carima™
3D PRINTER SPECIALIZED CO.

CARIMA 3D PRINTER

BROCHURE

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CARIMA's History

· Holds the most productive technology among global 3D printer manufacturers.

· Capable of printing with a variety of material properties, standing out among global 3D printer manufacturers.

ENGINEERING

DIGITAL DENTISTRY

2000 – 2015

- 2008 Developed optical engine technology.
- 2009 Launched 'Master EV,' Korea's first DLP 3D printer (with tape casting technology applied).
- 2011 Launch of 'Master EV+', a DLP 3D Printer
- 2014 Contracted for joint project development with Mitsui Chemical (Japan) (*Development of 3D printer for denture materials/dental)

2016 – 2018

- 2016 Signed ODM supply contract with Mutoh (Japan) for 250 units each of ML180 and ML200.
- 2016 Unveiled the world's high-speed continuous printing technology 'C-CAT' at Euromold.
- 2018 Launch of 'EM'
- 2018 ODM supply contract with DIO Implant (500 units delivered in 2018–19).
- 2017 Launch of 'IM2', the 1st Dental DLP 3D Printer

2019 – 2020

- 2019 Contracted with Tethon3D (USA).
- 2020 Co-development agreement with Adaptive3D (USA).
- 2020 Launch of 'TM250', 'DM250K', 'DM400'
- 2020 Launch of 'IMD', a Dental DLP 3D Printer
- 2020 Launch of Dental Model Resins
- 2020 Launch of dental model resins.

2021 – 2024

- 2021 Launch of 'LM1', 'DM4K', 'CL1800'
- 2021 Signed a joint development agreement with EVONIK.
- 2021 'DM400' designated as an innovative product by the Procurement Service.
- 2022 Co-development agreement with DIC Corporation.
- 2023 Awarded the Republic of Korea Science and Technology Medal of Honor for Innovation.
- 2023 Dealership agreement with T-Sol (Japan).
- 2023 Dealership agreement with IWAMA (Japan).
- 2023 Awarded for contributions to the advancement of the AM industry (Commendation by the Minister of Industry).
- 2024 Launched 'X1,' the world's fastest industrial 3D printer.
- 2021 Signed a joint cooperation partnership with DDF (USA).
- 2022 Signed sales contract for IMD-S with Shofu (Japan).
- 2023 Launch of new dental resins.
- 2023 Denture base resin in progress of US FDA approval.
- 2024 Launch of 'IML', a Dental LCD 3D Printer

12+
CARIMA DLP & LCD 3D Printers

25+
Developed a variety of materials with properties, holding a lineup of 25 types

20+
Number of Ministerial Award Wins

146+
44 3D printing technology patents registered and 102 patents pending

100×
100x faster than commercial SLA 3DPs (based on C-CAT)

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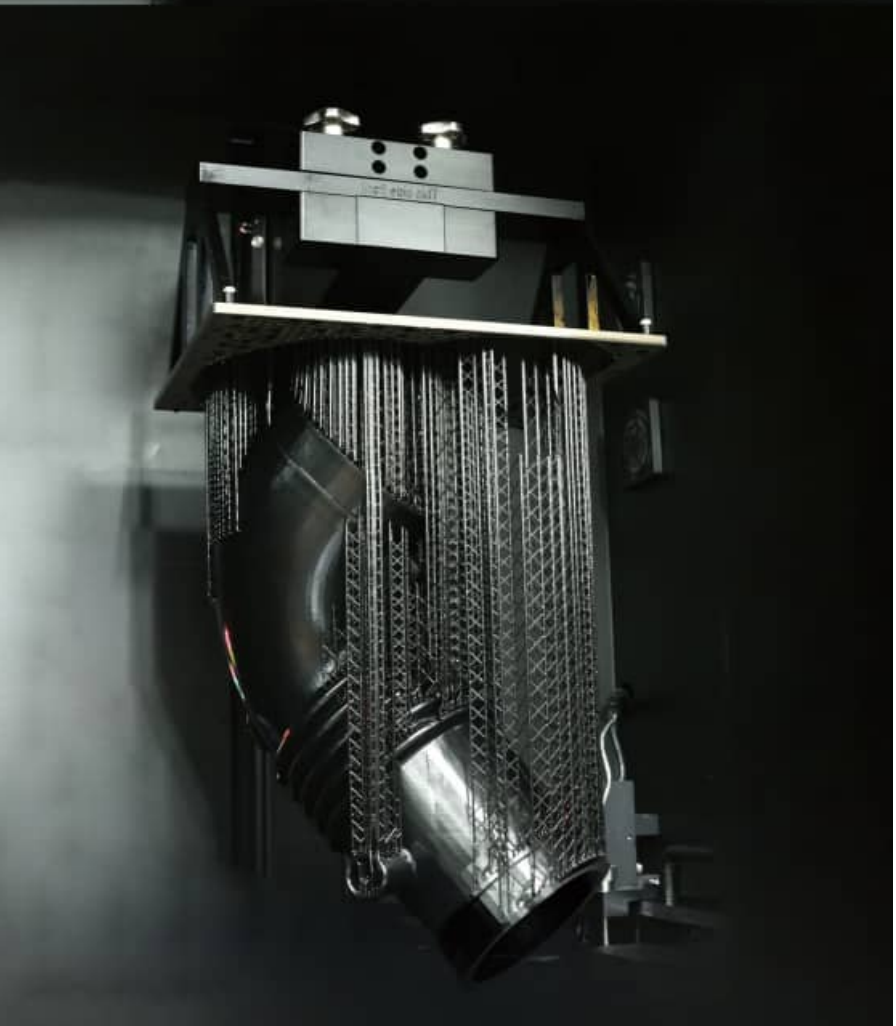


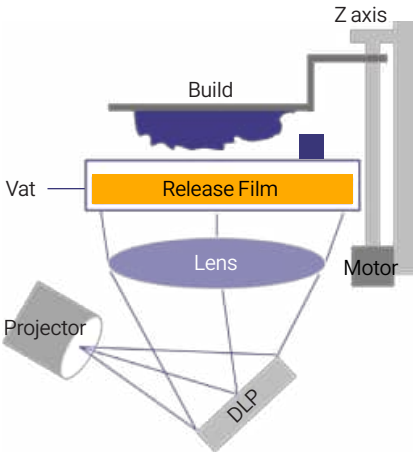
DLP 3D Printing

What is Carima's DLP 3D Printing?

DLP (Digital Light Processing) 3D printing is a 3D printing technology that uses light from an optical engine to harden light-curable resin layer by layer across the entire surface.

In this process, 'release force' is the key to DLP 3D printing as it is the force required to remove the resin-cured adhesive surface from the molding plate and VAT (water bath) floor, which determines the quality and speed of output.

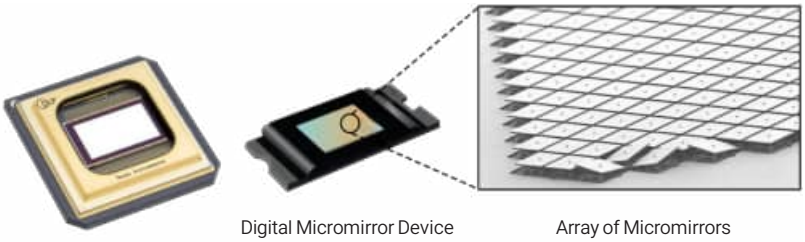
Through the development of differentiated release films and systems, Carima takes DLP technology to the next level to support extremely fast, failure-free and accurate output.



(DLP Device Configuration)

DLP method device configuration diagram

The core of the DLP method lies in the Digital Mirror Device (DMD) chip, which is an optical semiconductor. A DMD chip is a digital small mirror device that uses a small electrical repulsion force to arrange a single unit that moves a small mirror in the required number of pictures, and it is the same as the principle of a beam projector that uses a DMD element to reflect light and express shadows, and millions of mirrors of about 16 microns are embedded in one DMD chip.



