### **Product Description**

<u>3D Printing Metal on Sale Factory</u> Additive manufacturing refers to the use of software to decompose a 3D object into many cross-sectional layers, and the laser melts the material layer by layer according to the decomposed layer graphics, and then solidifies. Form the required cross-sectional pattern on each layer. After piled up layer by layer, the required 3D objects are formed. Mainly include QBH Module, Beam Expander, Galvo Scanner and F-Theta Scan Lenses.

The QBH collimation module realizes the conversion of divergent laser beams into parallel beams (to reduce the divergence angle), the Galvo Scanner realizes beam deflection and scanning, and the F-Theta Scan lens realizes uniform scanning and focusing of the beam.



### **Product Advantage:**

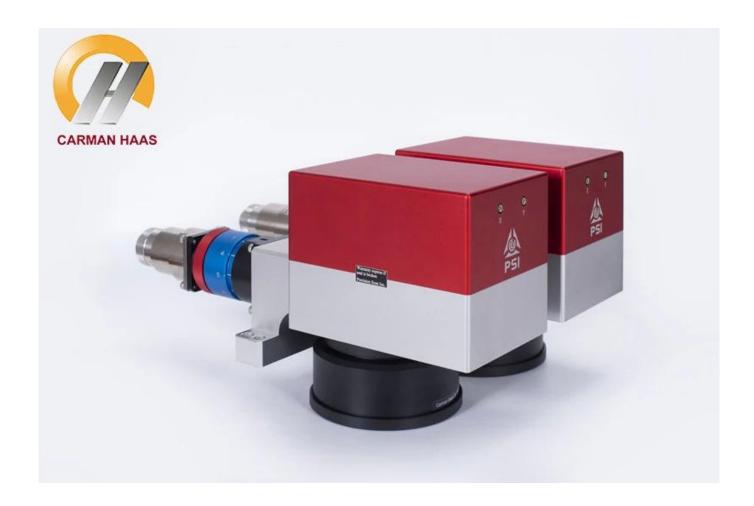
- (1)The optical lens can ensure that the roundness is greater than 93% in the range of 1.5 times the sharp length;
- (2) The lens adopts imported ultra-low absorption quartz,

Coating Absorption 20ppm. The film damage threshold is 50J/cm2, which can withstand 2000W single mode;

- (3) The focal spot size is more than 95% consistent across the entire frame;
- (4)Optimized design for collimation of single-mode laser to ensure that the influence of the entire optical system on  $M2 \square 0.04$ .

### **SLS Optical System in China**





# **Product Specifications:**

### **SLM - Metal 3D Printing**

Part Description	Focal Length (mm)	Scan Field (mm)	Entrance Pupil (mm)	Working Distance(mm)	Mounting Thread
SL-(1030-1090)-170-254-(20CA)-WC	254	170x170	20	290	M85x1
SL-(1030-1090)-170-254-(15CA)-M79*1	254	170x170	15	327	M79x1
SL-(1030-1090)-290-430-(15CA)	430	290x290	15	529.5	M85x1
SL-(1030-1090)-275-430-(20CA)	430	275x275	20	529.5	M85x1
SL-(1030-1090)-254-420-(20CA)	420	254x254	20	510.9	M85x1
SL-(1030-1090)-410-650-(20CA)-WC	650	410x410	20	560	M85x1
SL-(1030-1090)-440-650-(20CA)-WC	650	440x440	20	554.6	M85x1

## \*WC is for Water Cooling

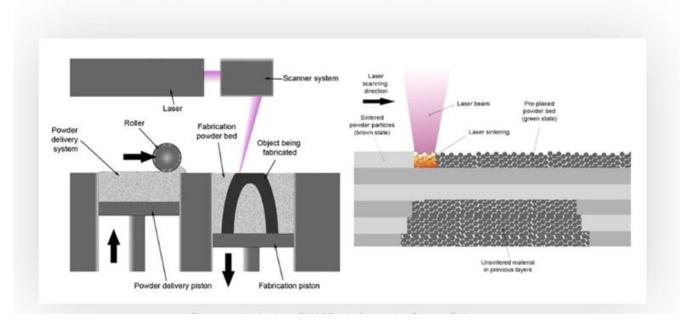
### SLS - Non-metal 3D Printing

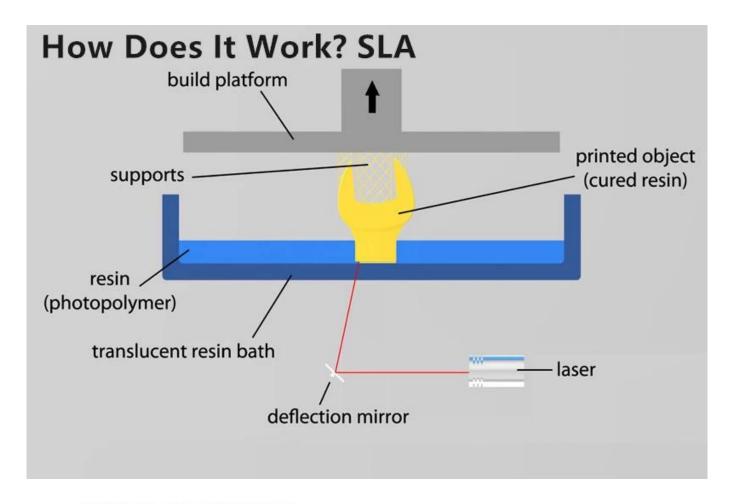
Part Description	Focal Length (mm)	Scan Field (mm)	Entrance Pupil (mm)	Working Distance(mm)	Mounting Thread
SL-10.6-250-360	360	250x250	14/20	352.9	M85x1
SL-10.6-300-430	430	300x300	14/20	414.7	M85x1
SL-10.6-400-565	565	400x400	14/20	536.5	M85x1

