CERAMBOT Software instructions

Version	**1.0.1**
Time	**20181018**
Author	**Jony**

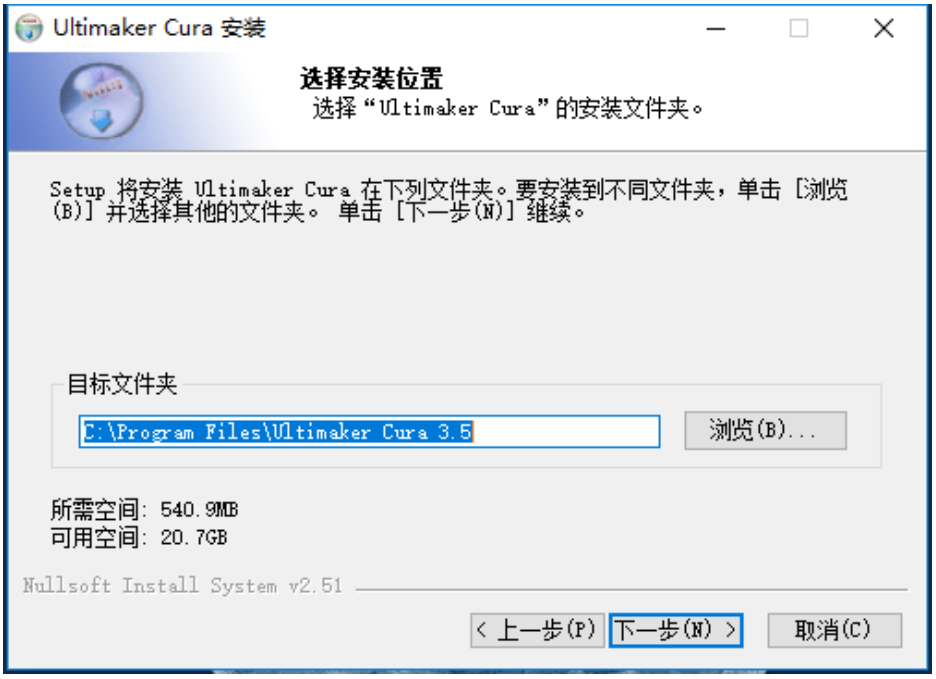
CERAMBOT uses slicing software

1. Install the slicing software

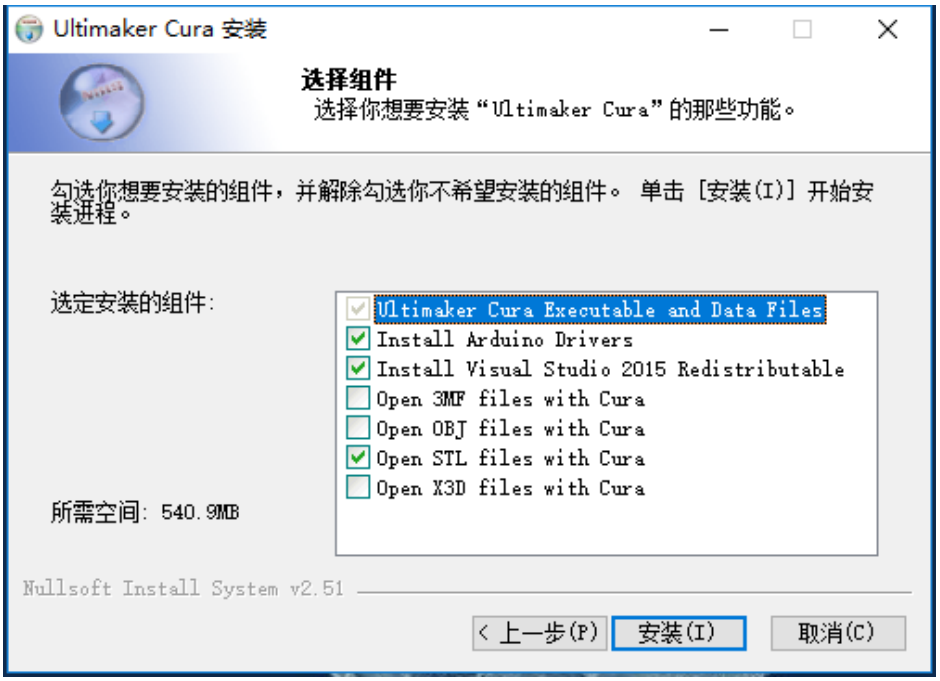
Download the software: download the adapter software according to your operating system : https://ultimaker.com/en/products/ultimaker-cura-software

① Double click on the installation software cura 3.6.0.

② Select the installation directory, please keep the default, click Next:



③ Select the associated file format, it is recommended to keep the default, click Install:



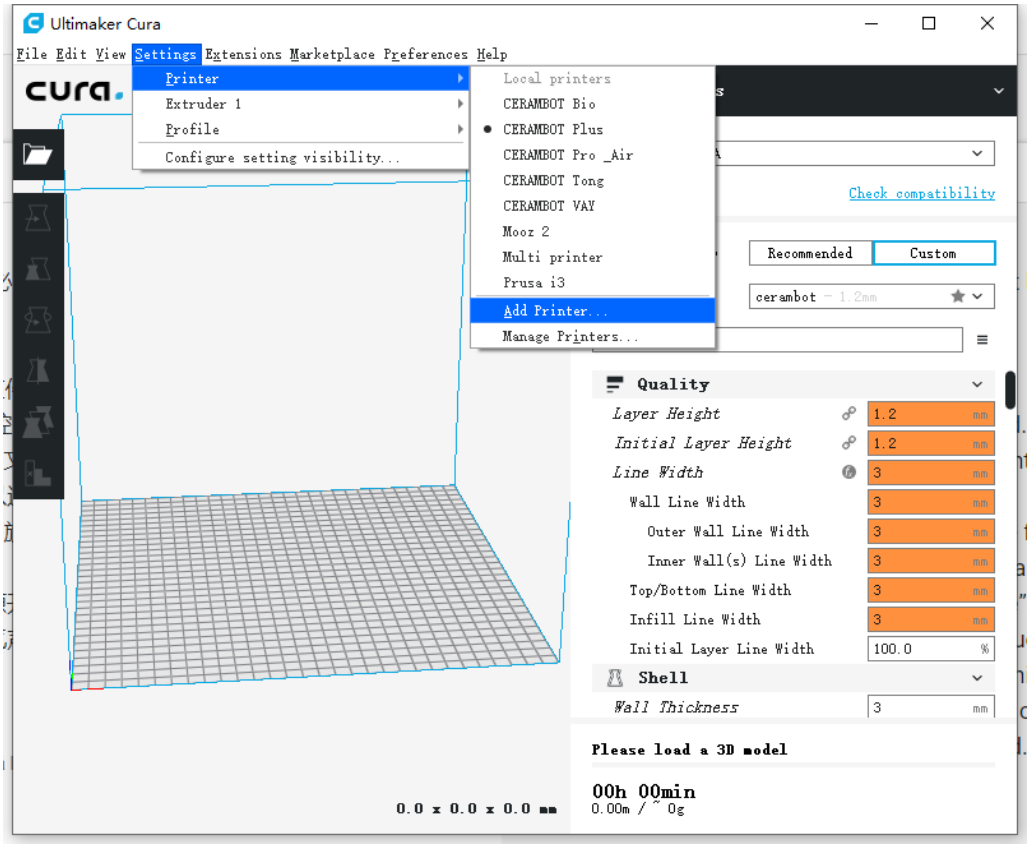
④ The installation process will pop up the window where the arduino driver is installed. Please keep the default installation. Follow the prompts and the installation is complete.

