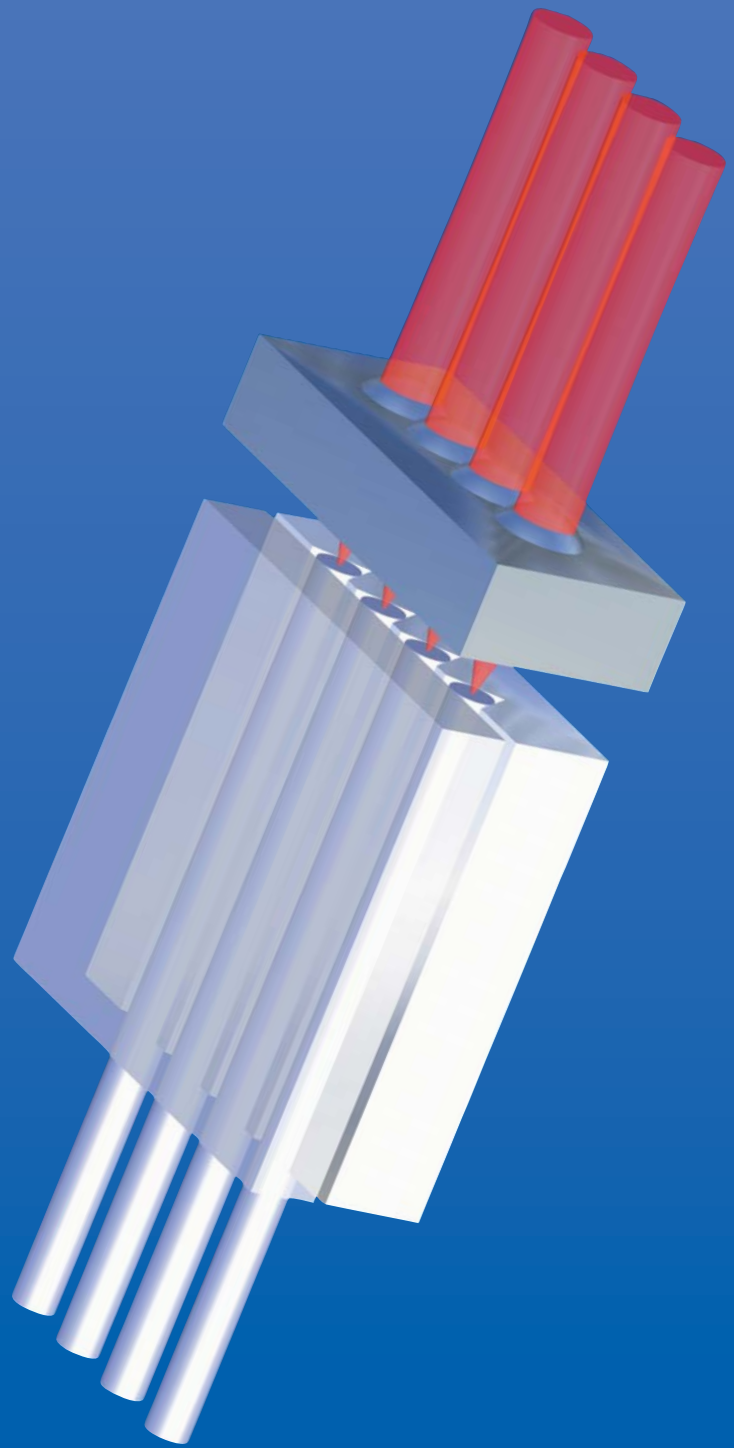
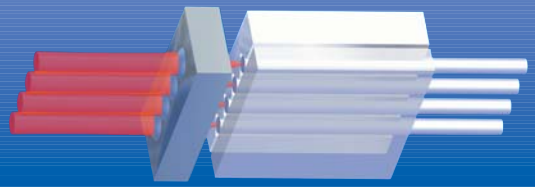


Fiber Optics

Fiber Collimating Lens Arrays





Fiber Optics

Fiber Collimating Lens Arrays

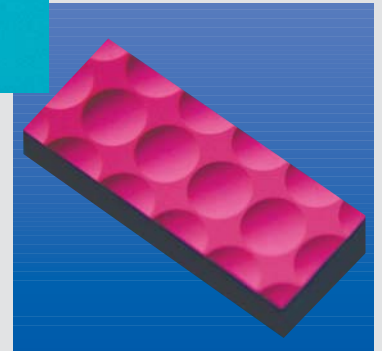
Microlens arrays for collimating and coupling of single mode optical fibers

Benefits

- 250 µm pitch standard fiber array compatible
- Focal length uniformity < ± 0.45 % lens-lens
- Uniform pointing performance
- Low roughness minimizes scattering loss
- Fused Silica material, Telcordia compliant
- 100 % inspection

Applications

- Multi-channel communications devices
- DWDM MUX, DeMUX and OADM
- Optical amplifiers, VOAs, optical isolators
- Waveguide to fiber coupling with custom versions



Customized microlens arrays are available upon request, optimized for your specific element dimensions, alignment marks, as well as pitch, focal length and throw distance. AuSn pads for soldering assembly are an option.

Product group	FCA 250FS 1xN/R315	FCA 1000Si NxM/R6.0	
Array pitch	250 µm	1000 µm	Tolerance: ± 0.25 µm
Number of channels per array	FCA 250FS 1x4: 4 FCA 250FS 1x8: 8	FCA 1000Si 1x4: 4 FCA 1000Si 4x4: 16	Larger arrays available upon request
Lens array dimensions	FCA 250FS 1x4: 1.5±0.05x1.0±0.05 x 1.0±0.025 mm ³ FCA 250FS 1x8: 2.5x1.0x1.0 mm ³	FCA 1000Si 1x4: 4.93±0.03x1.93±0.03 x 1.0±0.025 mm ³ FCA 1000Si 4x4: 4.93x4.93x1.0 mm ³	(length x width x thickness)
Lens diameter	240 µm	950 µm	
Lens surface profile	Aspherical	Aspherical	Optimized design
Surface Figure	< 35 nm RMS	< 25 nm RMS	
Numerical aperture	N.A. = 0.16	N.A. = 0.19	Custom designs available
Effective focal length	720 µm	2420 µm	At λ=1.55µm Tolerances: < ± 0.5 % within array
Material	Fused Silica (Schott Lithosil® Q1)	Silicon	
AR coating	Double sided, for λ = 1280-1620 nm	Double sided, for λ = 1280-1620 nm	R < 0.5 % per surface
Surface Roughness	Ra < 3 nm	Ra < 4 nm	
Insertion loss	< 1 dB fiber to fiber	< 1 dB fiber to fiber	



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