



Fiber Coupling Lens Arrays



PowerPhotonic
Precision Machined Optics

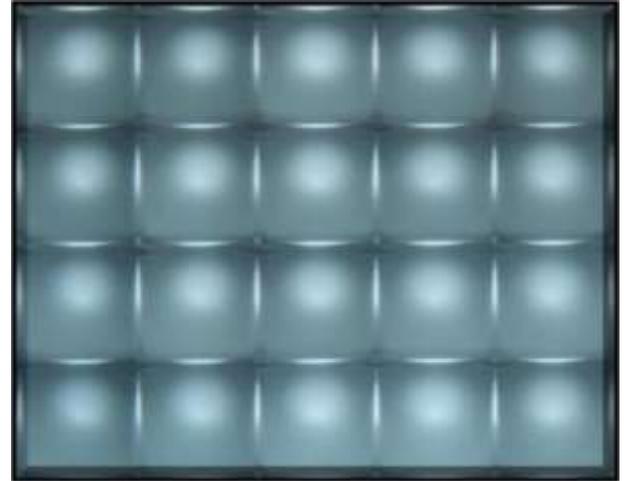
Overview

PowerPhotonic's fiber coupling lens array products offer a wide range of configurations, focal lengths, and forms. Using PowerPhotonic's unique laser direct-write process, we can create a wide range of lens array optics without the need for a mask or mold tooling.

One-dimensional arrays are available with a standard lens pitch of $250\mu\text{m}$, or can be supplied with customer-specified pitch.

Two-dimensional arrays are available with sphere, asphere, astigmatic, cylindrical or acylindrical lenses on a regular or customer specified grid.

The lens array can be fabricated within a larger planar substrate to enable ease of mounting, without the mount impinging on the clear aperture of the lens array.



Key Features

- UV-fused silica
- Large range of lens arrays possible
- One or two dimensional grid
- High uniformity of RoC, conic and pitch
- Free choice of lens form; spherical, aspherical, anamorphic, biconic, cylindrical, acylindrical

Target Applications

- Fiber array collimators
- WSS systems
- R/OADM systems
- Optical interconnects
- High performance optical communications

Benefits

- Application-specific lens arrays – avoids the design compromises imposed by the use of catalog parts
- Optimized lens profile for best performance
- Low scatter and low crosstalk

Customization Program

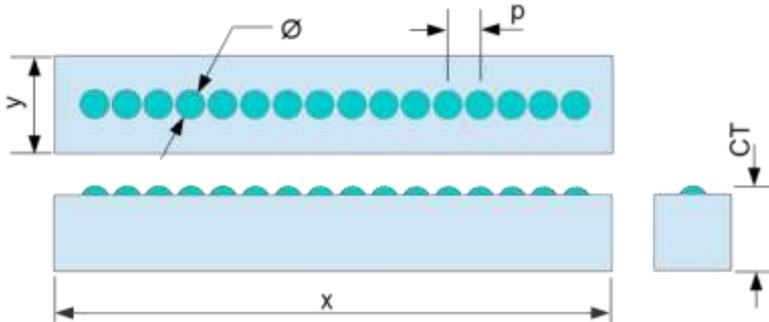
Due to the unique nature of the PowerPhotonic manufacturing process, our standard products can be easily modified to meet specific requirements. Please contact PowerPhotonic for additional information.

About Us

PowerPhotonic is a global leader in precision laser machined micro-optics products. Our business was founded with the objective of providing unsurpassed excellence in all aspects of design and manufacture of micro-optics for optical and laser applications. Our world-class design skills are supported by an innovative and flexible manufacturing process that allows the company to design both a broad range of state-of-the-art standard micro-optics products and uniquely, to offer a low cost and rapid fabrication service for creating completely freeform optical surfaces

Product Selection – Linear Array

Part Number	Array Pitch p (um)	#Channels Per Array	Effective Focal Length (um)	Pitch Accuracy (um) typ.	Lens Profile	Numerical Aperture (N.A.)	Insertion Loss (dB), Fiber-to-Fiber	Surface Roughness (nm)	Substrate Size x (mm)	Substrate Size y (mm)	Thickness CT (mm)
PP-LAL-P250-N4-AR22	250	4	710	±0.2	Plano-Convex	0.15	<1	<1	1.35	1.10	1.0
PP-LAL-P250-N8-AR22	250	8	710	±0.2	Plano-Convex	0.15	<1	<1	2.35	1.10	1.0
PP-LAL-P250-N12-AR22	250	12	710	±0.2	Plano-Convex	0.15	<1	<1	3.35	1.10	1.0
PP-LAL-P250-N16-AR22	250	16	710	±0.2	Plano-Convex	0.15	<1	<1	4.35	1.10	1.0
PP-LAL-Pxxx-Nx-ARx	Custom	Custom	Custom	±0.2	Plano-Convex	Custom	<1	<1	Custom	Custom	Custom



Options

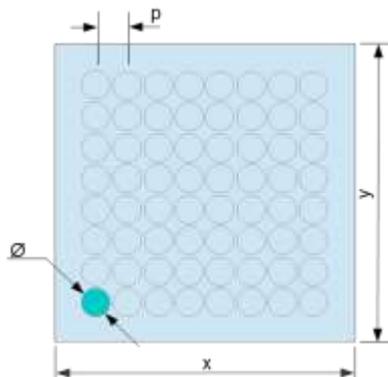
Array Pitch, Lens Diameter
 Number of lenses, X and Y
 Spherical, aspherical, anamorphic, biconic, cylindrical, acylindrical lenses
 Substrate size (x, y, CT)

Coatings

Anti-Reflectance Coating: 1260-1620nm,
 R<0.5% per side, other coatings on request

Product Selection – Square Grid

Part Number	Array Pitch p (um)	Array Size	Effective Focal Length (um)	Pitch Accuracy (um) typ.	Lens Profile	Numerical Aperture (NA)	Insertion Loss (dB), Fiber-to-Fiber	Surface Roughness (nm)	Substrate Size x (mm)	Substrate Size y (mm)	Thickness CT (mm)
PP-LAS-P250-N4-AR22	250	4x4	710	±0.2	Plano-Convex	0.15	<1	<1	1.35	1.35	1.0
PP-LAS-P1000-N4-AR22	1000	4x4	3166	±0.2	Plano-Convex	0.15	<1	<1	5.85	5.85	1.0
PP-LAS-Pxxx-Nx-ARx	Custom	Custom	Custom	±0.2	Plano-Convex	Custom	<1	<1	Custom	Custom	Custom



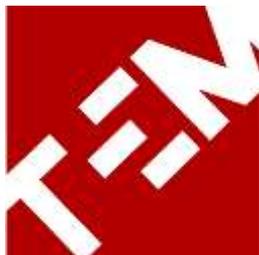
Options

Array Pitch, Lens Diameter
 Number of lenses, X and Y
 Spherical, aspherical, anamorphic, biconic, cylindrical, acylindrical lenses
 Substrate size (x, y, CT)

Coatings

Anti-Reflectance Coating: 1260-1620nm,
 R<0.5% per side, other coatings on request

お問い合わせ先



株式会社ティー・イー・エム PowerPhotonic担当

Tel: 03-6265-3310 / Fax03-6265-3350

Email: cont@tem-inc.co.jp

URL: <https://www.tem-inc.co.jp/>