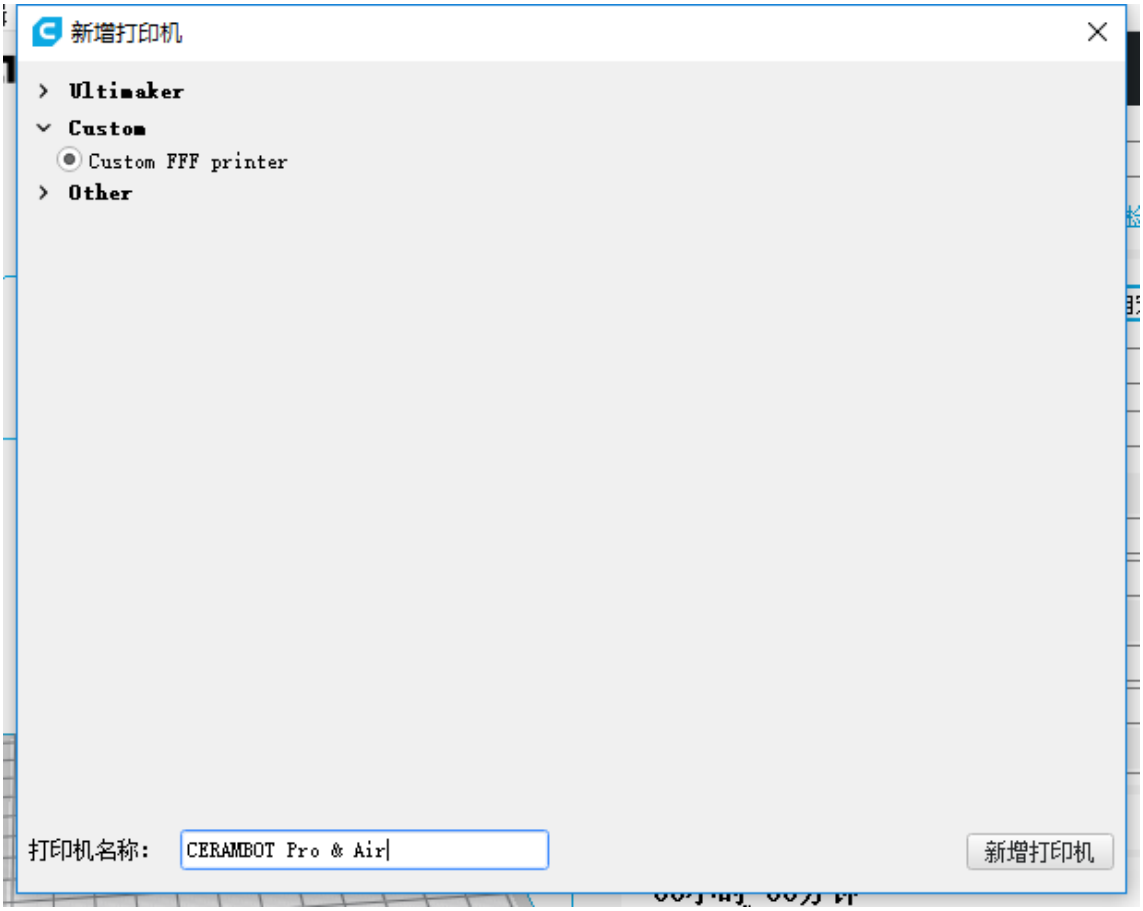
2. Initial use configuration

Steps:

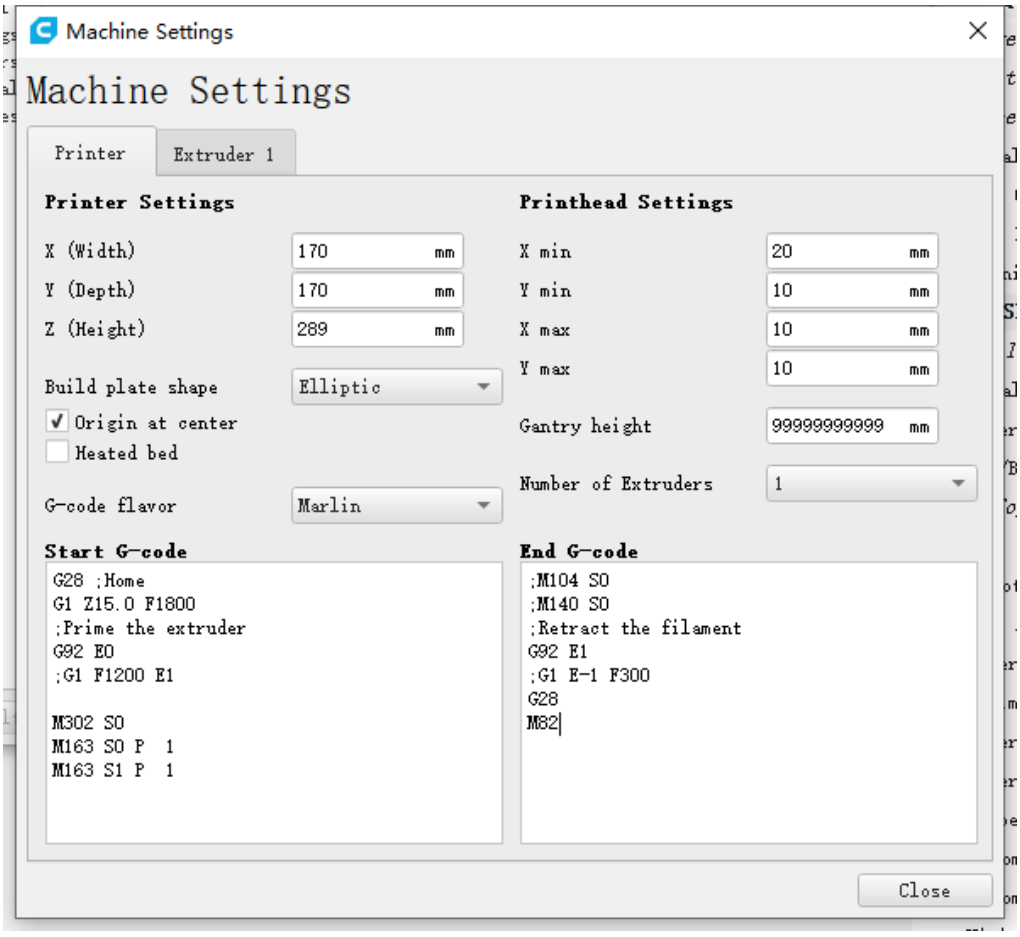
① Run Cura, click on Settings > Printers > Add Printer > Custom, type "CERAMBOT Pro & Air" in the printer name, then click "Add Printer", the printer settings interface will pop up ;

② Set the printer parameters as shown below.


