

# Blu User Guide

User Guide for Blu (Emerald Blue, Blu Clear V2, Blu Obsidian Black, Blu Nylon Black, Blu Nylon Mecha)

## 1. Introduction

Blu is developed to be a strong resin that has high resolution, precision, and is easy to print. It is tough and hard enough for making functional parts yet easy to print and clean for general use.

And it should not stink up user's work environment

**Due to higher polymer content for its outstanding mechanical properties, the ideal printing condition for Blu is over 25C.**

If user can maintain a resin temperature of 30C, the printing time could be further reduced

**The shelf life of the resin is one and a half years.**

Even if it can be stored for such a long time, we still recommend that you use it in half a year.

UV Resin is a liquid sensitive to temperature, light, and time. Long-term storage will cause the components and pigment of the resin to precipitate and separate.

**2. Print setting download:** [Please download profiles here the base for Elegoo, Anycubic, Phrozen, Peopoly, EPAX, Creality.](#)

**Check out recommended support settings if you have print failures**

**Exposure For Blu and Blu Clear V2 (Not Blu Obsidian Black, Not V3)**

Recommended		Resin Temperature 25-35C			Room temperature 20-28C		
Printer	Layer Height	Exposure (s)	# of Initial Layers	Exposure for Init Layers	Exposure (s)	# of Initial Layers	Exposure for Init Layers
Photon	50um	11-12 (s)	4	60 s	12-13 (s)	6	90 s
Photon-S	50um	10 (s)	4	60 s	11 (s)	6	75 s
LD-002R	50um	10 (s)	4	40 s	11 (s)	4	50 s
EPA X1	50um	10 (s)	4	55 s	10 (s)	6	75 s
EPA X1	100um	12 (s)	4	75 s	12 (s)	6	90 s
Elegoo Mars	50um	11 (s)	4	50 s	11 (s)	6	60 s
Shuffle	50um				9(s)	5	75 s
Shuffle XL	50um				12(s)	5	75 s
D7	50um				9(s)	5	75 s
Inkspire	50um	11s	4	50 s	12-13 (s)	6	90 s
Sonic Mini	50um	4s	5	35s	4s	5	35s
Moonray	50um	use settigs for nextdent Ortho rigid			use settigs for nextdent Ortho rigid		

**Note: 10mm lift distance help, lift speed 40mm/min, with support facing side surface**

Photon Mono	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0ft-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0ft-jfBLp4L9mKYebY90fHHO?usp=sharing</a>
Photon Mono X	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0ft-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0ft-jfBLp4L9mKYebY90fHHO?usp=sharing</a>
Mars 2 Pro	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0ft-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0ft-jfBLp4L9mKYebY90fHHO?usp=sharing</a>
Mars 3	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0ft-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0ft-jfBLp4L9mKYebY90fHHO?usp=sharing</a>
Saturn	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0ft-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0ft-jfBLp4L9mKYebY90fHHO?usp=sharing</a>

Sonic Mini 4K	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>
Might 4K	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>
Mega 8K	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>
Slash	<p>Siraya on the Slash is better than anything I've tried...and I've tried 5-6 other resins on the Slash. Example from left to right are 100um, 75um, and 50um. The one I'm holding is 50um.</p> <p>100um 5 sec 75um 4 sec 50um 3.5 sec 25um 2.8 sec 10um 2.5 sec</p> <ul style="list-style-type: none"> <li>- LED power 250 (default)</li> <li>- First layer for all 12sec/ first 3 layers (default amount).</li> <li>- Slow setting for Lift speed</li> <li>- 8mm lift height is safest and allow time resin to flow back (they only allow you to pick from 3,8, and 15mm height...which sucks...I'd like 6mm if I could.</li> <li>- Cooldown between layers on auto (smaller prints i do 2sec to speed things up)</li> <li>- Supports point(head) size no less than 1mm, but 1.5 is recommended with 2mm shaft.</li> </ul>

#### Exposure For Blu Obsidian Black and for Blu V3

Recommended		Resin Temperture 25-35C			Room temperature 20-28C		
Printer	Layer Height	Exposure (s)	# of Initial Layers	Exposure for Init Layers	Exposure (s)	# of Initial Layers	Exposure for Init Layers
Photon	50um	9.5 (s)	4	60 s	9.5 (s)	4	60 s
Photon-S	50um	7.5 (s)	4	50 s	7.5 (s)	4	50 s
LD-002R	50um	9 (s)	4	40 s	9 (s)	4	50 s
EPA X1	50um	9 (s)	4	55 s	9 (s)	4	55 s
Elegoo Mars	50um	9.5 (s)	5	45 s	9.5 (s)	5	45 s
Shuffle	50um				9(s)	5	75 s
Shuffle XL	50um				12(s)	5	75 s
D7	50um				8(s)	5	65 s
Inkspire	50um	10s	4	50 s	10s	4	50 s
Moonray	50um	use settigs for nextdent Ortho rigid			use settigs for nextdent Ortho rigid		
Sonic Mini	50um	3s	5	30s	3s	5	30s

