



NEWSLETTER - Q4 2020

End of the Year Sale is live!

15% Discount on all stock items for orders placed
between November 1st and December 27th
(Limited to 3 units per PN)

[ORDER NOW >>](#)



Announcements

After more than 30 years in the business, Holo/Or has gained a new affiliate sister company - high quality laser scan system manufacturer SCANLAB GmbH. Being recently partly acquired, Holo/Or is now a part of the TechInvest Holdings Group. We are very excited to announce this partnership, and see positive collaborations in the upcoming future. [For more details read here.](#)

Upcoming Events

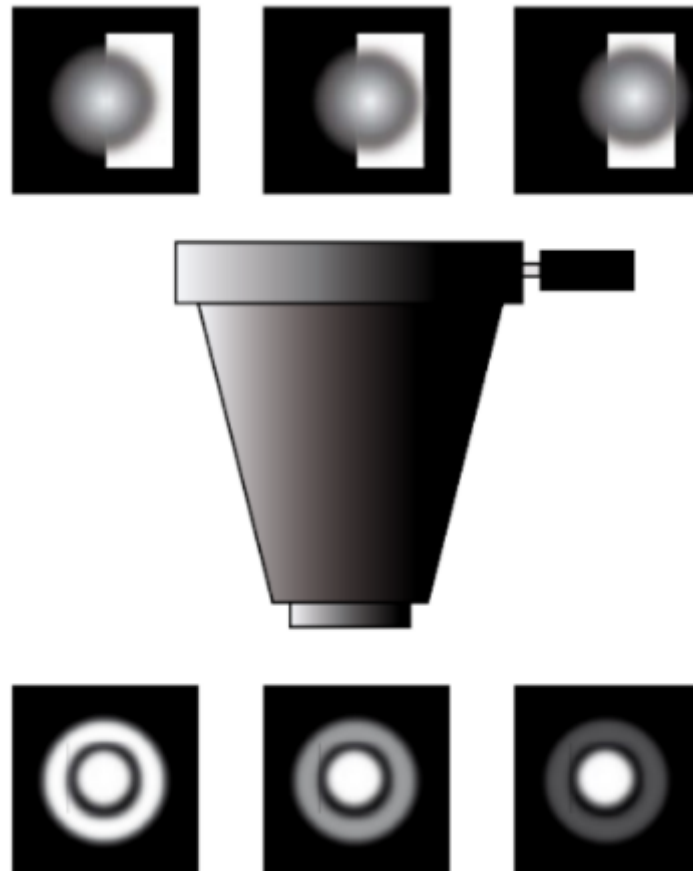
Adjustable ring generator for laser welding applications - Webinar

Laser welding is used in a wide range of industrial applications including automotive, aerospace, batteries and many others. A process-specific tailored laser intensity distribution can improve throughput, seam height, strength, and the edge smoothness of the joints.

Holo/OR has developed a method to combine the accuracy of passive DOE shaping with the versatility of active methods. Holo/Or's adjustable beam shapers can offer shaping such as a ring with central bright spot, where the

ratio between ring and center can be adjusted by a simple movement of the beam on the element.

[Join us Nov. 17th to see this new component in action!](#)

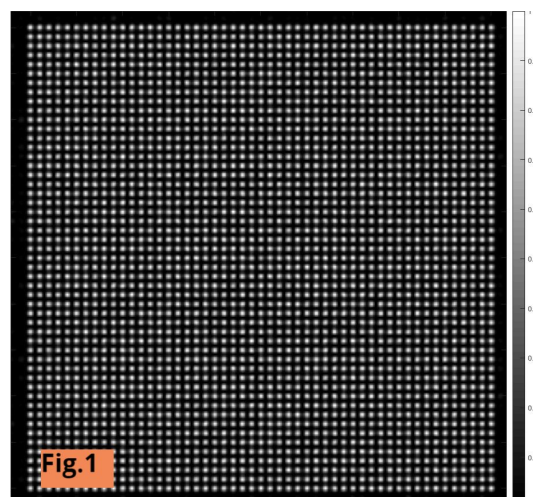


Schematic sketch of a laser head with an integrated DOE shaper with manual x stage. Left DOE region shapes the incident beam into a ring, while the right shapes into a central round spot. Moving the element in the x axis changes the power ratios between the ring and center spot

Laser Surface Texturing with single Beam splitter DOE as an alternative method to DLIP -Webinar

Patterning the surfaces of different materials by laser surface texturing (LST) has great economic and ecological potential.

One of the most promising methods to achieve LIPSS (laser induced periodic surface structures) is by direct laser interference writing (DLIP). However, a typical setup for



DLIP contains multiple elements and is highly sensitive to tolerances.

Holo/Or has developed a novel family of beam splitters that enables one to achieve DLIP like structuring results with a single DOE and a focus lens, with no sensitivity to tolerances and a compact, industry compatible design.

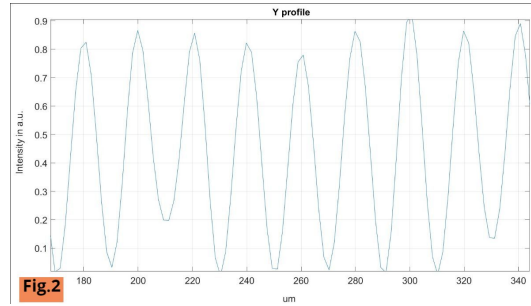


Fig.1: 51x51 spots generated from a single multispot DOE with continuous modulation of intensity similar to DLIP

Fig.2: 1 dimensional zoom on intensity level along axis

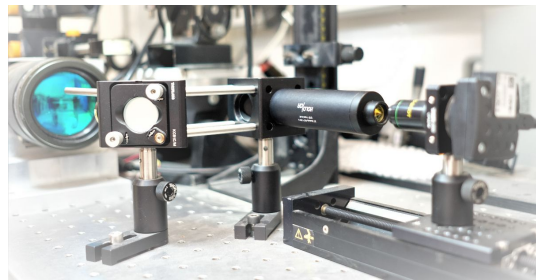
[Join us Dec 8th for a presentation of the new component!](#)

Both events will be presented by Holo/Or's CTO Mr. Natan Kaplan, will be hosted by EPIC members product release and will include explanations and a Q&A session.

