

Laser Sources to Process Various Materials and Precision Patterns

1. FUTA-Q's wide variety of laser processing machines

We provide optimal laser processing solutions for our customers by utilizing a comprehensive range of laser processing equipment, such as ultra-short pulse laser machines, dual laser machines of excimer laser and ultra-short pulse, and long-length processing laser machines with continuous-wave laser.

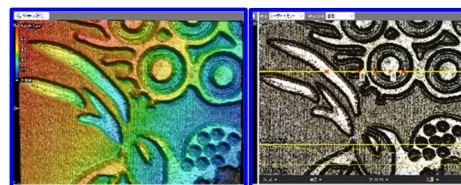
2. Precision pattern processing on an FPC substrate using ultrashort pulse laser

The pattern of "mahjong tiles" with deep grooves of varying depths is carved on an FPC substrate.

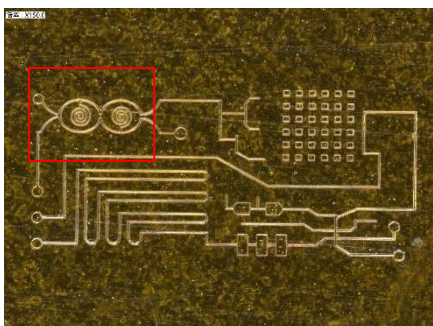
Minimum groove width: 5 μm
Groove depth: 10 and 25 μm



Polyimide	25 μm	10 μm
Copper foil	18 μm	25 μm
Adhesive	25 μm	
Polyimide	12.5 μm	



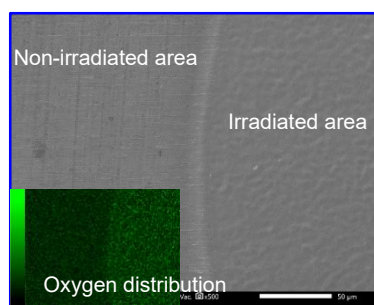
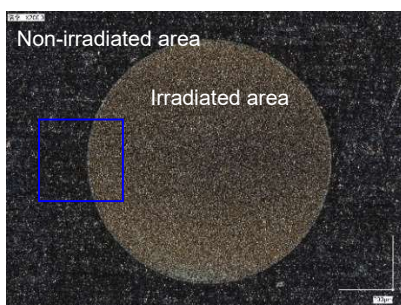
3. Precision pattern processing on a resin substrate using excimer laser



The whole pattern can be processed with a single shot of laser by using a pattern mask.

Groove width: 10 μm
Groove depth: 4 μm
Maximum mask size:
1 x 2.4 mm

4. Pattern modification processing of a metal surface using excimer laser



Changes in the metal's surface morphology and the increase of the oxygen concentration is found after pattern irradiation with excimer laser on the metal surface. Verification of the change in affinity for other materials such as for resins is currently underway.

Material: SUS304
Processed diameter: 1 mm

FUTA-Q Co., Ltd.

URL <https://futaku.co.jp>

E-mail futaku-info@futaku.co.jp

[Headquarters]
33-3 Karahashi-keiden-cho, Minami-ku, Kyoto
City, Kyoto Pref. 601-8454
Tel: +81-75-661-2931

[Tokyo Office]
Mitaka-myajo-palace 3F,
1-1-3, Kamirenjaku Mitaka-shi,
Tokyo 181-0012, Japan
Tel: +81-422-27-7629

