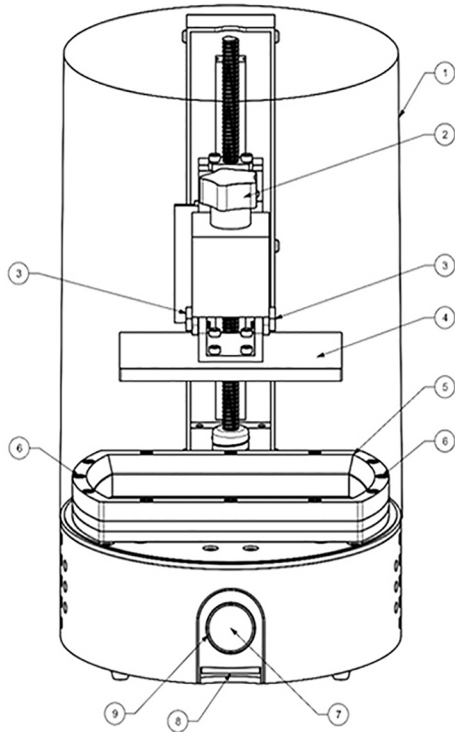

sparkmaker
spark your imagination

SparkMaker

SparkMaker
SLA 3D Printer

1. Specification of SparkMaker

Build Volume	98mm*55mm*125mm
XY Accuracy	100 μ m
Z Accuracy	20-100 μ m
Print Material	Resin
Print time	8-15 S/layer
Connectivity	SD Card
Printer Control	Interactive Push-button
UV Backlight	400-410nm 24W UV LED
Software	SparkStudio
Stepper Motor Driver	1/128 Micro step
Hardware Dimensions	Φ170mm*275mm
Product Weight	2KG
Power Adapter	DC 24V 2A 48W



- ① UV cover
- ② The handle of platform
- ③ Screws used to level platform
- ④ The print platform
- ⑤ Resin tank
- ⑥ Screws used to install resin tank
- ⑦ Swivel button
- ⑧ SD card slot
- ⑨ The status light

2. How to use SparkMaker



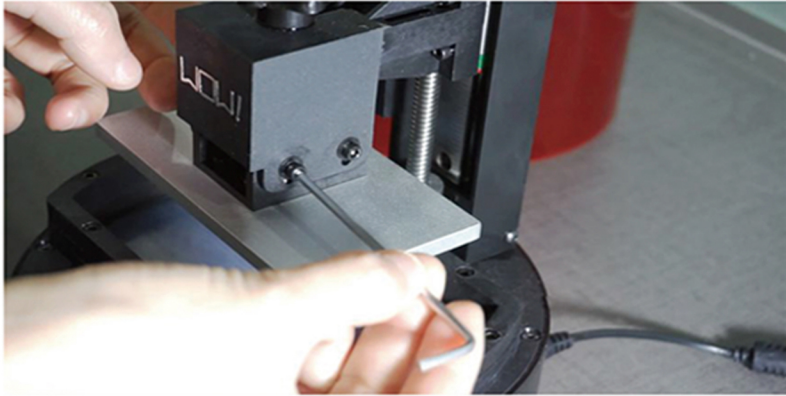
Step1: Add STL file model to SparkStudio to add support and slice



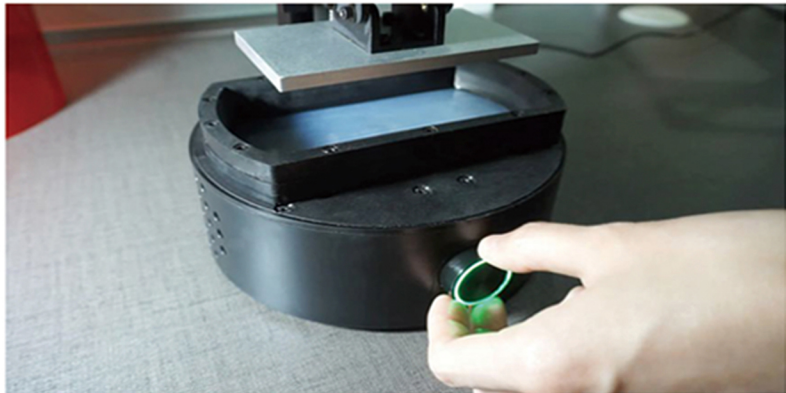
Step2: Save the slice file to SD card.



Step3: Level platform when first print (No need to level again next time).