Digital Micromirror Device (DMD)

Array of Micromirrors

Benefits of DLP

1. Fast output speed

   Full layer output provides fast speed against SLA

2. High precision, surface finish, repeatability, and reproducibility

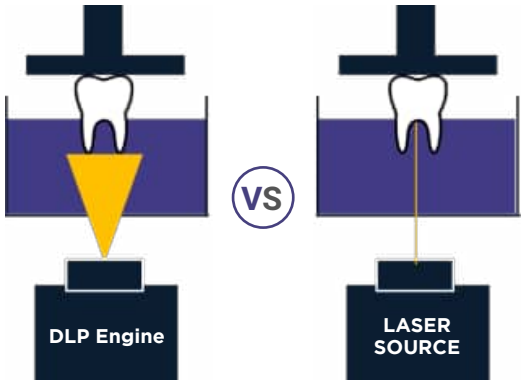
·Accurate representation of model details
·Zero output damage and deformation with the best release force

3. Long lifespan of optical engine

   Can be used even when the light source is off, maintaining a long lifespan

4. Compatible with a wide range of materials

   Flexibility to choose based on material properties



DLP(Digital Light Processing) vs SLA(Stereolithography)

Productivity with DLP

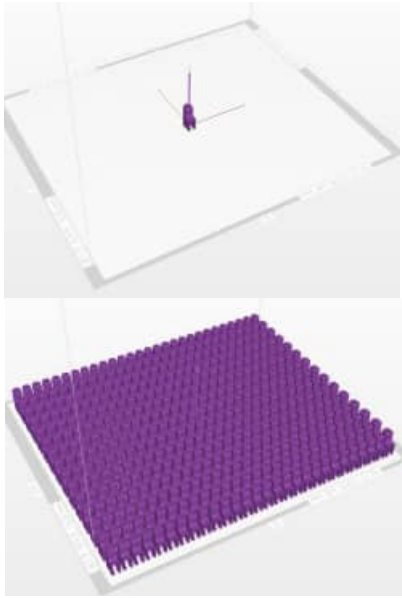
The DLP projection method cures the entire layer at once.
Compared to SLA, which is a spot formatting method,
the output speed is much faster. (at least 2-5 times)

Nearly 5x Higher Productivity than SLAs!
Same Power Time for 1 Door Holder and 420 Outputs!

Based on DM400

Door Hold	Time
DLP	**1.5 hrs**
SLA	8 hrs

Print model: Door Hold
Output: 420pcs

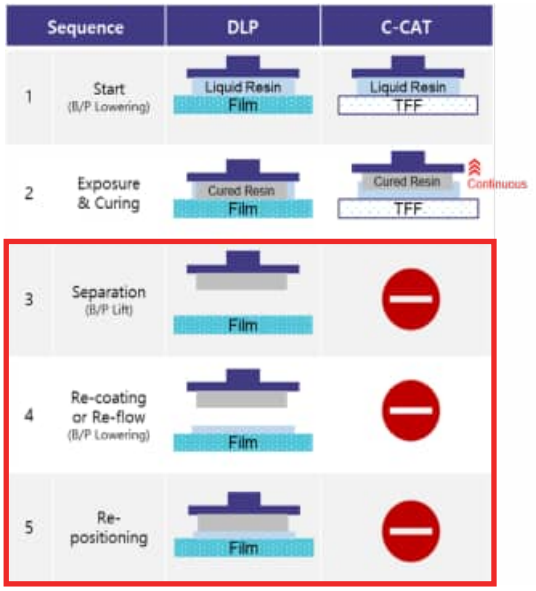


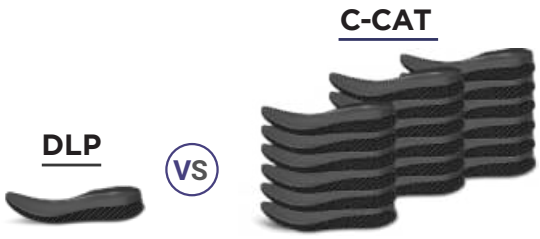
Carima's Unique Technology

Tech 1. High-speed continuous printing technology 'C-CAT'

The independently developed C-CAT (CARIMA-Continuous Additive Technology) Ultra-high-speed continuous printing technology that eliminates the No. 3 to No. 5 sequencing process provides about 20 times faster printing speed based on the same area of a typical DLP 3D printer.

In other words, a single X1 with C-CAT can cover the productivity of 20 general DLP 3D printers, and it is used in various industries.





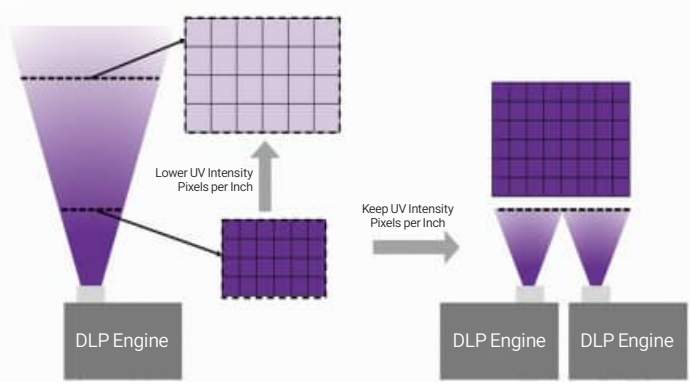
Compared to the same area/hr, 20 times faster productivity!

- Through the application of C-CAT, productivity is up to 20x higher than that of DLP 3DP in the same area
- Minimizing contact interface forces (release forces) through TFF for output stability and repeatability
- Optimized output of high-strength materials enables the production of high-strength, high-heat-resistant industrial parts

Tech 2. Dual Engine Nesting Technology 'S-BAT'

Independently developed multiple DLP engine control & nesting technology Through the development of 'S-BAT' (Seamless Boundary Alignment Technology), we have realized the large-scale expansion of 3D printers for the photocuring industry.

Excellent light uniformity for both interior and exterior!



Tech 3. Tension reduction technology 'TFF'

Manufactured through Carima's core patented technology TFF (Tension Free Film) is formed in the form of dots and pyramids on the molding surface with light passing through the MLA (Micro Lens Array), and the output surface and film are glued in the form of dots.

Therefore, compared to general FEP film, the release force is reduced by more than 90%.

It can be easily separated with little force to reduce output time, and it reduces the force applied to the output for superior output stability.

CARIMA TFF

- TFF (Tension Free Film) is formed in the form of a pyramid in which light is formed in the form of dots on the molding surface.
- The printout and the film are cured together in the form of dots

General FEP Film

- In the case of ordinary FEF films, light is formed into layers from the molding surface and cured into a layer form
- The printout and film are bonded in all areas

Multi-Purpose Desktop DLP 3D Printer

IMD-C

IMD-C is a multi-purpose DLP 3D printer for desktop applications in various fields such as ceramics, bio, medical, R&D, jewelry, and industrial parts printing. It is widely used. In particular, it can be customized according to customer requests, and various functions such as a heating mechanism and functional release film (TFF:Tension Free Film) are applied to provide the best precision and quality for printing high-viscosity materials such as ceramics, rubber, and silicone.

Ultra-Precise, Ultra-Fast Printing Speed
5 cm high printout, 10 mins.

Temperature-Controlled Heating Bed
Can be heated up to max 35°C.

Patented TFF(Tension Free Film)
Providing output stability by minimizing release energy.

Material Open System
Compatible with all third-party material.
High viscosity, high heat resistance, high strength material output.

Mold

Zirconia Teeth

Eyewear

Ceramic Samples

Figures

Plastic Scintillators
(for X-ray Detection)

Drones

Medical Devices

Microfluidics

Build Volume	124 x 70 x 140mm (Select one) 110 x 61 x 140 / 96 x 54 x 140 76 x 42 x 140 / 57 x 32 x 100
Pixel Size	30, 40, 50, 57, 65μm
Layer Thickness	25, 50, 100, 150μm
Engine Light Source	385, 405nm UV LED

Resolution	FHD 1920x1080
Product Size/ Weight	391 x 405 x 589mm / 18.5kg
Software	· CARIMA Slicer V2 · Chitubox Pro for CARIMA(*Select one)
Electrical Specifications	DC 24V 5A with Adaptor
Color	● ○

High-Performance Industrial DLP 3D Printer

DM4K

DM4K is a best-in-class industrial DLP 3D printer with a 4K UHD UV LED optical engine (3840*2160) and CARIMA's patented tension-free film (TFF) with a focus on high-speed printing, high accuracy, repeatability, and a material open system to deliver continuous productivity in the most demanding digital manufacturing environments.