Ultimaker Cura
File Edit View Settings Extensions Marketplace Preferences Help
Printer
Extruder 1
Profile
Configure setting visibility...
Local printers
CERAMBOT Bio
CERAMBOT Plus
CERAMBOT Pro _Air
CERAMBOT Tong
CERAMBOT VAY
Mooz 2
Multi printer
Prusa i3
Add Printer...
Manage Printers...
Check compatibility
Recommended
Custom
cerambot - 1.2mm
Quality
Layer Height 1.2 mm
Initial Layer Height 1.2 mm
Line Width 3 mm
Wall Line Width 3 mm
Outer Wall Line Width 3 mm
Inner Wall(s) Line Width 3 mm
Top/Bottom Line Width 3 mm
Infill Line Width 3 mm
Initial Layer Line Width 100.0 %
Shell
Wall Thickness 3 mm
Please load a 3D model
00h 00min
0.00m / ~ 0g
0.0 x 0.0 x 0.0 mm


新增打印机
Ultimaker
Custom
Custom FFF printer
Other
打印机名称:
CERAMBOT Pro & Air
新增打印机

新增打印机
打印机设置
打印机
Extruder 1
打印机设置
X（宽度） 170 mm
Y（深度） 170 mm
Z（高度） 289 mm
打印平台形状 Elliptic
置中
加热床
G-code 风格 Marlin
打印头设置
X 最小值 20 mm
Y 最小值 10 mm
X 最大值 10 mm
Y 最大值 10 mm
十字轴高度 99999999999 mm
挤出机数目 1
开始 G-code
G28 ;Home
G1 Z15.0 F1800
;Prime the extruder
G92 E0
;G1 F1200 E1
M302 S0
M163 S0 P .5
M163 S1 P .5
结束 G-code
;M104 S0
;M140 S0
;Retract the filament
G92 E1
;G1 E-1 F300
G28
M82
返回
完成
取消


Machine Settings
Machine Settings
Printer
Extruder 1
Printer Settings
X (Width) 170 mm
Y (Depth) 170 mm
Z (Height) 289 mm
Build plate shape Elliptic
Origin at center
Heated bed
G-code flavor Marlin
Printhead Settings
X min 20 mm
Y min 10 mm
X max 10 mm
Y max 10 mm
Gantry height 99999999999 mm
Number of Extruders 1
Start G-code
G28 ;Home
G1 Z15.0 F1800
;Prime the extruder
G92 E0
;G1 F1200 E1
M302 S0
M163 S0 P 1
M163 S1 P 1
End G-code
;M104 S0
;M140 S0
;Retract the filament
G92 E1
;G1 E-1 F300
G28
M82
Close

Start G-code：

```
G28 ;Home
G1 Z15.0 F1800
;Prime the extruder
G92 E0
;G1 F1200 E1

M302 S0       ; always allow extrusion (disable checking)
M163  S0  P0.5  ; Set Mix Factor
M163  S1  P0.5   ; Set Mix Factor
```

End G-code：

```
;M104 S0
;M140 S0
;Retract the filament
G92 E1
;G1 E-1 F300
G28
M82
```

Reference：
http://marlinfw.org/docs/gcode/M302.html
http://marlinfw.org/docs/gcode/M163.html

3. Online printing

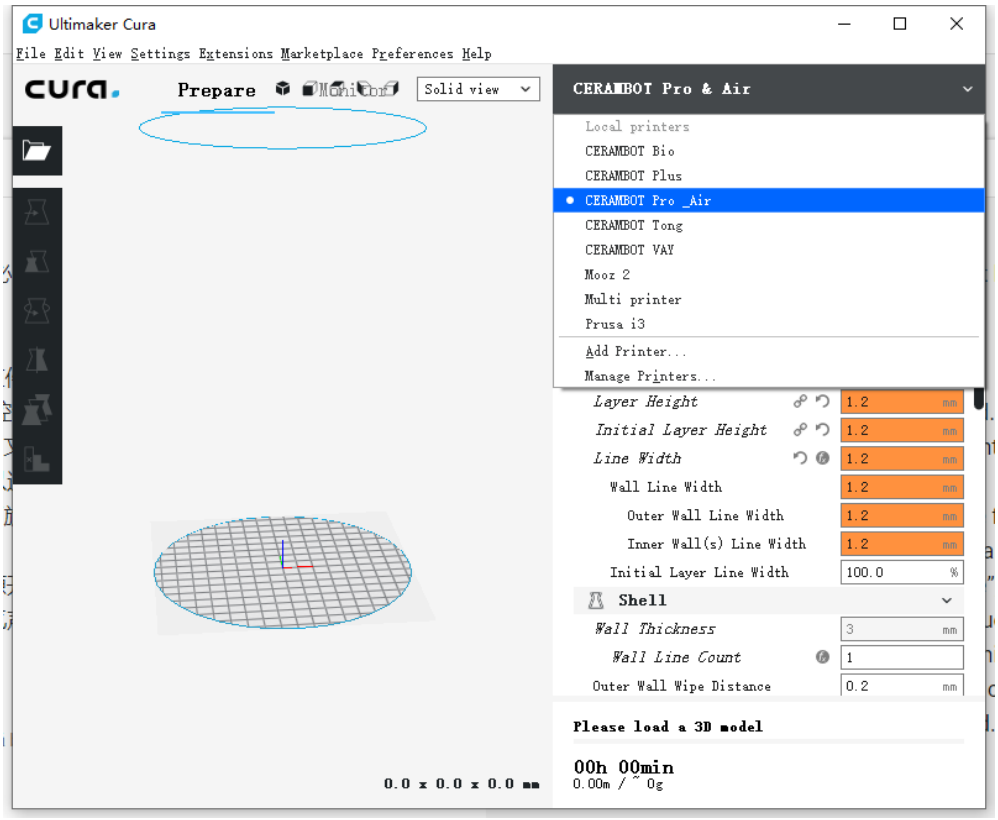
Note: When the computer goes into sleep during online printing, the printing process will be interrupted. Please confirm the power status of the computer before printing.

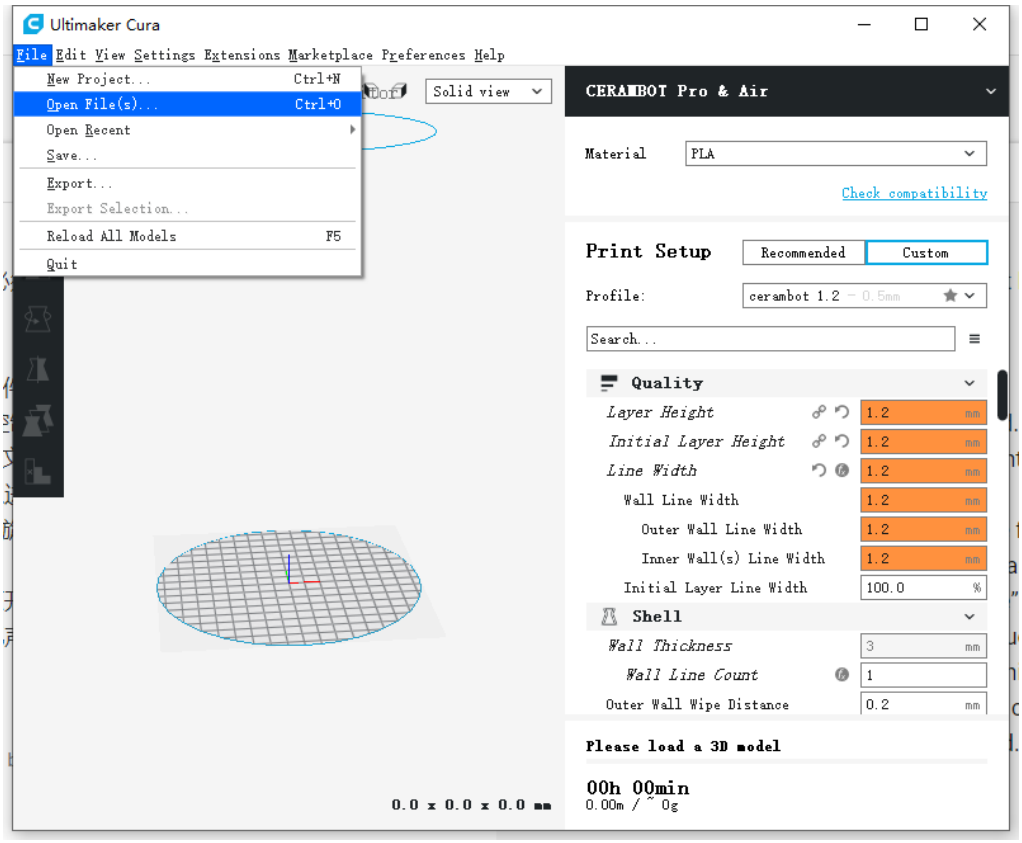
Online steps:

①tart the printer after connecting the printer to the computer with a USB cable

②restart Cura 3.5.1, then choose to configure the printer

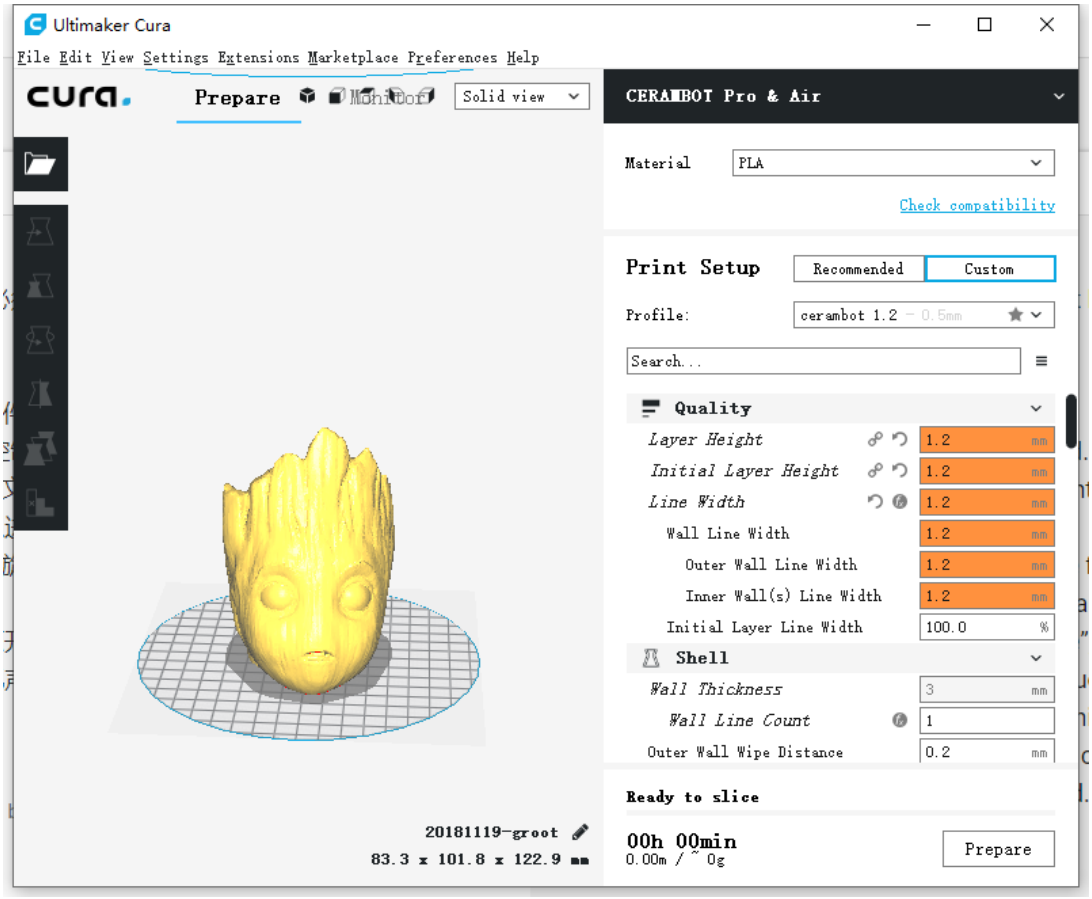
③Click “File” > “Open File (O)...” to select the model that needs to be sliced. Cura supports models in the STL/OBJ/AMF format.