**Note: 10mm lift distance help, lift speed 40mm/min, with support facing side surface**

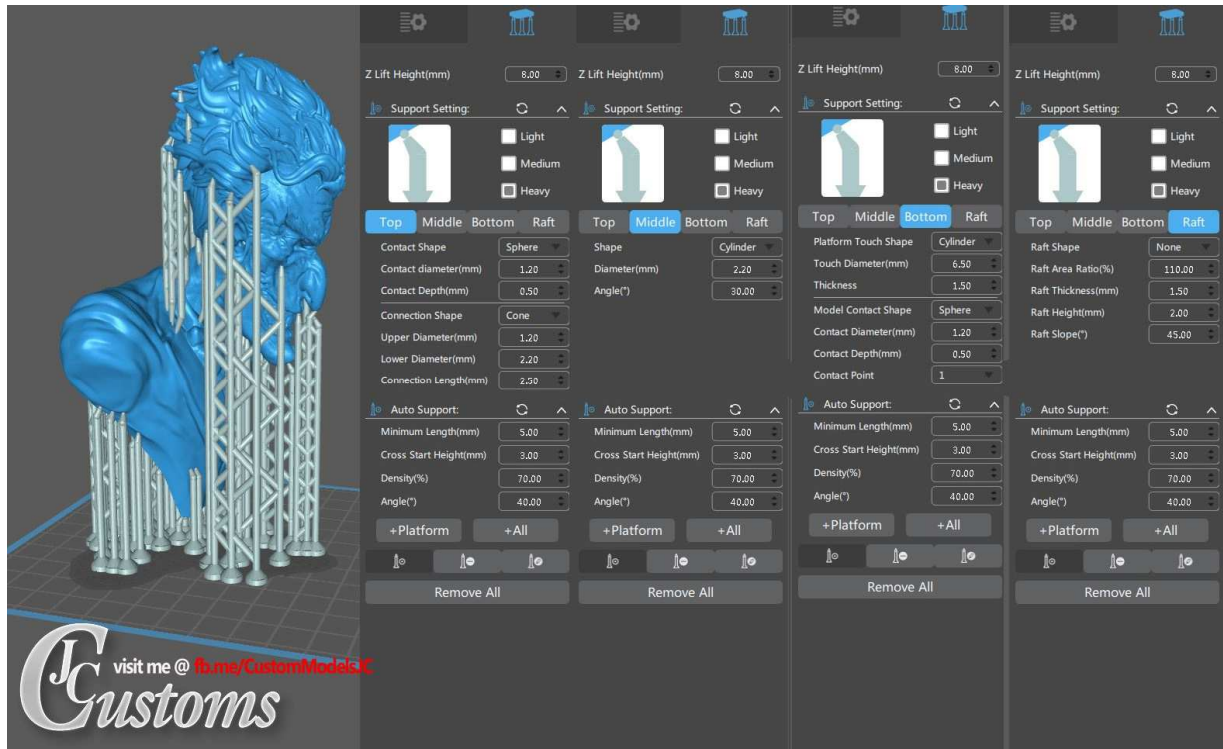
	Recommended	Resin Temperature 25-35C			Room temperature 20-28C		
Printer	Layer Height	Exposure (s)	# of Initial Layers	Exposure for Init Layers	Exposure (s)	# of Initial Layers	Exposure for Init Layers
Photon Mono	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
Photon Mono X	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
Mars 2 Pro	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
Mars 3	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
Saturn	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
Sonic Mini 4K	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
Might 4K	Where to find printer profiles: <a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
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#### Exposure For Blu Nylon Black and Blu Nylon Mecha

	Recommended	Resin Temperature 25-35C			Room temperature 20-28C		
Printer	Layer Height	Exposure (s)	# of Initial Layers	Exposure for Init Layers	Exposure (s)	# of Initial Layers	Exposure for Init Layers
Photon Mono	<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
Photon Mono X	<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
Mars 2 Pro	<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
Mars 3	<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
Saturn	<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
Sonic Mini 4K	<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
Might 4K	<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90fHHO?usp=sharing</a>						
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### 3. Recommend best support settings

Make sure the support tip diameter is 1.2mm for larger prints with a depth of 0.5mm.



(Settings come from: <https://www.facebook.com/groups/sirayatech/permalink/290257771885611/>)

It is best to use island style base like below left, not the raft style on the right. If you have problem keeping first layer on, make sure you level again to minimize gap between build plate and LCD screen.

#### 4. Cleaning

- Use a painter brush (or any brush made with hair) remove excess resins on the printed part with Use 95% concentrated Ethanol (preferred) or IPA to clean. Some form of methanol should work but make sure it does not contain acetone.
- Do not submerge the parts in alcohol for more than 5 minutes After cleaning, remove alcohol as soon as possible with a hair dryer or air blower. For complex parts with lots of cavities, it may be a good idea to clean/dry multiple times.
- You can check by touching the dry surface of the part to see if it is still sticky. If the dry surface is still sticky, wash some more and dry again.

#### 5. Post Curing

- Blu reached its optimal strength when the printed part was post-cured with UV after cleaning. Use 395-405nm UV light and cure for about 15 minutes. (UV light below 395nm will make the resin yellow quickly)
- Make sure the resin is completely cleaned off and there is no alcohol left (it needs to be dry) on the print before curing.
- Curing by submerging objects in water will significantly increase curing efficiency.

#### 6. Biocompatibility Certification

For Biocompatibility related application, please follow post-processing guideline here: <https://siraya.tech/blogs/news/blu-biocompatibility-certification-iso-10993>

#### 7. Mechanical Properties

##### Blu Tough Properties

Shore Hardness 85D  
 Tensile Stress at Break 50 MPa  
 IZOD Impact 45 Notched, J/m  
 HDT at 0.455 MPa 70°C  
 Elongation at Break 32%  
 Young's Modulus 1800 MPa

##### Blu Nylon Properties

Shore Hardness 80D  
Tensile Stress at Break 60 MPa  
IZOD Impact 53 Notched, J/m  
HDT at 0.455 MPa 63°C  
Elongation at Break(%) 40%  
Young's Modulus 2000 MPa

**Blu Nylon Mecha Properties**

Shore Hardness 73D  
Tensile Stress at Brea 58 MPa  
IZOD Impact 50 Notched, J/m  
HDT at 0.455 MPa 65°C  
Elongation at Break 37%  
Young's Modulus 1900 MPa