

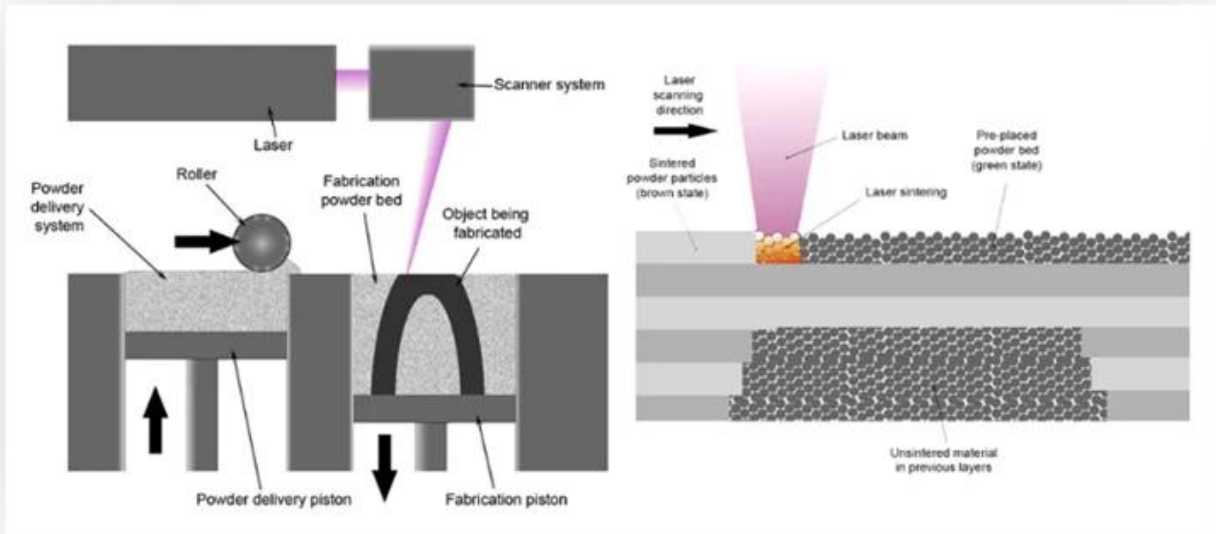
SLM (3D 打印) 是 一种 3D 打印 技术。 它 SLM 是 DMLS (Direct Metal Laser Sintering) 的 一种 形式。 它 使用 激光 来 烧结 金属 粉末。 它 是 一种 3D 打印 技术。 它 使用 激光 来 烧结 金属 粉末。 它 是 一种 3D 打印 技术。 它 使用 激光 来 烧结 金属 粉末。

