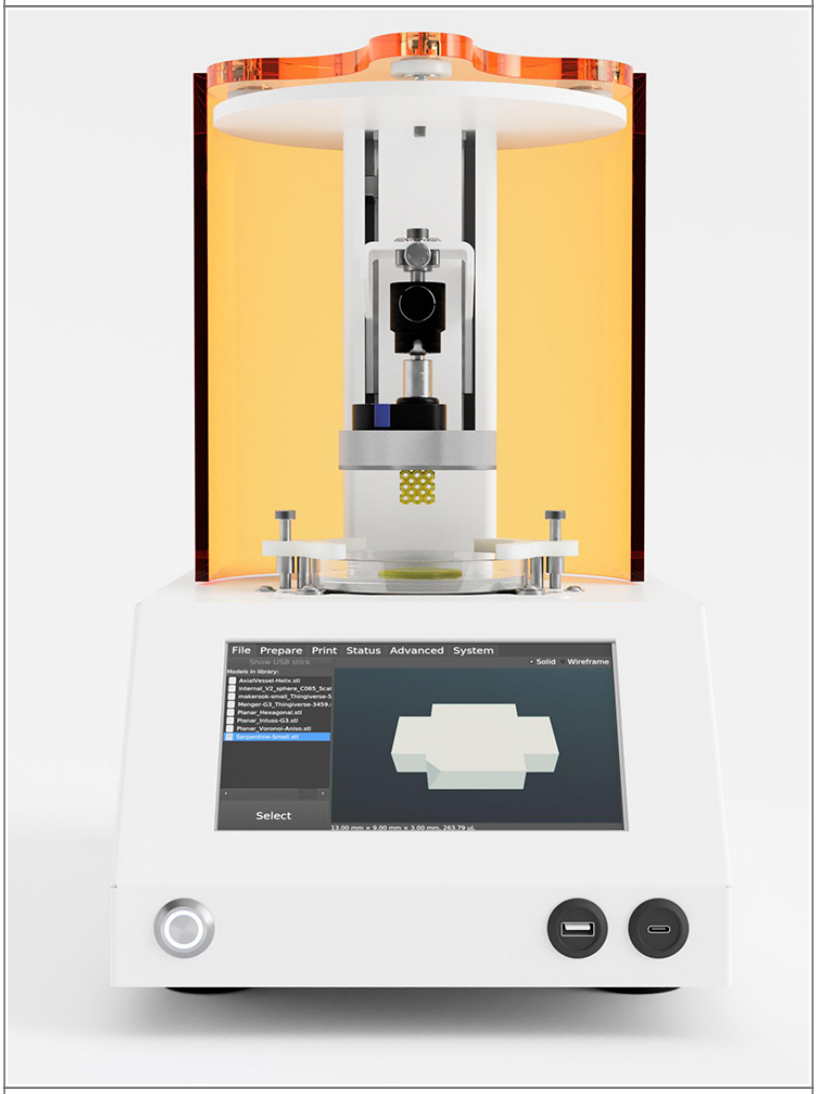
LUMEN X

LUMEN X

Tool Type: “3D Printer”
Location: “Elings Hall 2436”

Supervisor	Tool Lead
Juan Manuel Urueña	“WW Name”
jmuruena@ucsb.edu	“WW Email”

Description: “Lumen X”
Manufacturer: “CELLINK Life Sciences”

About

The Lumen X, leverages digital light processing (DLP) printing to offer users high resolution, high throughput and high fidelity. The Lumen X divides 3D models into stacks of horizontal layers in the form of black and white image files. Using an industrial-grade visible-light projector, each image is projected onto a droplet resin on a polydimethylsiloxane (PDMS) vat. The illuminated regions react and solidify, then the build platform moves the cured layer up and out of the way, so that more resin can be cured with the next image.

Detailed Specifications

* **Projected image:** 1280 x 800 px
* **wavelength:** 385 nm
* **Power:** 10 - 30 mW/cm^2
* **Z-precision (motor-driven):** 5 µm
* **Heated Platform:** Max 37 ºC
* **Max build volume:** 64 X 40 X 50 mm (128 mL)

Power in mW/cm^2 at certain intensity percentages

25%	**30%**	**35%**	**40%**	**45%**	**50%**	**55%**	**60%**	**65%**	**70%**	**75%**
8.12	10.36	13.30	15.83	18.24	20.58	22.58	24.37	26.42	28.31	29.85

Intensity vs power in mW/cm^2

20 mW/cm^2	**25 mW/cm^2**	**30 mW/cm^2**
50%	64%	76%

Safety Concerns

Read the manufactures manual before first use. If the BIO X Cellink acts in a way that is not described by the manual, turn off the printer and contact CELLINK.

- Never place your finger near the machine until all parts have stopped moving. Moving parts can cause serious injury
- Never clean or service the printer while it is on
- The printer uses UV light for sterilization and curing. Never look directly at UV light nor expose skin. Serious injury may result from exposure
- The printer has heated surfaces that can reach temperature up to 250 degrees Celsius. Never touch these surfaces when using the heating function. Allow things to cool before opening, touching the printer
- Always ensure that equipment is correctly mounted before use. Imporperly mounted print beds, printheads, cartridges, calbes liquid spouts and air spouts can be dangerous. If any equipment appears damaged, turn off the printer, unplug all connections and contact CELLINK.

Operating Procedures

Insert Text Here!

Reference Documentation

creationworkshop.pdf

small_projector_manual.pdf

Training Documentation

biox_manual.pdf