

SLS 3D (SLS 3D) 3D printing technology (3D printing) is a process of creating three-dimensional objects from a digital file. It uses a laser to sinter a powder bed layer by layer. The process is highly precise and can create complex geometries. It is used in various industries, including aerospace, automotive, and medical. The process is also used for prototyping and small-scale production. The main advantage of SLS 3D is that it allows for the production of parts that are difficult to manufacture using traditional methods. It also allows for the production of parts that are highly complex and have internal features. The process is also used for the production of parts that are highly durable and have a long lifespan. The main disadvantage of SLS 3D is that it is a relatively expensive process. It also has a limited range of materials that can be used. The process is also relatively slow compared to other manufacturing processes. Despite these disadvantages, SLS 3D is a highly versatile and powerful manufacturing technology that is used in a wide range of applications.



Carmanhaas. 3D printing technology is a process of creating three-dimensional objects from a digital file. It uses a laser to sinter a powder bed layer by layer. The process is highly precise and can create complex geometries. It is used in various industries, including aerospace, automotive, and medical. The process is also used for prototyping and small-scale production. The main advantage of SLS 3D is that it allows for the production of parts that are difficult to manufacture using traditional methods. It also allows for the production of parts that are highly complex and have internal features. The process is also used for the production of parts that are highly durable and have a long lifespan. The main disadvantage of SLS 3D is that it is a relatively expensive process. It also has a limited range of materials that can be used. The process is also relatively slow compared to other manufacturing processes. Despite these disadvantages, SLS 3D is a highly versatile and powerful manufacturing technology that is used in a wide range of applications.

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(1) □□ □□ □□ □□□□ (8 □□ □□□□ □□ □□□□ □□□□ $\leq 30 \mu\text{rad}$);

(2) □□ □□ □□□□ ($\leq 3 \mu\text{rad}$);

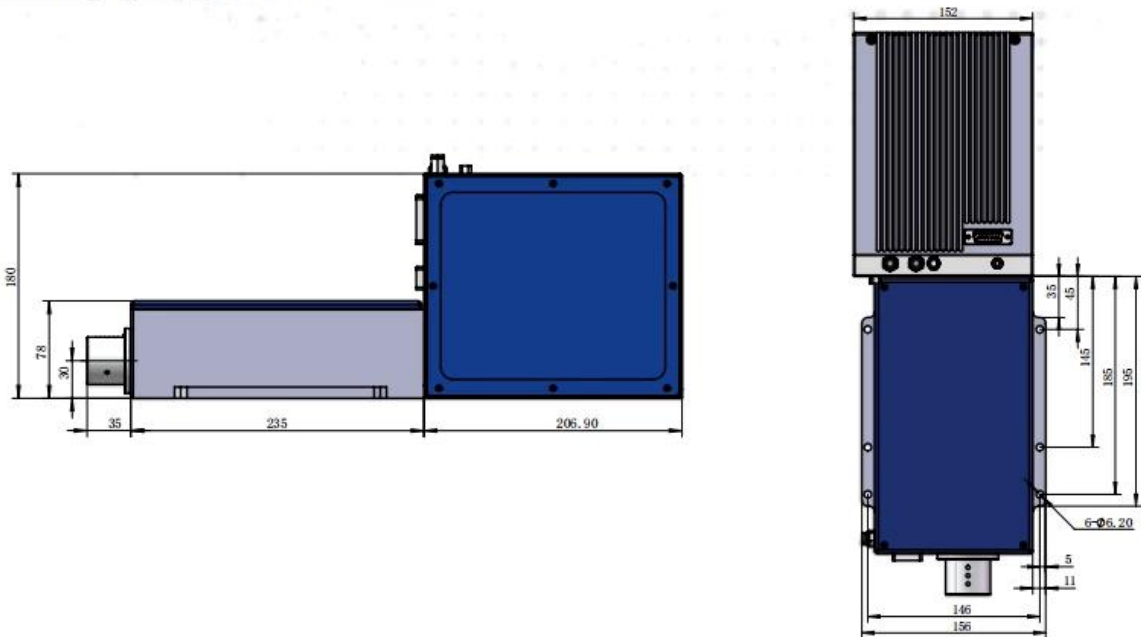
(3) □□□□□□ □□□□ □□□□;

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Carmanhaas□ □□□□ 3D □□ □□ ([3D Galvo □□□□ □□ □□](#)) □□ □□ □□□□ □□□□ □□□□ □□□□ □□□□. □□□□ □□ □□□□ □□, □□ □□, □□□□ □□ (3D □□), □□□□ □□, □□□□ □□ □ □□ □□ □□ □□□□□□.

