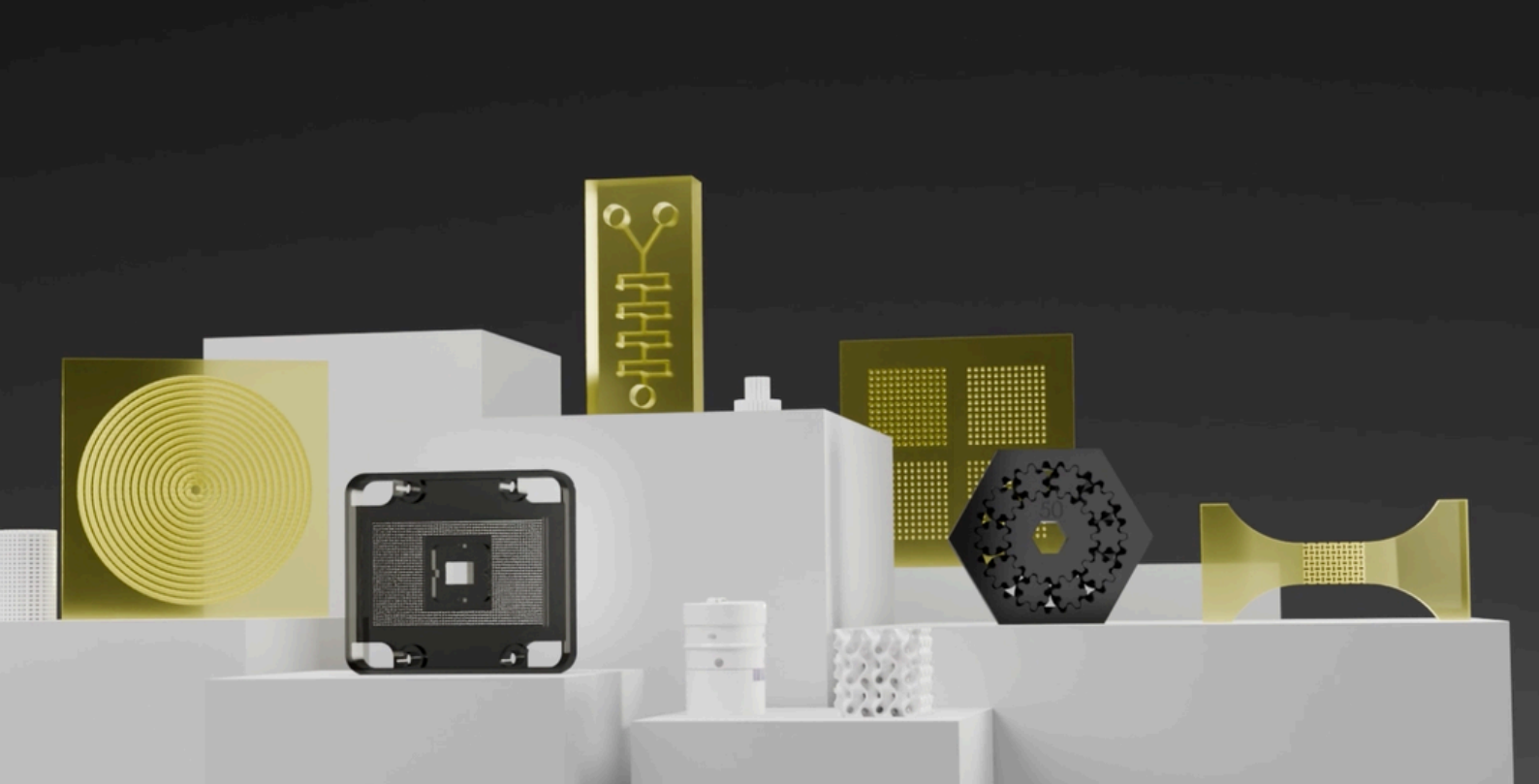
Enabling
Miniaturization

RESOLUTION × ACCURACY × PRECISION

**INDUSTRIAL MICRO-PRECISION
3D PRINTERS**



DOWNLOAD A DIGITAL COPY



About BMF

Boston Micro Fabrication (BMF) is the leading manufacturer of industrial micro-precision 3D printers. BMF uses an innovative technology called Projection Micro Stereolithography or PμSL, a technique that allows for rapid photopolymerization of a layer of liquid polymer using a flash of UV light at micro-scale resolution.