### **SLA - UV 3D Printing**

Part Description	Focal Length (mm)	Scan Field (mm)	Entrance Pupil (mm)	Working Distance(mm)	Mounting Thread
SL-355-530-750	750	520x520	10	824.4	M85x1
SL-355-610-840-(15CA)	840	610x610	15	910	M85x1
SL-355-800-1090-(18CA)	1090	800x800	18	1193	M85x1

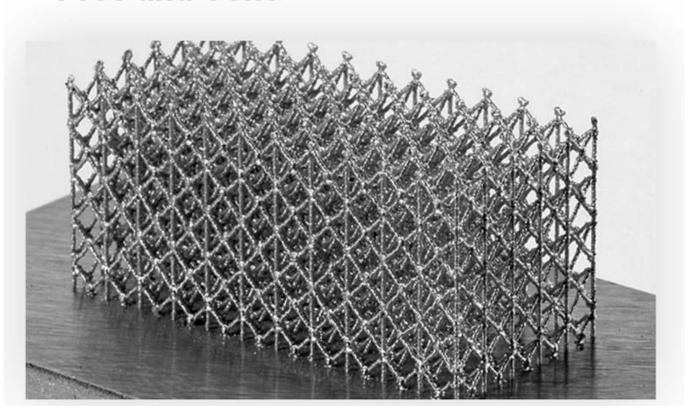
# How Does It Work? SLS



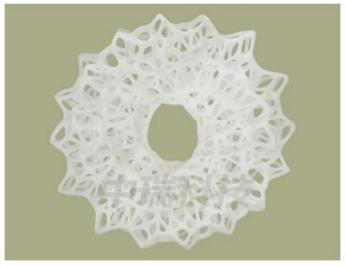


SELECTIVE LASER MELTING (SLM)

# **Pros and Cons**



### ZRPA12 ( PA12 Nylon Powder )



PHYSICAL	Grain Size:	50~55μm	
CHARACTERISTICS	Shape:	Spherical	
CHAIGHETERISTICS	Apparent density:	≥0.40 g/cm³	
10.194.608-1903F	Melting Point: 182	?~185°C (10°C/min)	
THERMAL PROPERTY	Melting Enthalpy: ≥90 J/g		
PROPERTY	HDT: 83.8°C @1.8MPa / 146.1°C @0.45MP		
	Density: 0.97 g/cm	13	
	Tensile Modulus: 1600 MPa		
	Tensile Strength: 43 MPa		
MOLDING	Elongation at break: ≥15 %		
PERFORMANCE	Un-notched Impact Str	ength: 20.7 KJ/m²	
	Notched Impact Stre	enath: 3.8 KI/m²	

Bending Modulus: 1432 MPa Bending Strength: 57 MPa

## ZRTPU (Thermoplastic Polyurethanes Powder)





# **Factory**

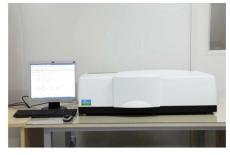








TRIOPTICS OptiSpheric 2000 AF
---Testing EFL、R、Centering Error、Wedge Angle、BFL、MTF



PerkinElmer Lambda 950---Testing Transmission and Reflectivity



Carmanhaas Coating Machine









# **Packing List**





### **Return Policy:**

Should returns be required:

- Step 1) Contact us with this website email.
- Step 2) Provide as much detail as possible about the problem you are having.
- Step 3) Authorization to return the item will be issued.
- Step 4) Return the item for the agreed replacement or refund.

#### **Logistics:**

- (1) For Laser Optics order delivery, can be optional with DHL, UPS, FedEx, TNT, EMS, ets
- (2) For Laser machine order delivery, can be optional with terms of EXWork FOB, CNF, CIF By Air or by Sea based on the buyer's forwarders or ours.

#### **FAO**

- Q1.Are you a manufacturer?
- A1: Yes, we are professional and experienced manufacturer with our own molds and production lines.
- Q2. How about quality of products?
- A2: Our technicians and QC teams test the products one by one using aging line, professional devices and instruments to ensure the quality for all products.
- Q3. How about price?
- A3: We are a manufacturer and always offer our customers the most competitive prices.
- Q4. How to place an order?
- A4: Contact with online service, or sent email to us directly, we will reply to you with product price, specifications, packing etc. soon. Thank you.
- Q5.May I send material to test marking performance?
- A5: Yes! You are welcome to send material to test our superior quality and service.
- Q6.Can I visit your factory?
- A6: Yes, welcome to visit our factory at your convenient time.
- Q7. How can I make OEM or ODM orders?
- A7: We have different print processing for different OEM/ODM orders. Please contact us with online service or send email to us directly.
- Q8. How should I pay for my orders?
- A8: You can pay by T/T would be available for qualified bank and MOQ required for each order.