HeyGears

Reflex 2

Complete Production Empowered

161 OptiZone
Light Engine

Upgraded
Amber Screen Pro

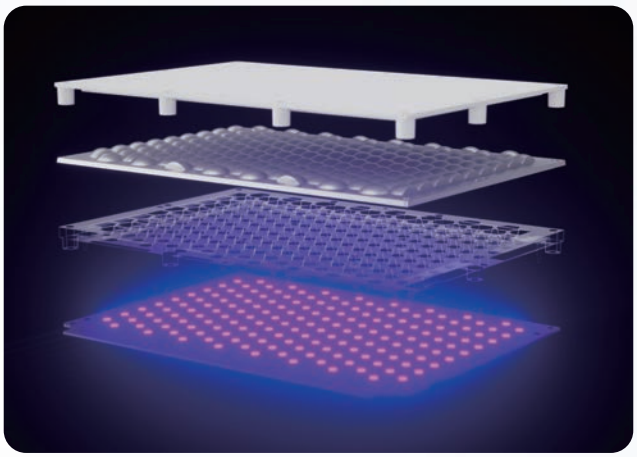
C5 grade
Z-axis Module

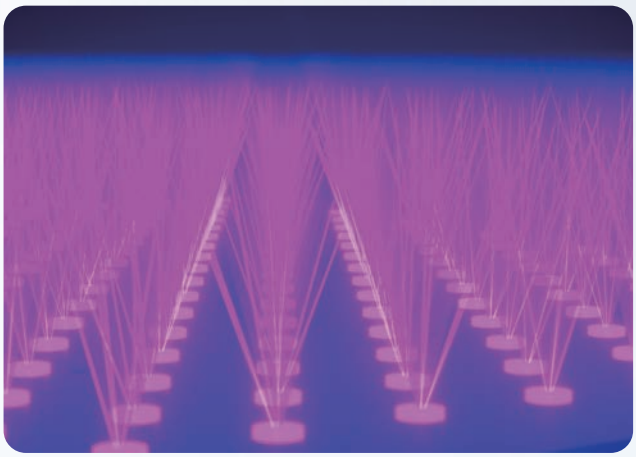
01

161 OptiZone Light Engine Pioneered by HeyGears

◆ More Accurate Light Control from the Core

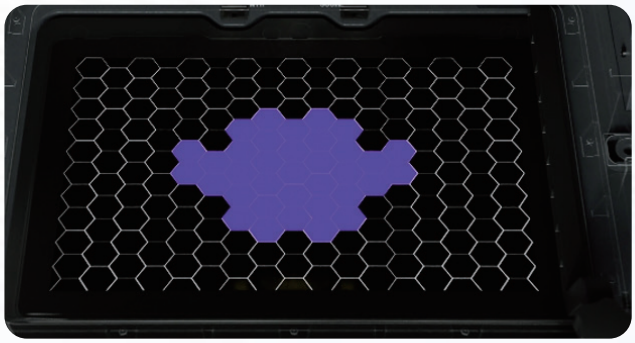
Reflex 2 introduces the OptiZone Light Engine with 161 mini-LEDs, each controllable for activation and brightness. With Pulse Width Modulation (PWM), the light engine delivers more uniform light to the screen.