Using industrial-grade composite polymers and ceramics, BMF is capable of achieving resolution of $2\mu\text{m}$ ~ $50\mu\text{m}$ and tolerance of $\pm 5\mu\text{m}$ ~ $25\mu\text{m}$, thus providing mold-free, ultra-high-resolution fast prototyping and end part capability. Today, BMF is the only industrial 3D printing company to match the quality of high-resolution injection molding and CNC processing.

The microArch® series is the first commercialized high-resolution, 3D microfabrication equipment based on PμSL technology. The superior production of intricate, exact, and replicable parts makes PμSL the optimal prototyping process for various use cases across a wide variety of industries.



MEDICAL DEVICES



MEMS



ELECTRONICS



MICROFLUIDICS



BIOPHARMA



RF & MICROWAVE



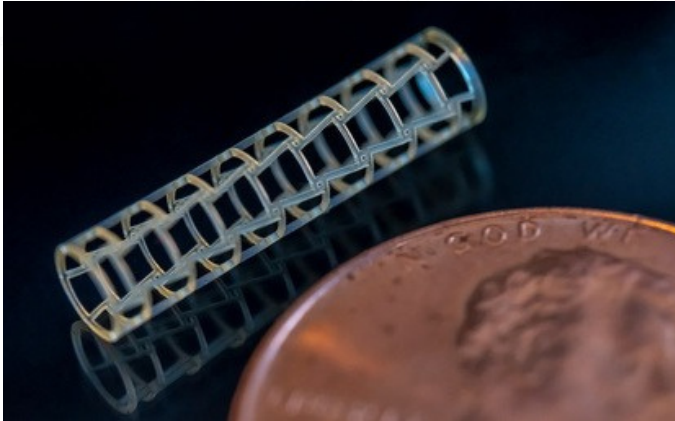
PERSONAL CARE &
CONSUMER PRODUCTS



EDUCATION & RESEARCH



FIBER OPTICS



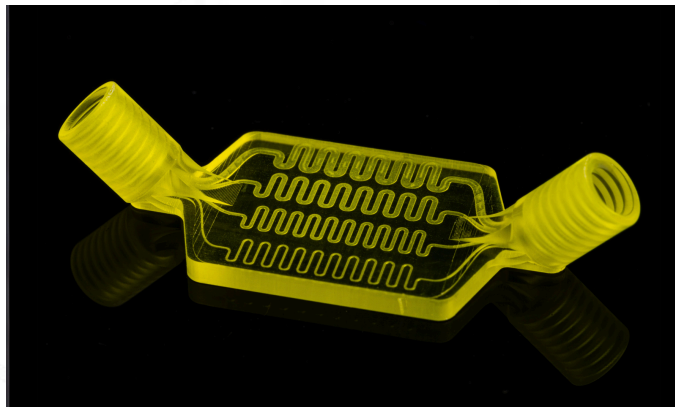
MEDICAL DEVICES

With PμSL technology, engineers can rapidly print small parts in biocompatible materials with 2μm resolution and ±10 μm accuracy. Medical applications for BMF's PμSL technology include endoscopes, cardiovascular stents, blood heat exchangers, robotics, and more.



