



Bright Solutions
SOLUZIONI LASER INNOVATIVE

Industrial Lasers



Who is Bright Solutions?

- Develop state-of-the-art diode-pumped solid-state laser systems aimed at superior efficiency, compactness, and reliability for industrial applications
- In business for over 20 years
- More than 60 employees
- Nearly 10,000 units fielded to date
- World-class level of quality, customer care, and service
- An ISO Certified Company

You do not need a fancy sales pitch when you have a history of successes

Know what your customers want most and what your company does best.
Focus on where those two meet.

**Fiber Lasers Are Compact, Rugged, Reliable, & Reasonably Priced,
But:**

Are Fiber Lasers limiting your performance?

Our DPSS lasers offer the benefits of a fiber laser and whole lot more

- 💡 Rugged fixed laser cavity design results in a compact and reliable laser
- 💡 Shorter pulsewidths result in higher peak powers
- 💡 Integrated doubling/tripling results in more wavelength options (harmonics)
- 💡 Customization results in a better laser for your application



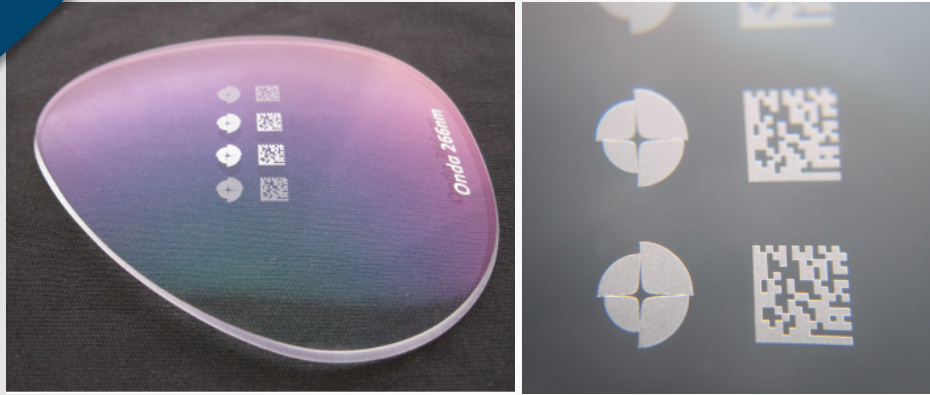
Let us show you how it can be done in our APPLICATIONS LAB

Our modern applications lab is ideal for
proof-of-concept testing / sample processing

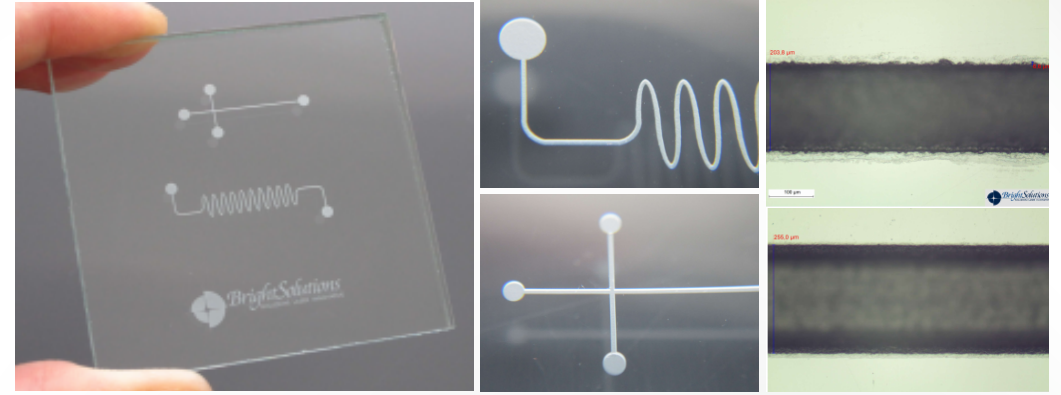
We offer:

- Wide range of resources:
Wavelengths,
Power levels,
Staff Availability
- Expertise in a wide range of applications
- Process development support

