www.LuxCreo.com

About Us

LuxCreo is a leader in 3D printing solutions and committed to innovation, product excellence, and customer success. Providing fully integrated solutions with cloud connected 3D printers, AI-enabled printing software, and advanced materials, LuxCreo transforms the way businesses design and manufacture products in dental, industrial, consumer, and medical industries. Backed by Kleiner Perkins, LuxCreo is a privately held company with North American headquarters in the San Francisco Bay Area, and Asian headquarters in Beijing.

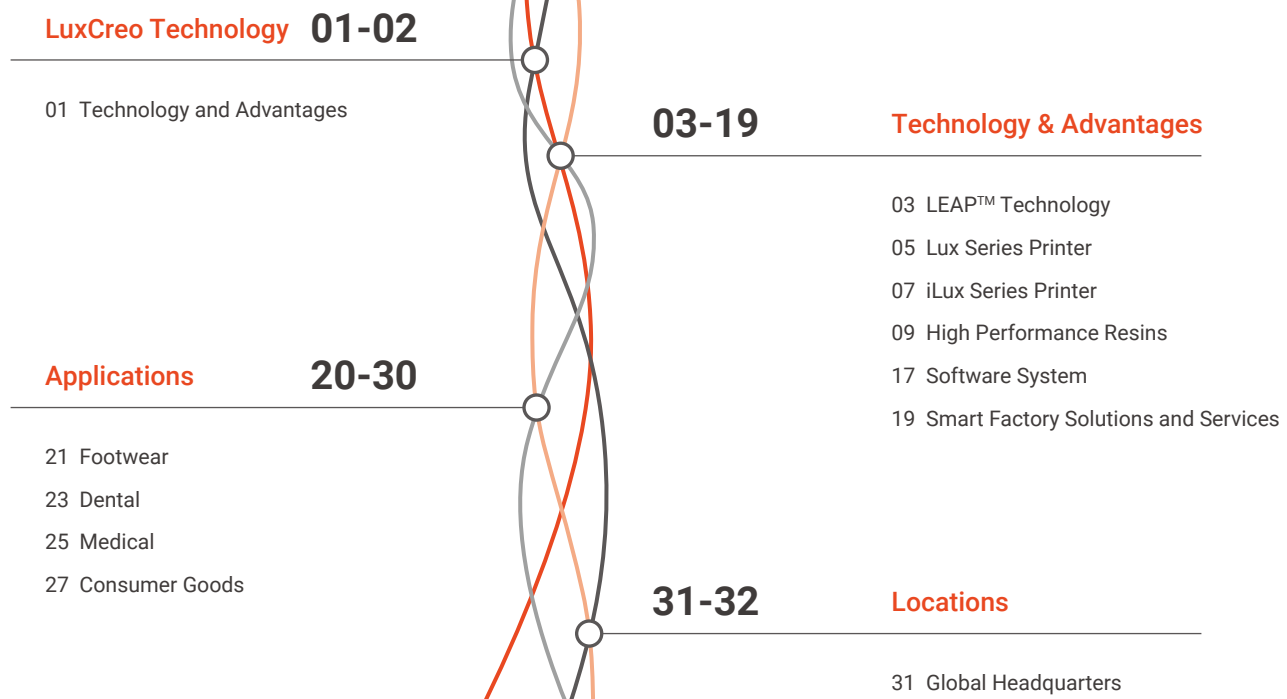**Connected**   **Agile**   **Flexible**   **Sustainable**

LUXCREO'S MISSION IS TO ACCELERATE THE WORLD'S TRANSITION TO SUSTAINABLE MANUFACTURING WITH 3D PRINTING

LuxCreo is a leader in 3D printing solutions and committed to innovation, product excellence, and customer success. Providing fully integrated solutions – cloud connected 3D printers, AI-enabled printing and design software, advanced materials, and Smart Factory production service LuxCreo is transforming the way businesses design and manufacture products in medical, dental, industrial, and consumer industries.
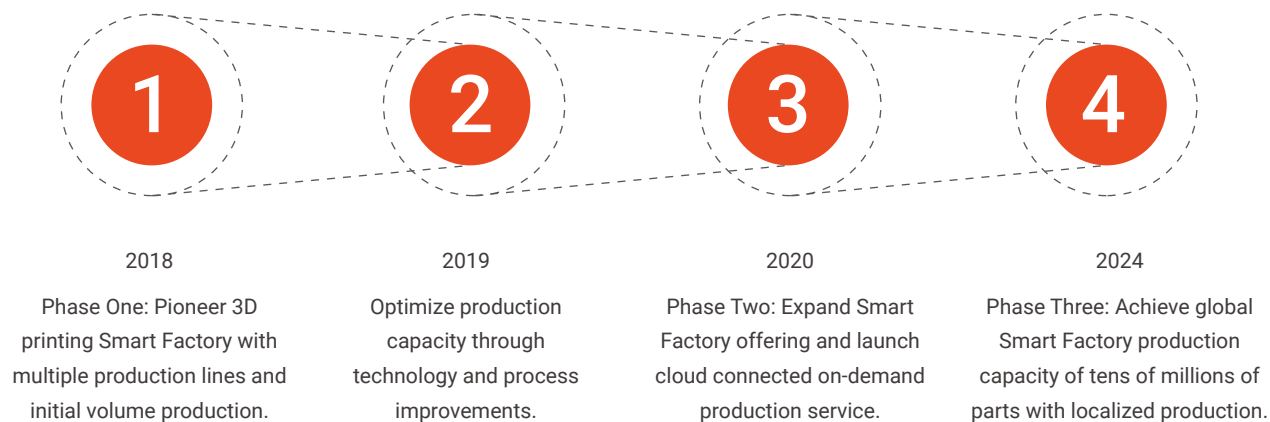
LuxCreo

Pioneering the 3D Printing Smart Factory

In 2018 after 3 years of development, LuxCreo launched its first high-speed 3D printers, high-performance materials, and 3D printing software as a service, pioneering the 3D printing Smart Factory.

Our initial "service first" approach has given LuxCreo the customer service and production process foundation to develop and offer compelling 3D printer, material, software solutions that solve today's 3D printing challenges. In 2020 we launched our unique high-speed and high-performance 3D printing solutions for dental and industrial application to accelerate the world's transition to sustainable manufacturing with 3D printing.

1

2

3

4

2018

Phase One: Pioneer 3D printing Smart Factory with multiple production lines and initial volume production.

2019

Optimize production capacity through technology and process improvements.

2020

Phase Two: Expand Smart Factory offering and launch cloud connected on-demand production service.

2024

Phase Three: Achieve global Smart Factory production capacity of tens of millions of parts with localized production.

No Tooling

Quickly move from concept to volume production with no required tooling. Easily locate production near your supply chain or localize production near your customers.
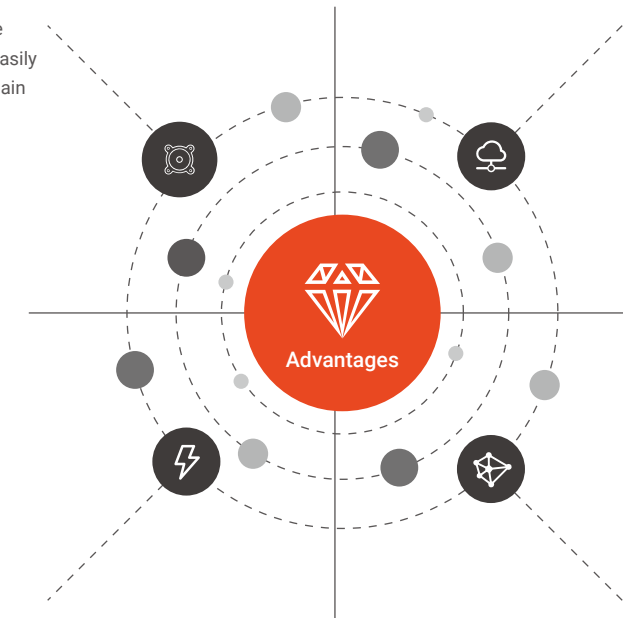
Connected

Production 3D printing is agile with cloud connected 3D printers and on-demand Smart Factory production capacity.