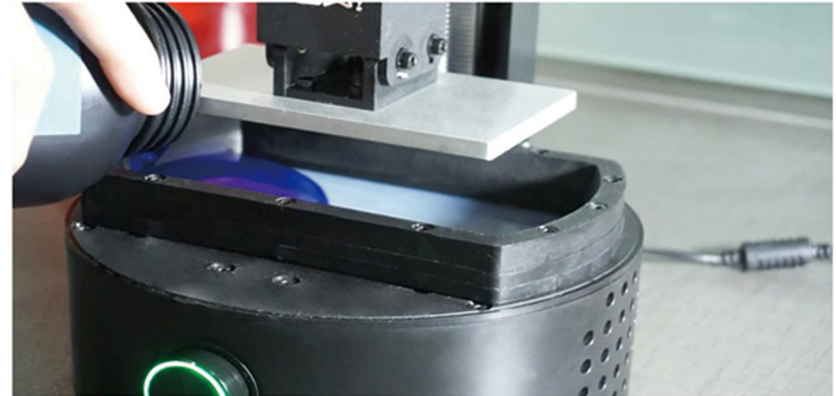
Step4: Loosen the four screws on both sides of the platform.



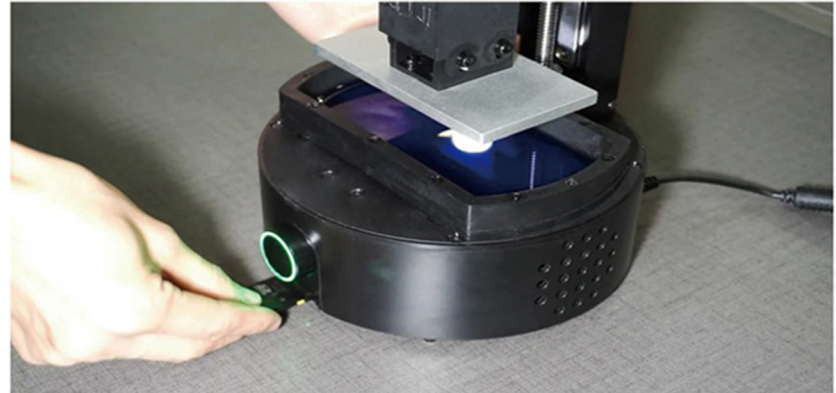
Step5: Rotate the knob drops the platform to the lowest point.



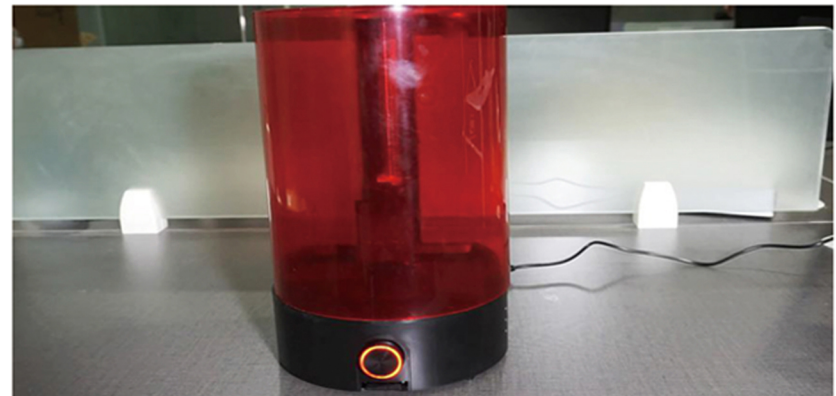
Step6: Press down the platform and tighten the four screws on both sides of the platform.



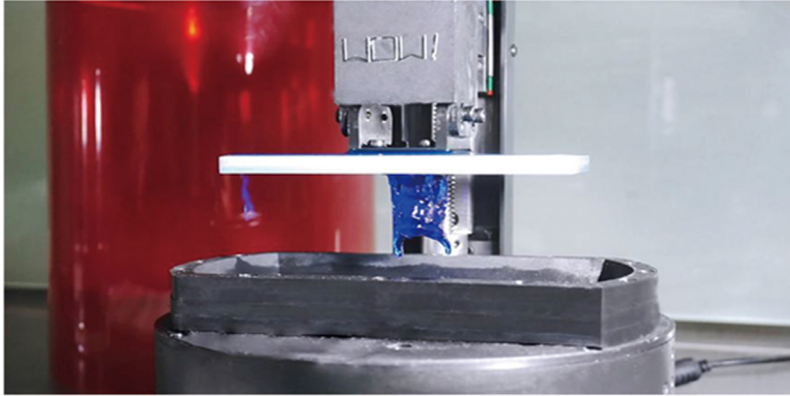
Step7: Pour the resin into resin tank(Less than 120g resin).



Step8: Insert the SD card into the slot (Face down).



Step9: Press the button and start to print.



Step10: The print is finished.



Step11: Loosen the handle and remove the platform.



Step12: Remove the supports of model.



Step13: Clean the model with 99% alcohol.



Step14: Irradiate the model with UV-light about 2-3mins.



Step15: Finally, get the model.

3. How to update the firmware

- a. Download the latest firmware from SparkMaker website www.sparkmaker3d.com
- b. Unzip the files and save the update.wow file in SD card.
- c. Turn off the power of SparkMaker.
- d. Insert the SD card in SparkMaker.
- e. Turn on the power of SparkMaker.
- f. The light of the button will turn purple for a while and turn green in the end.
- g. Delete the update.wow file with your computer.
- h. Finished the update and you can start print.

