

Linear Engineered Diffuser Molds

Light management using Engineered Diffusers - ED

Engineered diffusers control light output of lighting elements and light sources like lasers, LEDs, light fixtures and backlight units for LCDs. Engineered diffusers are surface diffusers with a very high transmission efficiency. holotools offers customer specified, tailor-made engineered diffusers with precise diffusion control and linear, elliptical and circular diffusion profiles. Engineered diffusers can be originated without seam-lines for large format applications. The HT-ED standard mold series was specifically designed as a set of multi-purpose engineered diffusers for R&D work, as well as for product and process development.

How HT-ED works

Engineered diffusers are flat optical elements, carrying a micro/nanopattern on one surface. The surface pattern on the HT-EDs redirects incident light in a controlled and efficient way in order to achieve a homogenisation effect or a desired illumination pattern.

HT-ED applications

- Beam shaping for laser sources
- Output control for LED lighting
- Optical films
- Light fixtures
- Multifunctional films in backlight units for flat panel display applications

Users of HT-ED molds

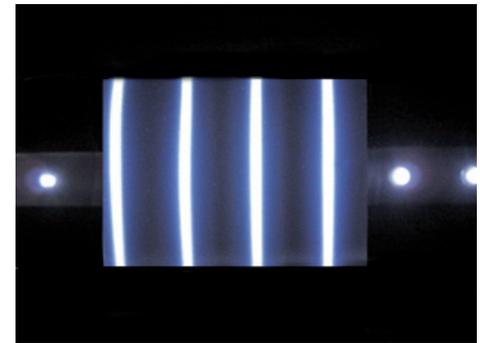
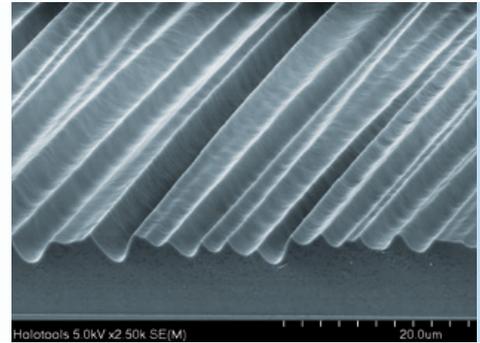
- Manufacturers of optical components
- Expert companies in injection molding and thermal embossing
- Film manufacturers – for product and process development work
- R&D institutes – for research activities on micro-optical structures
- Equipment manufacturers for injection molding, thermal embossing and Roll-to-Roll production equipment- as a reference to demonstrate the technical capabilities and homogeneity of their production processes

Specifications

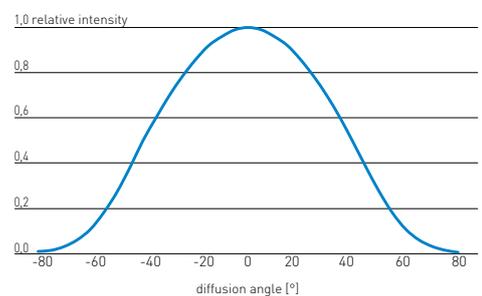
	HT-ED-L80B	HT-ED-L80D
Structure type	Engineered Diffuser	Engineered Diffuser
Output type	Linear diffusion	Linear diffusion
Diffusion angles (FWHM)*	1°/ 80°	1°/ 80°
Material	Nickel	Nickel
Mold thickness	300 µm	300 µm
Mold size	70 mm x 70 mm	120 mm x 120 mm
Active area	50 mm x 50 mm	100 mm x 100 mm

* Embossed into a material with an optical index of refraction of 1.5

HT-ED-L80



Diffusion profile



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