

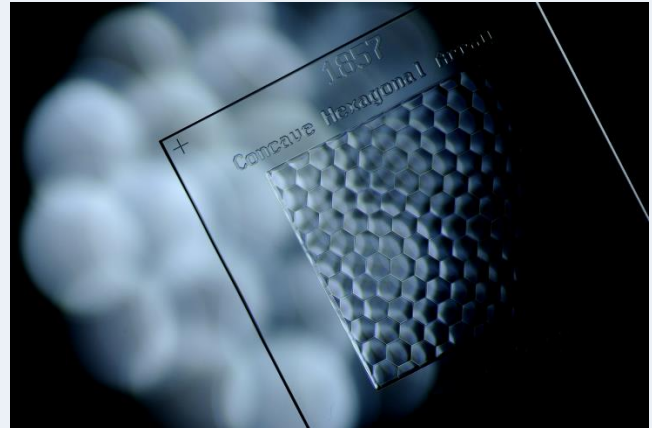
Overview

PowerPhotonic's lens array products offer a wide range of lens configurations, focal lengths, and forms.

One-dimensional arrays are available as both cylinder or acylinder lenses, to standard or customer-specified lens prescription.

Two-dimensional arrays are available as sphere, asphere, or astigmatic lenses, on rectangular, hexagonal or customer-specified grids.

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

- Large range of standard lens arrays possible
- Linear, square or hexagonal grid
- High uniformity of RoC, conic and pitch
- Free choice of lens form: cylinder/acylinder/sphere/asphere/astigmatic
- UV-fused silica

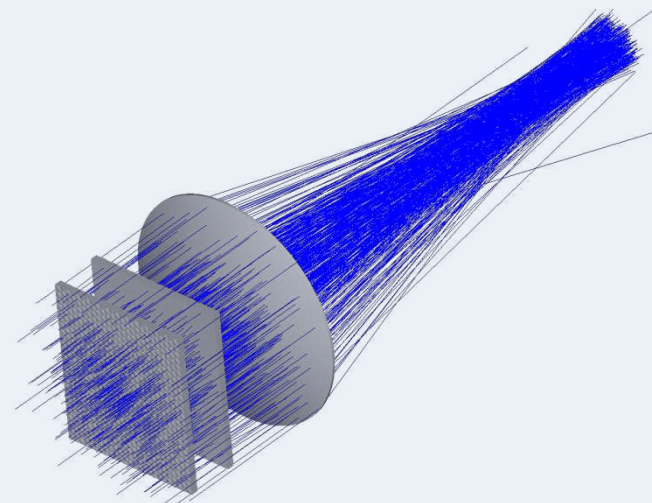
Benefits

- Application-specific lens arrays – avoids the design compromises required from use of catalog parts
- Optimized lens profile for best performance
- High CW and short-pulse power handling capability
- Low scatter

Target Applications

- Homogenizers
- Beam shapers
- Fibre array collimators
- High power diode lasers
- Solid-state laser pumping
- Laser material processing

How it is Used



Standard Product Selection – Square Arrays

Part Number	Effective Focal Length EFL (mm)	Pitch P (mm)	Width W (mm)	Height H (mm)	Thickness T (mm)	# Lenses X NX	# Lenses Y NY
PP-LA-S-F800-P100-V1-AR1	8.00	1.00	25.4	25.4	1.00	15	15
PP-LA-S-F500-P100-V1-AR1	5.00	1.00	25.4	25.4	1.00	15	15
PP-LA-S-F200-P50-V1-AR1	2.00	0.50	25.4	25.4	1.00	30	30
PP-LA-S-Fxxx-Pxx-Vx-ARx	tbd	tbd	tbd	tbd	tbd	tbd	tbd

Standard Product Selection – Hexagonal Arrays

Part Number	Effective Focal Length EFL (mm)	Pitch P (mm)	Width W (mm)	Height H (mm)	Thickness T (mm)	# Lenses X NX	# Lenses Y NY
PP-LA-H-F200-P50-V1-AR1	2.00	0.50	25.4	25.4	1.00	30	30
PP-LA-H-Fxx-Pxx-Vx-ARx	tbd	tbd	tbd	tbd	tbd	tbd	tbd

Standard Product Selection – Cylinder Arrays

Part Number	Effective Focal Length EFL (mm)	Pitch P (mm)	Width W (mm)	Height H (mm)	Thickness T (mm)	# Lenses X NX	# Lenses Y NY
PP-LA-C-F220-P50-V1-AR1	2.20	0.50	25.4	25.40	1.00	30	1
PP-LA-C-F400-P50-V1-AR1	4.00	0.50	25.4	25.40	1.00	30	1
PP-LA-C-F800-P50-V1-AR1	8.00	1.00	25.4	25.40	1.00	15	1
PP-LA-C-Fxx-Pxx-Vx-ARx	tbd	tbd	tbd	tbd	tbd	tbd	tbd

AR1 optical coating: Broadband 900-1100nm R<0.25%, %, other coatings on request

EFL: Effective focal length @ 808 nm

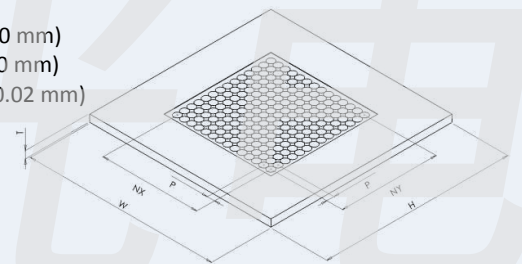
P: Pitch of lens

All tbd parameters can be customer specified

W: Width [+/-0.10 mm]

H: Height (+/- 0.10 mm)

T: Thickness (+/- 0.02 mm)



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.

Options

- EFL, Pitch, Width, Height and Thickness
- Number of lenses, X and Y
- Aspherical and acylindrical lenses
- Non-uniform, chirped or randomized grid
- Dual-surface lenses: BCX/BCV/meniscus

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

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