

### Announcements

We have saved the best for last! Holo/Or starts Q4 with a blast by **increasing the angular range of our [broad-band diffusers](#) to 10 degrees**, enabling many exciting new high power laser applications.

Do not miss our **annual End-Of-the-Year Sale**, starting November 1<sup>st</sup>, with discounts on all stock items. Now you can fit in your budget those DOE's you have been itching to try in your application for the entire year.



Holo/Or

展区: 激光技术及智能制造展  
展位号: 2511

HOLO/OR 诚邀参观!

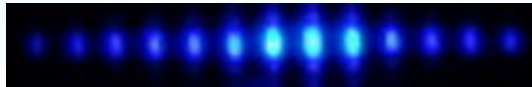
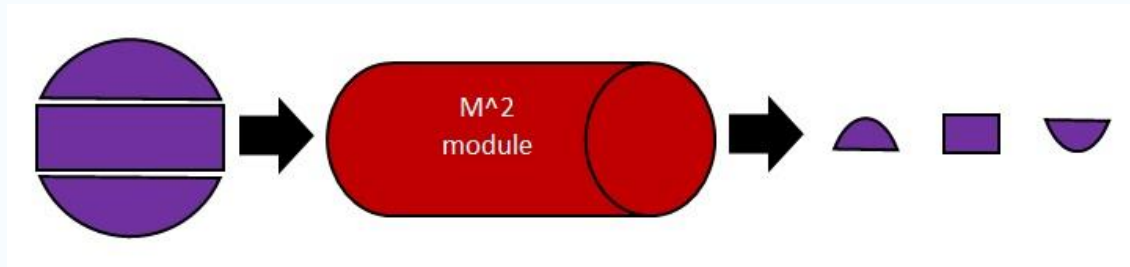
In case you missed it, we will be exhibiting at **the 20<sup>th</sup> China International Optoelectronic Exhibition (CIOE)** in Shenzhen, China. Follow [this link](#), or press the invitation picture, to pre-register as our VIP guests and be eligible for special offerings! Our experienced engineers will be happy to meet with you there. [Contact Us](#) to set up a meeting at our booth.

When	and	Where?
Shenzhen Convention and Exhibition Center		
September 5-8,		2018
Booth #2511		

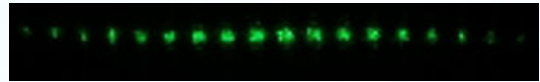
### New Products

## M<sup>2</sup> transformation modules

Inspired by our costumers' demand, Holo/Or has launched the M<sup>2</sup>transformation module of the [lean-line system](#) as a stand-alone product for 355nm and 532nm wavelengths.



355 nm system



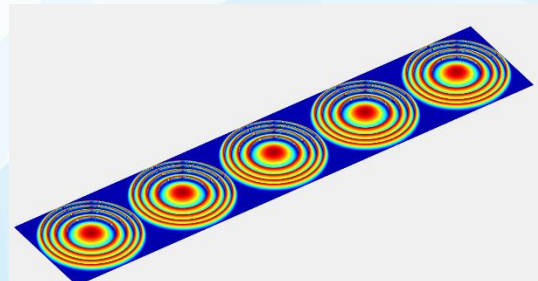
532 nm system

Many flat-panel applications, such as laser lift-off and laser annealing, require high power densities along a narrow line. This requires **transforming a multi-mode beam into an almost single mode beam in the line's narrow axis.** That is what our M<sup>2</sup> module does for your application, at a competitive cost and with excellent performance. Our module can be easily integrated into existing laser setups, as it is an on-axis module with high alignment tolerances. Holo/Or's unique approach enables our module to **accept both circular and elliptical inputs**, the module is **easily tuned by hand** and has **excellent thermal lensing stability.**

[Contact us](#) for more details.