Advantages

Instant Scale

Innovate in real time using our industry-leading 3D printers and materials. When your product is ready, produce at scale with our Smart Factory production capacity.

Design Freedom

Bring more designs and innovations to market with agile manufacturing. 3D print complicated geometries and smooth and textured surfaces with high dimensional accuracy repeatably at scale.

Cloud Connected 3D Printers – Enable On-Demand Production

LuxCreo maximizes printer utilization based on an intelligent cloud factory platform. Upload innovations wherever you are, and we'll help you achieve mass production faster and more efficiently.
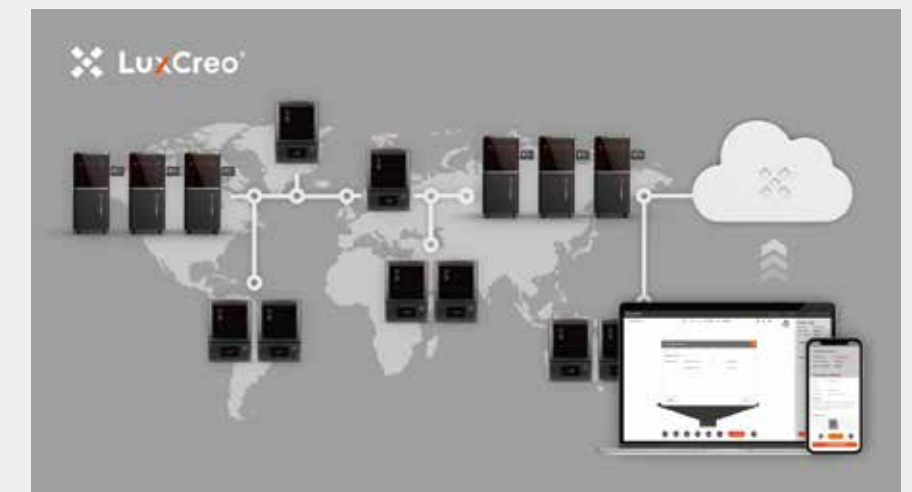
LEAP™ Technology

Core Technologies

LEAP™ technology enables printing of high-performance and high viscosity engineering and dental materials enabling high-speed and accurate printing with reduced post processing.

Efficient

◆ World-leading speed and efficiency

◆ Printing speeds over 100 times faster than traditional 3D printing

Functional

◆ 3D print complex elastic and tough structures

◆ Efficiently produce and accurate parts

3
Core
Technologies

Sustainable

◆ Reduce the material wastes during printing process

◆ Reduce the final product weights without sacrificing the performances

Light Enabled Additive Production

Build Platform

Liquid Resin

LEAP™ Membrane

Optical Engine
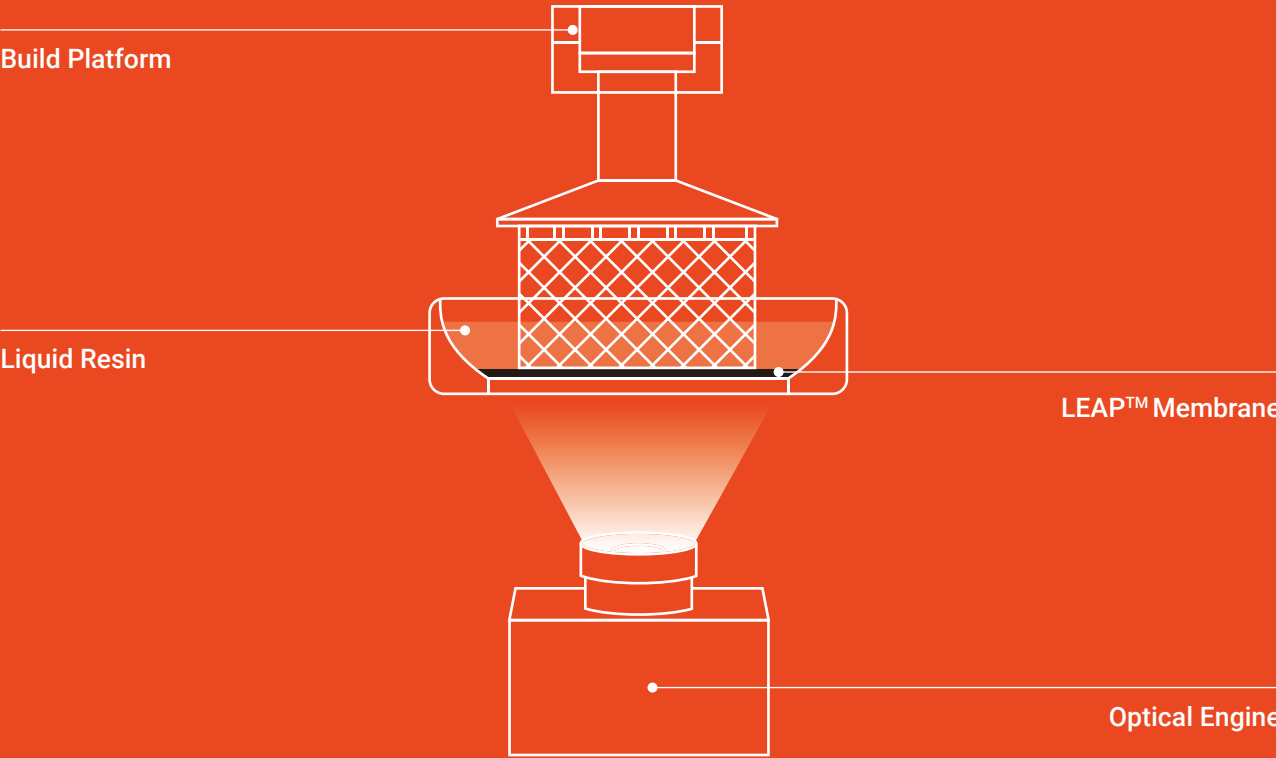
◆ LEAP™ Technology, developed by LuxCreo

◆ Bottom-up DLP Technology

◆ Fastest bottom-up 3D printing speeds

◆ LEAP™ Technology makes LUX Series and iLux Series printers fast

◆ Support multiple high performance resins printing

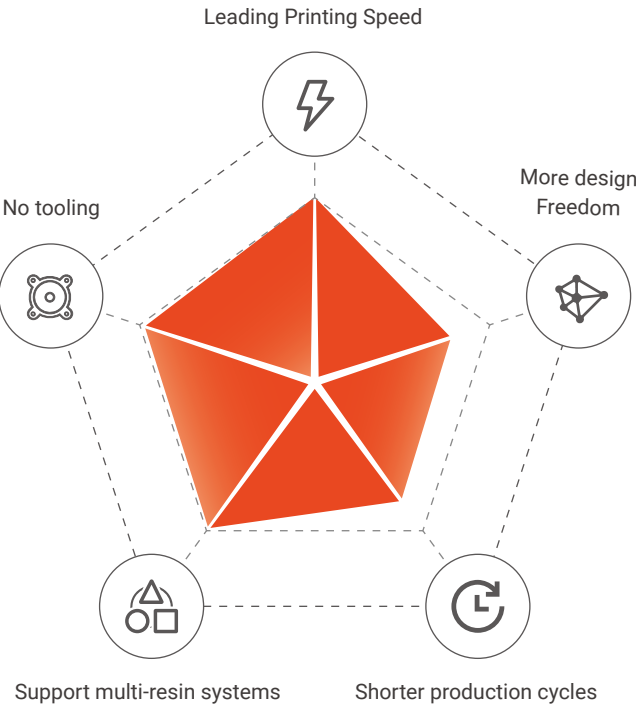◆ Build a 3D printing ecosystem integrating design, materials and production

Lux 3+ Series

Printing Equipment

Build Volume

Lux 3+: 293 mm x 165 mm x 380 mm
Lux 3L+: 384 mm x 216 mm x 380 mm

The Lux 3+ series is LuxCreo's upgraded ultra-fast, industrial 3D printers built for the production environment. Leverage the power of the Lux 3+ Dental for the dental industry, the Lux 3+ and Lux 3L+ for engineering materials and large format printing.

