

# Advanced Additive Manufacturing

Spectrum has developed groundbreaking additive manufacturing technologies, utilizing proprietary processes and medical-grade materials to create components with complex tolerances, geometries, and features.



## Benefits of Spectrum's AM Capabilities & Services

- Customized and/or proprietary processes, equipment, and materials for a wide range of medical applications
- Creating innovative, one-of-a-kind medical device components
- Dedicated technical team has the depth of knowledge and experience to determine the best additive manufacturing approach for your project
- Rapid prototyping that can deliver production-ready prototypes in a matter of days instead of weeks
- Bridge manufacturing that utilizes additive manufacturing/3D printing to test low-volume production runs of a product

## Spectrum AM Technologies

Spectrum's advanced additive manufacturing technologies create components for:

### Catheter Technologies

- Catheter tips, hubs and luers with complex features and geometries
- Dilators, and sheaths, with complex features
- Customized profile devices with individualized fit
- Extrusion profiles for multi-lumen, single-lumen, and infinite length

### Medical Molding

- Mold inserts for quick-turn prototyping
- Micro components
- Multi-material components
- Handles/large components and devices

**Tubing**—Spectrum has developed proprietary additive manufacturing technologies for manufacturing high-precision, medical-grade tubing (single and multilumen tubing) that is not extrusion based.

**Medical-grade 3D printing filament**—Spectrum also formulates and manufactures its own medical-grade 3D printing filaments for various materials and sizes in-house, assuring the highest quality, control, and availability.

## Product Design & Performance Parameters

- Medical-grade USP Class VI and/or ISO 10993 materials and additives that are biocompatible, traceable, and certified
- Low- to high-durometer materials (60A 85D)
- Low- to high-temperature materials (PLA-PEEK)
- Multi-material parts, utilizing up to four different materials
- Lumen sizes as small as 0.010" and tubing walls as thin as 0.006"
- Print volume—micro prints, large prints, infinite length prints

## Quick-Turn Prototyping

**Lead times can be as short as 3-5 days** for most additive manufacturing prototypes, and 1-2 weeks for higher-volume orders or complex designs.



Request a Quick-Turn Quote

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