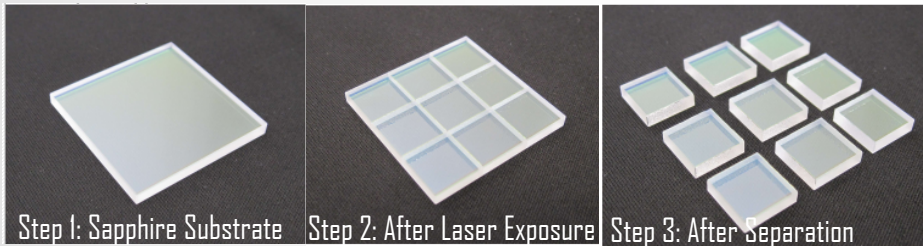
Glass/Sapphire



Lens Marking Onda 266 nm



Microchannels Wedge HF 532 nm | Wedge HB 266 nm



Sapphire Dicing Wedge HF 532 nm

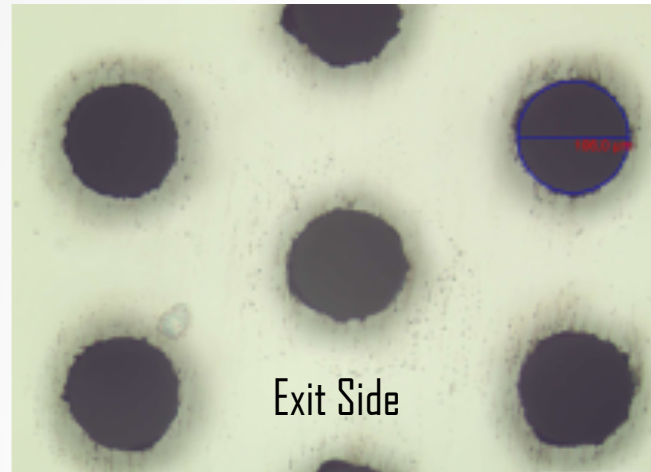


Surface Engraving Wedge HF 532 nm | Wedge HB 532 nm

Glass/Sapphire



Entrance Side



Exit Side

Hole Drilling

Wedge XF 532 nm

Glass Slide - 120 μm thick / 150 μm round through holes



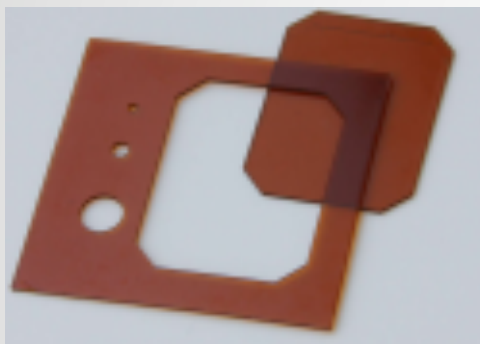
Intra-volume Marking

Wedge HF 532 nm

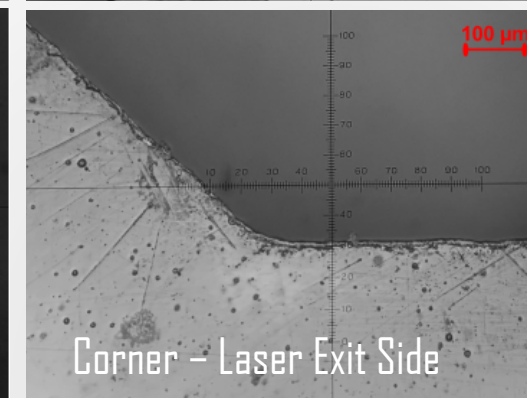
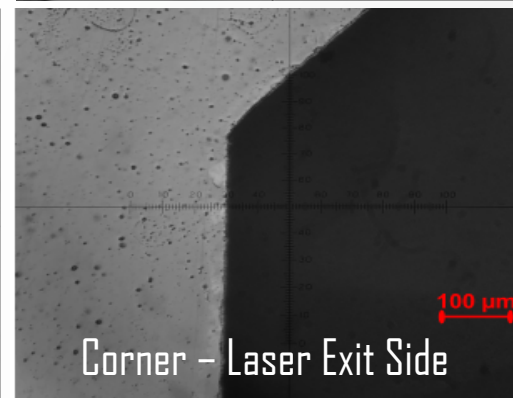
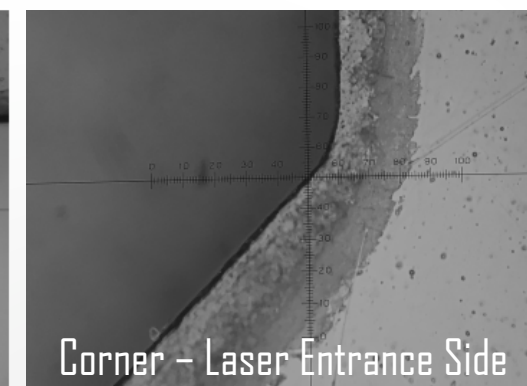
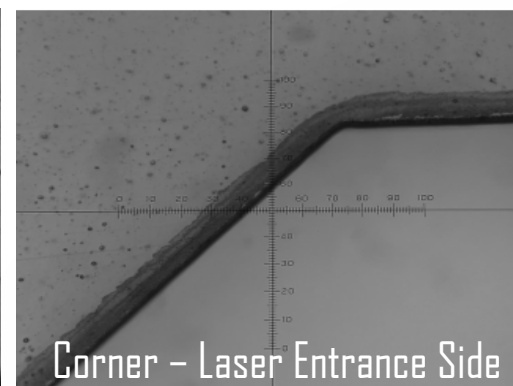
up to 600 dpi resolution

