

High Performance

Looking for homogeneous light, high efficiency and compact design? Multi-Lens Arrays (MLAs) made of SUPRAX® 8488 borosilicate glass and coatings from Auer Lighting deliver constant optical properties for your application over the entire system life, even at the highest power densities. Free-form lenses and AR coatings optimized to your requirements guarantee you and your customers homogeneous light fields with maximum intensity.

Cost-effectiveness

Auer Lighting manufactures multi-optics on a large industrial scale. Prototypes for your functional tests are part of the service.

Success

Auer Lighting's experts support you in the field of optical design, manufacture and coating of your multi-lens optics such as cluster lenses, fly's eyes or lens arrays. We are the right partner for the best possible beam collimation, light homogenization and projection. Let us write your success story together!

Applications

- Logo projection for interior and exterior automotive lighting
- Welcome lighting for car side mirrors and doors
- Laser collimation in digital projectors
- Beam shaping in light engines for stage and studio

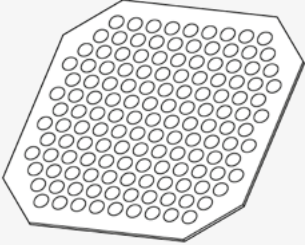
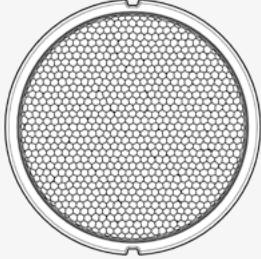
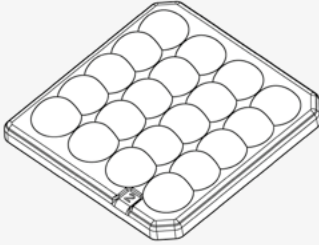
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MULTI-LENS ARRAYS

MADE OF SUPRAX® 8488 GLASS



Product Designs for Multi-Lens Arrays

| Performance | Collimation | Homogenization | Projection |
|-------------------------------------|--|---|---|
| Area of application | pre-collimation of LED emission | homogenization of LED emission | projection of multiple logos |
| Product design | <p>plano-convex lens array for Light Engines</p>  | <p>double-sided mixing lens with irregular lattice for round light distribution</p>  | <p>plano-convex micro-lens array for multiple logo projection</p>  |
| Applicable LEDs | e.g. Lumileds Altilon Intense 1x1, Luxeon Neo 0.5 mm ² , Osram OSLON® Compact CL, Nichia NJSW170C | pre-collimated beams of LED-arrays or COBs up to Ø 72 mm | e.g. Lumileds Altilon Intense 1x1, Luxeon Neo 0.5 mm ² , Osram OSLON® Compact CL, Nichia NJSW170C, Cree XD16 |
| Material | SUPRAX® 8488 borosilicate glass | SUPRAX® 8488 borosilicate glass | SUPRAX® 8488 borosilicate glass |
| Process | precision glass pressing, polishing of flat surface | direct pressing or precision glass pressing | precision glass pressing |
| Coating | double-sided AR | double-sided AR | double-sided AR |
| Array size | 84 mm x 84 mm x 3.5 mm | Ø 86 mm x 6.4 mm | 25 mm x 25 mm x 4 mm |
| Plate thickness (mm) | 1 | 3 | 2 |
| Lens aperture | round | hexagonal | round, truncated |
| Arrangement | hexagonal | stochastically distributed | linear, overlapping |
| Lens radius of curvature (ROC) (mm) | 2.61 | 1.64 | asphere ≤ 2 |
| Lens pitch (mm) | 6.49 | 2.51 | 5.5 / 4 |
| Pitch accuracy (µm across 25 mm) | ≤ 10 | ≤ 10 (front to back side: ±0.15 mm) | ≤ 10 |
| Contour accuracy (µm across 25 mm) | ≤ 20 | ≤ 20 | ≤ 20 |