New Products

DeepCleave™ optical module for Laser filamentation Glass Cutting is expanding

Due to customer demand, we have expanded our standard DeepCleave Modules selection to cover ultra-thin glass cutting with a depth of focus as low as 0.25mm in air.



DeepCleave™ transforms a Gaussian laser beam into constant peak power along the entire depth of focus, optimized to increase throughput by preventing energy waste below the process threshold and enabling full depth filamentation glass cutting from a single pulse. DeepCleave™ is designed to easily integrate with any existing opto-mechanics. Each DeepCleave™ module is shipped out of our factory with a full optical characteristics and individual testing report.

Functional properties include:

- Depth of Focus range (can be customized): 0.25mm-2mm
- Spot size (along entire depth of focus): < 2um
- Z-axis Flat-top with constant peak power along DOF

- Complete optical solution with no need for additional high NA objectives
- Module dimensions: dia. 30.5mm x length 106mm

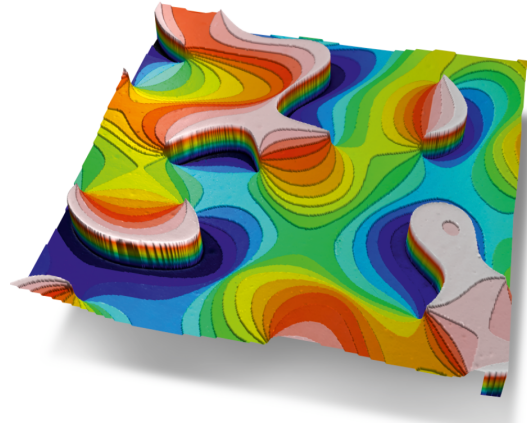
[Watch DeepCleave™ recorded webinar held on Oct 14th, 2020](#)

[See standard products and learn more](#)

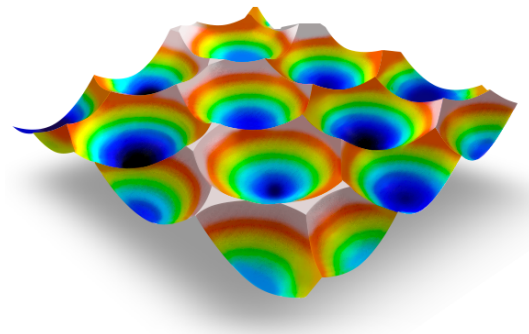
Polymer on glass beam shaping – performance envelope increased!

We have increased our Polymer on Glass beam shaping performance envelope with now up to 70x64 degrees FWHM flat top diffusers available.

Polymer-on-Glass (POG) beam shapers are cost-effective solutions for high-efficiency accurate beam shaping or multi-channel beam splitting.



This innovative line of products was developed to provide beam shaping solutions to meet the needs of emerging laser applications which have lately become available thanks to the decrease in laser power density prices.



Material compatibility:

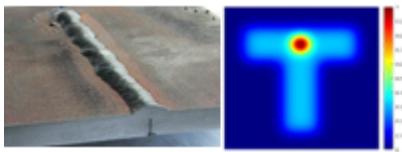
- LDT > 10 J/cm² laser pulses at 8ns, 1064 nm
- Low angle tolerance < 2%
- High transparency between 450nm to 1080nm
- High environmental stability -40 to + 120 deg C, no yellowing in most common use scenarios
- Reflow soldering compatible at 260 deg C
- Flat, thin and lightweight components
- Cost effective, high volume production capabilities
- Delivery available on wafer, diced or un-diced, and as single parts

[See standard products and learn more](#)

Applications and technical tips

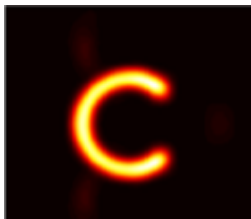
Optimizing high-power laser welding process parameters such as seam angle, seam strength, throughput and HAZ (Heat Affected Zones), can be easily achieved by precise shaping of the spot on the work plane.

Holo/Or offers many [beam shaping solutions](#) proven to improve laser welding parameters, including beam splitters for dual spot welding and parallel processing, ring shapers, and custom solutions. Among our latest unique custom solutions, you may find:



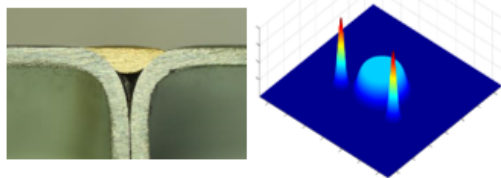
T-SHAPER DIFFUSER

For optimized post-weld annealing, reduced weld seam angle and improving weld strength



C-SHAPER DIFFUSER

For improved width/depth ratio, reduced oxidation and elimination hot cracking



BRAZING DIFFUSER

For melting a brazing wire between two hot-dipped galvanized plates, while pre-heating and cleaning both sides of the brazed seam

[Contact us to discuss your project requirements](#)

HOLO/OR A VISION OF EXCELLENCE

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