Carmanhaas□ □□□□ □□ / □□ □□ □□□□ □□□□ □□□□ □□ □□□□ □□□□ □□□□ □□□□.

Mechanical Drawings (Dimensions in mm)



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DFS30-10.6-WA, □□ : 10.6um.

□□ □□ (mm x mm)	500x500.	700x700.	1000x1000.
□□ SPOT □□ 1 / e ² (μm)	460.	710.	1100.
□□ □□ (mm)	661.	916.	1400.
□□□ (mm)	12.	12.	12.

□□ :

- (1) □□ □□ : □□ □□□ □ □□□□ □□□□ □□□ □□□□□ □□.
(2) $m^2 = 1$.

□□ □□

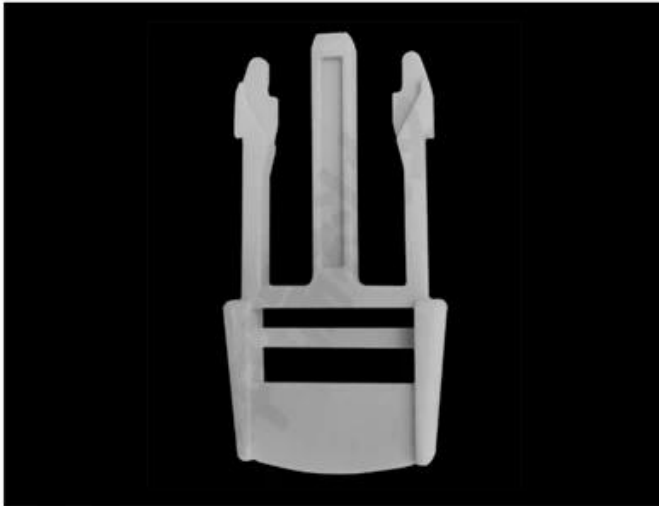
□□ (mm)	□□ (mm)	□□
80.	□	AR / AR@10.6um.
90.	□	AR / AR@10.6um.
110.	□	AR / AR@10.6um.
90 * 60.	□	AR / AR@10.6um.
90 * 70.	□	AR / AR@10.6um.

GF100 (Glass Fiber Composite Nylon Powder)



PHYSICAL CHARACTERISTICS	Apparent density: $\geq 0.66 \text{ g/cm}^3$
THERMAL PROPERTY	Melting Point: 183°C (10°C/min) HDT: 89°C @1.8MPa / 163°C @0.45MPa
MOLDING PERFORMANCE	Density: 1.24 g/cm^3 Tensile Modulus: 3498 MPa Tensile Strength: 43 MPa Elongation at break: 5% Un-notched Impact Strength: 19.26 KJ/m^2 Notched Impact Strength: 4.11 KJ/m^2 Bending Modulus: 2413 MPa Bending Strength: 67 MPa

MF100 (Mineral Fiber Composite Nylon Powder)



PHYSICAL CHARACTERISTICS	Apparent density: $\geq 0.53 \text{ g/cm}^3$
THERMAL PROPERTY	Melting Point: 180°C (10°C/min) HDT: 125°C @1.8MPa / 170°C @0.45MPa
MOLDING PERFORMANCE	Density: 1.18 g/cm^3 Tensile Modulus: 6128 MPa Tensile Strength: 50 MPa Elongation at break: 4.6 % Un-notched Impact Strength: 20.75 KJ/m^2 Notched Impact Strength: 5.58 KJ/m^2 Bending Modulus: 4630 MPa Bending Strength: 74 MPa

ZRTPU (Thermoplastic Polyurethanes Powder)