4. Matters needing attention

- a. The resin and the printed model do not eat.
- b. The resin must away from children and pets.
- c. The resin must avoid contact with skin and you should wear gloves.
- d. The resin should shake well before use and store in a dark place.
- e. The SparkMaker should put in a place without strong light.
- f. UV cover should be put on the SparkMaker when printing.
- g. The SD card's capacity should not more than 32G and should be formatting when first use.
- h. Avoid looking at UV light and you should wear goggles.
- i. Wash with soap and water if the resin stick to the skin or into the eyes.

5. Frequently Asked Questions

a. Which resin should I choose?

Type	Feature	Color	Hardness	Elongation	Description
LCD-T	Tough	Clear	60D	115%	ABS Alike
LCD-W	Water Washable	Clear	60A	150%	Water Washable
LCD-C	Castable	Clear	80A	24%	Castble
LCD-E	Elastic	Clear	26A	300%	Rubber Alike
LCD-N	Nylon Alike	Black	75D	115%	Nylon Alike
LCD-H	High HDT	Clear	90D	3%	>300°C HDT
LCD-G	Super Clear	Clear	70D	5%	Super Clear
LCD-A	High Precision	Black	70D	75%	Super Detail

6. How to Print?

- Step 1: Importing the .stl format file into SparkStudio.
- Step 2: Edit->Support->Slice->Export and save the file in. WOW format to SD card.
- Step 3: Connecting the Power supply to Sparkmaker from the power cable included. Sparkmaker will begin to make some noise when the power source is connected successfully.
- Step 4: Inserting the SD card into the Card Slot in front of the Sparkmaker, and the 3D printer will start flashing in green.
- Step 5: Pouring the liquid resin into the build platform of the Sparkmaker. (The height of 6-7 mm is enough for the printing)
- Step 6: Press the button (the green flashing one) about two seconds to start, if you start the machine successfully, the button will flash in red.
- Step 7: The machine will start to work, and the vertical lift will go up and down. The whole process will last about 6 hours to complete the printing of the SD card.
- Step 8: After the printing completed, loose the black button on the top of the building platform, take out of the printing objects. The objects can be cleaned by alcohol. (If the resin type is LCD-W, than you can only need to wash the prints by water)
- Step 9: Wash the model with the pure up to 99% alcohol less than 2 minutes after the printing is finished, after that, use UV-light to illuminate the model about 10 minutes or just put it in the sun for a while.

7. How to Clean the Machine?

The edge of the building platform can be cleaned by tissue or duster cloth and residual adhesive can be removed by a knife or spade and the residual adhesive in the tank should be taken out with tweezers. The remaining resin can be absorbed by a syringe and stored in a bottles for next use. Loosen the tow screws used to install resin tank and clean the tank with alcohol, and then install it back.

8. How to Clean the prints?

The Prints should be cleaned by alcohol up to the purity up to 95%.

9. How do I make this print other things from my slicer or can it only print the pre-loaded file you sent?

There are two ways to print other things

First: 1. Transfer your 3D files to the format of STL no matter where you get it.

2. Installing the modeling software: Sparkstudio.

3. Importing the .STL files into Sparkstudio.

4. Saving your slicer to your SD card and then you can print.

Second:

Go to the Sparkmaker website and download different files: www.sparkmaker3d.com

10. How about the operation method of SparkMaker?

1. If SparkMaker is not printing and the light is green, rotate the button clockwise, the printing platform will up, and rotate the button counterclockwise, the printing platform will down.

2. Inserting the SD card, press the button, it will start printing and the light will be red.

3. If SparkMaker is in printing, press the button, after finish the layer it is printing, it will pause and the printing platform will up 20mm, so you can check the printing status. And press the button again, it will down 20mm and continue printing.

4. If SparkMaker is in printing, pressing the button for a while when the light change to green, it will stop printing.

11. What should do if printing interrupt?

Removed residual adhesive on the building platform by a knife or spade and take residual adhesive in the tank out with tweezers. Remember to check the building platform and resin tank, the residual adhesive will cause printing failure and LCD screen broken.

12. Why printing failed?

1. You should level platform well.

2. You should check your model and add suitable support and snap it to floor.

3. You should set the appropriate print parameters.

13. Is other third party resin can be used in SparkMaker?

Theoretically, the resin's curing wavelength between 400-410nm can be used in SparkMaker, but the parameter of printing should be adjusted by yourself if you want to use other resin.

14. Is SparkMaker resin can be used in other SLA printer?

The SparkMaker resin can be used in LCD-SLA 3D printer use PEFT film or FEP film resin tank, and its curing wavelength between 355-420nm.

15. How to solve the problems?

Send e-mail to hello@wow-innovation.cn, or ask experienced users on SparkMaker official Facebook group on <https://www.facebook.com/groups/140657399943252/>.