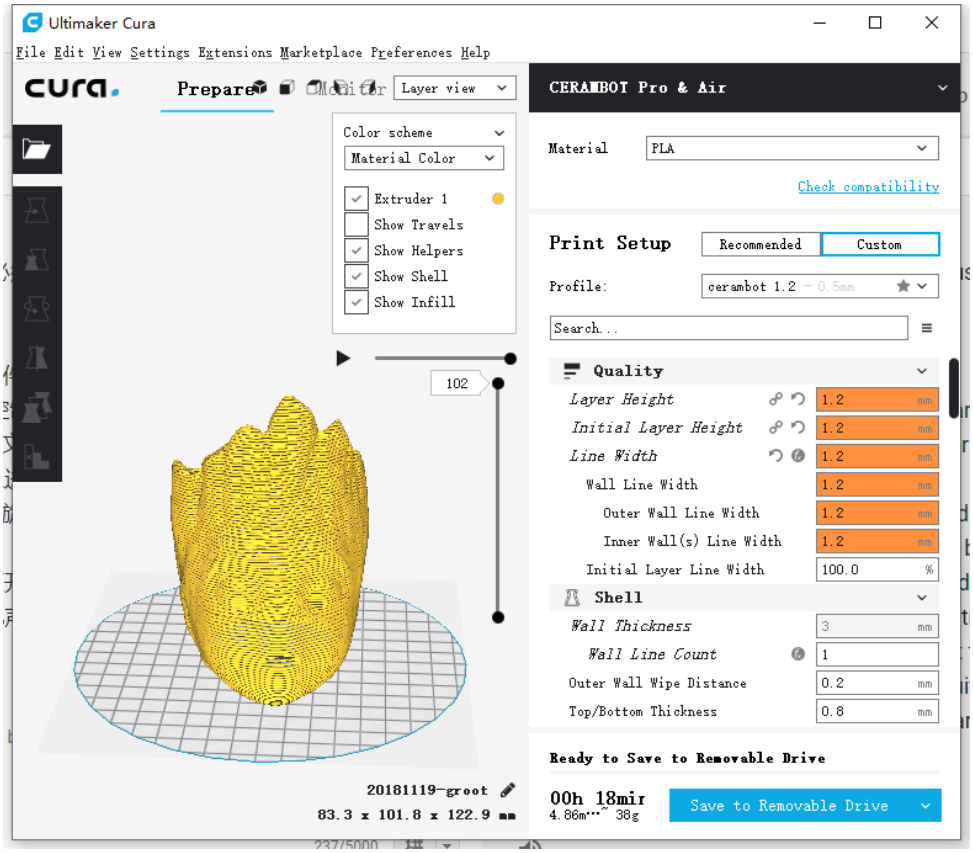


Model slice：

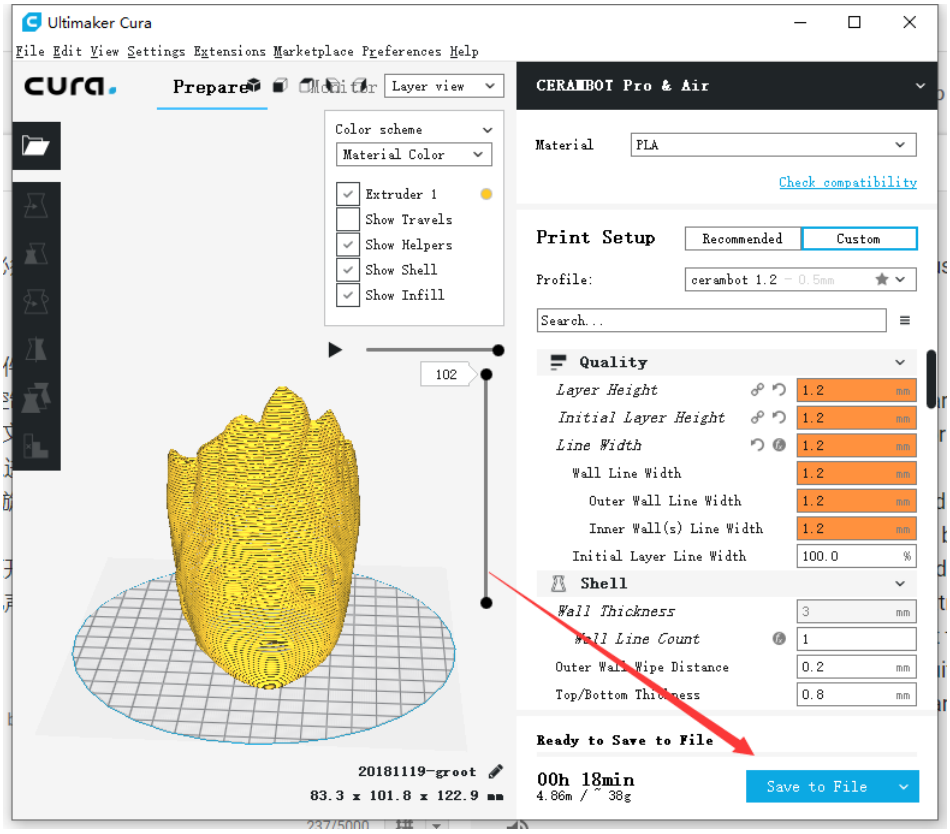
① Adjust the model: Left click on the model. There will be six options on the left side of the interface, which can be adjusted as needed.



② View slice details: Click on the drop-down menu at the top right of the model and select "Layered View" to view the slice details.



③ Start online printing: Click the drop-down menu in the lower right corner and select "Print online via USB"



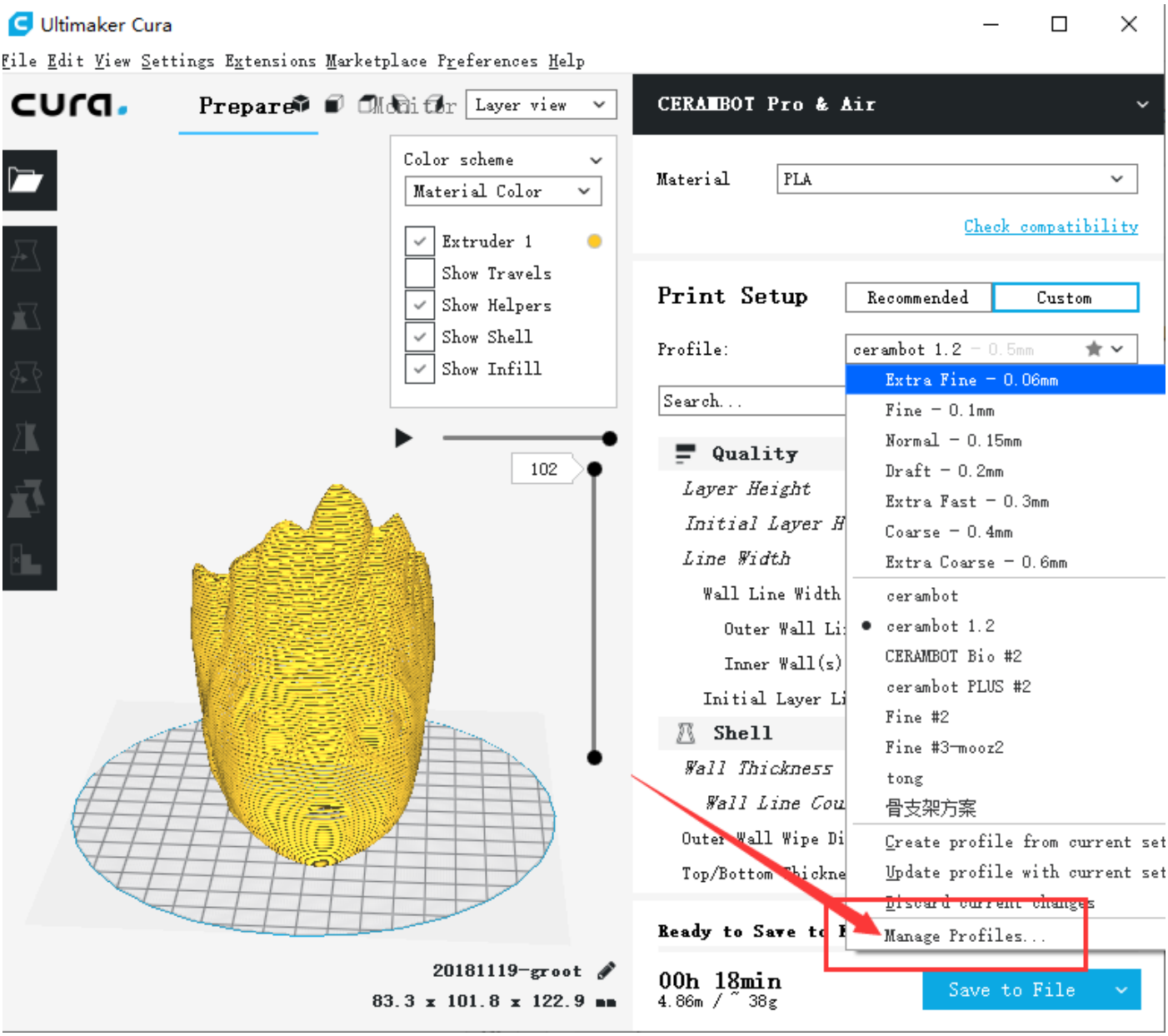
Note: Please start Cura after the machine is connected to the computer and powered on. Some computers may need to install driver support.

