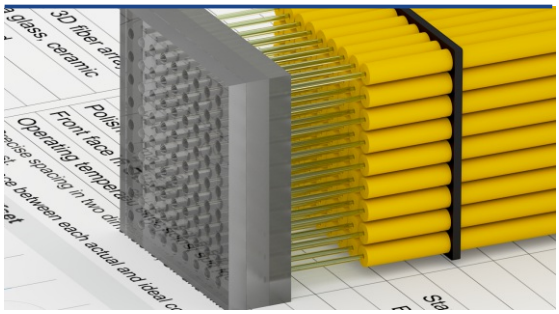
Fiber Coupled Microlens Array

2D Fiber Array Actively Aligned onto MLA



The manufacture of high-precision customized 2D fiber arrays together with MLA active alignment enables us to offer customized MLAs of high number functional channels with minimum deviating angle error of outgoing light rays.

A choice of suitable MLA is based on the customer requirement for a shape of outgoing light rays, type of fiber and the operating wavelength. The other end of fibers can be connectorized by E2000, LC, SC, FC, ST or by MTP® connectors. MLA with pre-determined fiber length can be housed in a stainless steel flange for easier implementation within targeted application.

Highlights: Active alignment of optical fibers onto micro-lens array / Minimum tilt of light beam / High accuracy in light beam positioning / Customized fiber layout matrix / fiber types include SM, PM, MM (STEP/GRIN) / Availability of customized MLA housing.

Applications: Optical switching, imaging, sensor systems.

MLA Properties	Single Mode and Multi Mode Version	Polarization Maintaining Version
Size [mm]	12 x 12	12 x 12
Lens arrangement	m × n, hexagonal grid or others	m × n, hexagonal grid or others
Fiber type	MM (Step index or Graded index)	PM fibers (UV/VIS/NIR)
	SM (ITU-T G.652d, G.657a, b)	
Angle misalignment [°]	-	± 1.5 or ± 2.5
Extinction ratio [dB]	-	20, 25, 30
Fiber array / MLA material	Borosilicate glass, fused silica / fused silica, BK7	Borosilicate glass, fused silica / fused silica, BK7
Output connectors	E2000, LC, SC, FC, ST, MTP®	E2000, LC, SC, FC, ST, MTP®
Operating temperature [°C]	-40 to +85	-20 to +70

Beam Properties	Values
Wavelength [nm]	850, 980, 1310, 1550 or on request
Working distance [mm]	Typ. 25 or on request
Insertion loss [dB]	Typ. 1
Return loss [dB]	> 50
Pointing accuracy [°]	Typ. < 0.2
Beam width [µm]	Typ. 300 or on request

We will propose for you, based on your request for parameters of outgoing light beam from the MLA, a suitable MLA. For the calculation we need to know following parameters:

- **operating wavelength**
- **fiber type**
- **working distance**
- **beam width**

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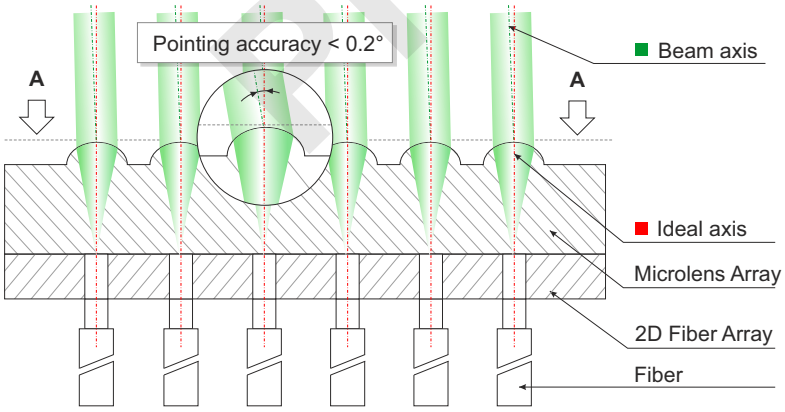
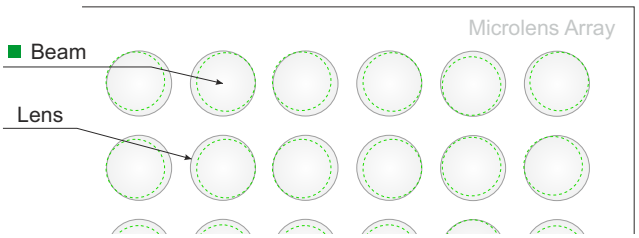


View A



Due to the precise active fiber alignment onto the matrix of aspheric lenses we are guaranteeing for all channels minimum insertion losses as well as minimum tilts and offsets of outgoing light beams. Used manufactured method as well as additional antireflection broadband coating ensures minimum losses due to reflections. High-power variant is available upon request.

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