High Accuracy & High Speed = Productivity

Deliver best-in-class productivity for end-use product output

Heating Mechanism (Max 40°C)

Built-in high-power heating mechanism can heat material temperature up to max 40°C

Automatic Material Feeder (*Optional)

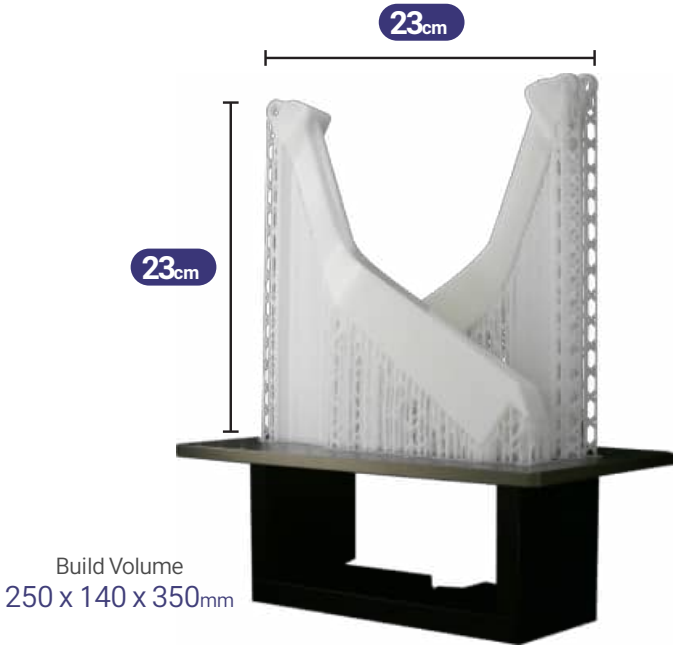
Intelligent automatic material feeder and automatic shutdown prevention

Patented TFF(Tension Free Film)

Minimizing release forces to provide output stability

Material Open System

- Third-party resin compatible
- Capable of printing ceramic, high-strength, high-heat/flame-retardant, and high-viscosity materials



Build Volume
250 x 140 x 350mm

Build Volume	192 x 108 x 350mm 250 x 140 x 350mm(Select one)
Pixel Size	50, 65μm
Layer Thickness	30, 50, 100, 150μm
Engine Light Source	385, 405nm UV LED
Resolution	4K UHD UV LED(3840 x 2160)
Product Size /Weight	650 x 620 x 1,735mm / 150kg
Software	· CARIMA Slicer V2 · Chitubox Pro for CARIMA(*Select one)
Electrical Specifications	AC100-220V ~ 50-60Hz 10.0A Max

DM4K Printouts

Optimized for the output of a variety of high-performance materials such as ceramics, high strength, high heat resistance/flame retardant, and high viscosity, it meets the needs of a wide range of industries.

Ceramic | Automotive Interiors | Drones | Defense | Robot | Dentistry | Customized Products | Medical

Midsole/Shoes

Saddle

Sunglasses

Wearable Robot Parts

Ceramic Samples

Nozzle

Dental Models

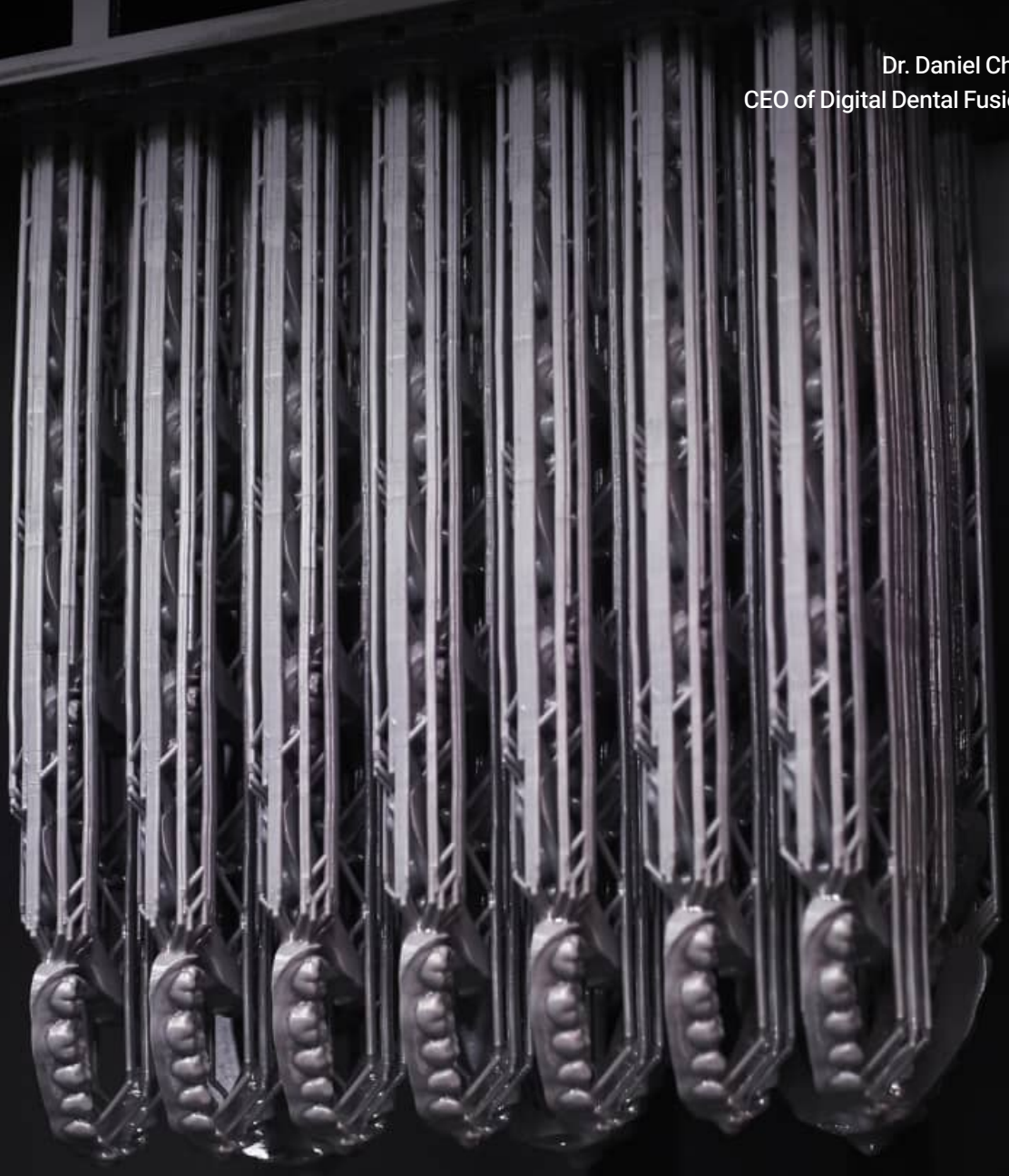
Helmet Built-in Cushion

Mood Light Cover

“CARIMA DM4K offers certain guarantees in high-precision and the fastest productivity that are indeed required for digital dentistry. When we were looking for the best way to solve the inconveniences such as the expensive manufacturing cost of dental prostheses and poor quality, we met CARIMA and recognized their dental DLP 3DP total solution.

We are now so happy and satisfied with the DM4K and their dental model resins too. We are sure that we’ve already achieved very good results compared to the existing devices. We are planning to introduce it to my friends who are working in the same field.”

Dr. Daniel Cho,
CEO of Digital Dental Fusion



Automated 3D Printing System for Ultra-speed, Customized, Mass Production

DM400

조달청 Minister of Trade, Industry and Energy Award

K-INNOVATION PROCUREMENT

DM400 is the world's first large-area, top-down industrial DLP 3D printer with dual DLP engine nesting technology 'S-BAT' that enables mass production of a large number of products, especially the top-down structure that makes it easy to print large and heavy models without failure. In addition, it is optimized for the output of not only high-strength and heat-resistant materials, but also high-viscosity materials such as rubber-like and silicone, and is used in various industries.