Leading Printing Speed

No tooling

More design Freedom

Support multi-resin systems

Shorter production cycles

	Lux 3+	Lux 3L+
Build Area		
Build Volume	293mm*165mm*380mm	384mm*216mm*380mm
Resolution	76.5 μm	100μm
Release Membrane	LEAP™	LEAP™
Layer Thickness	0.020-0.15mm	0.020-0.15mm
Printing Speed	Resin and mode dependent	Resin and mode dependent
Projector Properties		
Stereolithography	DLP	DLP
Array	3840 x 2160	3840 x 2160
UV Wavelength	405 nm	405 nm
Uniformity	97%	97%
Dimensions		
Dimensions WLH	850x780x1865 mm/33.5"x31"x73.4"	850x780x1865 mm/33.5"x31"x73.4"
Weight	250 kg	250 kg
Interface	11.6" Touch Screen	11.6" Touch Screen
Functions		
Button	Start / Reset / E-stop	Start / Reset / E-stop
Door Control	Automatic	Automatic
Resin Heating	Up to 50℃	Up to 50℃
Printing Monitoring	2 x Cameras	2 x Cameras
Environmental Sensor	Temperature, Humidity, Device Level	Temperature, Humidity, Device Level

iLux Series

World's Fastest Desktop 3D Printers

The iLux series of desktop printers offers fast, accurate printing of high-performance engineering and prototyping materials. The iLux Pro printers are able to print high viscosity materials to support functional prototyping and production, available in two sizes.
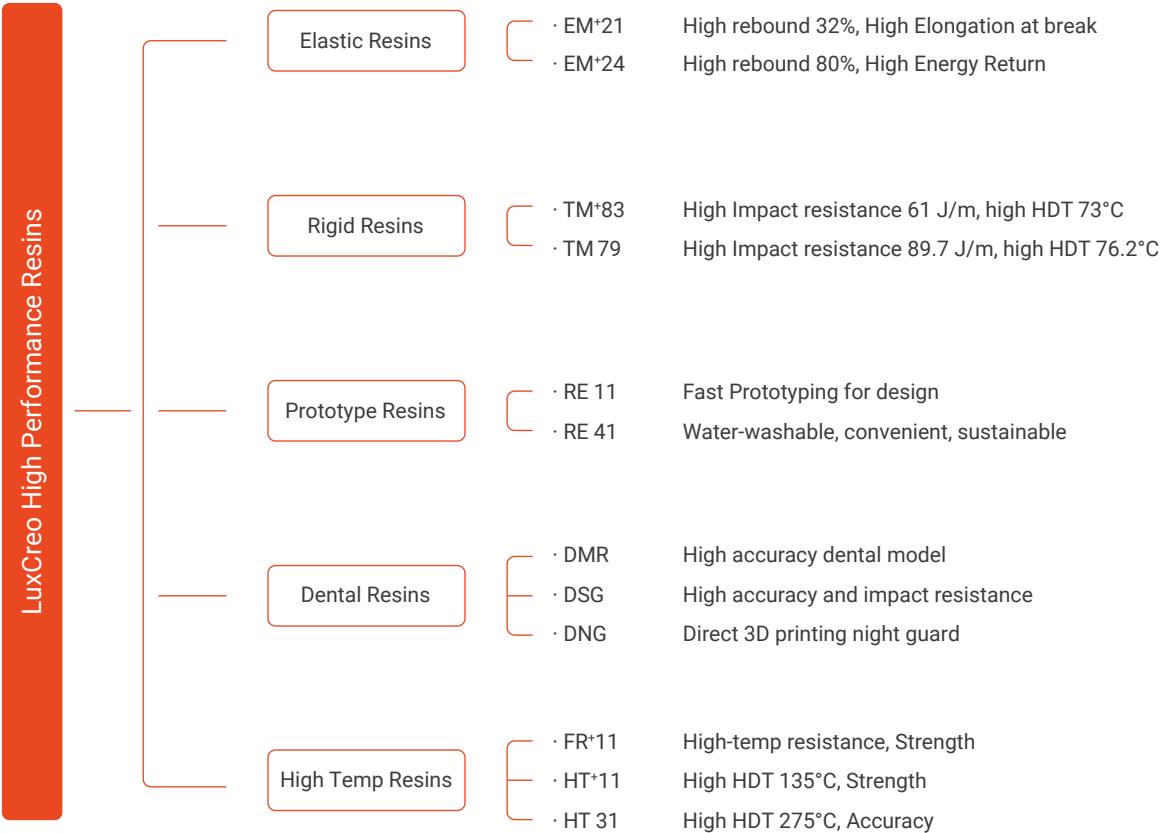
◆ The iLux & iLux Pro printers pack industrial performance in a compact desktop size.
◆ The iLux Pro redefines the limits of desktop printers, printing high viscosity materials.

Speed
Connected
Reliable
Versatile
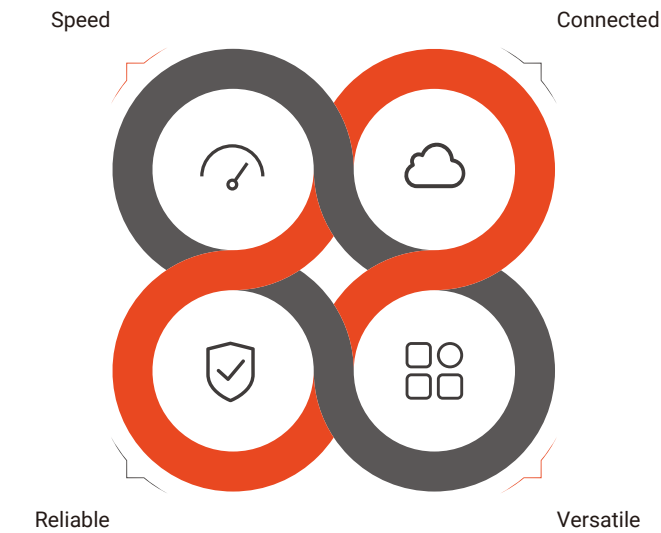
|	iLux	iLux Pro 8.9	iLux Pro 13.3
Build Area			
Build Area	192*120*200mm /7.5"x4.7"x7.9"	192*120*200mm/7.5"x4.7"x7.9"	293*165*320mm/11.5"x6.5"x12.6"
Resolution	50µm	50µm	76.5µm
Release Membrane	FEP	FEP	FEP/LEAP™
Layer thickness	0.020-0.15mm	0.020-0.15mm	0.020-0.15mm
Projector Properties			
Stereolithography	LCD 4K	LCD 4K	LCD 4K
Array	3840 x 2400	3840 x 2400	3840 x 2160
LED Wavelength	LED 405nm	LED 405nm	LED 405nm
Dimensions			
Dimensions (WDH)	400*360*515mm/16"x14 "x20"	400*360*565mm/16"x14"x22"	515*445*695mm/20.2"x17.5"x27.4"
Weight	31.5 kg	35 kg	50 kg
Interface	7" Touch Screen	7" Touch Screen	7" Touch Screen
Button	Start/Power	Start/Power	Start/Power
Connectivity	USB Host, Wifi	USB Host, Wifi	USB Host, Wifi
Functions			
Resin Heating	No	Up to 45°C	
Status Sensor	Door Staus, QR code	Resin Level, Door Status, Resin Temperature, QR code scanning	
Environmental Sensor	Temperature, Device Level	Temperature, Device Level	
Compatible Materials			
High-performance	None	EM⁺21, TM 79	EM⁺21, TM 79
Prototyping	RE 41, RE 42, RE 32, RE 33	RE 11, RE 41, RE 42, RE 32	RE 11, RE 41, RE 42, RE 32
High Temperature	HT 31	HT 31	HT 31

High Performance Resins

LuxCreo develops high-performance materials for dental and engineering applications. Our team of material scientists are focused on bringing new materials to market that have the potential to transform industries.