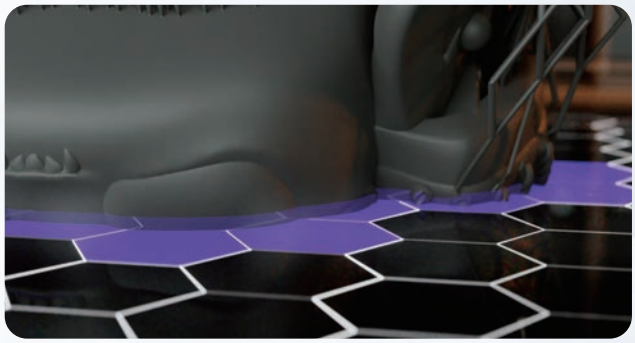


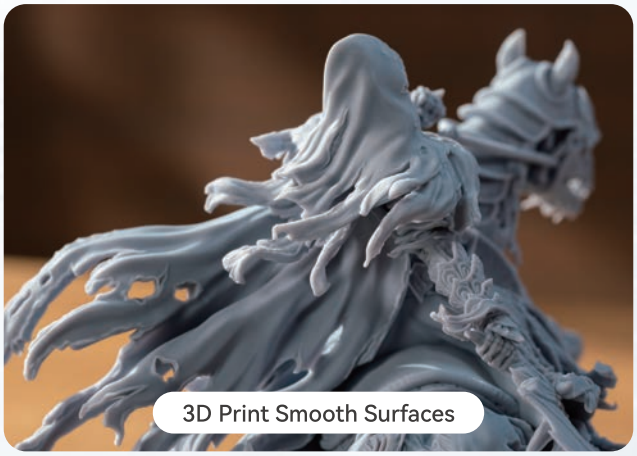


◆ Precise Light Projection for Exceptional Surface Finishes

The OptiZone Light Engine activates only the specific LEDs needed to illuminate the printing area, significantly minimizing light leakage, effectively preventing residue formation, and delivering smoother surface finishes.







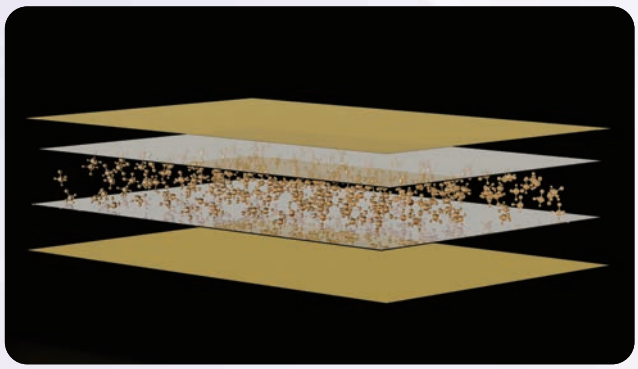
*Model created by Nerikson.

02

Upgraded Amber Screen Pro
Over 6,000 Hours of Stable Printing

◆ Upgraded UV Resistance for 6,000+ Hours Usage

Featuring a large-molecule liquid crystal layer, the Amber Screen Pro demonstrates exceptional resistance to UV degradation, maintaining good performance even under prolonged high-intensity exposure, ensuring over 6,000 hours of printing*. This durability is backed by a 1-year warranty**.



*Data sourced from HeyGears Lab. The contrast and light transmission of the Amber Screen Pro remain within a 10% deviation after 6000 hours of printing.
**With 6,000 hours of printing, it can be used year-round based on an average of 16 hours of daily use.

◆ 100x More Pressure Resistant

Engineered with structurally reinforced support pillars in the liquid crystal layer, the Amber Screen Pro exhibits excellent pressure resistance—over 10,000 cycles at a 40 kg load causes no damage, effortlessly handling the continuous stress of high-viscosity resins.

*Data sourced from HeyGears Lab. Testing was conducted using a 5x5 mm surface pressure test model.

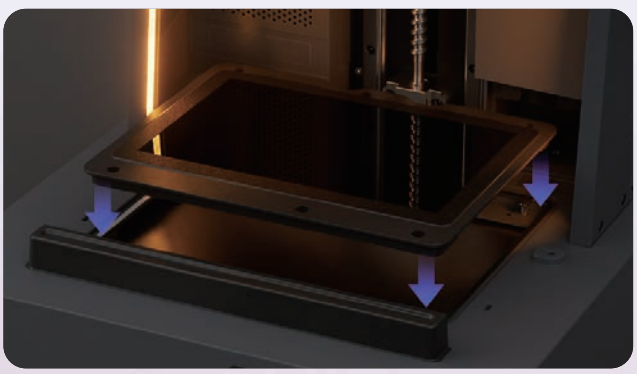
◆ AI-Powered 86,000+ Zone Light Calibration

The upgraded visual calibration algorithm, MASK, uses 86,020 calibration zones to compensate for light intensity variations in each screen zone. This method achieves ≥94% light uniformity and print accuracy of ≤0.05 mm*.