High-Speed Mass Production

- More than 6x faster output than SLA
- Largest build volume for DLP 3DPs.

Excellent Light Uniformity

Dual DLP engine nesting technologies 'S-BAT' (Seamless Boundary by Alignment Technology) ensuring perfect photouniformity in all optical irradiation surfaces.

Optimized Output of High-Performance Materials

(Rubber, Silicone, Ceramic Composite, etc.)

High viscosity (~10,000 cPs) materials that cannot be printed on other equipment can be used.

Freedom from Gravity

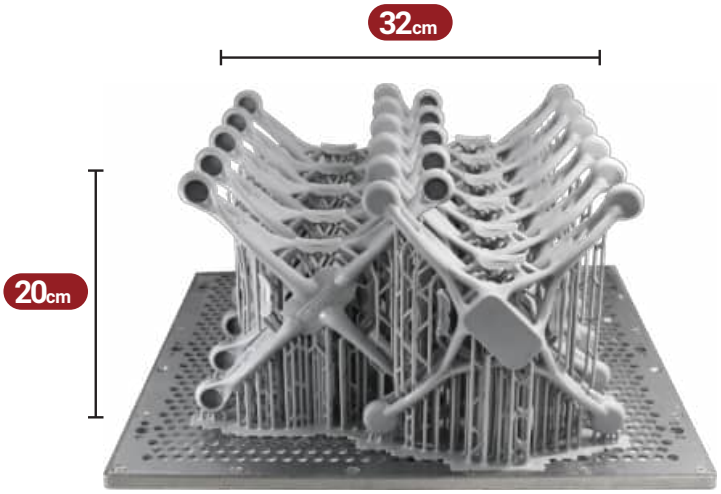
Top-down structure enables stable output of large and heavy prints without failure.

[Failure rate: 0.01% (Successes: 100,000 / Failures: 10)]

Automatic Post-Processing Device

(*Optional)

Removal + Washing + Curing + Drying + Collecting



Build Volume
420 x 380 x 400mm

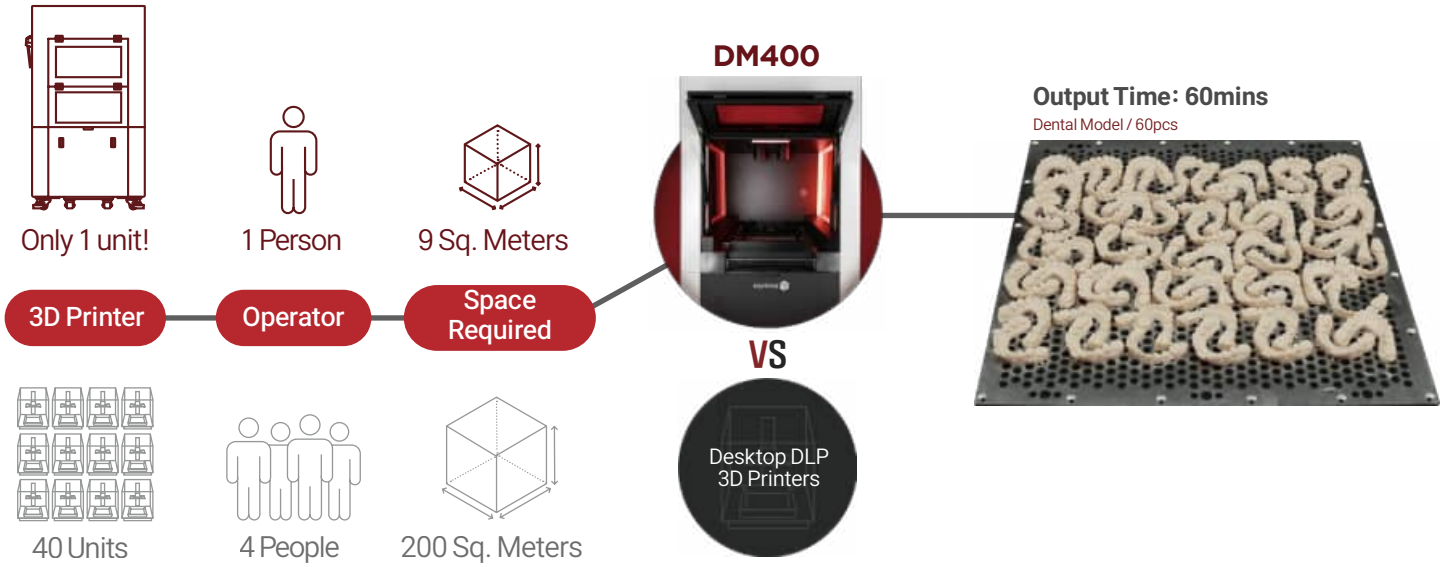
Drone
11pcs

Build Volume	420 x 380 x 400mm 420 x 380 x 200mm (for Dental)
Pixel Size	100μm
Layer Thickness	50, 75, 100, 125, 150μm
Engine Light Source	385, 405nm UV LED
Resolution	Dual 4K
Product Size/ Weight	1,050 x 1,210 x 1,881mm / 1000kg
Software	· CARIMA Slicer V2 · Chitubox Pro for CARIMA(*Select one)
Electrical Specifications	AC100-240V ~ 50-60Hz 20.0A Max

Large-area Industrial 3D Printer 'DM400' and 'Automated Post-Processing Device'

Accelerating Mass Production

The DM400 uses minimal manpower and space with just one machine, which offers significant cost and time savings over desktop equipment. Users can experience the ability to print multiple dental models efficiently, quickly, and safely.



Mass Production of Dental Models for Clear Aligners

Automated Process Produces more than 600 pcs per Day

DM400 Printouts

Optimized for the output of high-viscosity (~10,000 cP) and high-strength functional materials such as rubber-like, it meets the needs of a wide range of industries.

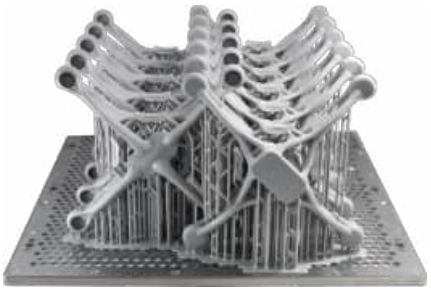
Production | Automotive Interiors | Drones | Defense | Robot | Dentistry | Customized Products | Medical

Robotic Arm Parts
2sets

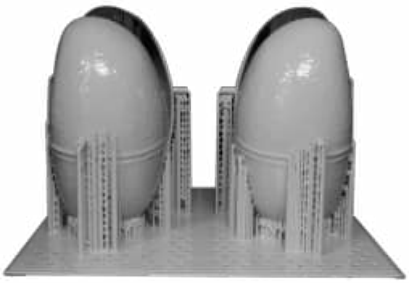
Eyewear
30pairs

Engine Cover

Railway Part(Wheel Cover)



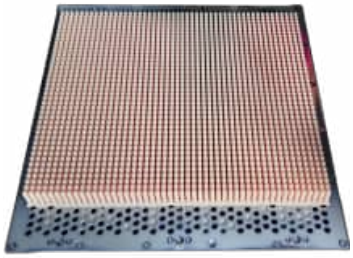
Drone
11sets



Pulmonary Bronchial Model

City Mini Model

Dental Models
60pcs



Tablets (Pharmaceutical R&D)
2,350 pcs

DM400 Awards

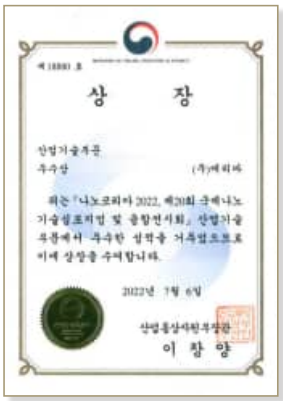
Proving Technology and Expertise Through Awards from Government Agencies

K-INNOVATION PROCUREMENT

조달청
Minister of Trade, Industry and Energy Award

DM400 Awards

Certificate of Scientific and Technological Innovation

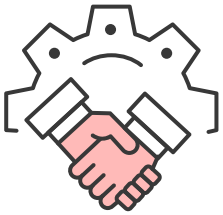


Minister of Trade, Industry and Energy Award

Designated as an Innovative Product

Merit Award

Benefits of Purchasing Innovative Products



Three-Year Contract Available

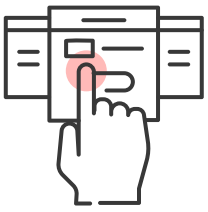
Voluntary Contracts with the National or Local Governments are Possible

Reflecting Purchasing Performance in Institutional Evaluation

of the Total Purchase Amount of Goods by Institution
1.0 ~ 2.0%

PPS Purchasing on Budget

Only One Session can be Held During the Specified Period



When the Trial Purchase is Judged to be Successful

If you Receive a Successful Trial Test
Qualify for the Superior Product Application

※ You can purchase it as an innovative product from the local government.

