

# VIAVI Microlens Arrays

Physical Properties	
Material	Polymer-on-glass
Index of refraction	1.56 @ 633 nm
Maximum size	50.8 x 50.8 mm <sup>2</sup>
Clear aperture (CA)	Central 90% of part
Nominal fill factor	100%
Transmission spectrum	400-2000 nm
Temperature range	-50°C to 120°C
Damage threshold	> 20J/cm <sup>2</sup>

Nomenclature for standard microlens arrays:  
MLA-GS-fN

G designates geometry:

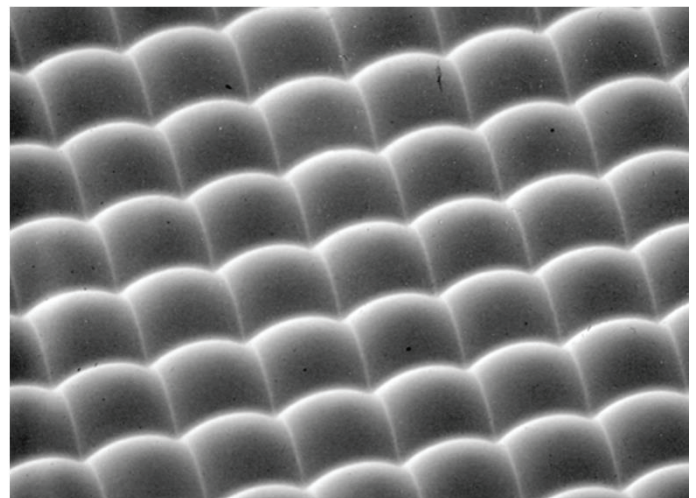
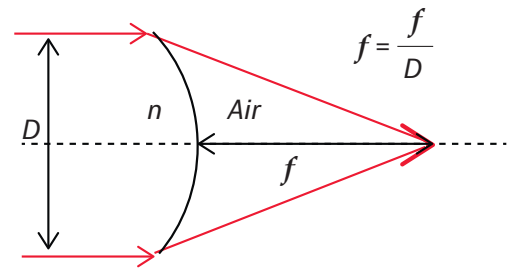
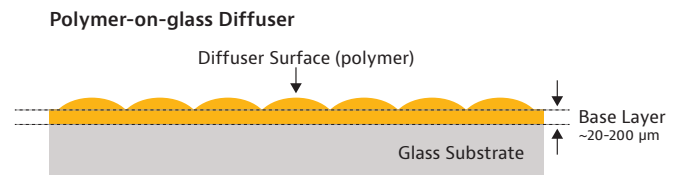
S (square), H (hexagonal), C (circular)

S designates lens size in μm

N designates f/number as defined in the diagram

### Technical Notes:

- Standard microlens arrays available in various lens sizes and geometries (see next page).
- For custom microlens arrays design and /or materials, such as Fused Silica and Silicon, please contact us.
- Handling and cleaning:
  - Avoid touching microlens surface
  - To clean just blow dry compressed air
- Operational recommendations are for informational purposes only. Your specific operating conditions may be distinct depending on other system and environmental variables.



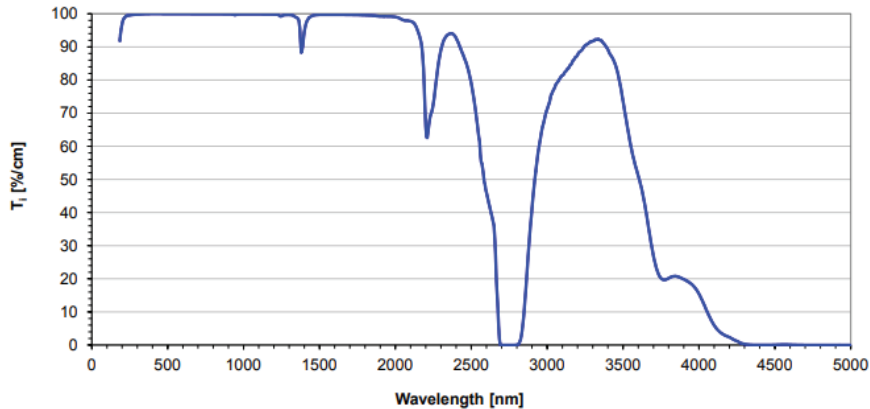
## Microlens Arrays Standard Models

Model	Geometry	Lens size ( $\mu\text{m}$ )	Fill factor	f/#
MLA-S125-f10	Square	125 x 125	100%	10
MLA-S125-f15	Square	125 x 125	100%	15
MLA-S125-f20	Square	125 x 125	100%	20
MLA-S125-f25	Square	125 x 125	100%	25
MLA-S125-f30	Square	125 x 125	100%	30
MLA-S100-f4	Square	100 x 100	100%	4.2
MLA-S100-f8	Square	100 x 100	100%	7.8
MLA-S100-f10	Square	100 x 100	100%	9.5
MLA-S100-f11	Square	100 x 100	100%	11
MLA-S100-f12	Square	100 x 100	100%	12.5
MLA-S100-f15	Square	100 x 100	100%	15
MLA-S100-f17	Square	100 x 100	100%	17
MLA-S100-f21	Square	100 x 100	100%	21
MLA-S100-f28	Square	100 x 100	100%	28
MLA-S250-f10	Square	250 x 250	100%	10
MLA-S250-f15	Square	250 x 250	100%	15
MLA-S250-f20	Square	250 x 250	100%	20
MLA-S250-f25	Square	250 x 250	100%	25
MLA-S250-f30	Square	250 x 250	100%	30

### Notes:

1. Maximum pattern size: 50.8 x 50.8 mm<sup>2</sup>
2. Standard substrates available at 50.8 x 50.8 mm<sup>2</sup> or 25.4 mm diameter, 2 mm thick
3. Lens size is defined as the size of the square aperture (square geometry), diameter of circumscribing circle (hexagonal geometry), lens diameter (circular geometry)
4. Handling and cleaning:
  - Avoid touching microlens surface
  - To clean just blow dry compressed air

## Transmission Spectrum



- Diffuser angles measured in the far-field @ 633 nm. Input beam size ~5 mm, detector subtense 0.25°. Actual angles may vary depending on wavelength or degree of collimation.
- For best uniformity, input beam should be many times larger than diffuser feature size.
- When used with coherent sources the diffuser produces speckle.
- Handle with gloves by edges and avoid touching diffuser surface. Blow with air/N<sub>2</sub> to clean. The plano side may be cleaned by wiping with an alcohol wipe.
- Edges are “fire polished” quality.
- Information subject to change without notice.