LuxCreo High Performance Resins

Elastic Resins
- EM⁺21 — High rebound 32%, High Elongation at break
- EM⁺24 — High rebound 80%, High Energy Return

Rigid Resins
- TM⁺83 — High Impact resistance 61 J/m, high HDT 73°C
- TM 79 — High Impact resistance 89.7 J/m, high HDT 76.2°C

Prototype Resins
- RE 11 — Fast Prototyping for design
- RE 41 — Water-washable, convenient, sustainable

Dental Resins
- DMR — High accuracy dental model
- DSG — High accuracy and impact resistance
- DNG — Direct 3D printing night guard

High Temp Resins
- FR⁺11 — High-temp resistance, Strength
- HT⁺11 — High HDT 135°C, Strength
- HT 31 — High HDT 275°C, Accuracy

EM⁺21

Comparable: TPU

Possessing excellent elasticity and tear resistance, EM+21 is suitable for the production of parts that need to be bent, stretched, or compressed hundreds of thousands of cycles without compromising on performance. EM+21 is an ideal fit for any application requiring cushioning, including sports shoe midsoles, automotive interiors, and industrial suspensions.

Strength · Resilience · Rigidity · Durability
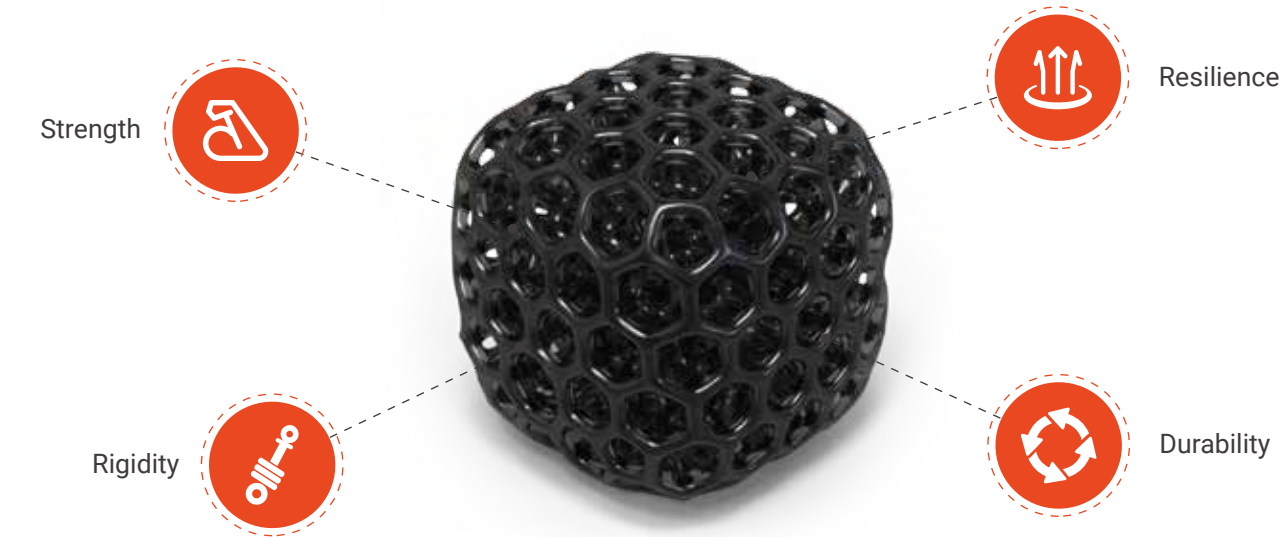
Tensile Properties	Metric	U.S.
Ultimate Tensile Strength	21.2 MPa	3.08 ksi
Elongation at Break	247%	247%

Flexural Properties	Metric	U.S.
Flexural Strength, ASTM D624 Die-T (die cut)	1.33 kN/m	7.59 lbf/in

Thermal Properties	Metric	U.S.
Tg (DMA, tan(d)), ASTM D4065	-8.95°C	15.89°F

General Properties	Metric
Shore Hardness, ASTM D2240	67A
Density(UV-cured), ASTM D792	1.081 g/cm³
Density (Liquid Resin)	0.993 g/cm³

TM 79

Comparable: ABS

TM 79 provides fast printing speeds, low shrinkage, and impact resistance. TM 79 is ideal for rigid and durable prototypes, and when used for production, it has excellent performance in applications where it will withstand stress and tension.

Tough

Accurate

Fast

Tensile Properties, ASTM D638	Metric	U.S.
Tensile Modulus	1820 MPa	264 ksi
Ultimate Tensile Strength	49.9 MPa	7.24 ksi
Elongation at Break	18%	18%
Tensile Strength at Yield	52.5 MPa	7.6 ksi
Elongation at Yield	5.0%	5.0%
Impact Properties	Metric	U.S.
Notched Izod, 23°C, ASTM D256	89.7 J/m	1.68 ft-lbf/in
Notched Izod, -30°C, ASTM D256	54.2 J/m	1.01 ft-lbf/in

Flexural Properties, ASTM D790	Metric	U.S.
Flexural Strength	60.4 MPa	8.76 ksi
Flexural Modulus	1488 MPa	209.7 ksi
Thermal Properties, ASTM D648	Metric	U.S.
HDT @ 0.455 MPa/66 psi	76.2°C	169.2°F
General Properties	Metric	
Shore Hardness, ASTM D2240	80D	
Density, ASTM D792	1.195 g/cm³	
Density (Liquid Resin)	1.153 g/cm3	