The CARIMA DM400 has been Designated as an Innovative Product.
Local Governments and Public Institutions can Purchase them on a Voluntary Contract.
sales@carima.com / +82-2-3663-8877 (Inquiries Available)

The World's Fastest Industrial DLP 3D Printer

X1

CARIMA X1 is the world's fastest industrial 3D printer and is equipped with C-CAT technology that can print over 40 cm per hour.
In addition, the power stability is enhanced through TFF, a heating mechanism, and an automatic material feeder.
Ideal quality and increased productivity are guaranteed.

*C-CAT: CARIMA-Continuous Additive Technology

The World's Fastest Continuous AM Technology 'C-CAT'

Optimized for maximum productivity
*C-CAT Mode: Over **40cm** per hr

Patented TFF(Tension Free Film)

Providing output stability by minimizing release energy

Material Open System

Compatible with all third-party materials, capable of printing ceramic, high-strength, high-heat/flame retardant materials

Automatic Material Feeder

Intelligent automatic material feeder prevents automatic stoppage due to material shortage

Heating Mechanism (Max 40°C)

Built-in high-power heating mechanism can heat material temperature up to max 40°C

80 Shoe Models
Print Time: 15 mins

Build Volume	320 x 290 x 500mm
Pixel Size	75μm
Layer Thickness	Normal: 25, 50, 100, 150μm C-CAT: 10~250μm(Varies by material)
Engine Light Source	385, 405nm UV LED
Resolution	Dual 4K UHD UV LED
Product Size/ Weight	1,000 x 775 x 1,950mm / 450kg
Software	· CARIMA Slicer V2 · Chitubox Pro for CARIMA(*Select one)
Electrical Specifications	AC100-240V ~ 50-60Hz 20.0A Max

X1 Printouts

Depending on the model structure, thickness, and characteristics of various high-performance materials such as high strength, high heat resistance, and flame retardancy, two models can be selected: C-CAT (continuous printing) and general printing, to meet all output requirements from detailed printing to mass production.

Ceramic | Automotive Interiors | Drones | Defense | Robot | Dentistry | Production | Customized Products | Medical

Pipe Fitting / 572 EA
Height: 27cm / Time: 4 hrs
(Normal Output)

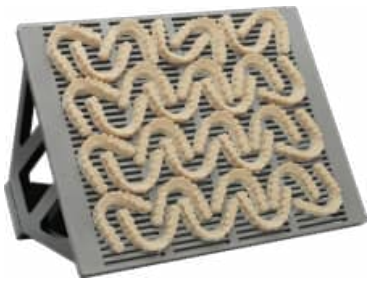
Remote Control Housing / 30 EA
Height: 12cm / Time: 5 hrs
(Normal Output)

Large Pipe
Height: 39cm / Time: 9 hrs
(Normal Output)

Ankle Cast
Height: 30cm / Time: 90 mins
(C-CAT Output)

Arm Cast
Height: 21cm / Time: 30 mins
(C-CAT Output)

Smog Senser Housing
Height: 17cm / Time: 6 hrs
(Normal Output)



Dental Model / 31 EA
Height: 3cm / Time: 10 mins
(C-CAT Output)

Drone
Height: 20cm / Time: 1 hrs
(C-CAT Output)

Carbon Filter(300μm)
Time: 10 hrs
(Normal Output)

Optimized Desktop LCD 3D Printer

IML

IML is a desktop 3D printer optimized to produce dental prosthetics and jewelry, offering fast print speeds and high precision. Its polarization correction system ensures superior print quality by providing up to 98% light uniformity.

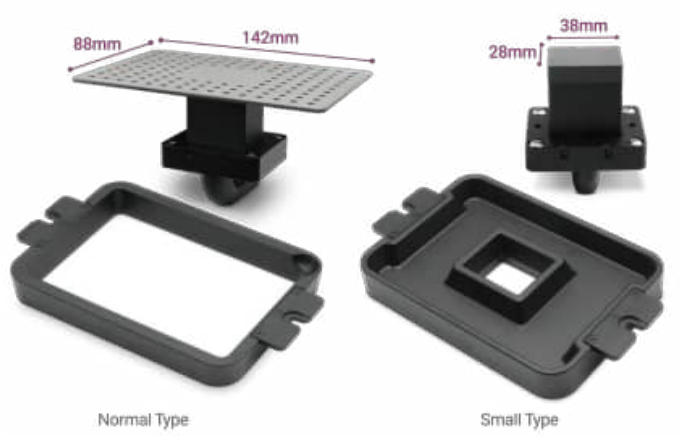
High-Speed Printing (3x Faster than Other LCD 3DPs)

- C&B, 8mins
- Precision: less than 40μm

11mm C&B, Only 8mins!

Customized Solution

- Normal Type: 142 x 88 x 100mm



Open Material System

Compatible with 3rd Party Dental & Jewelry Resins

Validated: ODS Graphy VERICOM DSM Holdings SHOFU merz DENTAL

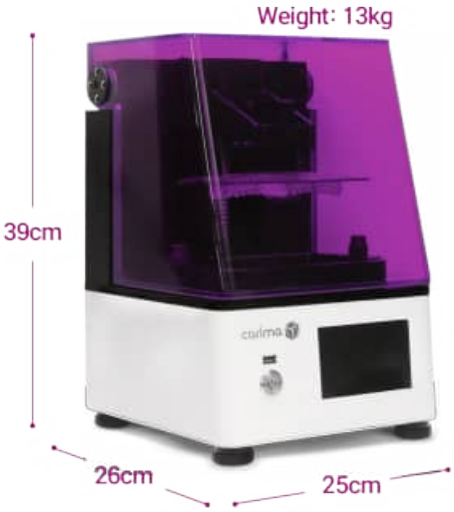
Revolutionary Slicing Software

- **CARIMA Slicer V2**
- chitubox Pro for CARIMA

(*Select one)

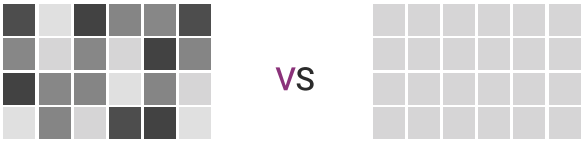
Compact Design

Space-saving and portable



CARIMA Polarization Correction System

- Consistently & Uniformly with the Same Light Power
- 98% Overall Light Uniformity



Heating Mechanism Applied

Can be Heated up to Max. 35°C(*Depending on the resin)

Build Volume	142 x 88 x 100mm (Normal) 38 x 28 x 100mm (Small)
Pixel Size	35μm
Layer Thickness	25, 50, 75, 100, 125, 150μm
Engine Light Source	405nm UV LED
Resolution	4K (4098 x 2560)
Product Size /Weight	250 x 266 x 391mm/13kg
Software	· CARIMA Slicer V2 · Chitubox Pro for CARIMA(*Select one)
Electrical Specifications	DC 24V 10A with Adaptor

CL300Pro

The CL300Pro is a desktop UV LED curing machine.
The easy-to-operate structure supports high-speed curing with 300W UV LED curing and heat, with 1~15 levels of light intensity adjustment.

