

# LUXIMPRINT

## FOR IMMEDIATE RELEASE

# Luximprint to add Opaque Substrate Masking Capabilities to its Optical 3D Printing Process Portfolio

WEMELDINGE, NETHERLANDS / NOVEMBER 2020 – Luximprint, a global leader in multi-market prototyping services for Printed Optics and Optographix based in The Netherlands, announced the availability of a next process feature including 'surface masking for optical substrates'. The new capability enables seamless in-process integration of opaque '*masking*' and '*reflecting*' layers along with functional optically 3D printed features - a truly unique capability offered straight from its proprietary optical 3D printing platforms.

## **New Features for Enhanced Light Control**

Lighting solutions - no matter they concern functional or decorative lighting - ask for the most precise light control. When considering side- and backlit applications in particular, the front-end medium, commonly existing of a translucent sheet, has to be uniformly lit to adhere to the established regulations for glare or would, on the contrary, have light to be coupled out selectively by using precise optical light guiding features at a surface level.

Nowadays, there are solutions available on the market that meet the requirements for the latter scenario, such as 'Blackout Materials'. Those may include fabrics and frames that can be attached to the luminaire to eliminate stray light or other unwanted light sources, or to build light-tight structures. However, the resulting outcomes of these approaches are still a 'best-compromise' built-together of multiple items in order to generate a properly matching solution.

## **Opaque Black and White Surface Masking**

Now, with access to new 3D printing resins, including 'black' and 'white', it becomes possible to combine optical resins with tinted resins. Or, more specifically to integrate opaque black and white tones, in one single process. While the use of black resin absorbs the light, white tints have excellent reflective properties.

In addition, a white base-layer, or multiple white layers, can be integrated into a particular optical solutions to optimize total internal reflection inside the substrate sheet. As such, lens sheets can be flatter while boosting the same output with only minimal reflection losses.

On the contrary to reflecting the light by means of adding a white reflective layer, a black absorption layer can be selected. In many cases, unused light rays are considered as cumbersome, especially when blinding or unwanted stray light effects are visible.

By blocking the light with a porous cover (or: "mask" it), light rays are enabled to leave the transportation medium (mostly PMMA, Polycarbonate or glass) and get coupled out at selective spots only.

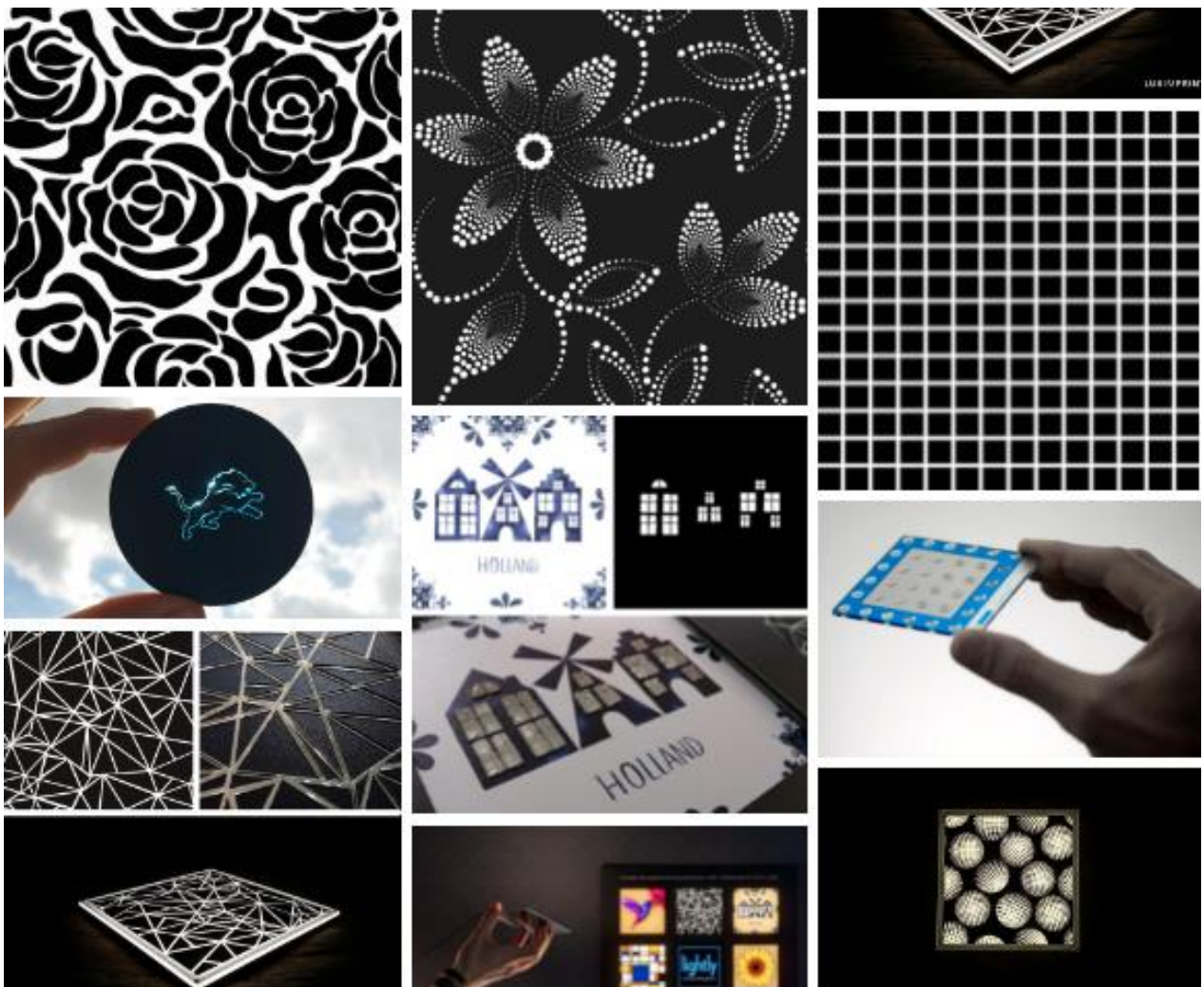
This new feature enables to illuminate only particular areas while at the same time avoiding the light to travel through other parts of the surface by blocking it off. This brings along an interesting proposition for especially large-format optics, as used in display solutions, planar lighting applications and other large luminous surfaces.

## Targeted Illumination – Optical ‘Finishing Touch’

In addition, the Luximprint Additive Optics Fabrication process enables to put optical lens features exactly at the spot where the light is welling-up from the inside of the surface. Rather than enabling the light to travel into any direction, light rays can be 're-grouped' and directed into a specific target direction. The ‘optical touch’ may make the solution even more appealing and directionally functional.

Luximprint technology users are encouraged to discover the new process capabilities for their use. Reference samples are available via the [Luximprint Sample Shop](#), or just contact our global team to discuss your next project challenge!

### IMAGES:



**About Luximprint**

Luximprint, based in Wemeldinge, The Netherlands, offers Additive Manufacturing Services for decorative and functional optical plastics. Services are offered to engineering and design professionals in illumination markets that aim for a faster, more flexible and cost-efficient development cycle. Key product solutions include printed optics, reflective surfaces, textured surfaces and Optographix. Direct 'CAD-to-Optic' manufacture avoids the costly commitments related to tooling and inventory in conventional fabrication, and opens door to new possibilities in lighting system design and development.

[www.luximprint.com](http://www.luximprint.com)

***For more information, interviews and additional footage, please contact:***

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