

Fiber Coupling Microlens Array

Overview:

Collimation and coupling of fibers can be made simple with the use of a PowerPhotonic fiber microlens array. PowerPhotonic standard microlens arrays are designed for coupling or collimation of SMF-28 single mode fibers.

Multi-channel optical communication systems require microlens arrays for coupling between laser sources, fiber and waveguide arrays, optical multiplexing and optical switching.

Made from fused silica, these microlens arrays minimise channel cross talk due to extremely low scatter and minimise insertion loss due to surface accuracy.

The PowerPhotonic Effect:

<3%

Effective Focal Length Tolerance

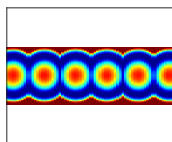
<5 μ m

Lens Centration Accuracy

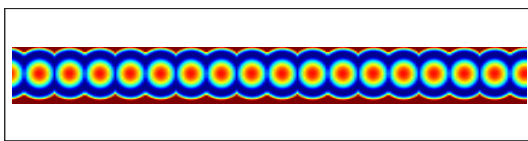
<0.25%

Reflectance (Coated Side)

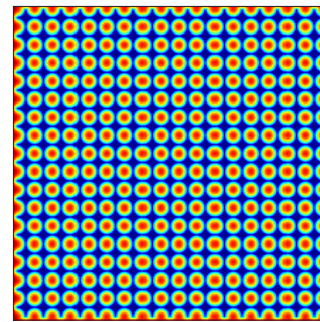
Example



PP-LAL-P250-N4-AR



PP-LAL-P250-N16-AR



PP-LAS-P250-N16-AR

Key Features:

- High Uniformity of RoC, Conic and Pitch
- High Transmission
- Very Low Scatter

Target Applications:

- Fiber Array Collimation
- Wavefront Selective Switching
- High Performance Data-communication



Fiber Coupling Microlens Array

Standard Part: Line Array

Part Number	Design Wavelength (nm)	Number of Lenslets (X)	Lenslet Pitch (μm)	Effective Focal Length (mm)
PP-LAL-P250-N4-AR	1550	4	250	0.710
PP-LAL-P250-N8-AR	1550	8	250	0.710
PP-LAL-P250-N12-AR	1550	12	250	0.710
PP-LAL-P250-N16-AR	1550	16	250	0.710

Effective Focal Length @ 1550nm

Standard Part: Square Array

Part Number	Design Wavelength (nm)	Number of Lenslets (X)	Lenslet Pitch (μm)	Effective Focal Length (mm)
PP-LAS-P250-N16-AR	1550	16	250	0.710

Effective Focal Length @ 1550nm

General Specification:

Parameter	Value
Line Array Length (mm)	1.35 to 4.35 \pm 0.05
Line Array Width (mm)	1.10 \pm 0.05
Square Array Length & Width (mm)	4.35 \pm 0.05
Part Thickness (mm)	1.01 \pm 0.01

Performance:

Parameter	Value
Effective Focal Length Tolerance (%)	<3%
Coating Reflectance, Convex Side Only (%)	<0.25

Coating Wavelength Band = 1260 - 1620

Custom Options:

PowerPhotonic Line and Square Arrays can be customised for different sizes and lenslet specification upon request.

Sales and Technical:

United Kingdom

PowerPhotonic Ltd.
5A St. David's Drive
Dalgety Bay
Fife
KY11 9PF
+44 1383 825 910

North America

PowerPhotonic Inc.
16220 S. La Cañada Drive
Sahaurita
AZ 85629
United States
+1 571 866 0551

Japan

yoshiyuki.mori@powerphotonic.com
+81 80 1398 0331

sales@powerphotonic.com

© PowerPhotonic 2023. All rights reserved - see www.powerphotonic.com

www.powerphotonic.com