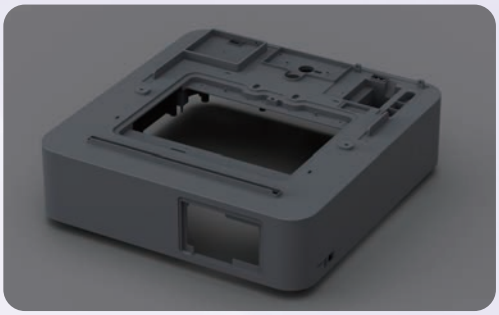
*Data from HeyGears Lab: Indicating the dimensional deviation for a printed test model measuring equal to or less than 20 mm in the XY direction. Test results are within the 95% confidence interval.

◆ Modular Design for Effortless Replacement

The modular design enables quick and effortless replacements, resulting in significantly greater maintenance efficiency.

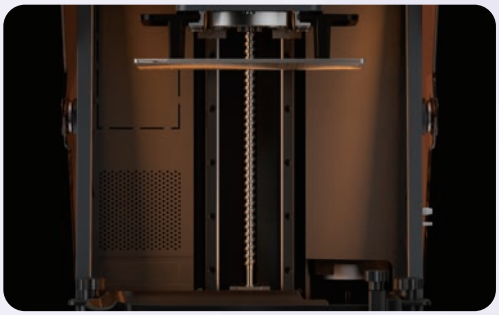


03 Enhanced 3D Printing Reliability



Die-Cast Unibody Base

The die-casted single-piece body replaces multiple components, eliminating cumulative tolerances and enhancing device consistency. It also increases overall device rigidity and improves Z-axis repeat positioning accuracy.



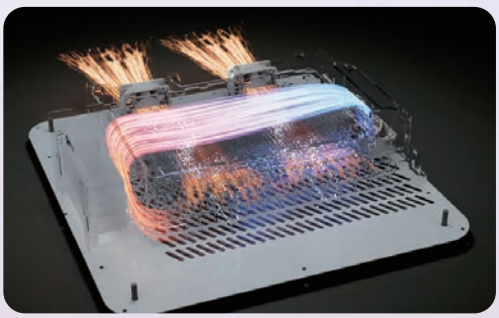
Upgraded C5 grade Z-axis Module

High repeat positioning accuracy ensures layer positioning errors are no greater than 2 μm*. Tested with a 50 kg load across ten thousand runs.

*Data sourced from HeyGears Lab.

Dynamic Motion Algorithm 3.0

Equipped with a high-precision spindle and force sensors, this system offers real-time force feedback at 80 Hz. Dynamic speed adjustments prevent layer misalignment and detachment, minimizing downtime and enhancing overall printing speed.



Powerful Thermal Dissipation

The thermal ventilation structure dissipates heat from the light source and screen, maintaining a stable temperature between 31.2 ℃ and 35 ℃. This reduces heat buildup and extends lifespan.

*Data sourced from HeyGears Lab, with UltraPrint-Production PAP10 resin printed at 25 ℃.。

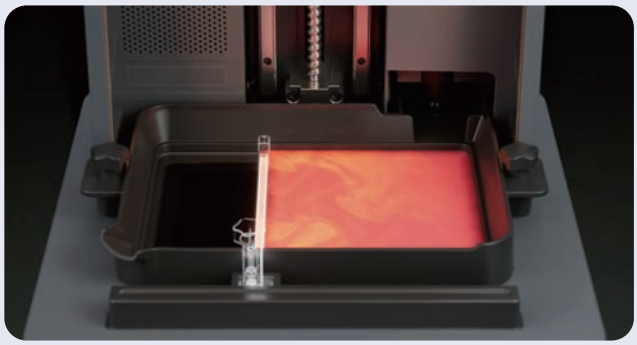
*Model created by DM-Stash, mrtprk, HeyGears.