300W UV LED for High-Speed Curing

- Curing 1 dental model takes 3 mins
- The world's fastest cure speed

Providing Seamless, Complete Light Irradiation and Safety

- 360° auto rotary table (⌀150 x 110mm)
- Overheating prevention mechanism

Adjustable Light Intensity

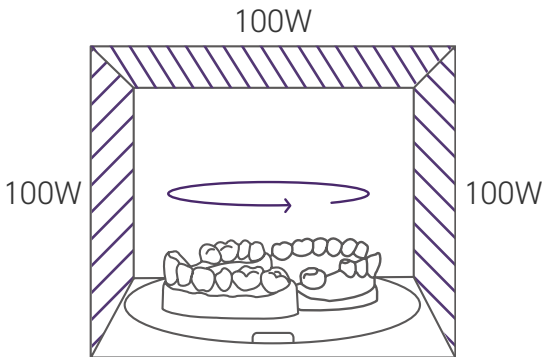
Upper Part: 100W Side: 100W x2
(Levels 1~15)

Compact Size & Ease of Use

- Adjustable light intensity & time setting
- Simple touch screen operation
- Air cooling system

Curing Size	Ø150 x 110mm
Product Size	283 x 283 x 337mm
Weight	10kg
Light Source	300W UV LED

Power	110 ~ 240V 60Hz 5A
Cooling System	Cooling Fan
Control Type	Touch Screen



CL800

Multipurpose Medium UV Curing Machine

The CL800 is a versatile and energy-efficient curing machine.
With its powerful 600W light source, it delivers fast and flawless curing,
offering unmatched performance.

Curing Size	Ø250mm
Product Size	635 x 517 x 718mm
Weight	68kg
Light Source	1150W UV LED
Power	AC110V/ 220V (50/60HZ)
Cooling	Cooling Fan
Control Type	Touch Screen

CL1800

Industrial UV Curing

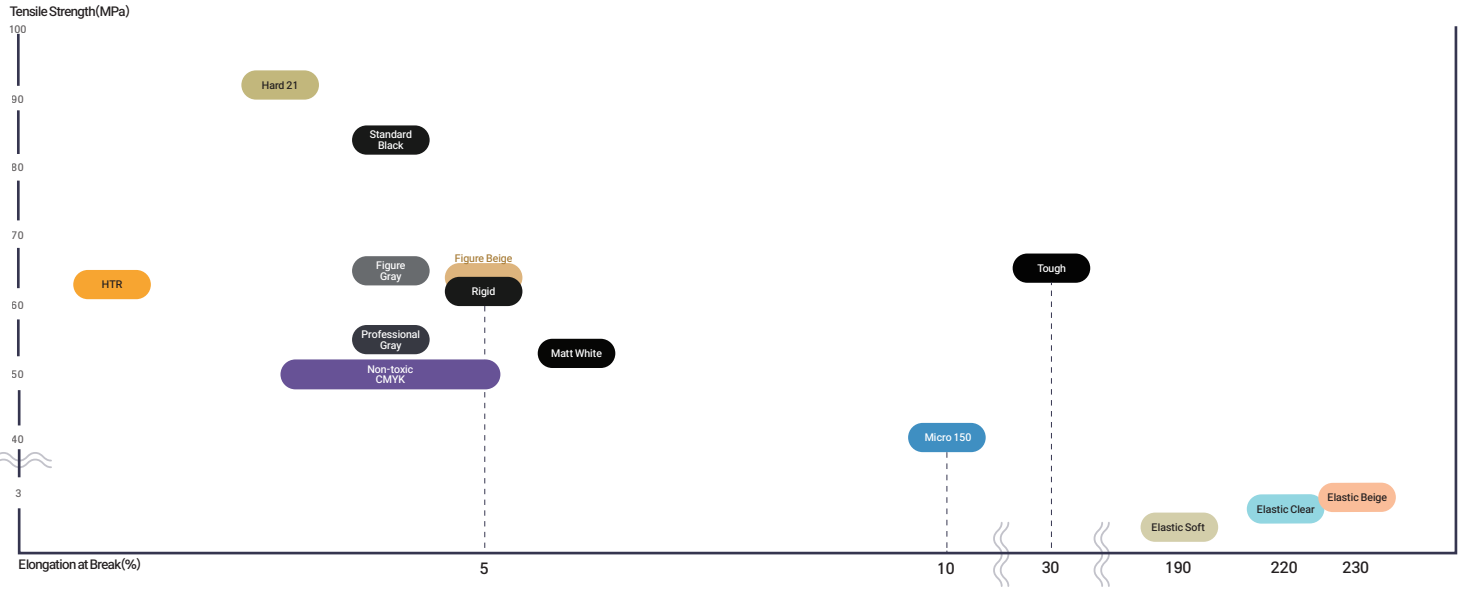
The CL1800 features a large curing size with adjustable output levels
ranging from 1 to 15. Equipped with an 1800W UV LED light source, it enables
rapid curing of large-scale or high-volume prints in a single process.

Curing Size	Ø520 x 450mm
Product Size	876 x 777 x 817mm
Weight	120kg / 265 lbs
Light Source	1800W UV LED
Power	110 ~ 240V 60Hz 10A
Cooling	Cooling Fan
Control Type	Touch

CARIMA 3D Printing Materials
Key Features of the Lineup

Properties	Functional	Engineering				
	HTR Yellow 3DKH01	Hard 21 CUKH10C	Elastic Beige/Clear CUKE05B/CUKE05C	Elastic Soft CUKES13C	Tough Black CUKT05B	Rigid Black CUKR03B
Technology [DLP | LCD]	● | ●	● | ●	● | ◐	● | ◐	● | ●	● | ●
Color	Yellow	Clear	Beige / Clear	Clear	Black	Black
Wavelength [365 | 385 | 405nm]	○ | ● | ●	○ | ● | ●	○ | ○ | ●	○ | ● | ●	○ | ● | ●	○ | ● | ●
Key Features	High hardness and tensile strength, with heat resistance over 300°C, suitable for high-temperature process parts.	High strength, low strain, and fast print times.	Soft material with high elongation and elasticity,silicone-like, excellent for body model output.	Soft material with a softer texture compared to Elastic Beige/Clear.	ABS-like material with high tensile strength and elongation, as well as impact resistance.	High rigidity, minimal shrinkage, and no warping.
Indoor/outdoor use	All Applicable	All Applicable	All Applicable	All Applicable	All Applicable	All Applicable
Applicable Industries – Educational	○	●	●	●	○	○
Figures/Toys	○	●	●	●	○	○
Research & Development	○	●	●	●	○	○
Consumer goods	●	●	●	●	●	●
Industrial (Parts/Jigs)	●	○	●	●	●	●
Automotive	●	○	●	●	●	●
Aerospace & Aviation	●	○	●	●	●	●
Electrical & Electronic Components	●	●	●	●	●	●

Comparison of Properties of Each
CARIMA Material



3D PRINTER RESIN

For the best 3D printing results, CARIMA has developed the best 3D printing materials.
Experience CARIMA resin, known for its safety and superior mechanical properties.

GENERAL

Non-Toxic CMYK

RoHS

· It is an eco-friendly material developed by CARIMA, which is non-irritating to the skin, non-toxic, odorless, and safe
· 6 colors for a variety of color combinations
· Output parameter values that remain unchanged even when mixed freely
· Low viscosity makes it easy to use for people of all ages

Tensile Strength	50 MPa	Young's Modulus	1140 MPa
Elongation	3-5 %	Hardness	84 D
Viscosity	300-400cP		

Applications: Education, Figures/Toys, R&D, Consumer Goods

Standard Black

· Epoxy-based properties are relatively robust and rigid
· Smooth surface finish
· A material that is easy to use for beginners
· Shorter printing time compared to other materials

Tensile Strength	84 MPa	Young's Modulus	2700 MPa
Elongation	4 %	Hardness	87 D
Viscosity	130 cP		

Applications: Education, Figures/Toys, R&D, Consumer Goods

Figure Gray

· High precision and surface finish make it easy to use even for beginners
· Supports are easily removed, and printouts can be removed without damage during printing

Tensile Strength	65 MPa	Young's Modulus	3200 MPa
Elongation	4 %	Hardness	85 D
Viscosity	450 cP		

Applications: Education, Figures/Toys, R&D, Consumer Goods

Figure Beige

· It has a smooth surface finish and high precision, and is easy to use even for beginners
· Supports are easily removed, and printouts can be removed without damage during printing

Tensile Strength	64 MPa	Young's Modulus	3000 MPa
Elongation	5 %	Hardness	88 D
Viscosity	560 cP		

Applications: Education, Figures/Toys, R&D, Consumer Goods

Non-Toxic CMYK

Cyan Magenta Yellow
Black White Clear

Carima's CMYK resin, consisting of 6 colors, is a non-toxic mixable material, allowing users to freely combine colors. The liquid resin has been tested and classified as non-irritant, and no harmful chemical substances were detected, which makes it suitable for educational use and printing children's toys.