RE 41

RE 41 resin is water washable and has high precision. RE 41 is compatible with Lux series DLP printers & iLux series LCD printers and can print at rapid speeds. The high accuracy printing, RE 41 enables delicate and vivid part finish for prototyping, educational, medical modeling and toys.
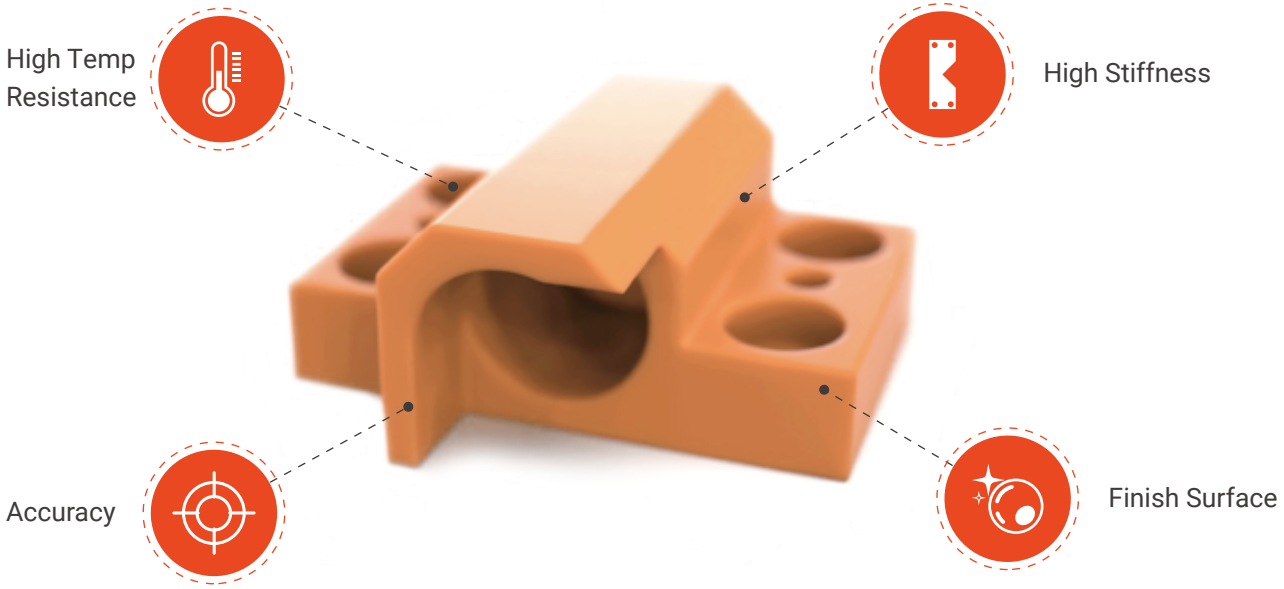
Water-washable

Low Viscosity

Fast

Accurate

Tensile Properties, ASTM D638	Metric	U.S.
Tensile Modulus	1450 MPa	211.7 ksi
Ultimate Tensile Strength	32 MPa	4.9 ksi
Elongation at Break	4.0 %	4.0 %
Impact Properties, ASTM D256	Metric	U.S.
Notched Izod, 23°C	13.0 J/m	0.24 ft-lb/in

Flexural Properties, ASTM D790	Metric	U.S.
Flexural Strength	57 MPa	9.6 ksi
Flexural Modulus	1650 MPa	277.3 ksi
General Properties	Metric	
Shore Hardness, ASTM D2240	86D	
Density, ASTM D792	1.24 g/cm3	

HT 31

LuxCreo HT 31 offers a heat deflection temperature (HDT) of 275°C @ 0.45 MPa. HT 31 could provide strength, stiffness and high temperature resistance with excellent precision and surface finish.
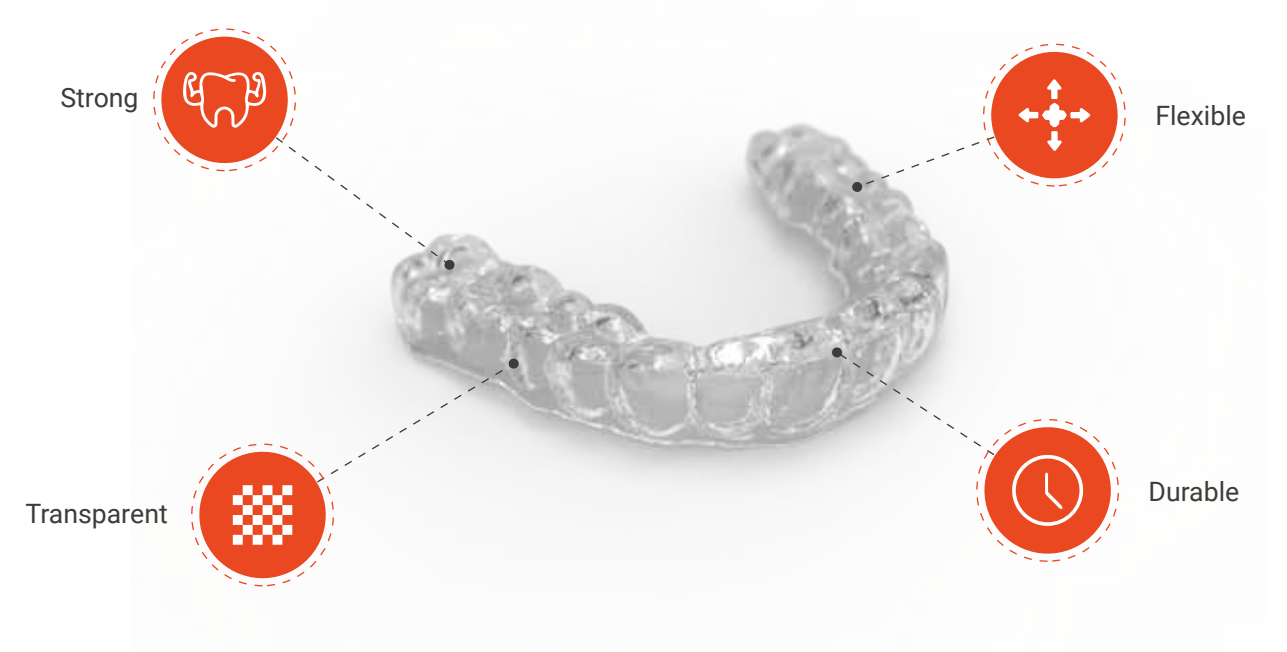
High Temp Resistance

High Stiffness

Accuracy

Finish Surface

DNG

DNG enables the direct printing of retainers, night guards, and dental splints with a clear material and minimal post processing.
Uniquely engineered for 3D printing at high speeds to enable maximum throughput. DNG possesses industry-leading toughness and biocompatibility. Launching exclusively with our Lux 3 printer.
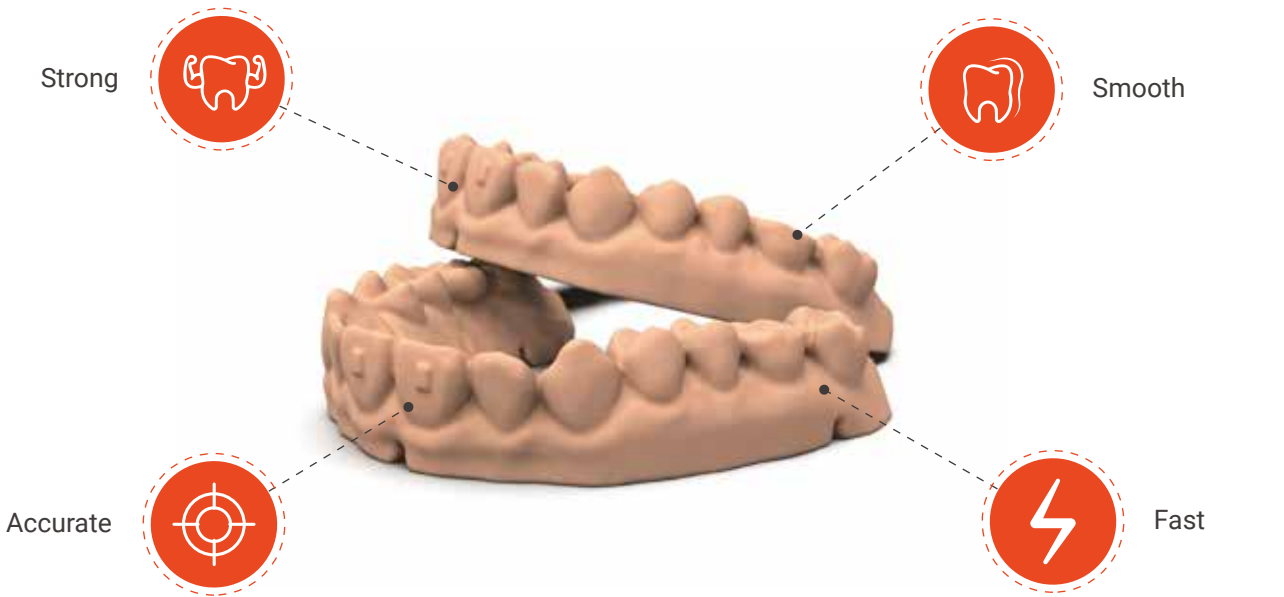
Strong

