



Electro Optical Components, Inc.

5460 Skylane Boulevard, Santa Rosa, CA 95403

Toll Free: 855-EOC-6300

www.eoc-inc.com | info@eoc-inc.com



Laser Processing Application -- Laser Processing Head

In view of the shortcomings of low efficiency and low precision in the current micro-hole processing, our company has developed a high-speed parallel group hole processing device based on a liquid crystal spatial light modulator. The controllable beam splitting of the laser realizes the parallel processing of multiple laser beams, thereby effectively improving the laser processing efficiency.

It mainly includes two parts: control software and processing head module, as shown in the following figure:



Features

- ▮ Parallel processing to improve processing efficiency
- ▮ Spot position, flexible and controllable quantity
- ▮ Beam shaping to generate structured light fields
- ▮ Beam performance, real-time correction of aberrations

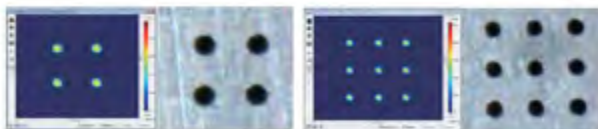
Performance

Parameters	Technical specifications
Beam energy consistency	98% (3×3)
Maximum beam splitting	10×10
Radiation Use Efficiency	≥70% @1030nm (3×3)
Spot quality	Ellipticity>90% (3×3)
Peak power damage threshold	50GW/cm ²
Machining accuracy	±5um (bore diameter50um)

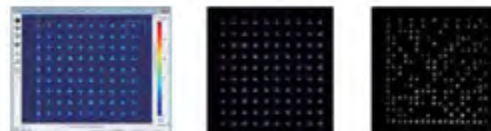
Functions

- ▮ Planar Multi-Focus Parallel Machining-Improve processing efficiency
- ▮ Various aberration corrections-Improve machining accuracy and quality
- ▮ Axial multifocal stealth cutting-Optimize machining quality
- ▮ Beam shaping-Can realize flat top light, vortex beam, etc.

Plane Multi-Focus Machining

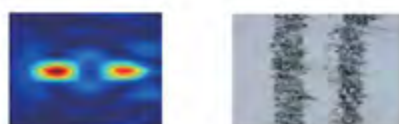


a. Parallel microvia machining (100μ m)



b. Parallel Array Dots and Micro QR Codes

Axial light field modulation (2 focal points)



Aberration Correction (Spherical Aberration Correction)