CMYK resin can also be used to print figures and models due to it's high precision and strength.

Lethal Dose(LD50) Comparison

Safe

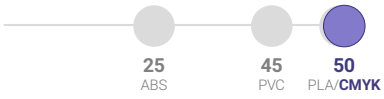
Nontoxic

Non-irritant

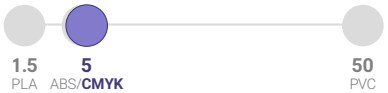
3D Materials Comparison

*CARIMA CMYK / PLA Filament for 3D Printer / PVC Plastic/ ABS Filament for 3D Printer

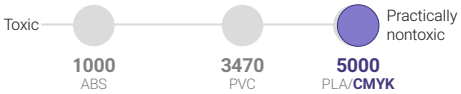
Tensile Strength(MPa)



Elongation at Break(%)



Acute Toxicity(mg/kg)



Color Mixing Method

Soild

Gradation

HTR Yellow

· High hardness and tensile strength
· High heat-resistant material above 300°C
· Suitable for printing industrial parts used in high-temperature processes (e.g., jigs, moldings, etc.)

Tensile Strength	63 MPa	Young's Modulus	6300 MPa
Elongation	1 %	Hardness	82 D
Viscosity	600-800 cP		

Applications: Consumer Goods, Industrial, Automotive, Aerospace/Aviation, Electrical and Electronic Components

Tough Black

· The right balance of high tensile strength and elongation
· Not easily broken by external shocks
· Printouts can be combined by making holes
· Suitable for printing a wide range of parts

Tensile Strength	59 MPa	Young's Modulus	1200 MPa
Elongation	30 %	Hardness	81 D
Viscosity	365 cP		

Applications: Consumer Goods, Industrial, Automotive, Aerospace/Aviation, Electrical and Electronic Components

Rigid Black

· High rigidity compared to other resins
· Does not bend easily with little shrinkage
· Suitable for rigid modeling outputs

Tensile Strength	62 MPa	Young's Modulus	1920 MPa
Elongation	5 %	Hardness	84 D
Viscosity	300 cP		

Applications: Consumer Goods, Industrial, Automotive, Aerospace/Aviation, Electrical and Electronic Components

Elastic Beige

· High elongation and elastic force allow bending and pulling
· Feels similar to silicone, perfect for body models (or mold outputs)

Tensile Strength	2.8 MPa	Density	1.03 g/cm³
Elongation	230 %	Hardness	50 A
Viscosity	1050 cP		

Applications: Education, Figurines/Toys, R&D, Consumer Goods, Industrial, Automotive, Aerospace/Aviation, Electrical and Electronic Components

Elastic Clear

· High elongation and elastic force allow bending and pulling

· Feels similar to silicone, perfect for body models (or mold outputs)

Tensile Strength	2.2 MPa	Density	1.03 g/cm³
Elongation	220 %	Hardness	46 A
Viscosity	1050 cP		

Applications: Education, Figurines/Toys, R&D, Consumer Goods, Industrial, Automotive, Aerospace/Aviation, Electronic Components

Elastic Soft

Softer feel than elastic beige/clear.

Tensile Strength	1.3 MPa	Elongation	190 %
Hardness	33 A	Viscosity	800 cP

Applications: Education, Figurines/Toys, R&D, Consumer Goods, Industrial, Automotive, Aerospace/Aviation, Electronic Components

Micro 150

· Transparent material for 365nm 3D printer

· Superior precision

· Suitable for microfluidic channel implementation devices

Tensile Strength	40 MPa	Die C Tear Specimen	12.97 kN/M
Elongation	10 %	Hardness	83 D
Viscosity	350 cP		

Application: R&D

Hard 21 Yellowish

· High-strength material with low deforming properties

· Fast output time

Tensile Strength	92 MPa	Young's Modulus	4200 MPa
Elongation	2.8 %	Hardness	86 D
Viscosity	200 cP		

Applications: Education, Figures/Toys, R&D, Consumer Goods

Matt White

· Provides fast output speed
· Tactile and visually smooth texture
· White matte material with a color that does not change

Tensile Strength	53 MPa	Young's Modulus	1916 MPa
Elongation	6 %	Hardness	83 D
Viscosity	312 cP		

Applications: Education, Figures/Toys, R&D, Consumer Goods

Professional Gray

· Provides fast output speed
· Tactile and visually smooth texture
· Attractive material that combines matte and gloss finishes

Tensile Strength	55 MPa	Young's Modulus	1700 MPa
Elongation	4 %	Hardness	82 D
Viscosity	100 cP		

Applications: Education, Figures/Toys, R&D, Consumer Goods,
Electrical and Electronic Components

CERAMIC

Ceramic Model White

· Matte Surface, High Resistance to Chemicals and Heat
· High Rigidity & High Flexural Strength

Viscosity	500-1000 MPa
Density	1.08 g/cm³

Applications: R&D, Ceramics

Ceramic Mold White

· Matte surface, high resistance to chemicals and heat
· High rigidity and high flexural strength
· Optimized for mold making

Viscosity	500-1000 MPa
Density	1.08 g/cm³

Applications: R&D, Ceramics

EVONIK

RESIN

High-quality industrial materials developed by the German global chemical company EVONIK can be found at CARIMA.

RG 3101L

·Thermal and mechanical properties are balanced, making it easy to output

· Excellent impact strength combined with high heat resistance, similar to ABS materials

Tensile Strength	52 MPa	Young's Modulus	2100 MPa
Elongation	32 %	Hardness	80 D
Viscosity	1700 cP		

Applications: Automotive, Heavy Equipment Parts Printing

RG 7100L

· High impact strength and low water absorption

· Optimal for the production of parts with isotropic properties and low hygroscopicity

· Glossy, smooth surface ideal for fine detailing

Tensile Strength	51 MPa	Young's Modulus	1450 MPa
Elongation	48 %	Hardness	81 D
Viscosity	4870 cP		

Applications: Automotive, Heavy Equipment Parts Printing

TI 5400L

· Excellent anti-aging performance
· Part-specific toughness and ductility
· Constant hardness
· Easy and excellent color development

Tensile Strength	40 MPa	Young's Modulus	1080 MPa
Elongation	210 %	Hardness	80 D
Viscosity	450 ± 50 cP		

