

## COME VISIT US!

### New-Tech exhibition:

May 29-30, 2018

Booth 71

Trade Show Tel-Aviv



### LASYS trade fair:

June 5-7, 2018

Booth 4C33

Messe Stuttgart



**Holo/Or** would like to thank everyone who came to our booth at Laser World of Photonics China!



In case you missed it, we will be exhibiting at the **New-Tech exhibition** in Tel-Aviv, as well as **LASYS trade fair** in Stuttgart, Germany.

Our experienced engineers will be happy to meet with you there.



*Round BD element used with red & green lasers simultaneously*

## New Products

### **Broad band Diffuser (BD) - Achromatic Shaping Solution**

BD is special beam shaping micro-refractive optical element dedicated to high power application where more than a single wavelength is used in same optical path. Typical applications are in field of aesthetic medicine where a few wavelengths are used for different procedures, microscopy applications with wide spectrum sources, automotive lights market, and some very specific scientific applications.

The BD element can be used in same optical setups as diffractive element, offers higher efficiency than the standard Diffuser (>90%) and eliminates zero-order effects.

Read more [here](#).

## Glass cutting module using Multi-Focal lens

Diffractive Multifocal lenses (MF) are widely used for glass cutting applications.

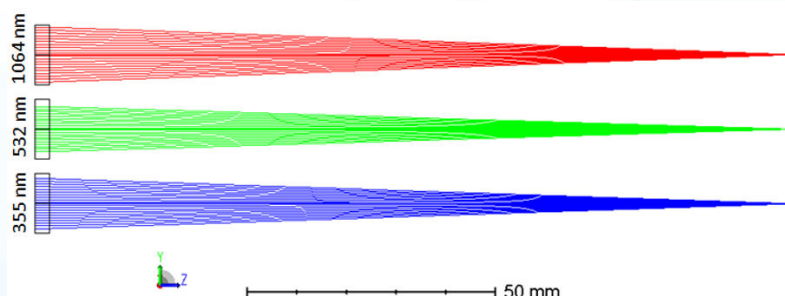
To achieve optimal performances, small separation distances between neighboring foci and high-power densities are required. This is usually achieved with a high NA objective lens. However, the majority of off-the-shelf high-power objectives do not meet the application requirements and result in degraded performance.

To address this issue, **Holo/Or** has developed a tailored focusing module for glass cutting applications. This module integrates our MF elements with special focusing optics, thus enabling diffraction limited spot size at all foci and offers high NA to further increase power density at the foci. Read more [here](#).

## Diffractive Achromat lens for Nd:YAG laser harmonics

**Holo/Or** has developed diffractive Achromat lenses that have the same focal length for 3 harmonics of Nd:YAG lasers (355nm, 532nm, and 1064nm). These Triple Wavelength (TW) lenses are ideally suitable for high power applications, where standard Achromats made by using lenses with different refractive indices often suffer from limited laser damage threshold. Furthermore, due to their diffractive design, these lenses have significantly lower thermal focal shift compared to standard Achromats. Due to the high accuracy of the manufacturing methods of diffractive optical elements, our lenses are aberration-free at all 3 design wavelengths, enabling tighter focusing and higher power density at focus compared to standard Achromat lenses.

All TW elements are planar, light and thin windows that are easy to integrate into limited spaces in high power systems. These diffractive lenses are also called Multi-Order Diffractive Lenses ("MOD lenses"). For more data and comparison to standard Achromats, read [here](#).



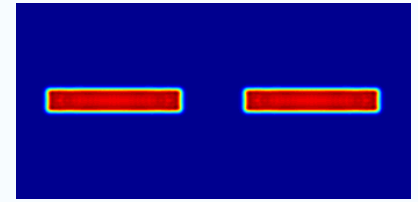
*Diffractive Achromat element focuses 3 wavelengths to the same focal point*

## Applications

### DOE combinations

Many applications require both splitting and shaping of the incoming beam. These combinations are useful for parallel processing applications to increase throughput and to shorten process time.

Holo/Or's DOE can achieve both splitting and shaping actions in a single component. Read [here](#) for more information.



*Combination of Top-Hat and a 1x2 Multi-Spot DOE*

## Technical Tips

### Advanced Workshop - DOE for Laser Ablation and Glass Cutting Applications

During the upcoming **LASYS exhibition** (June 5-7, Messe Stuttgart, Germany), **Holo/Or** will hold an advanced workshop discussing Diffractive Optical Elements (DOE) in Laser Ablation and Glass Cutting Applications. This is a joint effort of **Laser Components GmbH**, **Holo/Or** and **EdgeWave**, and will present both theoretical and industrial case-studies of using DOE in laser material processing applications.

We invite you to attend the workshop conducted by Shlomit Katz, an optical design engineer:

**Tuesday, June 5<sup>th</sup>, 13:30 PM**  
**Room C7.2, ICS building**

Please register to the workshop [here](#).

### Contact Us

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