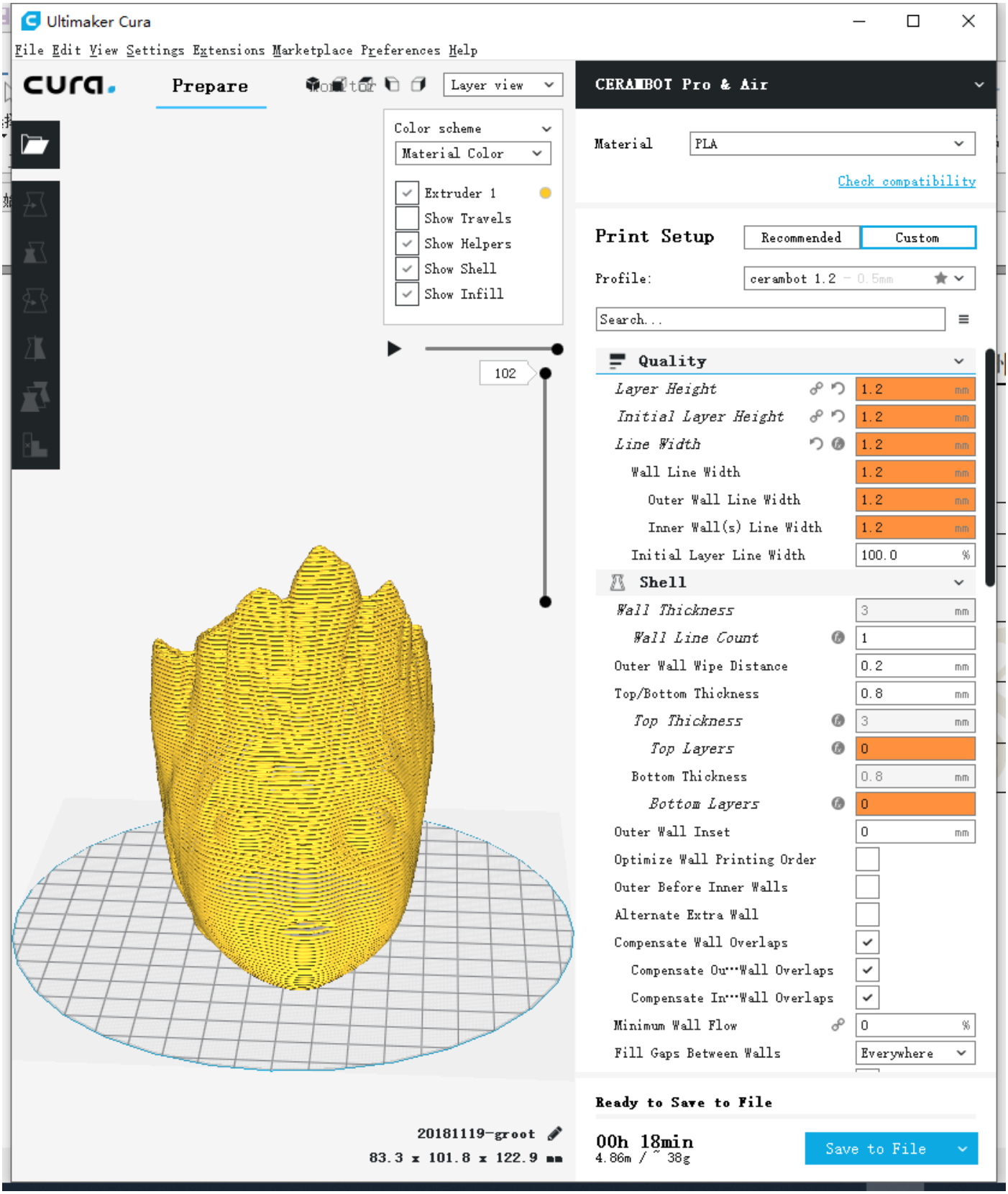
Key option description:

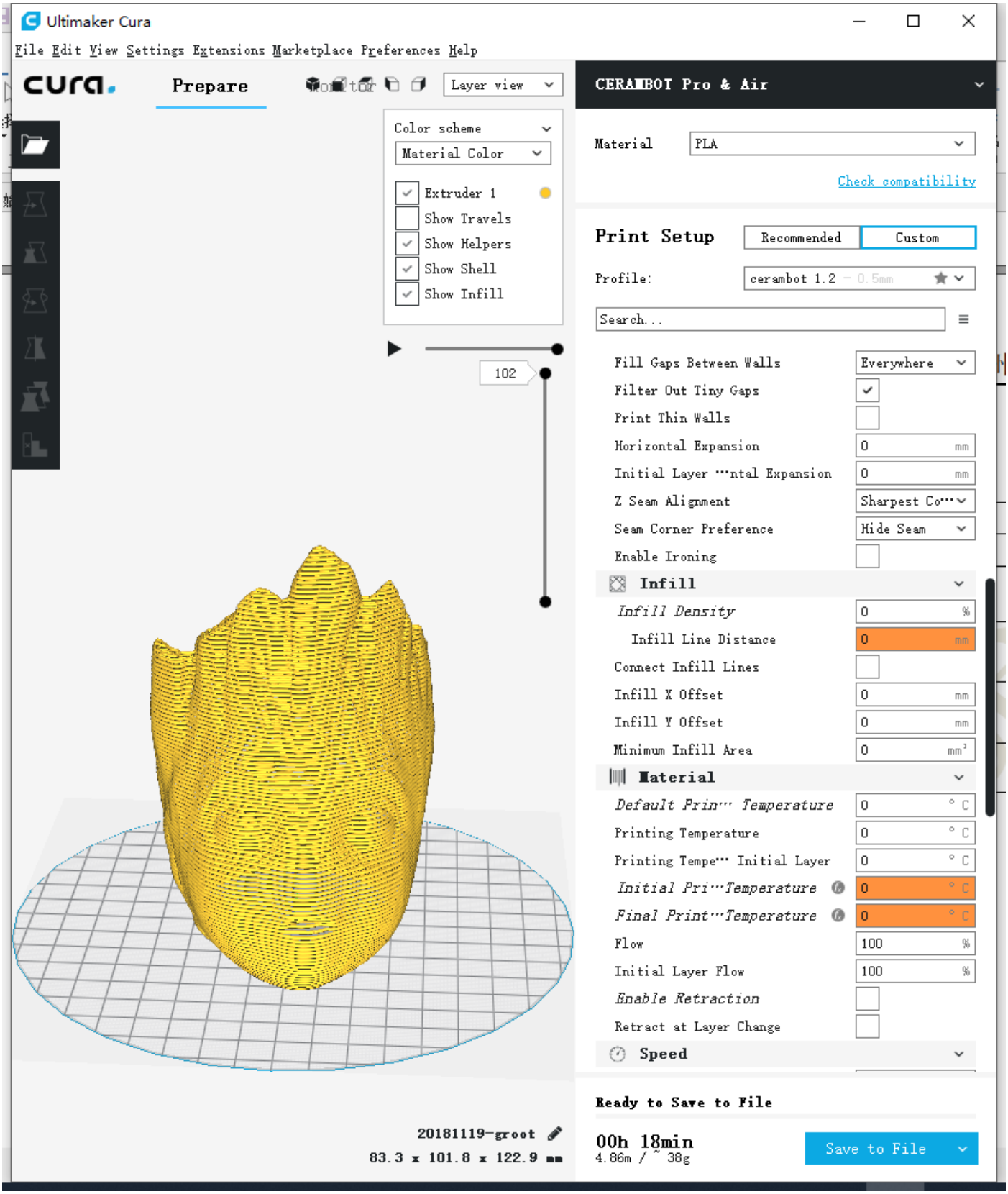
1) Layer height: the height of each layer printed, the smaller the print surface is finer, but the slower it is, the parameter range is 0.5-3, CERAMBOT Pro & Air uses 1.5 nozzles by default.
2) Wall thickness: the thickness printed on the outer surface of the model. Setting 3 here means that the outer surface will print a layer.
3) Top/Bottom Thickness: Determines the thickness of the bottom/top of the model.
4) Filling Density: Determines the degree of density of the mesh fill inside the model, generally set below 15%.
5) Print temperature: Set 0 °C here.
6) Speed: The speed is set to 23mm/s.
7) Platform Attachment Type: Select Skirt here to print an outer circle on the bottom of the print model.
8) Spiral print outer contour (ie vase mode): only the outer surface and bottom of the model are printed. When the outer surface is printed, the spiral is lifted continuously, which can improve the surface quality, but it has requirements for the model. The model is required to have only one outer surface. Can't hang. Generally we check