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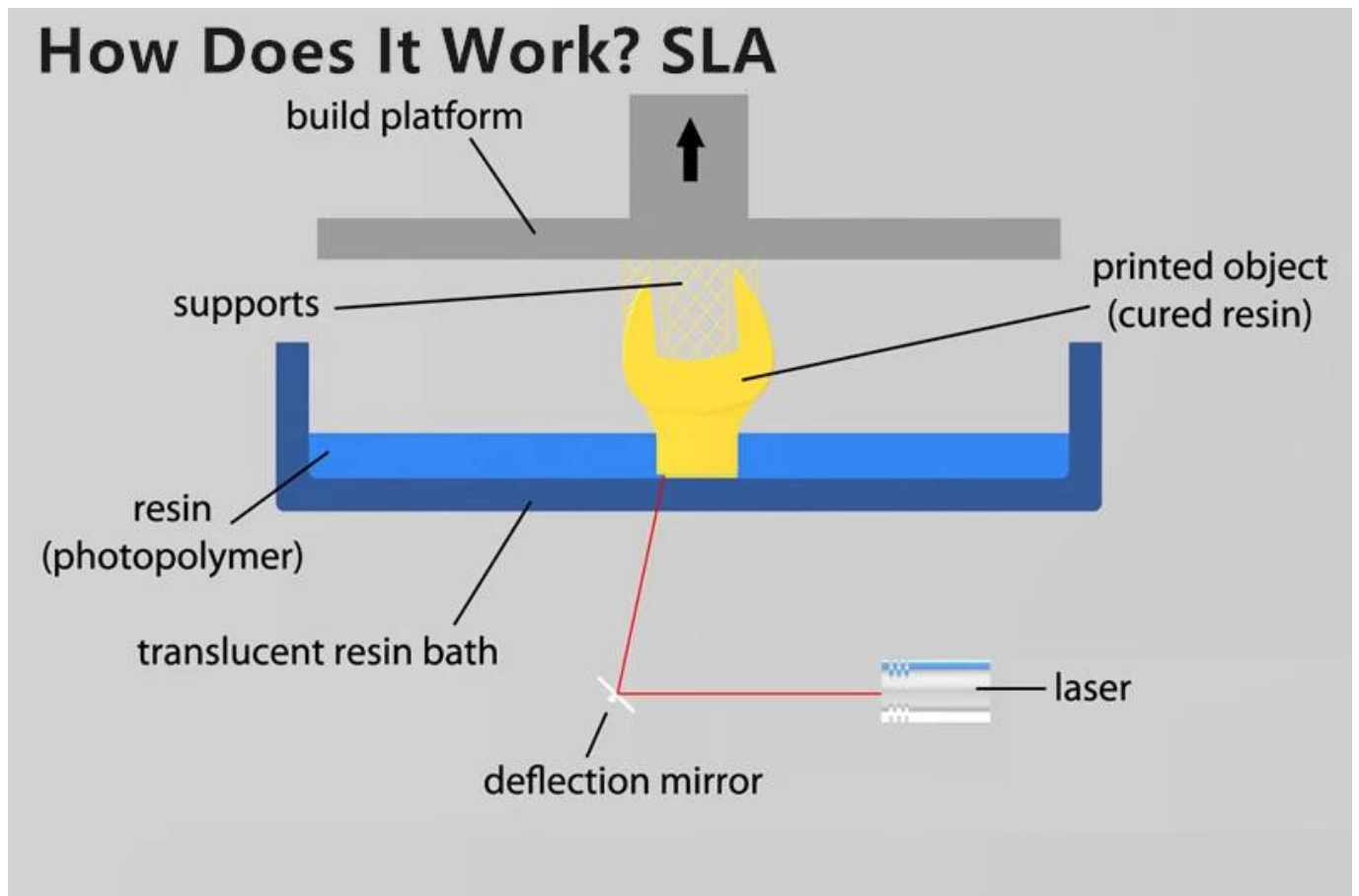
SLS 3D 打印 技术 (选择性激光烧结) 使用 CO₂ 激光 来 烧结 粉末。 它 是 一种 3D 打印 技术。 它 使用 激光 来 烧结 金属 粉末。 它 是 一种 3D 打印 技术。 它 使用 激光 来 烧结 金属 粉末。 它 是 一种 3D 打印 技术。 它 使用 激光 来 烧结 金属 粉末。

How Does It Work? SLS



SLA (선택적 레이저 소결)는 UV 레이저를 사용하여 분말을 VAT에 선택적으로 소결하여 3D 물체를 생성하는 기술입니다. 이 기술은 CAM / CAD 소프트웨어를 사용하여 UV 레이저를 사용하여 VAT에 선택적으로 소결하여 3D 물체를 생성하는 기술입니다. 이 기술은 선택적 레이저 소결을 사용하여 3D 물체를 생성하는 기술입니다. 이 기술은 3D 물체를 생성하는 기술입니다.