PHYSICAL CHARACTERISTICS	Grain Size: $60\mu\text{m}$ 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



TRIOPTICS OptiSpheric 2000 AF
---Testing EFL, R, Centering Error, Wedge Angle, BFL, MTF



PerkinElmer Lambda 950---Testing Transmission and Reflectivity



Carmanhaas Coating Machine





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- 1 問) 〇 〇〇〇 〇〇〇〇 〇〇〇〇〇〇.
- 2 問) 〇〇〇 〇〇〇 〇〇 〇〇〇 〇 〇〇 〇〇 〇〇〇〇〇〇.
- 3 問) 〇〇〇 〇〇 〇 〇〇 〇〇〇 〇〇〇〇〇.
- 4 問) 〇〇 〇 〇〇 〇〇 〇〇〇 〇〇 〇〇〇 〇〇〇〇〇.

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- (1) 〇〇〇 〇〇 〇〇 〇〇〇 DHL, UPS, FedEx, TNT, EMS, ETS 〇〇〇 〇 〇〇〇〇.
- (2) 〇〇〇〇〇〇〇〇〇, 〇 〇 〇〇〇〇〇〇〇〇 〇〇〇〇〇〇〇 〇〇FOB, CNF, CIF. 〇〇〇〇〇〇〇〇〇〇〇〇〇〇 〇〇〇〇〇〇〇〇〇〇〇〇〇 〇.

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Q1. 〇〇〇〇〇 〇〇〇〇?

A1 : 〇, 〇〇〇 〇〇 〇〇〇 〇〇 〇 〇〇 〇〇〇 〇〇 〇〇〇〇〇 〇〇 〇 〇〇〇〇〇〇〇.

Q2. 〇〇〇 〇〇〇 〇〇〇?

A2 : 〇〇〇 〇〇〇 〇 QC 〇〇 〇〇 〇〇〇 〇〇〇 〇〇〇〇 〇〇 〇〇 〇, 〇〇 〇〇 〇 〇〇〇 〇〇〇〇 〇〇〇 〇〇〇 〇〇〇〇〇.

Q3. 〇〇〇 〇〇〇〇〇?

A3 : 〇〇〇 〇〇 〇〇〇〇 〇〇 〇〇〇〇 〇〇 〇〇〇〇〇 〇〇〇 〇〇〇〇〇.

Q4. 〇〇〇 〇〇〇〇〇〇〇〇?

A4 : 〇〇〇 〇〇〇〇〇 〇〇 〇〇 〇〇〇〇 〇〇 〇〇〇〇 〇〇〇〇 〇〇〇 〇〇 〇〇, 〇〇, 〇〇 〇〇 〇 〇〇 〇〇〇〇〇. 〇〇〇〇〇.

Q5. May May Marching 〇〇〇 〇〇〇〇〇 〇〇 〇〇〇 〇〇〇〇〇〇〇?

A5 : 〇! 〇〇〇 〇〇〇 〇〇〇 〇〇〇〇 〇〇〇〇〇 〇〇 〇〇〇 〇〇 〇〇 〇 〇〇〇〇.

Q6. 〇〇〇 〇〇 〇 〇 〇〇〇〇?

A6 : 〇, 〇〇〇 〇〇〇 〇〇〇 〇〇〇 〇〇〇〇 〇〇 〇〇〇〇〇.

Q7. OEM 〇〇 ODM 〇〇〇 〇〇〇 〇 〇 〇〇〇〇?

A7 : 〇〇 OEM / ODM ORD 〇〇 〇〇 〇〇〇 〇〇 〇〇〇 〇〇 〇〇〇 〇〇〇〇.ers. 〇〇〇 〇〇〇〇 〇〇〇〇〇 〇〇〇〇 〇〇 〇〇 〇〇〇〇〇.

Q8. 〇〇〇 〇〇〇 〇〇〇〇〇〇〇?

A8 : 〇〇〇 〇 〇〇〇 〇〇〇 〇〇〇 〇〇 〇〇 〇 MOQ 〇〇 T / T 〇〇 〇 〇 〇〇〇〇.