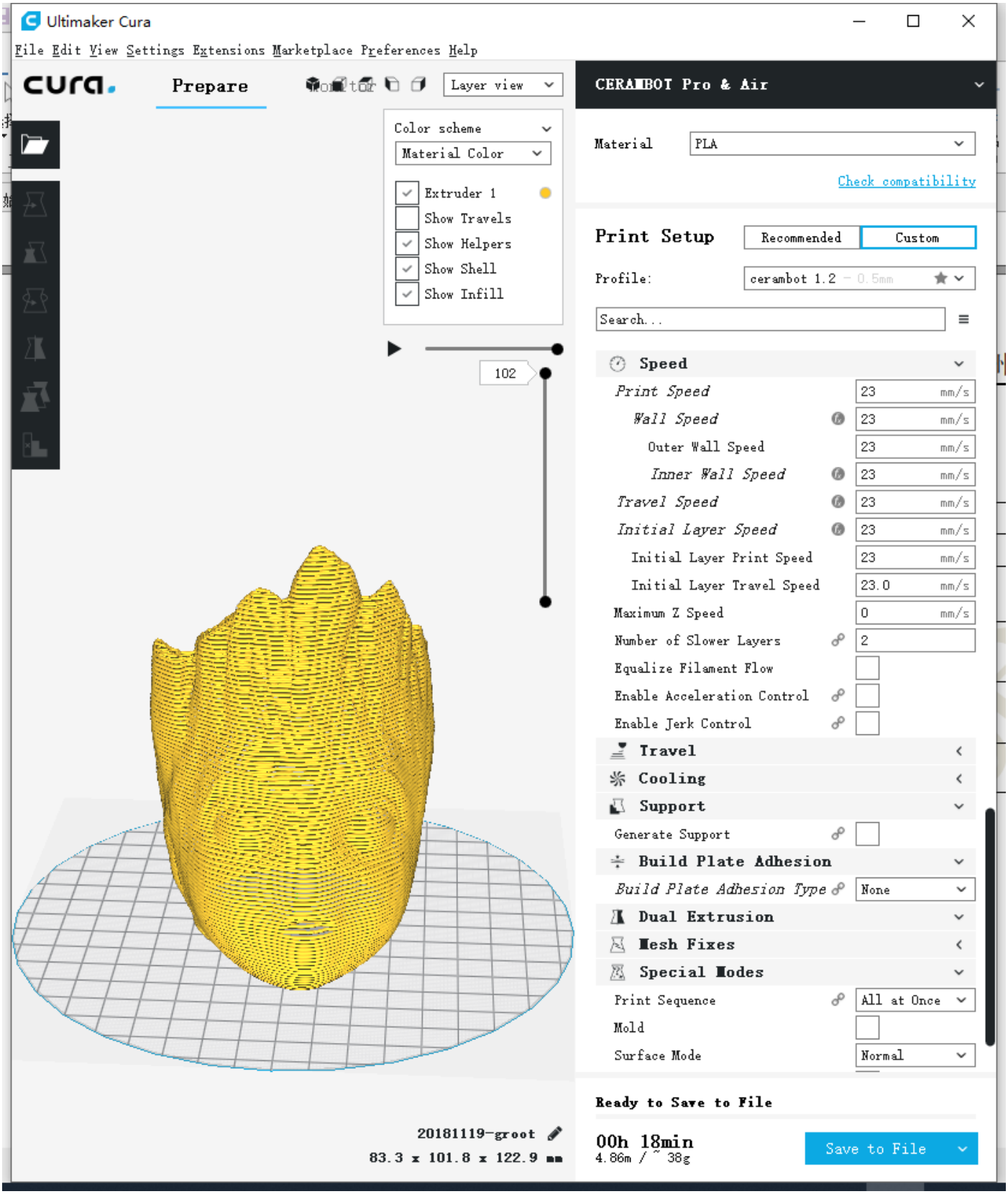
Note: After the mouse stays on the relevant parameter options for a while, the corresponding setting prompt will pop up automatically.

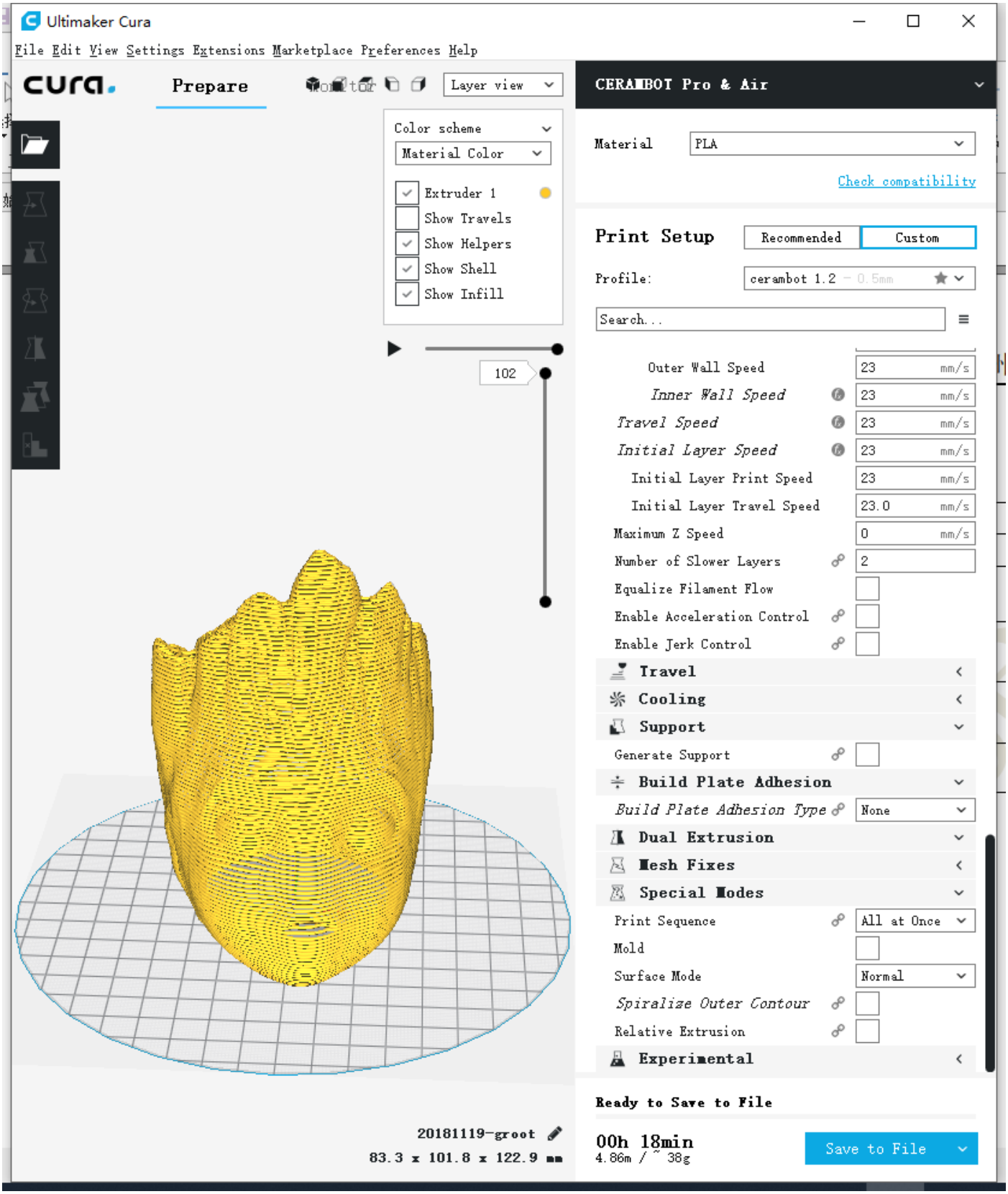
Configure Cura's parameter slice print settings as shown below, or import the configuration file directly: *cerambot.curaprofile*


