

Laser nano-etching process: 0.5 to 10 μm (Photonic jet application)

High Definition, Best Accuracy with Affordable Solution

Target:

Micro-electronic



Micro-fabrication

Luxury



Cutting delicate material

Watchmaking



Medical



Traceability

Our technology:

→ Photonic jet creation with shaped fiber tip

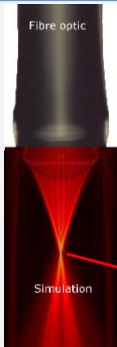
- Simple and inexpensive optical system
- Standard industrial marking laser
- Easy plug&play optical system (FC/SMA Connector)

Etching size below the wavelength

Treatment of non-absorbant materials



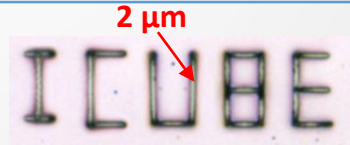
Prototype Station



Photonic jet simulation

Results:

- Minimum Etching diameter 700 nm for 500 nm depth
- Line etching of 2 μm
- Creation of 500 μm sized Qr-code



500 μm

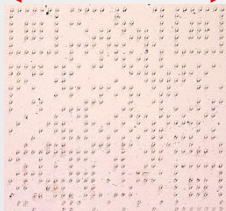


Image
Processing
→
(Threshold
Dilate/Erode)