04

Intelligent Features for Seamless 3D Printing

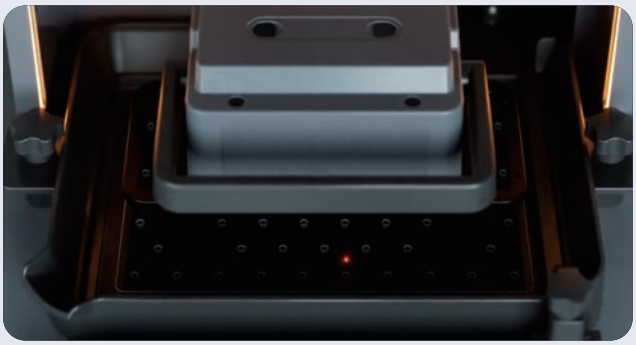
Intellligent Temperature Control*

The in-scraper heater evenly stirs and heats resin from 10 ℃ to 22 ℃ in just 6 minutes, reducing time by 68%*, while keeping it at the optimal printing temperature within ±1 ℃ throughout the entire printing process.



High-sensitivity Residue Detection

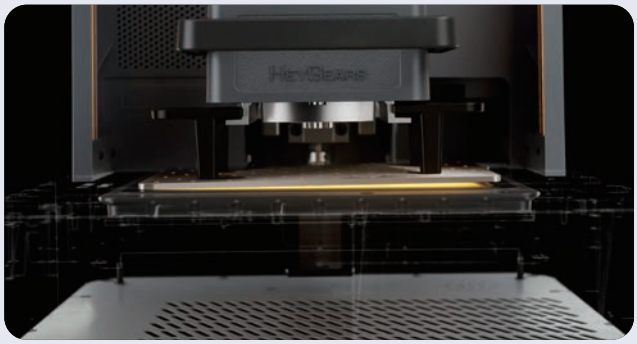
Force sensors with a sensitivity of 0.01 N can detect resin residue as small as 0.15 mm and can auto-stop upon detection or print failure.



*Data sourced from HeyGears Lab, tested using UltraPrint-Production PAP10 resin.

Floating Build Platform Auto Leveling

A floating build platform system with a deviation of 0.15° eliminates gaps of up to 240 μm for automatic leveling.



Automatic Resin Refill

Automatic resin refill before and during printing.

05

3D Print with Advanced Materials

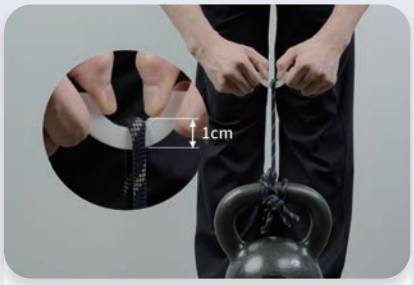
The Reflex 2 utilizes 161 OptiZone light zones, stable hardware, and an advanced materials library to deliver improved performance for stunning 3D printed results.

109 MPa Flexural Strength

PAU20 Resin

88% Light Transmittance

PAT10 Resin



7240 MPa Flexural Modulus

PAH270 Resin

06

Reflex 2 Specifications

Product Name	UltraCraft Rapid Production System
Product Model	UltraCraft Reflex 2
Marketing Name	Reflex 2
3D Printing Technology	LCD (MSLA)
Build Volume	230*144*230mm
XY Native Pixel	40 μm
Accuracy	±20 μm
Layer Thickness	20-250 μm
Optical Wavelength	385+ nm
Size	430*445*605 mm
Weight	25.5 kg
Rated Power	350 W
Voltage	100-240 V~50/60 Hz
Connectivity	USB, WIFI, LAN
Language	English, Simplified Chinese

HeyGears

HeyGears was founded in 2015 as an innovation-driven company, devoted to providing digital manufacturing solutions in various industries. The company bases its core competencies in 3D printing, software development, materials, and big-data handling. We have a global presence with teams across North America, Latin America, Europe, Middle East, and Asia Pacific.

HeyGears believes in a product development process rooted deeply into vertical applications, and our vision goes beyond just 3D printing technology. We strive to create vertically integrated solutions through the solid establishment of hardware, software, material, and service platforms, delivering our goal to bring advanced technology into daily life.

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