Ultimaker Cura
File Edit View Settings Extensions Marketplace Preferences Help
cura.
Prepare
Monitor
Layer view
Color scheme
Material Color
Extruder 1
Show Travels
Show Helpers
Show Shell
Show Infill
102
20181119-groot
83.3 x 101.8 x 122.9 mm
CERAMBOT Pro & Air
Material
PLA
Check compatibility
Print Setup
Recommended
Custom
Profile:
cerambot 1.2 - 0.5mm
Search...
Quality
Layer Height
Initial Layer H
Line Width
Wall Line Width
Outer Wall Li
Inner Wall(s)
Initial Layer Li
Shell
Wall Thickness
Wall Line Cou
Outer Wall Wipe Di
Top/Bottom Thickne
Extra Fine - 0.06mm
Fine - 0.1mm
Normal - 0.15mm
Draft - 0.2mm
Extra Fast - 0.3mm
Coarse - 0.4mm
Extra Coarse - 0.6mm
cerambot
cerambot 1.2
CERAMBOT Bio #2
cerambot PLUS #2
Fine #2
Fine #3-mooz2
tong
骨支架方案
Create profile from current set
Update profile with current set
Discard current changes
Manage Profiles...
Ready to Save to F
00h 18min
4.86m / ~ 38g
Save to File


Ultimaker Cura
File Edit View Settings Extensions Marketplace Preferences Help
cura
Prepare
Layer view
Color scheme
Material Color
Extruder 1
Show Travels
Show Helpers
Show Shell
Show Infill
102
CERAMBOT Pro & Air
Material
PLA
Check compatibility
Print Setup
Recommended
Custom
Profile:
cerambot 1.2 - 0.5mm
Search...
Quality
Layer Height 1.2 mm
Initial Layer Height 1.2 mm
Line Width 1.2 mm
Wall Line Width 1.2 mm
Outer Wall Line Width 1.2 mm
Inner Wall(s) Line Width 1.2 mm
Initial Layer Line Width 100.0 %
Shell
Wall Thickness 3 mm
Wall Line Count 1
Outer Wall Wipe Distance 0.2 mm
Top/Bottom Thickness 0.8 mm
Top Thickness 3 mm
Top Layers 0
Bottom Thickness 0.8 mm
Bottom Layers 0
Outer Wall Inset 0 mm
Optimize Wall Printing Order
Outer Before Inner Walls
Alternate Extra Wall
Compensate Wall Overlaps
Compensate Ou···Wall Overlaps
Compensate In···Wall Overlaps
Minimum Wall Flow 0 %
Fill Gaps Between Walls Everywhere
Ready to Save to File
00h 18min
4.86m / ~ 38g
Save to File
20181119-groot
83.3 x 101.8 x 122.9 mm


Ultimaker Cura
File Edit View Settings Extensions Marketplace Preferences Help
cura
Prepare
Layer view
Color scheme
Material Color
Extruder 1
Show Travels
Show Helpers
Show Shell
Show Infill
102
CERAMBOT Pro & Air
Material
PLA
Check compatibility
Print Setup
Recommended
Custom
Profile:
cerambot 1.2 - 0.5mm
Search...
Fill Gaps Between Walls
Everywhere
Filter Out Tiny Gaps
Print Thin Walls
Horizontal Expansion
Initial Layer ···ntal Expansion
Z Seam Alignment
Sharpest Co···
Seam Corner Preference
Hide Seam
Enable Ironing
Infill
Infill Density
Infill Line Distance
Connect Infill Lines
Infill X Offset
Infill Y Offset
Minimum Infill Area
Material
Default Prin··· Temperature
Printing Temperature
Printing Tempe··· Initial Layer
Initial Pri···Temperature
Final Print···Temperature
Flow
Initial Layer Flow
Enable Retraction
Retract at Layer Change
Speed
Ready to Save to File
00h 18min
4.86m / ~ 38g
Save to File
20181119-groot
83.3 x 101.8 x 122.9 mm


Ultimaker Cura
File Edit View Settings Extensions Marketplace Preferences Help
cura
Prepare
Layer view
CERAMBOT Pro & Air
Color scheme
Material Color
Extruder 1
Show Travels
Show Helpers
Show Shell
Show Infill
102
Material
PLA
Check compatibility
Print Setup
Recommended
Custom
Profile:
cerambot 1.2 - 0.5mm
Search...
Speed
Print Speed 23 mm/s
Wall Speed 23 mm/s
Outer Wall Speed 23 mm/s
Inner Wall Speed 23 mm/s
Travel Speed 23 mm/s
Initial Layer Speed 23 mm/s
Initial Layer Print Speed 23 mm/s
Initial Layer Travel Speed 23.0 mm/s
Maximum Z Speed 0 mm/s
Number of Slower Layers 2
Equalize Filament Flow
Enable Acceleration Control
Enable Jerk Control
Travel
Cooling
Support
Generate Support
Build Plate Adhesion
Build Plate Adhesion Type None
Dual Extrusion
Mesh Fixes
Special Modes
Print Sequence All at Once
Mold
Surface Mode Normal
Ready to Save to File
00h 18min
4.86m / ~ 38g
Save to File
20181119-groot
83.3 x 101.8 x 122.9 mm



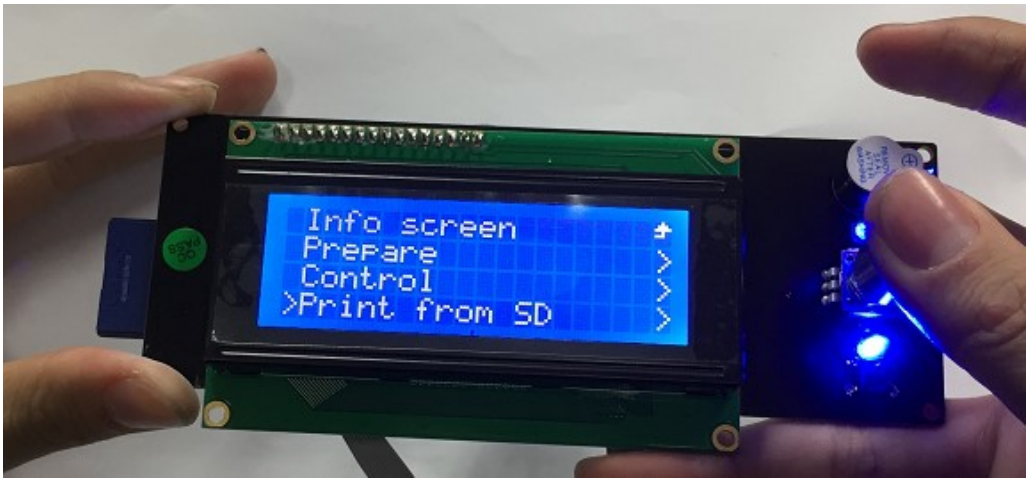
4. Print offline

Note: The SD card used for offline printing must be Fat32 and the capacity is no more than 8G.

Steps:

1) Use Cura to export Gcode files to the SD card.

2) Insert the SD card into the left side of the printer control board to print.

3) Follow the steps below to execute the Gcode file for printing. Press the silver knob down to enter the menu bar. Rotate the silver knob to select the item, find “CERAMBOT.gcode”, and press the knob to print. At this time, the printer black extruder Move up.

4) Turn on the power of the push rod motor at this time, the push rod motor starts to work, or the black air circuit control switch is turned on, and the air intake sound will be heard.