Flexible

Transparent

Durable

Tensile Properties, ASTM D638	Metric	U.S.
Tensile Modulus	4028 MPa	584.2 ksi
Ultimate Tensile Strength	51 MPa	7.4 ksi
Elongation at Break	1.6 %	1.6 %
Flexural Properties, ASTM D790	Metric	U.S.
Flexural Strength	110 MPa	16.0 ksi
Flexural Modulus	4532 MPa	657.3 ksi

Impact Properties, ASTM D256	Metric	U.S.
Notched Izod, 23°C	18.8 J/m	0.35 ft-lb/in
Thermal Properties, ASTM D648	Metric	U.S.
HDT @1.82 MPa/264 psi	120 °C	248 °F
HDT @0.455 MPa/66 psi	275 °C	527 °F
General Properties	Metric	
Shore Hardness, ASTM D2240	94 D	
Density, ASTM D792	1.29 g/cm3	

Tensile Properties, ASTM D638	Metric	U.S.
Tensile Modulus	2127 MPa	308.5 ksi
Ultimate Tensile Strength	39 MPa	5.8 ksi
Elongation at Break	14.0 %	14.0 %
Impact Properties, ASTM D256	Metric	U.S.
Notched Izod, 23°C	36.7 J/m	0.69 ft-lbf/in

Flexural Properties, ASTM D790	Metric	U.S.
Flexural Strength	80 MPa	11.7 ksi
Flexural Modulus	2037 MPa	295.4 ksi
General Properties	Metric	
Shore Hardness, ASTM D2240	82D	
Density, ASTM D792	1.143 g/cm3	

DMR

DMR is a rigid material designed to create highly accurate dental models with low shrinkage. Perfect for thermoforming, DMR is designed to produce models for crowns, bridges, implants, and aligners.
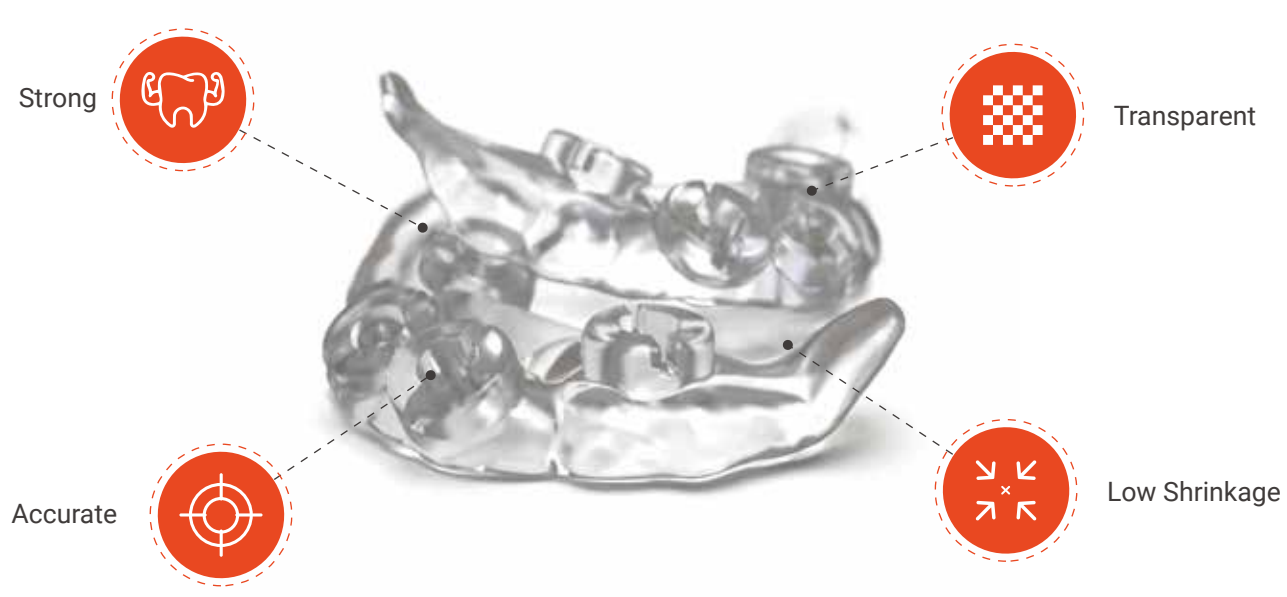

Strong

Smooth

Accurate

Fast

Tensile Properties, ASTM D638	Metric	U.S.
Tensile Modulus	2750 MPa	398.8 ksi
Ultimate Tensile Strength	50 MPa	7.3 ksi
Elongation at Break	3.2 %	3.2 %
Impact Properties, ASTM D256	Metric	U.S.
Notched Izod, 23°C	19.1 J/m	0.36 ft-lb/in

Flexural Properties, ASTM D790	Metric	U.S.
Flexural Strength	100 MPa	14.5 ksi
Flexural Modulus	3650 MPa	529.4 ksi
General Properties	Metric	
Shore Hardness, ASTM D2240	86D	
Density, ASTM D792	1.1274 g/cm3	

DSG

DSG is designed for the fast, highly accurate production of surgical guides. With industry-leading flexural stiffness and strength, DSG is ideal for precise orthodontic work that requiretailored angle and depth.

Strong

Transparent

Accurate

Low Shrinkage

Tensile Properties, ASTM D638	Metric	U.S.
Tensile Modulus	2950 MPa	427.8 ksi
Ultimate Tensile Strength	70 MPa	10.2 ksi
Elongation at Break	4.1 %	4.1 %
Impact Properties, ASTM D256	Metric	U.S.
Notched Izod, 23°C	19.4 J/m	0.364 ft-lb/in

Flexural Properties, ASTM D790	Metric	U.S.
Flexural Strength	125 MPa	18.1 ksi
Flexural Modulus	3500 MPa	507.5 ksi
General Properties	Metric	
Shore Hardness, ASTM D2240	85D	
Density, ASTM D792	1.1191 g/cm3	

Software System

LuxCreo's software team is focused on building software that simplifies the additive manufacturing process and accelerates the world's transition to sustainable manufacturing.

01

LuxFlow

LuxFlow is a powerful and easy to use 3D printing software able to quickly import and prepare CAD models for print. Importing, arranging, orienting, and labeling models is simplified and LuxFlow algorithms quickly and automatically generate support structure and print parameters to ensure successful printing. LuxFlow supports both Lux-Series and iLux-Series 3D printers for fast printing of LuxCreo's high-performance engineering and dental resins.

02

LuxLink

LuxLink is LuxCreo's fleet management software enabling remote printer management of one printer in an office to hundreds of printers in a Smart Factory. LuxLink works seamlessly with LuxFlow, receiving print jobs and optimizing printer resources for maximum productivity. LuxLink digitalizes additive manufacturing workflow making 3D printing production fast and efficient at any scale.

03

LuxGen

LuxGen conformal latticing software simplifies part latticing making designs more sustainable, higher performing, and unique. LuxGen artificial intelligence, combined with generative design algorithms, give designers the power to design 3D printed production parts for both aesthetic and performance goals at the same time. LuxGen gives businesses the fastest path to beautiful, high-performance production parts at scale.

