

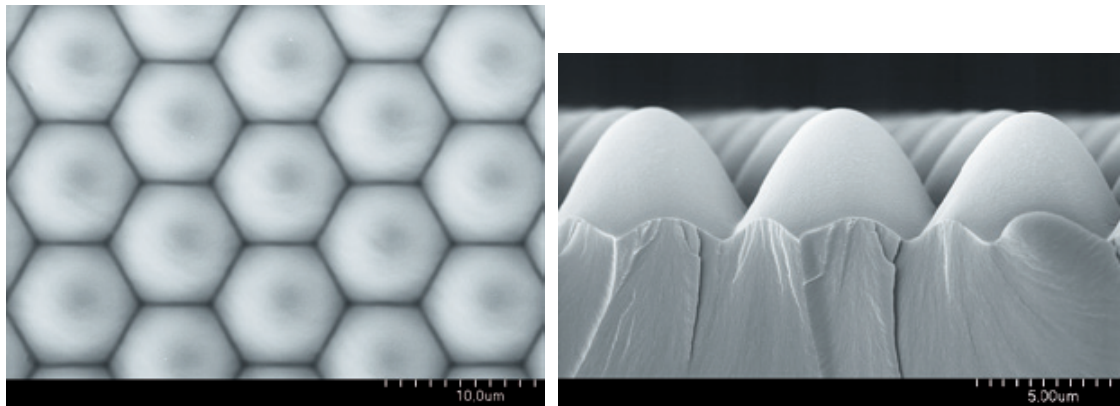
HT-MLA-09

MicroLens Array Molds

微透镜阵列模具

Light management using MicroLens Arrays – MLA

利用 MLA 微透镜阵列进行光的管理



Microlens arrays control the light output of lighting elements to achieve homogenization or beam shaping. Unlike most other micro lens arrays, HT-MLAs have no dead area between the lenses. They are arranged in a honeycomb geometry with three dimensional intersections between the single lenses. Customer specified HT-MLAs can be made in a variety of lens diameters and lens heights, and even with an elliptical light control. HT- MLA-09 series was specifically designed as a generic microlens array for R&D work, as well as for product and process development.

微透镜阵列通过控制照明元件的光输出以实现均匀化或者光束整形。与大多数其他微透镜阵列不同，HT-MLA 在透镜之间有死区，它们呈蜂窝状排列，单个透镜之间又有三维交叉。我们可为客户定制 HT-MLA，可以制作不同的透镜直径和透镜高度，甚至是椭圆形的光控制。HT-MLA-09 系列是专为科研中的通用微透镜阵列而设计的，也可用于生产和工艺改进。

How HT-MLA works 工作原理

Microlens arrays are flat optical elements, that can be used to control the directional output of light sources and backlight units. The shape of HT-MLAs redirects incident light in a controlled and efficient way in order to achieve a homogenisation effect. In backlight units additionally a recycling effect is used for homogenisation. HT-MLAs can also be used for coupling out of light from LEDs / OLEDs and for coupling of solar radiation into flexible solar cells.

微透镜阵列是平面光学元件，可以用来控制光源和背光单元的方向性的输出。HT-MLAs 的形状可以改变入射光的方向，使其以一种可控和有效的方式，以达到均匀化的效果。

在背光单元中，额外的循环效应同样可带来均匀化。HT-MLA 也可用于从 LED/OLED 发出的光的耦合，和太阳辐射进入到柔性太阳能电池的耦合。

HT-MLA applications 应用

- Homogenisation of light output
- Control of the angular distribution in lighting systems
- Optical films
- Multifunctional films in backlight units for flat panel display applications
- Outcoupling from light emission in LED / OLED / Laser applications
- Thin-film and organic photovoltaics

- 光输出均匀化
- 照明系统中角度分布的控制
- 光学薄膜
- 用于平板显示器背光单元的多功能薄膜
- LED/OLED/激光应用中的光发射输出耦合
- 薄膜与有机光伏

Users of HT-MLA molds 用户

- 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

HT-MLA standard molds are for use in Research & Development.

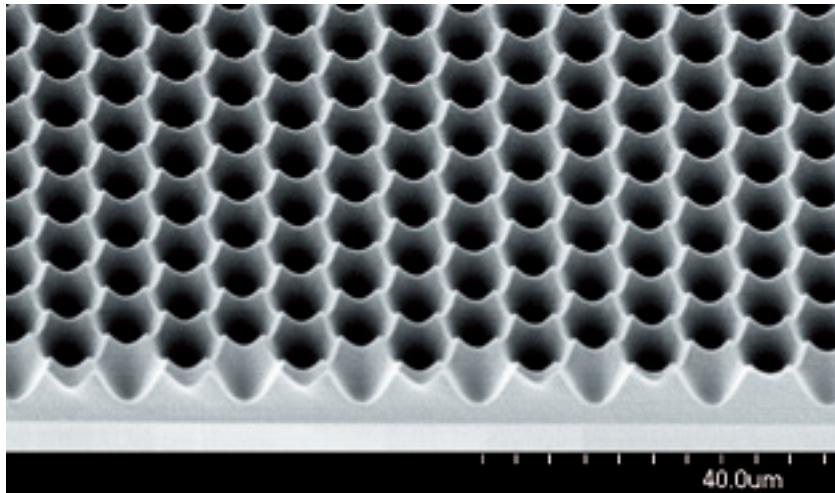
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- 薄膜制备者-用于产品和工艺开发工作
- 研发机构-用于微光学结构的研究活动
- 注塑、热压以及卷对卷生产的设备制造商 – 作为演示他们生产工艺的技术能力和重复性的参考

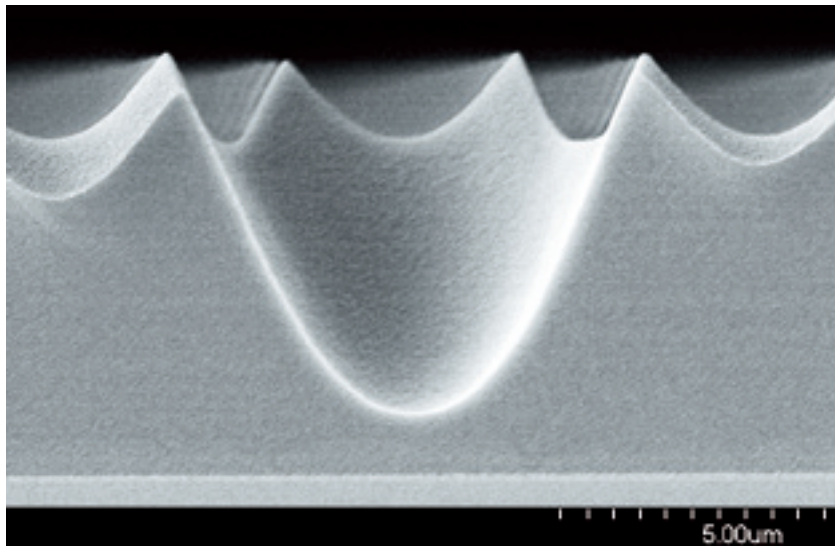
HT-MLA 标准模具用于研发。商业用途需要特许权使用协议。

Specifications

	HT-MLA-09B	HT-MLA-09D
Structure type	Microlens Array	Microlens Array
Structure geometry	Hexagonal/Honeycomb	Hexagonal/Honeycomb
Lens diameter	9 μm	9 μm
Average lens height	5.5 μm	5.5 μm
Material	Nickel	Nickel
Mold thickness	100 μm – 300 μm	100 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



模具表面



模具剖视

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