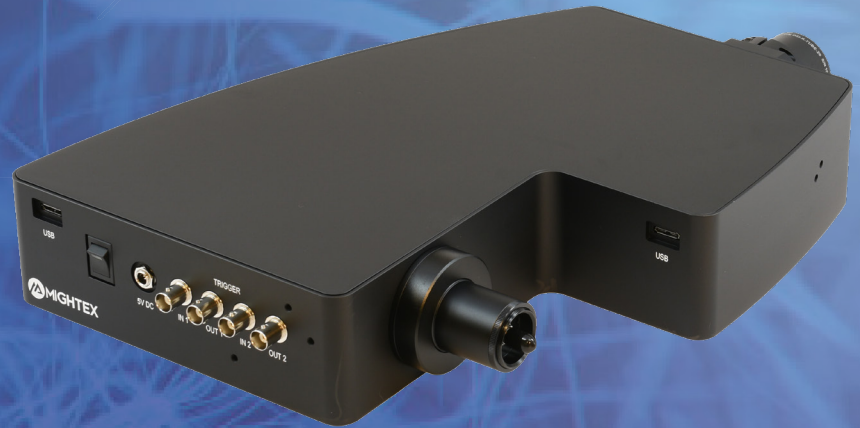


Welcome to the newest member of the family...

# Polygon UHC

## DMD Pattern Illuminators

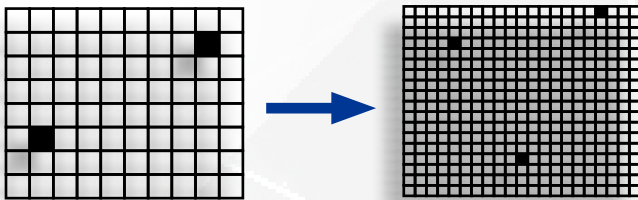


### ULTRA HIGH CONTRAST RATIO OF 10,000,000:1

We are happy to introduce our Polygon UHC DMD pattern illuminator! The Polygon UHC incorporates the latest in digital micromirror technology with the marketing-leading contrast ratio of 10,000,000:1. Contrast ratio refers to the ratio of the light intensity of an all-on image to an all-off image. The higher the contrast ratio, the better the background light can be suppressed. Combining ultra high contrast ratio with DMD simultaneous multi-region illumination capability, the Polygon UHC will unlock many applications for bioscience researchers.

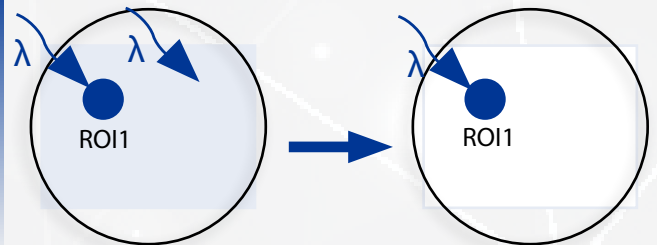
#### 1 Larger Optogenetic Grid Scans.

Create optogenetic grid scans with greater number of grids for higher spatial resolution circuit mapping.



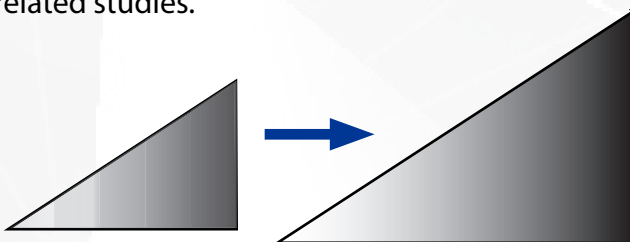
#### 2 Decreased Ectopic Activation.

Decrease unwanted photoactivation in surrounding light sensitive areas within your tissue of interest.



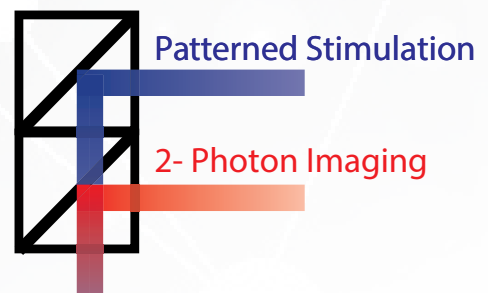
#### 3 Larger Dynamic Range.

