Highly Uniform Multimode Optical Splitters

For Visible and Near Infrared Range

Such optical splitters split continuous or pulsed optical signal from the input fiber into the output fibers with highly uniform optical power. They are suitable for visible and near infra-red wavelength range where PLCs are not available. Input fibers are fitted with SMA or FC connectors with metal ferrule. Output fibers are with LC/PC or other types of connectors.

Optical power spitters have commonly n^2 output ports. As of now the maximum number of these ports is 400. The optical elements are placed within anodized aluminium housing which can be customized for different applications.

Applications

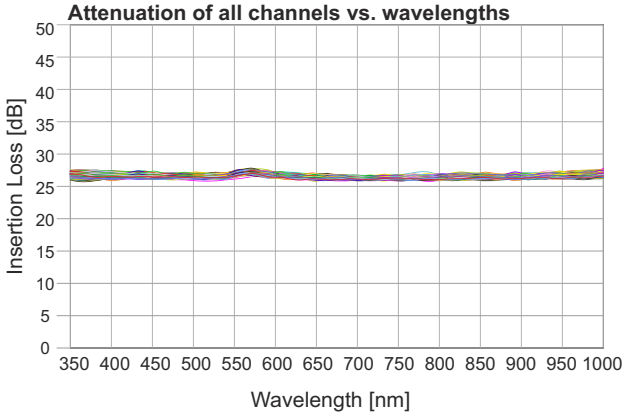
- Measurement and Testing
- Lighting Technology (RGB)
- Calorimetry

Specification

	1x64	1x81	1x100	1x400
Wavelength [nm]:	350-1000	350-1000	350-1000	350-1000
Uniformity max. [dB]:	1.5	1.5	1.5	1.5
Input power max. [W]:	5 (cw); Pulse signal on request			
Fiber type:	Step index fiber with cores (50 - 200 µm)			
Operating temperature	+10 ~ +40			
Storage temperature [°C]:	-20 ~ +60			
Pigtail style:	250µm, 900µm or custom made solutions			
Input connector:	FSMA, FC, ST, ...			
Output connectors:	MTP® (MPO), LC, FC, ...			

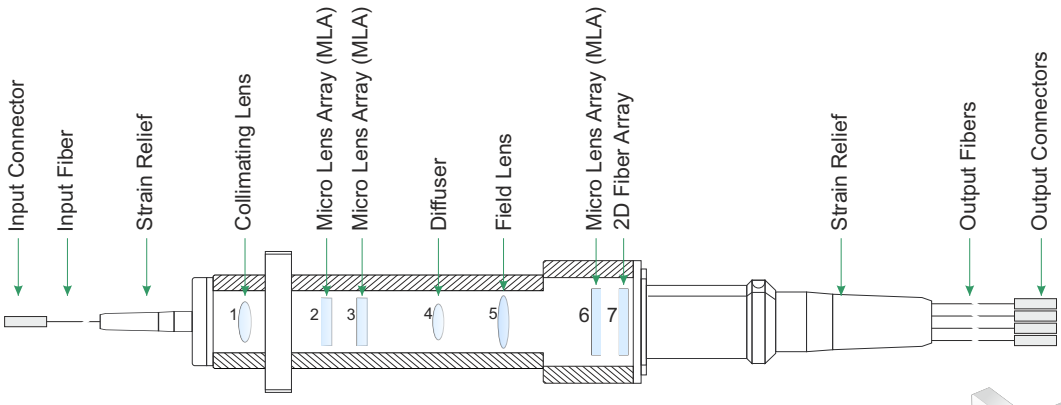
All values are measured without optical connectors

Attenuation of all channels vs. wavelengths



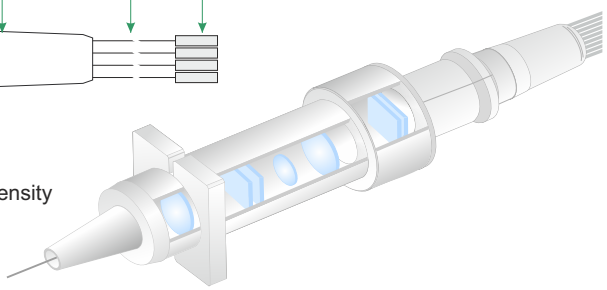
Measured values relate to the splitter 1 x 100

Optical Splitter - block diagram

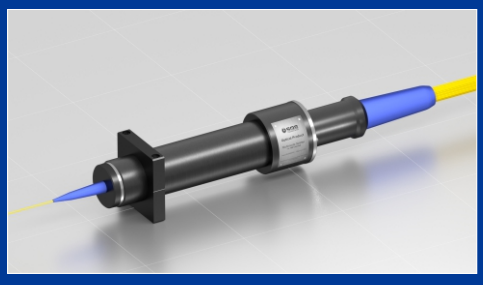


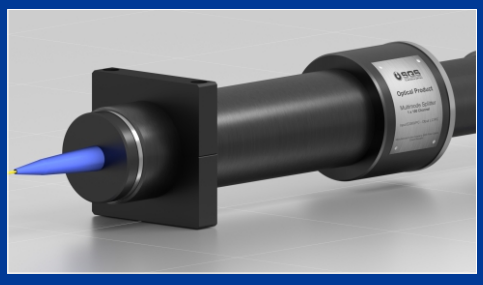
1) Lens transforming a diverging beam into a collimated beam
2), 3), 5) Two micro lens arrays and a field lens generate a square beam with uniform intensity profile (top hat profile)
4) Diffuser helps to reduce unwanted interference effects in case of coherent light
6), 7) Another micro lens array distributes light into individual fibers in the 2D fiber array

3D view of the deployment of optical components

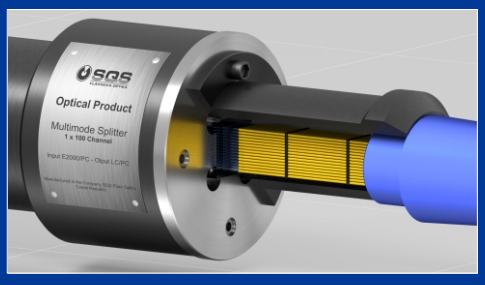


VIS/NIR Splitter with 100 output Channels





Multi Lens Array (MLA) and 2D Fiber Array



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