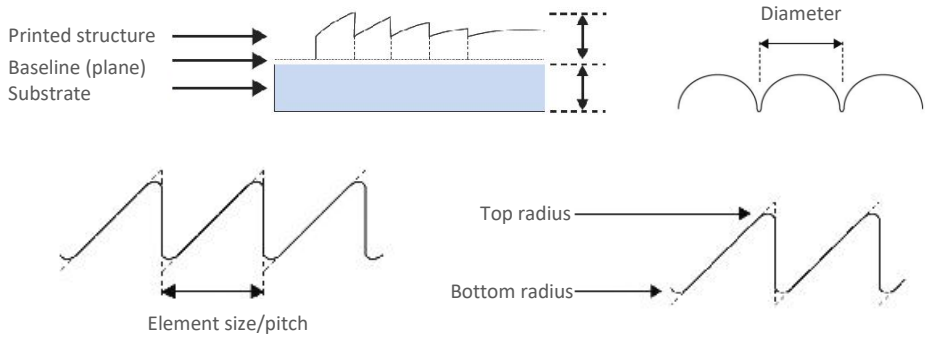
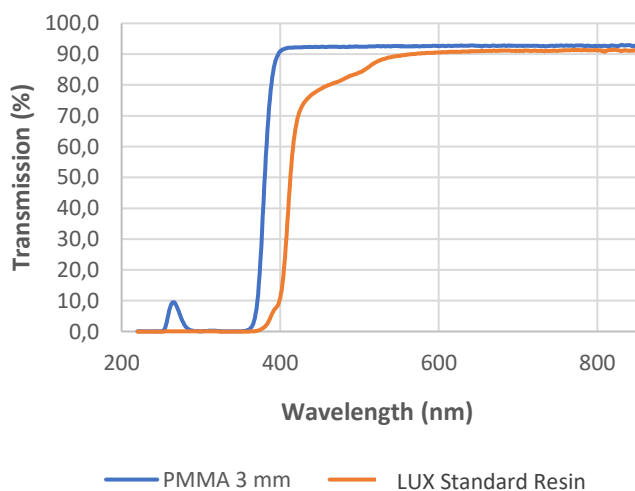


## Introduction

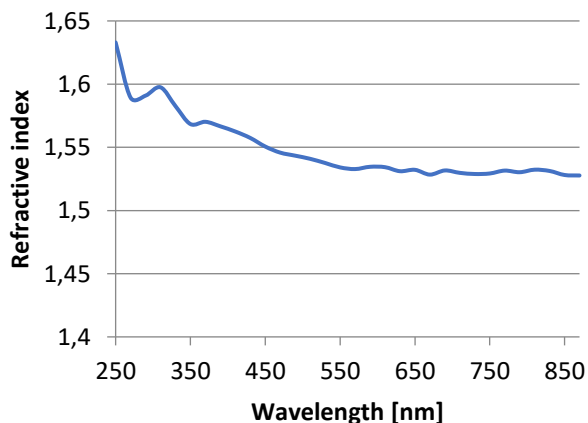
The Luximprint optical 3D Printing Platforms are primarily engineered for rapid prototyping of decorative and functional optical plastics. 'LUX Standard' resins are originally developed for use in illumination and 'entry' imaging applications and suitable for use in engineering and temporary project environments. When it comes to fast, flexible and cost-effective prototyping of custom optical textures and features with moderate material requirements, LUX Standard is the material of choice.

|                           |   |
|---------------------------|---|
| User definitions          |  <p>Printed structure</p> <p>Baseline (plane)</p> <p>Substrate</p> <p>Element size/pitch</p> <p>Top radius</p> <p>Bottom radius</p> <p>Diameter</p> |
| Material lens structure   | UV-cured, PMMA like acrylic.  |
| Substrate material        | <b>Standard:</b> Polymethyl-methacrylaat (PMMA) / Glycol Modified Polyethylene Terephthalate (PET-G) / Polycarbonate (PC). <b>Specialties:</b> Other base materials and thin films are available upon request.                        |
| Colored materials / resin | Available on request.   |
| Application temperature   | -20° C / + 60° C (-0,4° F / + 140° F)   |

LUX STANDARD // TOTAL LIGHT TRANSMISSION (VLS)



LUX STANDARD // REFRACTIVE INDEX (VLS)



**NOTE:** Detailed visible light transmission data and refractive index charts are available upon request. Please [contact us](#) to receive your data.



## Material Overview

|   | LUX STANDARD RESIN   |
|---|--|
| <b>Build Tray</b>                                   |  |
| Max building area <sup>(1)</sup>                    | 1000 mm x 610 mm (39.370" x 24.016")   |
| Max feature print height (excl. substrate)          | 6.0 mm (0.236")  |
| Min feature print height (excl. substrate)          | 300 microns*   |
| Shape conformity <sup>(2)</sup> (Average deviation) | 80 microns*  |
| Min element size / pitch                            | 1.0 mm (0.039")  |
| <b>Optical Performance (420 nm - 780 nm)</b>        |  |
| Internal transmission 1.0 mm                        | 97.6%  |
| Haze value  | 0.40%  |
| Refractive index @ 587,6 nm                         | 1.540  |
| Yellowness Index @ 2.0 mm                           | 2.9  |
| Application   | Indoor: Research and engineering environments; temporary project environments<br>Outdoor: with cover and surface protection only |
| Outdoor use   | If UV coated.<br>For enhanced material characteristics – please refer to our LUX Crystalline materials                           |

**Table input:** Sample with 2.0 mm printed lens structure on 3.0 mm thick PMMA base substrate.

(1) Larger sizes available on request. Please also refer to our Design Guidelines for more details.

(2) Shape conformity: the difference between the CAD file and actual 3D printed model. In fact, tolerances vary from 'only a few microns' to 'tens' or 'hundreds' of microns depending on the feature to be printed. As all our work is custom, it is hard to display an exact figure here. Please verify the accurate expectations with one of the Luximprint Sales Engineers.

For any material related questions, please [contact our sales engineers](#) to learn about the availability and possibilities for your custom project.

## 3D Printing Capabilities Optical Plastics

These 'Material Specifications' are a part of our Printoptical Capabilities Library. For design and surface related questions, please refer to our 'Design Guidelines' or 'Surfaces & Finishes' documentation.