PDMS

Laser	Pulse duration	cut HAZ at entrance side	cut exit side
Sol 10W 1064nm	~20 ns	300-400 μm	melted material
Wedge HF 532nm	~0.8 ns	60-80 μm	clean
Wedge HF 266nm	~0.7 ns	~5 μm	clean



425 μm thick cutting



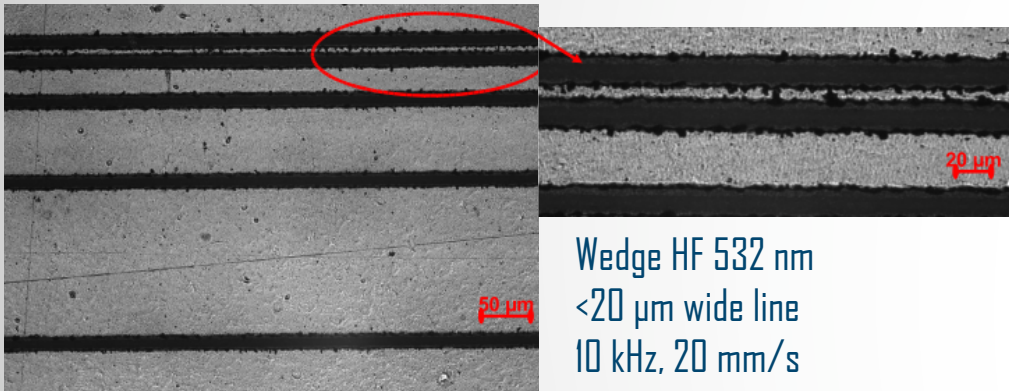
Wedge HF 266 nm

Wedge HF 532 nm

Sol 20W 1064 nm

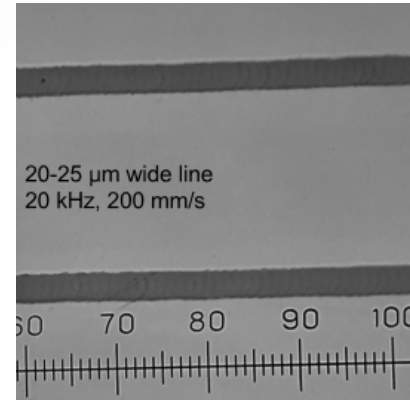
Thin Film/ITO Removal

25.4 μm thick **noble metal removal** on top of alumina substrate
 Complete metal removal | reduced line separation with intact metal stripe in between (few μm) | undamaged alumina substrate

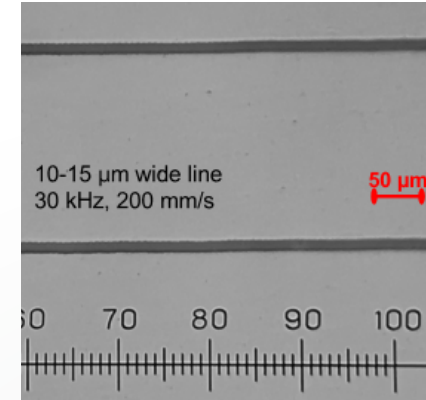


Wedge HF 532 nm
 <20 μm wide line
 10 kHz, 20 mm/s

120 nm thick **ITO layer removal** on top of polymeric substrate
 Clean ITO removal | Undamaged polymeric substrate | Tested for electrical insulation