04

LuxAlign

LuxAlign simplifies the process of designing directly 3D printed clear aligners. LuxAlign works seamlessly with LuxFlow giving technicians the tools to customize aligner design for each patient and automate batching and support generation to ensure production speed, part accuracy, clarity, and high yield. LuxAlign makes directly printed clear aligner production scalable from the dentist and orthodontists office to the high-volume dental lab.
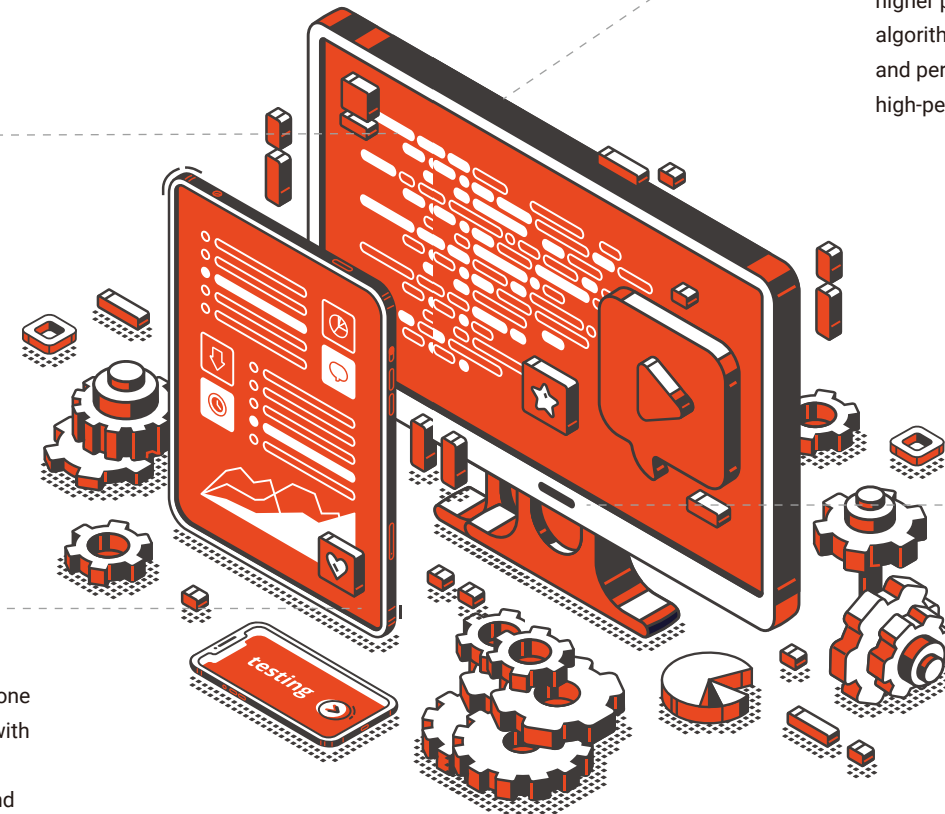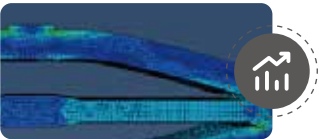
Smart Factory Solutions and Services

Innovation Through Production At The Speed Of Light

Smart Factory leverages Digital 3D Production to help customers bring innovation to market faster.

Design

01

LuxCreo designers engage at all levels of the design process able to bring 2D concepts to production 3D printed parts in less than 1 month.

Analysis

02

With strong analysis skills and tools, LuxCreo's analysis team ensures our customer's 3D printed production products meet mechanical and resilience goals.

Prototyping

03

Smart Factory produces both aesthetic and production prototypes to shorten the time it takes to finalize 3D printed production products.

Testing

04

Smart Factory in-house dynamic and static testing capabilities shorten product innovation time. Printed production parts can be tested same-day to inform design.

Production

05

Smart Factory brings ideas to market faster. From concept to production services are available to reduce time to market for small to large batches seamlessly producing multiple models with Digital 3D Production Lines.

Applications

Footwear

LuxCreo Redefines Sustainability - One Million Cycle Test (Over 30 marathons)

LuxCreo's footwear midsoles provide industry-leading resilience and energy return comparable to Pebax foam, giving the wearer unmatched performance, product life, and comfort.

3D Printed

Easy Clean

100% Waterproof

Energy Return

360° Breathable

Environmental Friendly
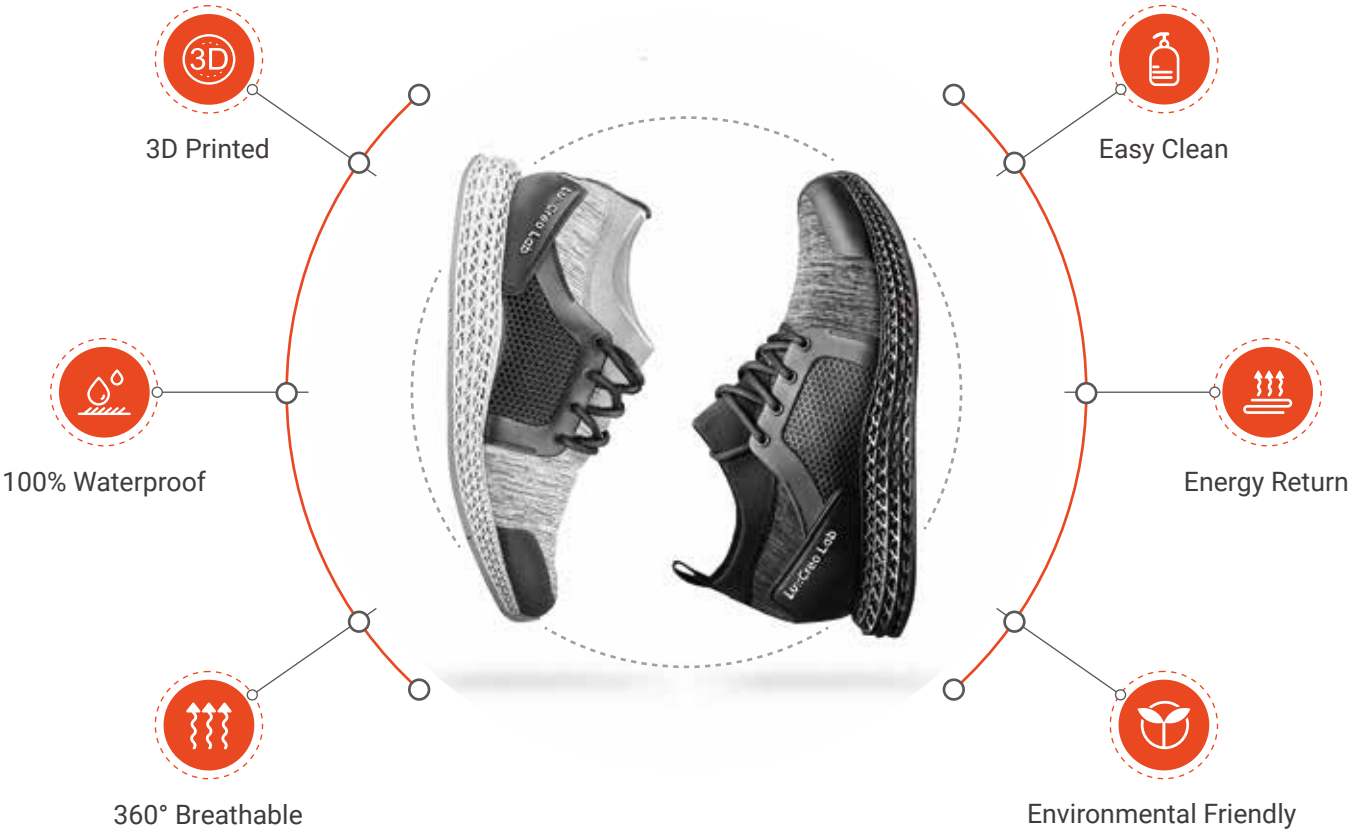
LuxCreo Elastic Materials. Leading Footwear Innovation.
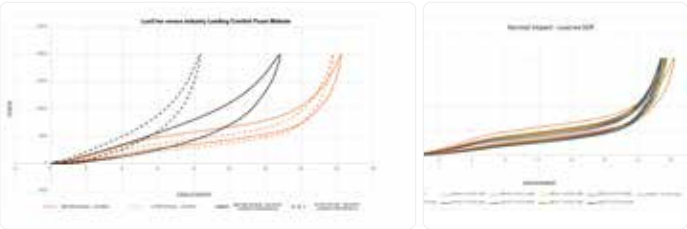
01 **High Resilience**

02 **Energy Return**

03 **Long Life**

04 **Sustainable**

Dental

Produce aligners, surgical guides, gingival masks, retainers and night guards.

