

**Lighteum Medical** is the only fully transparent and collaborative partner, offering white-glove customer service to the medical device manufacturing community.

With a core focus on being experts in the field of  
**Nitinol Component Development & Scale to High Volume Production,**

Lighteum Medical leads the industry in complex problem solving and responsiveness.

### MER Europe

Tussenklappen WZ 21  
9649 EC  
Muntendam  
The Netherlands  
T: +31 598 634 420  
E: [info@mer-europe.nl](mailto:info@mer-europe.nl)

### Contact

E: [tim@mer-europe.nl](mailto:tim@mer-europe.nl)  
E: [wendy@mer-europe.nl](mailto:wendy@mer-europe.nl)

[www.mer-europe.nl](http://www.mer-europe.nl)

### Nitinol Heat Shaping

Lighteum Medical specializes in designing and developing custom, complex heat shape tooling for advanced nitinol components.

We utilize table-top furnaces, fluidized aluminum oxide, and molten salt bathes as options for covering every step of your project heat shaping needs; from early concept development through high volume, steady-state production.

With in-house DSC testing, we ensure consistent Af to meet your project needs.



### Nitinol Electropolishing

Lighteum Medical has the largest capacity of nitinol electropolishing in Southern California, with 16 independent stations.

We specialize in electropolishing of medical components and subassemblies, whether they be nitinol, stainless steel, CoCr or titanium.



### Complex Nitinol Wire Forming

Lighteum Medical develops custom tooling and develops processes for complex forming of nitinol wires and mandrels.

With expertise in chemical etching and surface preparation, Lighteum Medical is able to provide wire forms with a passivated surface or even fully electropolished.



### Precious Metal Wire & Tube Manufacturing

Wire machining with tighter tolerances achievable, different spooling options and temper/heat treatments. Pt alloys, Pd alloys, Pt/8W, Pt/10Ni, Pt/10Ir Au alloys.

Optional secondary machining operations on cut tubes: Notches, slits, edge conditioning. Pt alloys, Au alloys, Pd alloys, customizable compositions.



**Lighteum Medical has an inventory of over 180 unique SKUs of Nitinol tubing for rapid project development and iteration.**



## Laser Welding

CNC controlled laser welding for complex subassemblies of nitinol, stainless steel, or dissimilar medical grade materials.

This technology can be used to fabricate pull-ring assemblies for steerable catheters, electrode welding for electro-mechanical assemblies, as well as adding radiopacity to implantable stents and valve frames.



## Multi-Axis Laser Ablation

With the recently added femtosecond laser micromachining system from LASEA, Lighteum Medical is able to selectively ablate layer by layer of nitinol, stainless steel, and polymer components, whether they be flat sheet, tube, or assembled parts.



## Nitinol Tube & Sheet Manufacturing

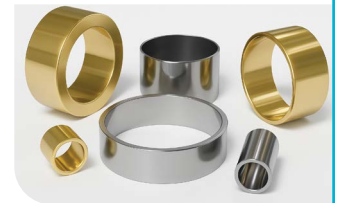
Lighteum Medical manufacture World-class Nitinol sheets capable of exceptional thickness uniformity at extreme thinness.

Lighteum Medical also manufacture High reliability Nitinol tubing optimized for catheter delivery systems. Can be laser processed into complex structures



## Markerbands

Lighteum Medical manufacture marker bands for catheters serving as visual indicators during fluoroscopy. The bands balance X-ray visibility with catheter flexibility and biocompatibility of radiopaque materials to integrate seamlessly without affecting performance or patient safety.



## High Volume Manufacturing

With dedicated capacity to support high volume manufacturing, customers are able to scale to production quickly and efficiently.

In addition, Lighteum Medical has developed a statistics based approach for production transfer from R&D that is fully customizable and allows for maximum customer flexibility.



## Rapid Prototyping

Lighteum Medical offers best in class lead turnaround times for complex part processing. With over 200 different SKUs of nitinol tubing in stock, we are able to offer rapid response to development projects.

Additionally, and unlike anyone else in the market, Lighteum Medical offers customers the ability to come on-site and develop their parts in person, while not being trapped in a conference room.



## Femtosecond Laser Cutting

Lighteum Medical utilizes state of the art femtosecond technology from Light Conversion, with both 20W and 40W systems.

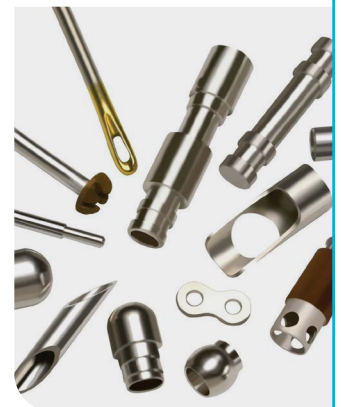
Femtosecond laser cutting allows for extreme precision, minimal kerf size, and an almost completely non-thermal manner.

This processing equates to better results downstream when post-processing your nitinol project. Since there is minimal heat affect at the cuts, there is no need for honing, Af is easier to control across the part, and much less electropolishing is required by mass.



## Precision Machining of Precious Metals

Lighteum Medical advanced capabilities include Swiss screw machining for complex geometries, electrical discharge machining (EDM) for intricate profiles in hard materials, and femtosecond laser cutting for heat-free processing of nitinol and platinum, delivering complex microcomponents that accelerate your time-to-market.



Your Trusted Partner for Medical Component Manufacturing