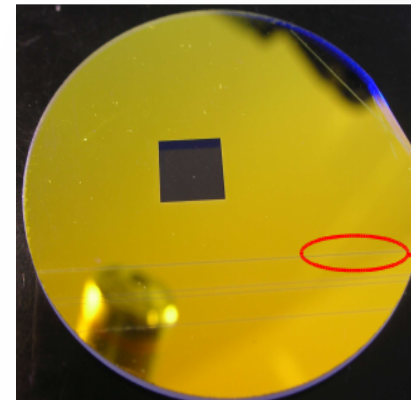


Sol 6W 1064 nm

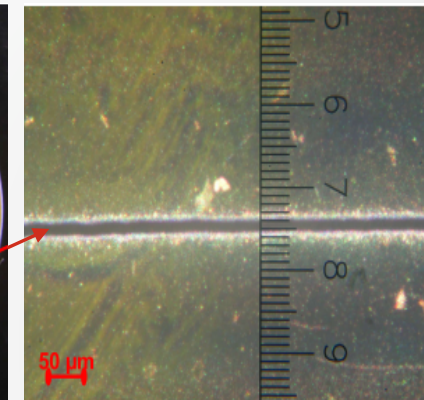


Sol 5W 532 nm

Coating Removal on Glass Substrates | Onda 1064 nm



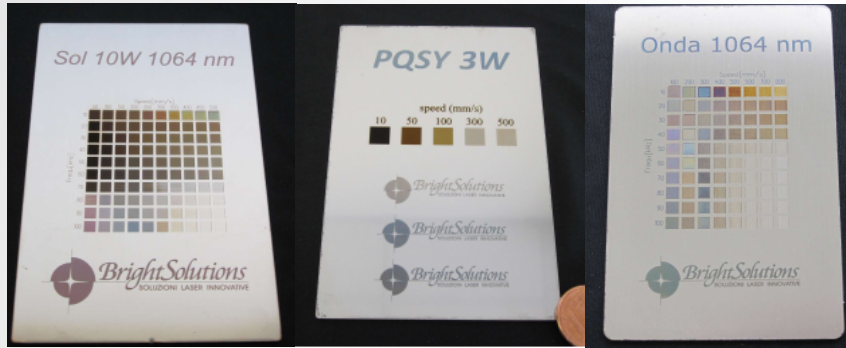
5x5 mm² Square
 Coating Removal



10-15 μm Wide Line
 10 khz, 100 mm/s

Metals & Hardened Materials

Stainless Steel

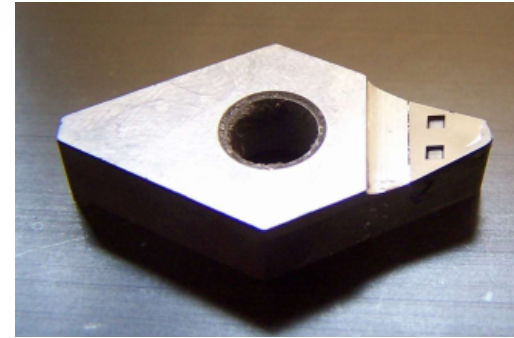


Sol 1064 nm

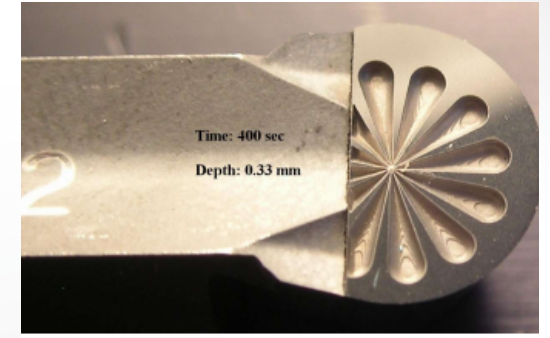
PQSY 3W 1064 nm

Onda 1064 nm

Synthetic Polycrystalline Diamond (PCD) For mechanical applications Onda 1064 nm

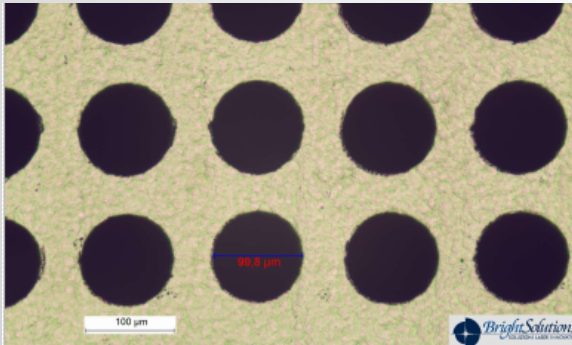


Laser milling on a cutting tool

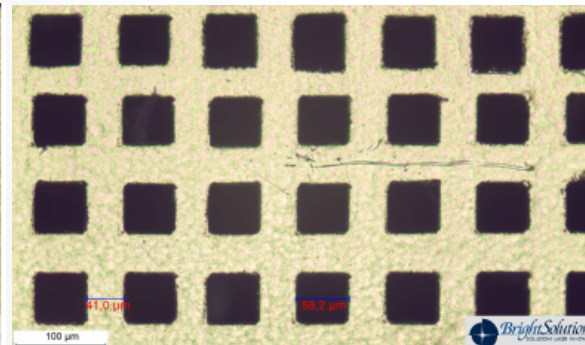