Applications: Consumer Goods, Drone Parts, Automotive Parts

RG 2000L

· High optical transparency and excellent impact resistance

· No yellowing, good elasticity with a tough composition

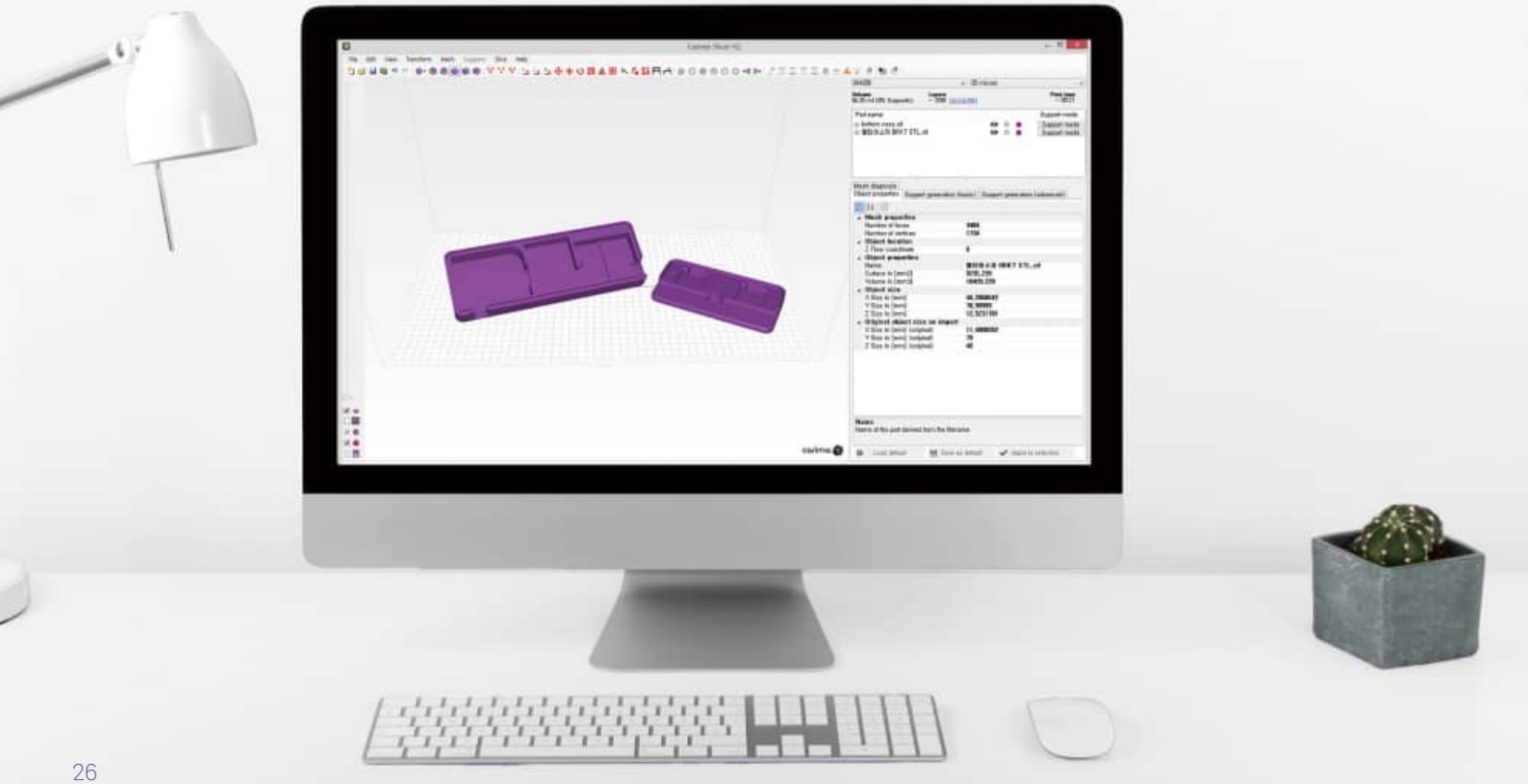
Tensile Strength	53 MPa	Young's Modulus	1940 MPa
Elongation	48 MPa	Hardness	85 D
Viscosity	3060 cP		

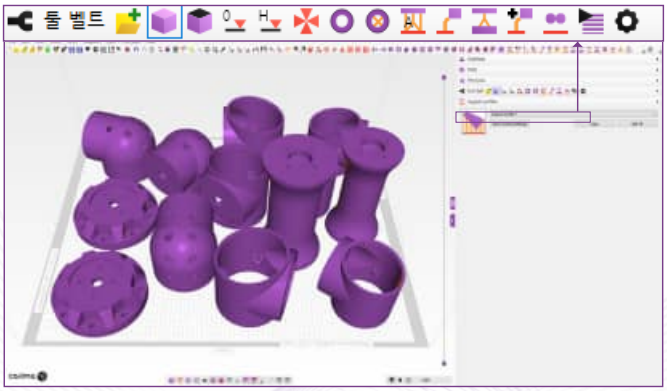
Applications: Consumer Goods (Eyewear), Wearable Robot Parts, Medical Devices

OPTIMAL SOFTWARE FOR SLICING & FIXING

carima™ Slicer V2

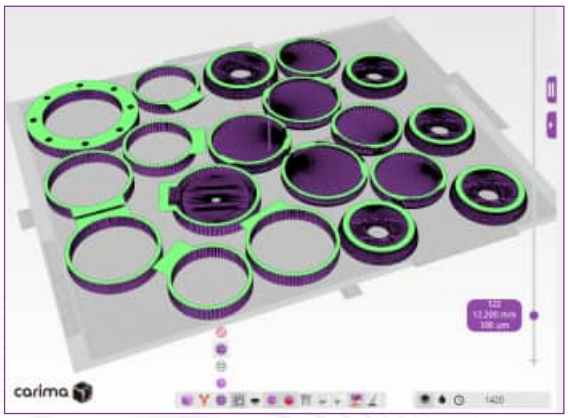
CARIMA Slicer V2 is the dedicated software for
CARIMA DLP 3D printers to ensure optimized performance.
A wide range of features makes it quick and easy for users to prepare for printing.





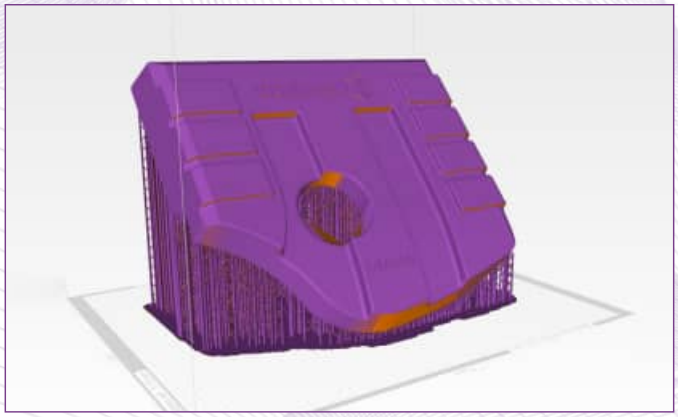
User-friendly Interface

It is designed to be easy to use, even for beginners.
Expand the 3D printing process to a wider range of users.



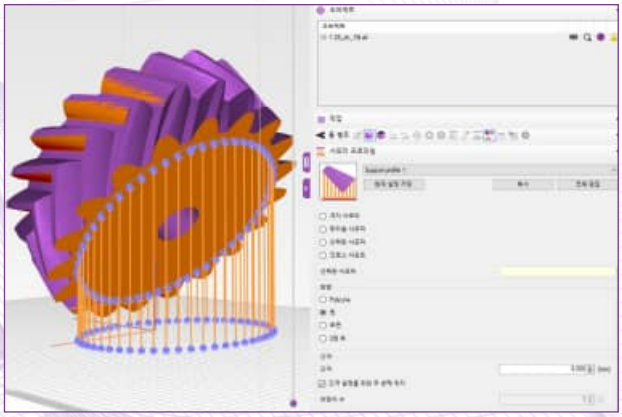
Slicing Preview

Users can simulate with a slicing preview, which allows them to proactively spot and correct potential issues to achieve a perfect print.



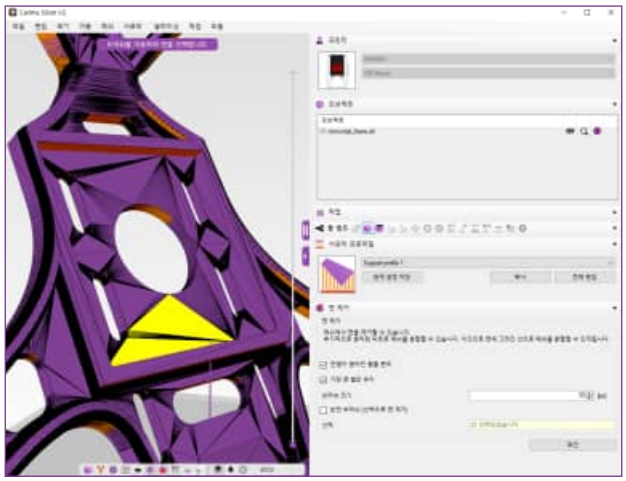
Automatic Supports Generation

Simplify the printing preparation process of complex models and save time with optimized automatic support generation.



Creating & Editing Advanced Support

Includes advanced options for preparing complex models for printing, making it easier to create and edit supports.



Quick Mesh Editing Tools

Mesh holing for material savings and weight reduction, lattice infill for strong parts, drain holes for hollowing, and more to save time and material. It provides mirroring and scaling of parts, including ports.

carima™
3D PRINTER SPECIALIZED CO.

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