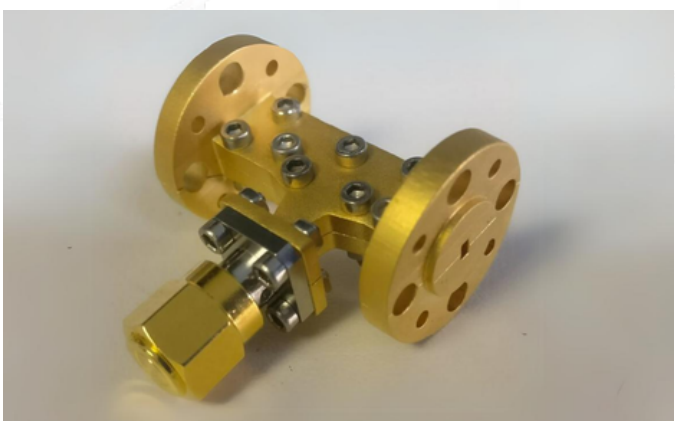
ELECTRONICS

3D printing electronics is emerging as a viable alternative to traditional manufacturing processes. This is especially relevant as electronics are becoming smaller, more tightly packaged, and subjected to more demanding conditions. 3D printing eliminates the tooling used in micro injection molding and can reduce time-to-market across multiple design iterations and test cycles.



MICROFLUIDICS

Current methods of building MFD's are time-consuming and costly, and include cutting, etching, and molding. In many cases, these manufacturing methods cannot achieve the sizes and tolerances that are required for the complex 3D channels. PμSL technology can print channels down to 10μm.

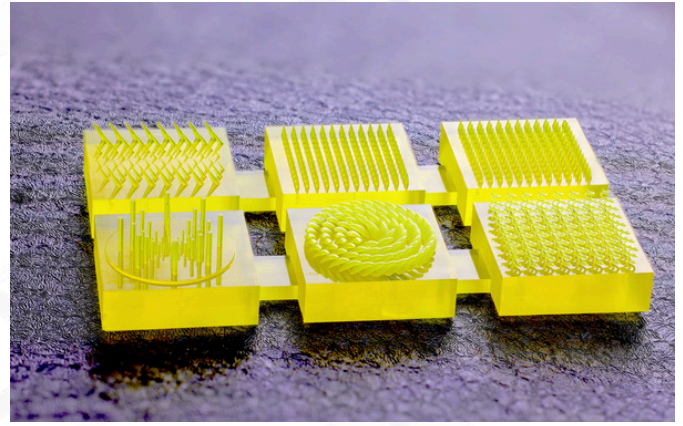


RF & MICROWAVE

Micro 3D Printing enables small, complex thin-walled antennas, waveguides, and other precision components. With an open-source system compatible with dielectric polymers, ceramics, metal plating, and ESD materials, microArch technology produces high-quality components previously unachievable through traditional manufacturing.

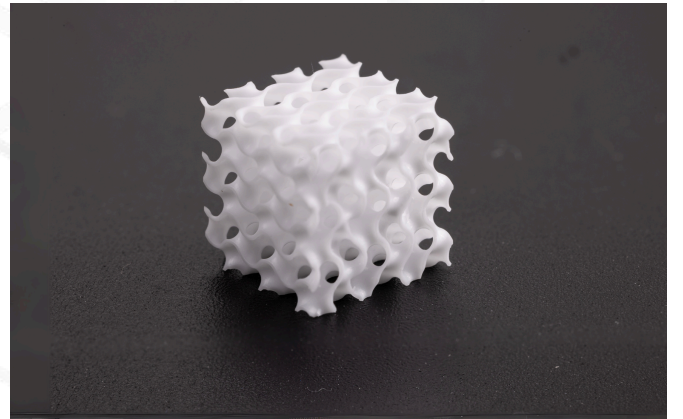
BIOPHARMA

Micro 3D printing is emerging as a cost- and time-saving alternative for drug delivery and diagnostic tools, offering greater design flexibility. With biocompatible, high-temperature materials, it enables innovations like microneedles that demand fine resolution and safety.



EDUCATION / RESEARCH

Universities seek accessible microfabrication tools that let students and researchers explore medical, electronic, and microfluidic applications without cleanrooms or hazardous materials. P μ SL micro 3D printing delivers ultra-high resolution and precision, bringing advanced microfabrication directly into the classroom and lab.