3D laser milling on a chip breaker

Micro-hole drilling Wedge XF 532 nm Blind or through holes | Nickel iron alloy - 50 µm thick (OLED mask applications)

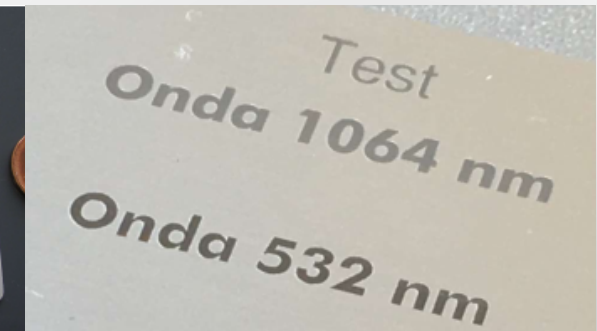


100 µm round through-holes matrix



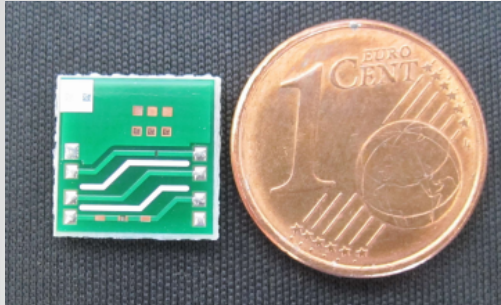
50 µm square through-holes matrix

Controlled blackening of aluminium

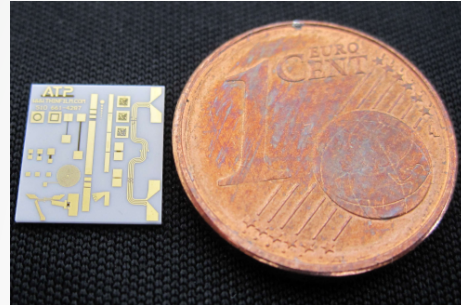


Printed Circuit Boards

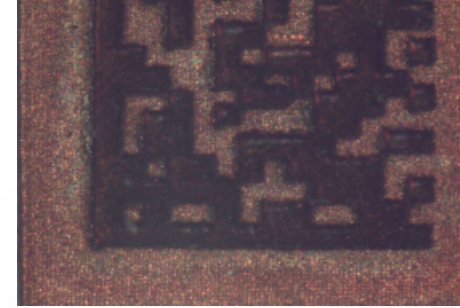
Printed **electric boards** & devices | In-situ **micro-corrections** of connection errors |
Selective removal of different layers | Barcode/datamatrix marking
Wedge XF 532 nm



