

Lighting Optics

For nearly 40 years, Reflexite has been a world leader in microreplicated polymer optics. Reflexite is an integrated supplier providing system solutions from optical design to master tool fabrication to polymer replication and through to a finished optical component or subassembly. Reflexite Display Optics manufactures microstructured optical components and assembles subsystems for a diverse array of lighting applications. We have the capability to manufacture prism sheets, light guides, collimating diffusers, collimating Fresnel lenses, lens arrays, microlens arrays, diffractive optics, motheye microstructures and other optical components for the lighting industry.

LED Systems

Lens arrays, microlens arrays, Fresnel collimators, prisms and diffusers are now being used with LED-based lighting systems to optimize light output and direction.

Commercialized products include:

- signal lights - flashlights - spotlights
- flash units for digital cameras and cell phones
- automotive applications - decorative lighting

plus other applications requiring long life, no mercury LED systems.



Signals

Traffic lights, pedestrian lights and railway signal lamps use both traditional incandescent technology and the newer LED systems. In both technologies customized microstructured optical components are used to improve output efficiencies, control viewing angle and reduce power requirements.

Luminaires

Reflexite's luminaire technology consists of microreplicated prisms or crossed prisms that are optically bonded to a waveguide, or microstructures on a thin film substrate mounted within a light fixture to direct and distribute light in a specified manner.



Benefits

- Additional degrees of design freedom
- More efficient use of light and energy
- Faster optics (high aperture)
- Reduction in thickness and weight
- Reduction in power consumption

Enhancements

Product enhancements, such as special coatings, screen printing and diffusion treatments, are available to optimize performance and/or aesthetics. Enhancements can also be used to provide the unique look of a "signature" product.

Design Considerations

- Applications
- Modularity
- Photometrics
- Weight
- Size
- Aesthetics
- Cost Requirements
- Unit Volumes

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