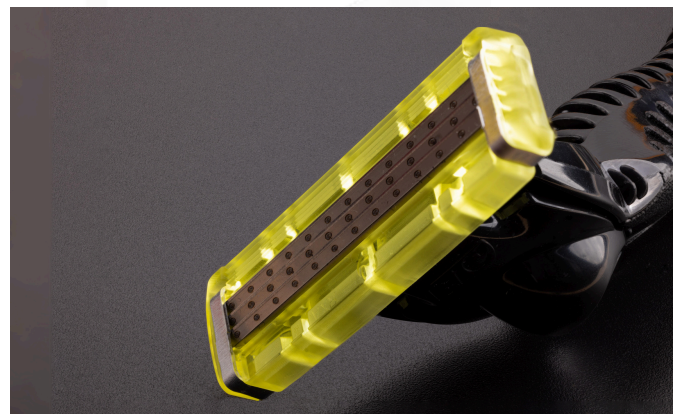
MICRO-ELECTROMECHANICAL SYSTEMS (MEMS)

As the demand for micro-electromechanical devices continues to grow, designers want greater freedom and faster speeds. P μ SL technology delivers greater design and manufacturing freedom in less time at resolution and tolerances that meet the high standards of MEMS fabrication.



PERSONAL CARE & CONSUMER PRODUCTS

High-precision 3D printing accelerates consumer product development with rapid prototyping and fast design iterations. In personal care and other industries where comfort and usability matter, it enables ergonomic, detailed designs that improve product performance and exceed customer expectations.



microArch S230

The microArch S230 is our highest resolution system, perfect for applications that require ultra-high resolution and tight tolerances. Compatible with a wide range of materials, the 2µm series is the ultimate choice for the rapid prototyping of parts that perfectly match your CAD files, as well as short-run production capabilities.

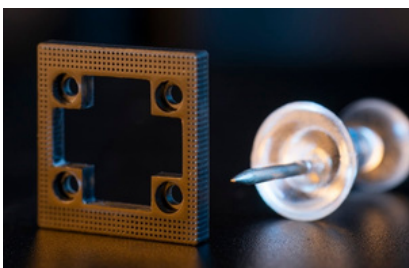


- RESOLUTION**
2µm
- LAYER THICKNESS**
5µm - 20µm
- BUILD SIZE**
50 x 50 x 50mm



microArch S240

The 10µm series 3D printers are the ideal solution for businesses and universities requiring ultra-high resolution, accuracy, and precision in a desktop package. Within the 10µm series, the microArch S240 3D printer is our industrial workhorse, with the ability to print with engineering-grade materials and a larger build volume – specifically designed to meet the needs of industrial production. BMF's 10µm series 3D printers offer a level of precision and accuracy that delivers the most challenging micro parts at production quality.



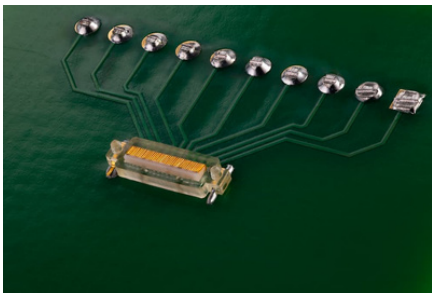
- RESOLUTION**
10µm
- LAYER THICKNESS**
10µm - 40µm
- BUILD SIZE**
100 x 100 x 75mm



microArch S350

The microArch S350 is perfect for researchers and manufacturers for prototyping and production in the 1000-30,000 part volume range for parts requiring ultra-high resolution, accuracy, and precision.

The microArch S350 combines high part quality with increased speed and throughput. With increased ease of use and built-in automation, the S350 will be BMF's highest throughput printer designed for end part production.



RESOLUTION
25µm

LAYER THICKNESS
10µm - 50µm

BUILD SIZE
100 x 100 x 50mm



microArch S150 Series

Powered by Projection Micro Stereolithography (PµSL), the microArch S150 Series delivers true 25µm optical resolution and layer thicknesses from 10-100µm on a compact desktop and benchtop platform – bringing industrial-grade micro-precision manufacturing within reach of labs, development teams, and production environments.

The series includes two configurations: the microArch S150, for flexible lab and development workflows, and the microArch S150 Ultra, a higher-throughput option for teams scaling production output. Both deliver the same uncompromising part quality – outstanding accuracy, repeatability, fine feature fidelity, and superior surface finish.



