

Holo/Or Newsletter – Q1 2025

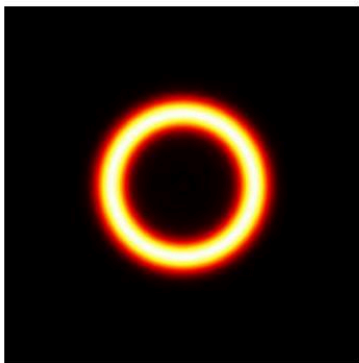
Publications and conferences

Come meet us at SPIE Photonics west 2025, 28-30 January, Booth #1665

We are excited to meet our customers at the photonics west conference this year. Our team of experienced application engineers will be happy to help you with your beam shaping needs and optical challenges. drop by our booth #1665 at The Moscone Center for a chat or [contact us](#) to book an appointment beforehand for an in-depth discussion.

SPIE. PHOTONICS WEST

Diffraction optics in the service of quantum computing- trapping atoms with Diffractive Axicons



In a [recently published article](#), researchers from Atom Computing have used Holo/Or's [Diffractive axicon](#) to generate a magneto-optic trap for ^{171}Yb Atoms, as a stage in creating an optically trapped atomic array that serves as a qbit array. Our Axicon has no apex region, making it suitable for applications requiring rings or annular beams with no disturbance in center. Other diffractive optical elements such as beam splitters have many applications in quantum computing- read more [here](#).

Products and Applications

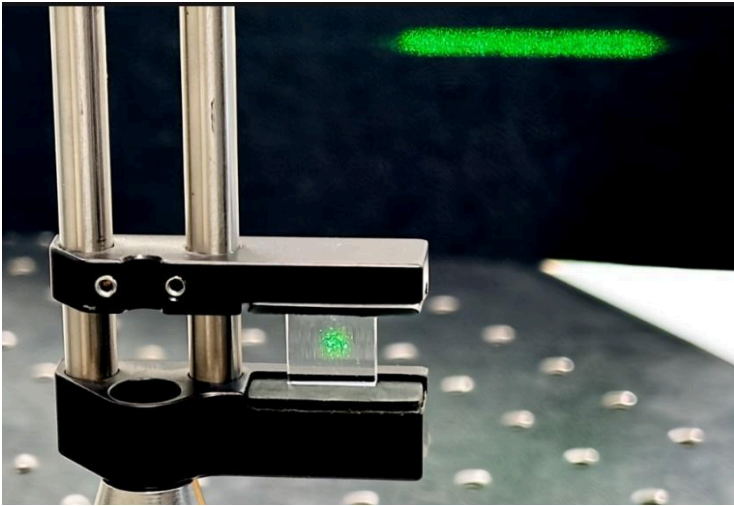
New Product launch- Variable Depth of Focus Bessel Objective for glass cutting

Holo/Or is proud to present our new laser glass cutting solution, the [Variable Depth of Focus Bessel objective](#). This full optical solution can generate a waist of 2 μm over an adjustable range of 0.08-1.8mm (in air), enabling cutting of different glass thickness with the same optics. The variable DOF objective can accommodate different input beam sizes while still maintaining the same waist diameter over different DOF ranges, making it ideal for laser glass cutting process development. Green and UV wavelength customization options are available in addition to or standard IR solution.



[Contact us](#) for a quote or more details.

Upcoming Product: Double sided cylindrical lens arrays with improved homogeneity



Driven by market demand, Holo/Or has developed the ability to produce double sided element with precise alignment, allowing us to offer broad band line diffusers with unmatched integrated uniformity. Unlike simple double sided homogenizers, our BH line diffuser have both a sharp transfer region and good uniformity, without strong one-dimensional speckle modulations. The BH line diffusers are useful for biological microscopy applications, thermal treatments and many other applications utilizing high power multi mode lasers. Find out more details will in our [new article at photonicsviews](#)

Technical Tips

Using DOE tuner for fine adjustments of the shape or input beam

To get the best performance out of beam shapers, precise adjustment of input beam size is often required. Standard variable beam expanders often have large ranges of 1X-X8 magnification, making fine adjustment challenging. For this purpose, Holo/Or offers our [DOE tuner](#). This continuous magnification module can be adjusted between X0.8-1.2 magnification, enabling fine control of the magnification and optimal shaping performance for [TH shapers](#) placed after the module. It can also be used to fine tune the output from the beam shaper, enabling adjustment of the shape to compensate for system tolerances such as EFL variability.

[Contact us](#) for a quote.

