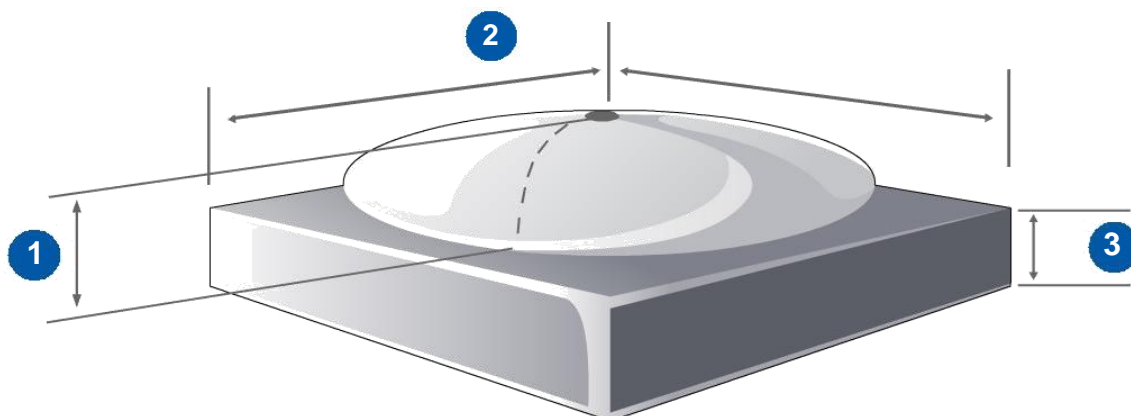


## Introduction

Luximprint optical 3D printing platforms are primarily engineered for additive fabrication of large format optics and Optographix. Printed optics may appear as large-format optics, or singular smaller optics (separated from the substrate sheet).

Size, feature height, materials and build volume are well-balanced to meet the most demanding applications. Further customization (beyond specs) is possible on demand, please [contact our sales engineers](#) to learn about the possibilities.

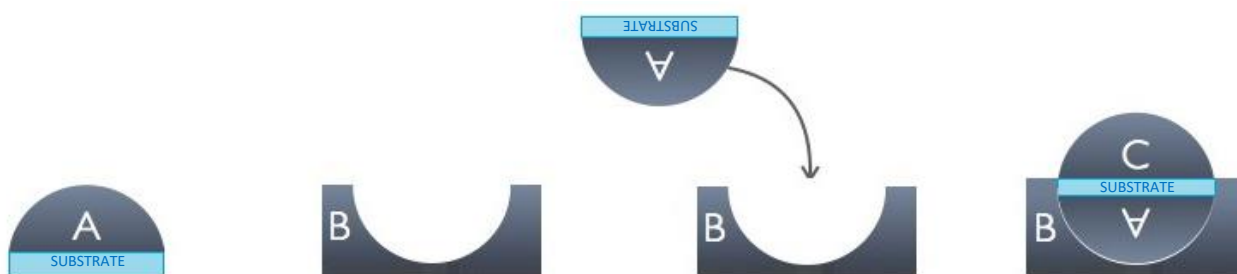
### Build Tray and Lens Format



① Effective lens structure height	② Maximum Format	③ Minimum substrate height*
<b>Total structure height (mm) :</b>	<b>Maximum lens / substrate size (length*width) :</b>	<b>Minimum substrate height*:</b>
< 5.0 mm (0.197")	200 mm x 200 mm (7.874")	4.0 mm (0.157")
< 3.0 mm (0.118")	600 mm x 600 mm (23.622")	3.0 mm (0.118")
< 2.0 mm (0.079")	1000 mm x 610 mm (39.370" x 24.016")	2.0 mm (0.079")
< 1.0 mm (0.0395")	1000 mm x 610 mm (39.370" x 24.016")	1.0 mm (0.0395")
< 0.5 mm (0.020")	1000 mm x 610 mm (39.370" x 24.016")	1.0 mm (0.0395")

*\*) Other substrate combinations or even thin films are possible. In case of any doubts or suggestions, please feel free to contact the Luximprint Sales Engineering team for consult.*

### Dual Sided Printing Approach



① Print first positive onto substrate	② Print mold negative (part holder)	③ Flip 1 <sup>st</sup> positive and load in holder	④ Print 2 <sup>nd</sup> positive onto flat 'bottom' of 1 <sup>st</sup> positive
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## Golden Design Rules


In order to ensure the printability of your parts, we have established the following design guidelines. Please make sure you consider them before submitting your CAD file to us. On the contrary to typical 3D printing processes you might be used to, no additional support materials (removables / rewashables) are used in the Luximprint process, nor support structures being built, thus ensuring optically smooth surfaces and features straight from the printer with zero need for post-processing.

Design Complexity	no overhangs	no undercuts	vertical walls	vertical walls	no hollows <sup>1)</sup>
Possible?	X	X	✓	✓	X

1) Hollows straight from the process are not possible. Combined with conventional technologies (machining and diamond turning) however, parts can be reworked to demand.

## Optics Design Sourcing

In the Luximprint process, we can work with a variety of CAD file extensions. When submitting your CAD-file to us, please make sure it matches with one of the file formats as mentioned below. We prefer 'solids' above unstructured triangulated 'surface tessellation files (.STL)' to ensure a smooth processing and most accurate production of your part(s).

SUPPORTED FILE FORMATS	DESIGN SOFTWARE INTEGRATION
 <ul style="list-style-type: none"> <li>.SLDPRT / .SLDASM (SolidWorks)</li> <li>.IPT / .IAM (Inventor)</li> <li>.DWG / .DXF (AutoCAD)</li> <li>.STP / .STEP / .STL / .IGES</li> <li>.RAY (Photopia)</li> </ul>	 <p>We have collaborations with various leading Optics Design Software firms to ease simulating with our materials. Please contact us to learn about the specific possibilities.</p>

## Don't have the skills, flexibility or budget to source optics design in house?

For that reason, we teamed up with a team of globally active (independent) designers with far reaching industry experience. Educated and trained by us to work according our printing specs, they would be delighted to support you on your next project!



Please refer to our [Optics Design Hub](#) for support on your own or just feel free to ask us for an introduction!

## 3D Printing Capabilities Optical Plastics

These 'Design Guidelines' are a part of our overall 3D Printing Capabilities Library. For materials and surface related guidance, please refer to our 'Material Specifications' or 'Surfaces & Finishes' documentation.