RESOLUTION
25µm

BUILD SIZE
80mm × 48mm × 50mm

LAYER THICKNESS
10µm - 100µm

microArch D1025

Powered by PuSL, the dual resolution microArch D1025 prints in either 10µm or 25µm resolution for the entire build, or switching between layers.

With improved built-in automation, this capability enables greater efficiency - saving time, resources, and cost. Delivering the same ultra-high resolution, accuracy, and precision BMF is known for, the microArch D1025 will revolutionize the prototyping and production of parts requiring micron-level precision and repeatability.



RESOLUTION
10µm & 25µm

LAYER THICKNESS
10µm - 50µm

BUILD SIZE
100 x 100 x 50mm



BMF MATERIALS

BMF's open material system gives you flexibility without compromise. Print with our specially engineered liquid polymers—or use the material of your choice.

HTL

HTL is a high performance engineering material with high strength, rigidity, and heat resistance, able to withstand temperatures up to 114°C.

BIO

BIO is a biocompatible resin suitable for non-implantable medical applications. BIO can undergo sterilization and has passed numerous ISO biocompatibility tests.

HT200

HT 200 is a high temperature material that can withstand temperatures up to 200°C with high strength and durability, perfect for end use applications.

TOUGH

TOUGH is a rigid, robust engineering material with a good combination of strength and elongation. TOUGH can be used to produce end-use parts.

BMF MED

BMF MED powered by 3D Systems is a rigid amber material for applications requiring biocompatibility, translucency and/or thermal resistance. It provides parts with crisp details, that can be sterilized and tested at high temperatures, over 100 °C

HTF

HTF is a heat resistant and tough resin with a high HDT, tensile strength, and biocompatibility. Perfect for high pressure steam applications such as autoclaving.

SR

SR is a soluble resin that can be used as a sacrificial material to print single-use molds to manufacture parts in other materials. SR dissolves in a 5:95 solution of sodium hydroxide to distilled water.

FR

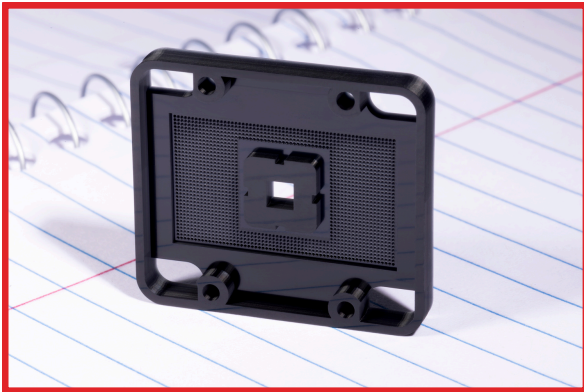
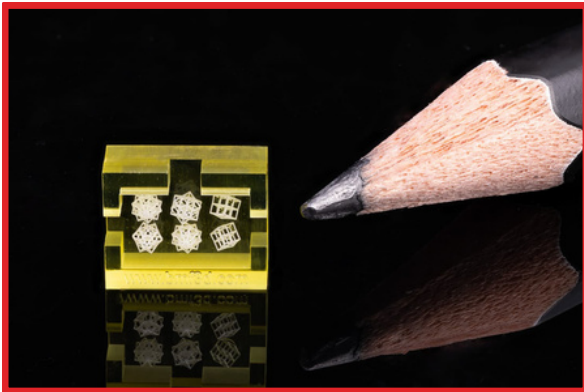
FR is a flame retardant material with a high heat deflection temperature that has a UL94 V-0 flammability rating at 2.0mm.

AL CERAMIC

AL (Alumina) Ceramic is perfect for applications involving tooling, casings and housings, and medical devices - able to withstand high temperatures with high strength properties and chemical resistance.



BMF
BOSTON MICRO FABRICATION



info@bmf3d.com



8 Mill & Main, Suite 310 Maynard, MA 01754 USA



(978) 637-2050



www.bmf3d.com