How Does It Work? SLA



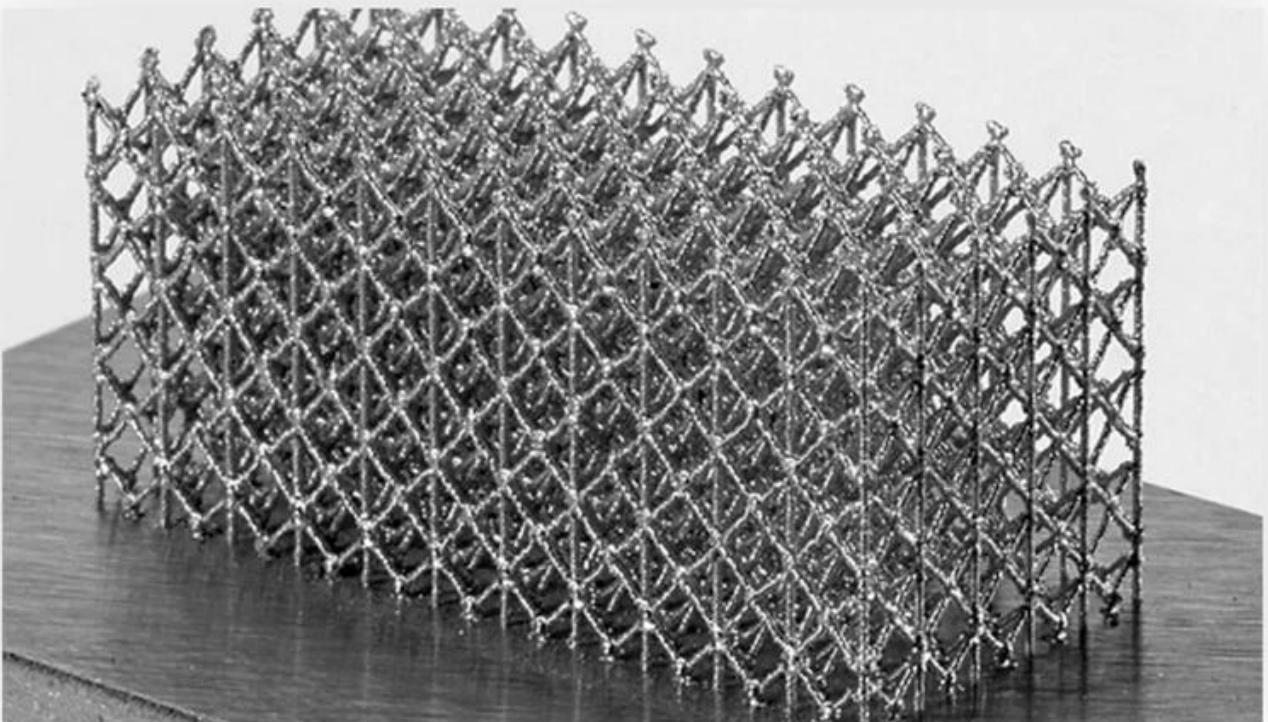
Carmanhaas. [3D 프린팅](#)은 다양한 재료와 디자인을 사용하여 3D 물체를 생성하는 기술입니다. 이 기술은 QBH 및 F-Theta Galvo 시스템을 사용하여 3D 물체를 생성하는 기술입니다. 이 기술은 3D 물체를 생성하는 기술입니다.

□□ □□ :

- (1) □□ □□ □□□□ □□□ M2□ □□□□ □ □□□ □□ □□ □ □□□ < 0.04;
- (2) □□□□ □□□ 1.5 □ □□□ □□□ 93 %□□ □□.
- (3) □□ □□ □□□□ □□ □□ □□ 2000W □□ □□ □□□□ □□ □□□ 50J / cm2□□□□.
- (4) □□ □□ □□□ □□ □□□□□ 95 % □□ □□□□□.
- (5) □□□□ □□ □ □□ □□ □□□□ □ □□ □□□□;

SELECTIVE LASER MELTING (SLM)

Pros and Cons



Stainless Steel



Desktop FDM



Industrial FDM



Desktop SLA



Industrial SLA



Industrial SLS

ZRPA12 (PA12 Nylon Powder)



PHYSICAL CHARACTERISTICS	Grain Size: 50~55 μ m Shape: Spherical Apparent density: ≥ 0.40 g/cm ³
THERMAL PROPERTY	Melting Point: 182~185°C (10°C/min) Melting Enthalpy: ≥ 90 J/g HDT: 83.8°C @1.8MPa / 146.1°C @0.45MPa
MOLDING PERFORMANCE	Density: 0.97 g/cm ³ Tensile Modulus: 1600 MPa Tensile Strength: 43 MPa Elongation at break: ≥ 15 % Un-notched Impact Strength: 20.7 KJ/m ² Notched Impact Strength: 3.8 KJ/m ² Bending Modulus: 1432 MPa Bending Strength: 57 MPa

ZRTPU (Thermoplastic Polyurethanes Powder)



PHYSICAL CHARACTERISTICS	Grain Size: 60 μ m Shape: Spherical Apparent density: 0.47 g/cm ³
THERMAL PROPERTY	Melting Point: 165°C HDT Heat deflection temperature: -25°C
MOLDING PERFORMANCE	Density: 1.15 g/cm ³ Tensile Modulus: 61 MPa Tensile Strength: 21 MPa Elongation at break: 310 % Tear strength: 101 N/mm Bending Modulus: 74 MPa Bending Strength: 3.3 MPa