Produce more grey levels for applications that require high dynamic ranges such as retina-related studies.



#### 4 2-Photon Setup Compatible.

Seamless integration with 2-photon microscopes, allowing easy transition between patterned stimulation and 2-photon imaging.



## ILLUMINATION FIELD-OF-VIEW & RESOLUTION

Model	Field of view	Projection Area	Commercial Microscope (1X Objective) <sup>a</sup>			
			Leica	Nikon	Olympus	Zeiss
Polygon UHC	Standard	Diameter <sup>b</sup>   mm	12.4	12.4	11	10.2
		Pixel Size   $\mu\text{m}$	15.2	15.2	13.8	12.6

<sup>a</sup> To calculate illumination field-of-view and pixel resolution at the specimen, simply divide the above numbers by the magnification of the objective.

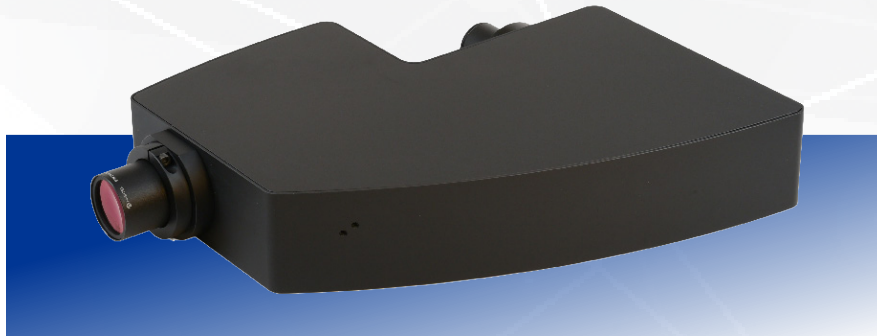
<sup>b</sup> Polygon UHC has a circular illumination field-of-view.

## FEATURES

- Illuminate any Shape or Size Within Large FOV
- 10,000,000:1 Contrast Ratio
- Simultaneous Multi-Region Illumination
- Fast Pattern Switching Speed up to 6.6 kHz
- Infinity Path Design
- Accepts SMA-connectorized fiber input from laser sources
- Wavelength range of 400nm - 700nm

Our primary goal is to help you find the optimal solution for your research. We have a dedicated technical support and sales team committed to providing expert guidance on our Polygon models and other Mightex products.

For questions and feedback please visit  
[www.mightexbio.com/contact](http://www.mightexbio.com/contact)





# MIGHTEX

## Photonics Tools for Neural Circuit Visualization & Manipulation

### **OASIS FIBERSCOPE**

Fiberscope solution for simultaneous cellular-resolution optogenetics and calcium imaging in freely-behaving animals to probe complex neuronal networks.

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*Multiple Excitation Wavelengths*

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*Multiple Regions of Interest*

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*Scalable for High-throughput Experiments*

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*Compatible with High Speed Cameras*

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*Reconfigurable Platform*



### **POLYGON1000**

DMD pattern illuminator providing precise spatiotemporal control of light with subcellular resolution, making it the perfect illumination tool for life science research.

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*Cellular-Resolution Optogenetics & Photostimulation*

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*Simultaneous Multi-Region Illumination*

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*Any Shape, Any Size, From UV to Far Red*

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*Subcellular Resolution*

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*Compatible with Any Microscope*

### **OASIS MACRO**

Mesoscope solution for all-optical targeted optogenetics, calcium imaging, and intrinsic imaging. Enabling researchers to simultaneously image the entire mouse cortex and perform targeted optogenetics when paired with Mightex's Polygon.

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*Large Field-of-View for In Vivo Imaging*

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*Spatially Patterned Targeted Optogenetics*

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*Reconfigurable Mesoscope*

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*Designed for Head-Fixed In Vivo Experiments*

