

## BEACON Newsletter - January 2025

### Formlabs Form 4 & 4L Redefining Precision in Large-Scale SLA 3D Printing

In this month's newsletter, we're excited to introduce updates, tips, and resources to help you unlock the full potential of your Formlabs Form 4 and Form 4L 3D Printers.

In the ever-evolving world of 3D printing, precision, versatility, and scalability are critical factors that set apart leading technologies. Formlabs, a pioneer in the 3D printing industry, introduces the Form 4 and 4L, a large-format SLA printer designed to meet the growing demands of professionals and industries seeking high-quality prints on a larger scale.



#### **Form 4:**

**Unmatched Precision, Ultimate Versatility** The Form 4 takes professional 3D printing to the next level. Engineered for accuracy and speed, it is perfect for producing prototypes and high-quality parts with fine details. The Form 4 combines industrial-grade technology with an intuitive design to meet the needs of professionals looking for reliable and scalable 3D printing solutions.

#### **Form 4L:**

**Big Ideas, Bigger Prints** Designed for large-scale projects, the Form 4L delivers the same high resolution as the Form 4 but with a significantly larger build volume. It's perfect for creating bigger parts or increasing throughput without compromising on quality. With the Form 4L, you can take on ambitious projects and bring complex designs to life effortlessly.

FORM 4/ 4B	FORM 4L /4BL
<p><b>Technology</b> Masked Stereolithography (MSLA)</p>	<p><b>Technology</b> Masked Stereolithography (MSLA)</p>
<p><b>Printer Engine</b> Low Force Display™ (LFD)</p>	<p><b>Printer Engine</b> Low Force Display™ (LFD)</p>
<p><b>Build Volume (W x D x H)<sup>5</sup></b> 20.0 × 12.5 × 21.0 cm 7.9 × 4.9 × 8.3 in 5.25 liters</p>	<p><b>Build Volume (W x D x H)<sup>5</sup></b> 35.3 × 19.6 × 35.0 cm 13.9 × 7.7 × 13.8 in 24.2 liters</p>
<p><b>Light Source</b> Backlight Unit: 60 uniform-wavelength LEDs, a plano-convex lens array, and integrated air cooling 405 nm optical wavelength 16 mW/cm<sup>2</sup> optical power intensity delivered to the cure plane 50 μm pixel size</p>	<p><b>Light Source</b> Backlight Unit: 145 uniform-wavelength LEDs, a plano-convex lens array, and integrated air cooling 405 nm optical wavelength 16 mW/cm<sup>2</sup> optical power intensity delivered to the cure plane 46 μm pixel size</p>
<p><b>Resin Cartridges</b> 1</p>	<p><b>Resin Cartridges</b> 2</p>
<p><b>Maximum Print Speed</b> 100 mm/hour, 3.9 in/hour</p>	<p><b>Maximum Print Speed</b> 80 mm/hr, 3.1 in/hour</p>
<p><b>Materials</b> 38 industry-leading Formlabs materials, including 15 biocompatible, or third-party materials using Open Material Mode. More exciting new materials are currently in development.</p>	<p><b>Materials</b> 32 industry-leading Formlabs materials, including 12 biocompatible, or third-party materials using Open Material Mode. More exciting new materials are currently in development.</p>
<p><b>PreForm File Types</b> STL, OBJ, and 3MF file input FORM file output</p>	<p><b>PreForm File Types</b> STL, OBJ, and 3MF file input FORM file output</p>
<p><b>Software</b> PreForm, Dashboard, Fleet Control</p>	<p><b>Software</b> PreForm, Dashboard, Fleet Control</p>
<p><b>Printer Weight</b> 18.3 kg 40.4 lb</p>	<p><b>Printer Weight</b> 58.5 kg 129 lb</p>

## Why Choose the Form 4L?

The Form 4L redefines what's possible in stereolithography (SLA) 3D printing. It combines user-friendly design, exceptional material capabilities, and an expansive build volume, making it an ideal choice for those requiring intricate details in larger models or multiple smaller parts in a single print job.



## Key Features of the Form 4L

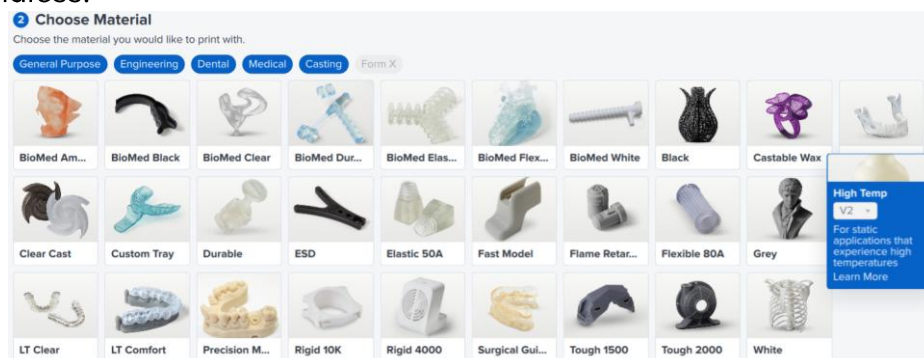
### 1. Large Build Volume

The Form 4L offers an impressive build volume, making it perfect for producing larger prototypes, detailed models, or multiple parts simultaneously. Its size unlocks opportunities for industries such as healthcare, engineering, and manufacturing to scale up their projects without compromising on quality.



### 2. Material Versatility

The Form 4L supports a wide range of materials, enabling users to choose the perfect resin for their specific application. From standard resins to specialty materials for dental, engineering, or biocompatible applications, the possibilities are endless.



### 3. User-Friendly Operation

Designed with ease of use in mind, the Form 4L features a streamlined workflow. Its intuitive software interface, remote monitoring, and maintenance-friendly design ensure seamless operation even for those new to large-format 3D printing.



### 4. Cost-Effective Production

By leveraging Formlabs' robust ecosystem, the Form 4L reduces material waste and operational costs, making it an economical solution for scaling up production.

#### Applications of the Form 4L:

The versatility of the Form 4L makes it suitable for a range of industries:

##### Healthcare:



Create precise surgical guides, prosthetics, and anatomical models.

##### Engineering:



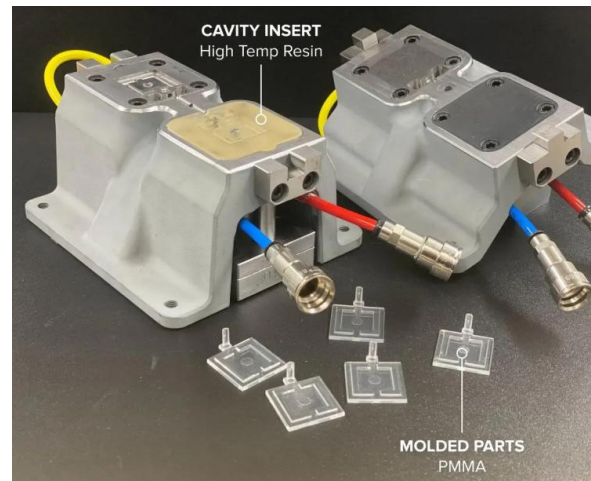
Build large prototypes or functional parts for rigorous testing.

## Education



Enable students to explore large-scale projects and concepts.

## Manufacturing



Produce end-use parts, Molds, and tooling with ease.

### Transform Your Workflow with Form 4L:

Whether you're an innovator pushing the boundaries of design or a business aiming to increase efficiency, the Formlabs Form 4L offers a robust solution for large-scale 3D printing. Its ability to deliver consistent, high-quality results across various applications makes it a game-changer in the industry.

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