Co-Cr Alloy (MP1)









重要仪器,
非专业人士勿动。

OptiCentric 300

TRIOPTICS





PerkinElmer Lambda 950---Testing Transmission and Reflectivity







C E R T I F I C A T E

ATTESTATION CERTIFICATE OF MACHINERY AND LOW VOLTAGE DIRECTIVES

Technical file of the company mentioned below has been observed and audit has been completed successfully. 2006/42/EC Machinery Directive and 2014/ 35/EU Low Voltage Directive have been taken as references for these processes

Company Name : **Camman HAAS Laser Technology (Suzhou) Co., Ltd.**

Company Address : No 155, West Road Suhong, Suzhou Industrial Park, Suzhou City, Jiangsu , P.R.China

Related Directives and Annex : **Low Voltage Directive 2014/35/EU
Machinery Directive 2006/42/EC**

Related Standards : **EN ISO 12100:2010; EN 60204-1:2006+A1:2009-AC:2010**

Product Name : **Laser Marking Machine**

Report No and Date : SD-90049717:09.08.2018

Product Brand/Model/Type : LMCH-3W,LMCH-5W,LMCH-10W,LMCH-15W,LMCH-20W,LMCH-25W,
LMCH-30W,LMCH-50W,LMCH-60W,LMCH-70W,LMCH-100W,
LMCH-120W,LMCH-150W,LMCH-200W,LMCH-300W,LMCH-500W

Certificate Number : **M.2018.201.N6073**

Initial Assessment Date : 10.08.2018

Registration Date : 13.08.2018

Reissue Date/No :

Expiry Date : **12.08.2023**

Signature
UDEM International Certification
Auditing Training Centre Industry
and Trade Inc. Co.

The validity of the certificate can be checked through www.udem.com.tr. The CE mark shown on the right can only be used under the responsibility of the manufacturer with the completion of EC Declaration of Conformity for all the relevant Directives. This certificate remains the property of UDEM International Certification Auditing Training Centre Industry and Trade Inc. Co. to whom it must be returned upon request. The above named firm must keep a copy of this certificate for 15 years from the registration of certificate. This certificate only covers the product(s) stated above and UDEM must be notified in case of any changes on the product(s)
Address: Muthakent Mahallesi 2073 Sokak (Eski 93 Sokak) No:10 Çankaya - Ankara - TURKEY
Phone: +90 0312 443 03 90 Fax: +90 0312 443 03 70
E-mail: info@udemild.com.tr www.udem.com.tr



Certificate of Approval

Certificate No.: 10119Q12565ROM

Awarded to

**Carman Haas Laser Technology(SuZhou)
Co., Ltd.**

Organization Code Certificate No. / Unified Social Credit Code:91320594MA1MF4EP56
Add.:No.155, West Road Suhong, Suzhou Industrial Park, Suzhou City, Jiangsu Province, P.R. China. 215000

Beijing ZhongLian TianRun Certification Center (ZLTR) certify that the
Quality Management System of the above organization has been assessed and found to be
in accordance with the requirements of the standard:
GB/T19001-2016 / ISO9001:2015

SCOPE OF CERTIFICATION/REGISTRATION

The Research and Development and Production of Optics Lenses (Except the limits of national laws and regulations.)

This certificate is made valid when used with certification scopes and the requirements of applicable laws and regulations. These requirements include, but are not limited to, administrative permits, scopes of qualifications, and CCC requirements.

Subject to operation conditions in requirements conformity with Quality Management System,

This Certificate is valid for a period of three years only,

Date from: Mar 13th,2019 To: Mar 12th,2022

The effectiveness of this Certificate shall be Validated by periodic surveillance audit of ZLTR for maintenance.

Information of this certificate can be found on the official website of Beijing Zhonglian Tianrun Certification center (<http://www.zltr.com.cn>)



Beijing Zhongliantianrun Certification Center

Room2603, 22nd Floor, 2nd Unit, Block 1, No.4 Yard, Qiyang Road, Chaoyang District, Beijing, P.R. China 100102

Information of this certificate can be found on the official website of Certification and Accreditation Administration of the People's Republic of China (<http://www.cnca.gov.cn>)

ISO 9001

ISO 9001





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