Assist technicians, clinics, and orthodontic labs in providing customized solutions tuned to each patient.

01

Dental Model

DMR

02

Dental Surgical Guide

DSG

03

Dental Crown & Bridge

DCB

04

Dental Gingival Mask

DGM

05

Dental Try-in

DTI

06

Dental Casting

DCR

07

Dental Denture Base

DDB

08

Dental Indirect Bonding Tray

DIBT

Medical

LuxCreo's high-performance rigid and elastic resins enable new innovations in the medical industry. Our bio-compatible resins support flexible and rigid medical applications, customized to the patient to achieve the best treatment outcomes.

Scoliosis Corrector

Custom designed for children and young adults. Fits closely reducing the body's pressure on the lumbar spine.
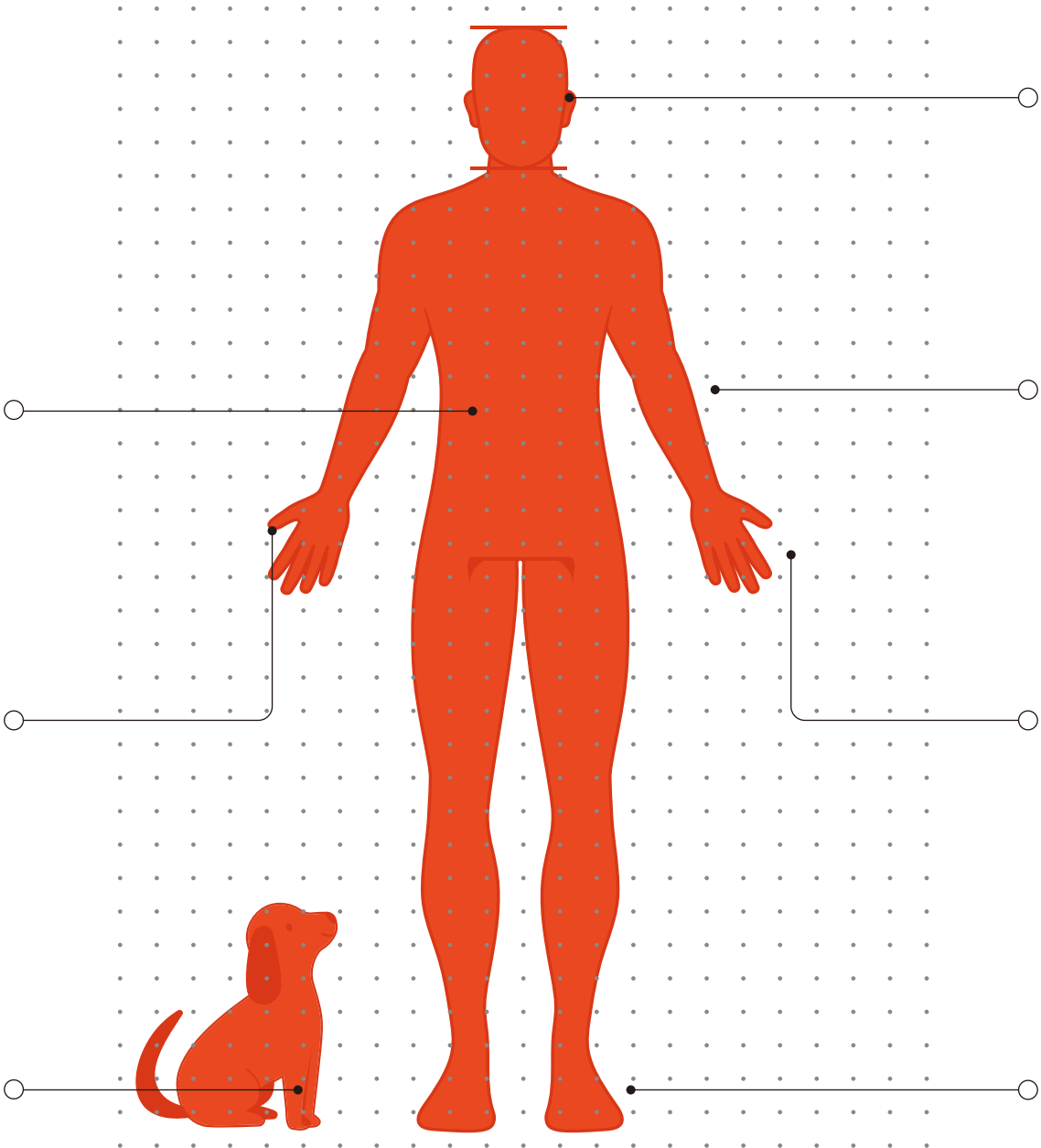
Fingerboard

Customized according to finger integral molding relieving hand dysfunction such as hemiplegia.

Pet Prosthesis

Customized to leg and foot prosthetics for small animals making hard prostheses more skin-friendly, soft and comfortable.

LuxCreo's love is not limited to humans.

Face shield

The world's first 3D printed breathable face shield.

Designed to protect first responders and vulnerable children.

Elbow Joint Fixture

Child high mobility elbow brace for post operations.

Comfortable and fit restricts movement to avoid infection caused by scratching and allows mobility for child play.

Finger Splint

Custom support during fracture recovery period maintaining alignment and preventing secondary injuries.

Avoid finger joint pain caused by sports injuries and reduce excessive stress during exercise.

Customized Medical Insoles

Customized surface and zoned support achieve perfectly fit and resilient support to stabilize joints and relieve pain.

Elastic material was developed for flexible and durable impact absorption.

Fast mass customization, shortened production cycles, and improved operation efficiency.

Consumer Goods

LuxCreo's 3D printing solutions support personalized needs in mobile phone cases, eyewear frames, earphones, helmets and other product applications. Our focus is on accelerating our customers' speed of innovation and ensuring a sustainable future and healthy lifestyle.

Mobile Phone Shells

Earphones

Helmets

Eyewear Frames

Additional Applications

Production 3D printing frees producers from the shackles of traditional development, supports a faster innovation process, accelerates ideas to production for many industries. In the future, 3D printing will enter every household, bringing your imagination to your fingertips.

Robotics

Robotic design and manufacturing innovation is accelerating with production 3D printing. High-performance flexible and rigid materials enable new innovation and increases robotic agility opening up new applications and markets.

Industrial

Industrial manufacturing with production 3D printing increases the development and manufacturing of complex industrial parts, without the need for complicated production lines or processing procedures.

Consumer Mass Customization

Design-for-one, enabled by 3D printing, will transform products and industries including: mobile phones, spectacle frames, earphones, helmets and other products affecting the future of consumption and sustainable lifestyle.

Aerospace

Aerospace manufacturing will improve with 3D printing increasingly complex parts production parts. Higher sustainability will be achieved with less waste, lighter weight and higher performance.

Automobile

Automotive manufacturers will continue to adopt more 3D printing solutions for production and intermediate tooling applications. Production 3D printing accelerates the development of automobile parts with fast, functional prototyping and supports production of complex parts to reduce weight, reduce assembly time, and achieve higher performance.

Global Headquarters

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