## Diffractive collimator arrays

Based on the unmatched accuracy of our lithographic production, we offer both **1D and 2D diffractive lens arrays.**



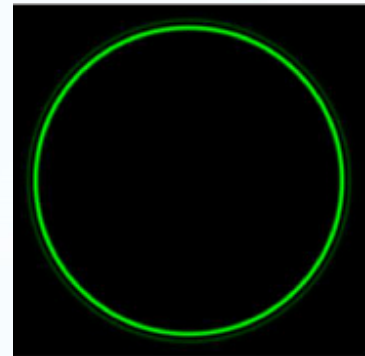
**Ideal for coherent beam combining systems, both as couplers and as collimators,** our product features stable lens-to-lens performance that is unmatched by any standard

refractive lens array. Our lenses have negligible angular tolerances ( $<10^{-5}$  mrad), and high efficiencies ( $>90\%$ ) making the construction of stable coherent beam combining setups easier than ever. Lens spacing and dimensions can be easily customized to accommodate any specific configuration you want to develop. [Contact us](#) for more details.

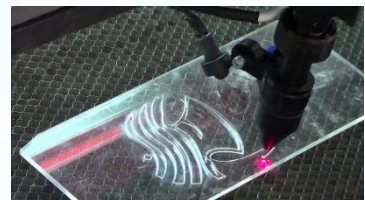
## Applications

### Glass Cutting with Diffractive Axicons

Many of our customers are trying to tackle the challenging field of precision glass cutting, a rapidly growing application field in many industries. Our growing family of high efficiency fused silica [Diffractive Axicons](#) is providing **unmatched Bessel beam accuracy with no apex "dead zone"** and **high Laser Damage Threshold**.

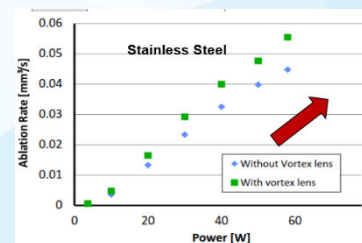


**Did You Know-** The best focusing performance for glass cutting is achieved when the focusing objective has diffraction-limited performance. Our [Glass Cutting module](#) guarantees this performance, providing much tighter spots and higher power densities, at a high NA.



### Vortex phase plates enhance ablation rates on stainless steel

Recently, our partners [Edge-Wave GmbH](#) have presented better than **15% improvement** of ablation rate for stainless steel laser processing by using our [vortex lenses](#) to shape the spot.



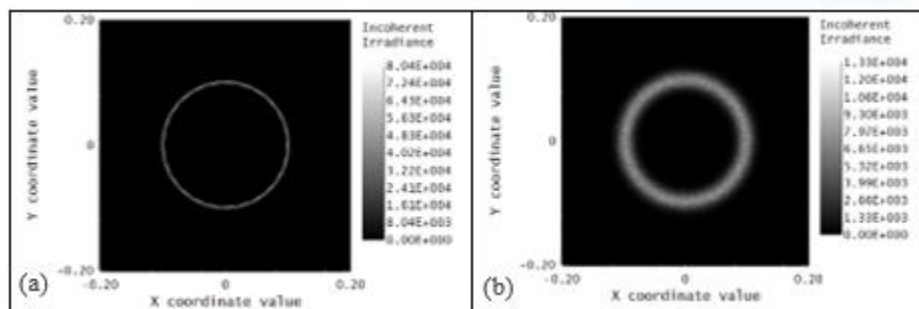
The presentation was organized by [LC Germany GmbH](#) and held at LASYS 2018, in Stuttgart.

For more details please [contact us](#).

## New Technologies

### Narrow Ring Optical trepanning with Annular Beams using Multimode Lasers

Optical Trepanning is a technology where a laser annular (ring shaped) beam is used to drill or cut discs in thin sheets of material. By using an annular beam, there is no need to move the beam in a circular path, thus throughput can be increased. However, spreading the laser energy over a ring requires tight focusing and higher power compared to a scanned spot. Such power is usually available in Multi-mode lasers, but these cannot be focused to a narrow ring. To answer this need, Holo/Or has developed a **novel optical concept that transforms a high  $M^2$  input beam into an almost diffraction limited narrow ring at the focus of the system**. The solution is a single, compact, standalone module. We have recently [published](#) this concept - please feel free to [contact us](#) for more details.



Ring width - focused multimode annular beam (right) vs  $M^2$  transformed focused annular beam (left)

### Contact Us

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