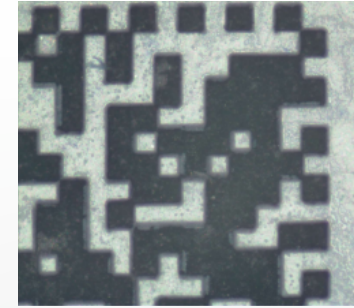
copper layer covered with solder resist film



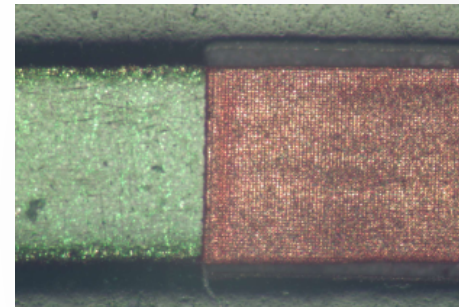
gold on alumina
(TaN/TiW/Au on Al₂O₃)



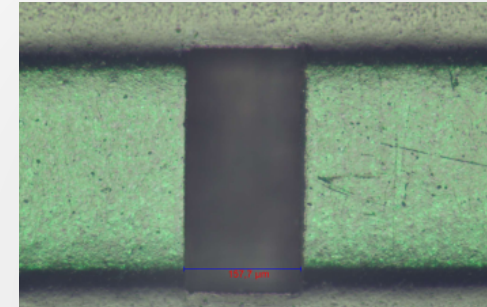
datamatrix marking on
exposed copper



datamatrix marking on
white varnish



selective exposure of copper
layer



track interruption

Plastics

Gray scale laser marking on plastic cards up to 600 dpi resolution

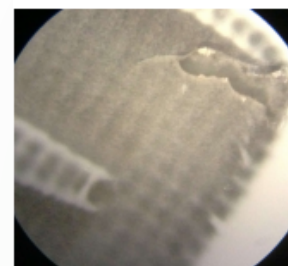
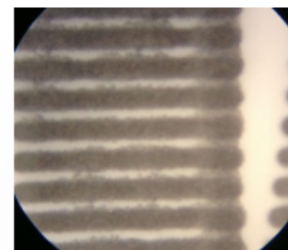


Sol 1064 nm



PQSY 3W 1064 nm

High contrast marking on heat-sensitive polymeric materials



Sol 532 nm
ns laser marketing



Wedge HF 532 nm
Sub-ns laser marking

Our Laser Offerings

BRIGHT SOLUTIONS IS COMMITTED TO OFFERING A WORLD-CLASS SELECTION OF LASERS FOR INDUSTRIAL & AEROSPACE APPLICATIONS

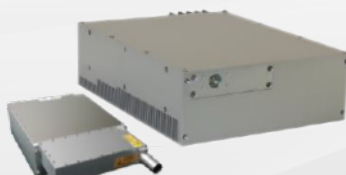
SOL

Compact Q-Switched DPSS Laser



WEDGE

Short Pulse Q-Switch DPSS Laser



VENTO

MOPA sub-ns lasers



AERO

High Energy DPSS Laser



MICROCHIP

Passively Q-Switched DPSS Lasers



ONE

Miniaturized Q-Switched DPSS Lasers



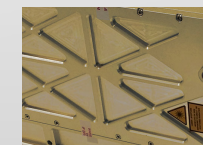
NPS

Narrowband ps Lasers



AEROSPACE

Laser Solutions for Space



ONDA

ns Q-Switched DPSS Laser



MICROMAKE

BrightSystem Laser Micromachining



CUSTOM

Industrial, Medical, Defense & Scientific Applications



Bright Solutions Business Units:

Bright Solutions - develops and manufactures state-of-the-art nanosecond and sub-nanosecond DPSS lasers and high brightness diode laser modules.

Bright Microlaser - developing and manufacturing microchip lasers after acquiring the assets of CRC Ltd.

Bright System - the advanced sub-systems division and application lab for developing special applications of our DPSS laser sources for micro-machining and material processing.



**RPMC Lasers Inc. is proud to be the exclusive
North American source for Bright Lasers products
for over 15 years**

**With our 15+ years history and over 10,000 lasers in the field, we
have the experience, proven track record and laser knowledge to
get you the right laser for your application.**



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The Lasers You Need From The People You Trust
Our Experience, Your Advantage

HOW CAN WE HELP YOU?



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