

## » » » » » Product Information

### Product Description:

SLS Printing uses selective CO<sub>2</sub> laser sintering technology which sinters plastic powders (ceramic or metal powders with binding agent) into solid cross-sections layer by layer until a three-dimensional part is built. Before making the parts, need to fill the build chamber with nitrogen and rise the chamber temperature. When the temperature is ready, a computer controlled CO<sub>2</sub> laser selectively fuses powdered materials by tracing cross-sections of the part on the surface of a powder bed and then a new coat of material is applied for the new layer. The working platform of the powder bed will go one layer down and then the roller will pave a new layer of the powder and the laser will selectively sinter the cross-sections of the parts. Repeat the process until the parts completed. [Additive Manufacturing china](#)

CARMANHAAS could offer customer Dynamic optical scanning system with High speed · High precision · High quality function.

Dynamic optical scanning system means front focusing optical system, achieves zooming by a single lens movement, which consists of a moving small lens and two focusing lenses. The front small lens expands the beam and the rear focusing lens focuses the beam. The use of the front focusing optical system, because the focal length can be elongated, thereby increasing the scanning area, is currently the best solution for large-format high-speed scanning. Generally used in large-format machining or changing working distance applications, such as large-format cutting, marking, welding, 3D printing, etc.

### Advantages:

- (1) Galvanometer Aperture □14mm □20mm □30mm;
- (2) Large-format scanning processing, the format can reach 2000mmx2000mm, and ensure high consistency and high roundness of the focused spot;
- (3) Large spot incidence, so that the finer the spot size is required;
- (4) Advanced servo control algorithm and efficient photoelectric sensing positioning technology;
- (5) Support XY2-100 international general agreement.

[QBH optical module manufacturer china](#)





## Technical Parameters:

### CO2 F-Theta Lenses

Part Description	Focal Length (mm)	Scan Field (mm)	Max 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

### CO2 Beam Expander

Part Description	Expansion Ratio	Input CA (mm)	Output CA (mm)	Housing Dia (mm)	Housing Length(mm)	Mounting Thread
BE-10.6-D17:64.5-3x	3X	11	15	25	64.5	M22*0.75
BE-10.6-D17:70.5-4x	4X	11	15	25	70.5	M22*0.75
BE-10.6-D20:72-5x	5X	11	18	25	72	M22*0.75
BE-10.6-D27:75.7-6x	6X	11	25.5	32	75.7	M22*0.75
BE-10.6-D27:71-8x	8X	11	25.5	32	71	M22*0.75

## CO2 Protective Window

Diameter(mm)	Thickness(mm)	Coating
80	3	AR/AR@10.6um
90	3	AR/AR@10.6um
110	3	AR/AR@10.6um
90*60	3	AR/AR@10.6um
90*70	3	AR/AR@10.6um

### ZRPA12 ( PA12 Nylon Powder )



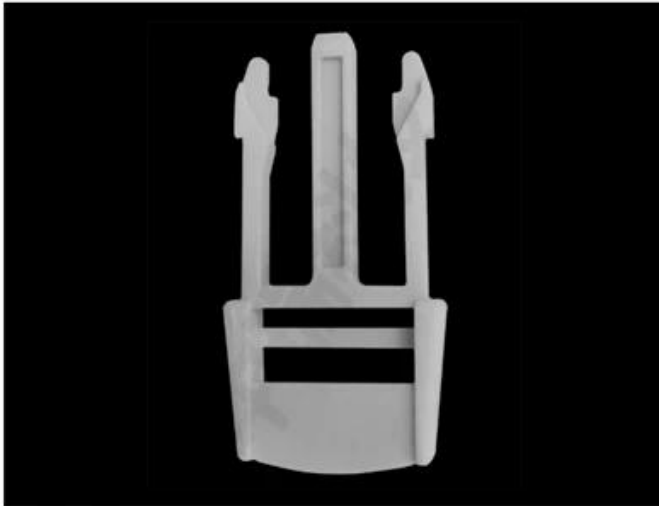
<b>PHYSICAL CHARACTERISTICS</b>	Grain Size: 50~55µm Shape: Spherical Apparent density: ≥0.40 g/cm³
<b>THERMAL PROPERTY</b>	Melting Point: 182~185°C (10°C/min) Melting Enthalpy: ≥90 J/g HDT: 83.8°C @1.8MPa / 146.1°C @0.45MPa
<b>MOLDING PERFORMANCE</b>	Density: 0.97 g/cm³ Tensile Modulus: 1600 MPa Tensile Strength: 43 MPa Elongation at break: ≥15 % Un-notched Impact Strength: 20.7 KJ/m² Notched Impact Strength: 3.8 KJ/m² Bending Modulus: 1432 MPa Bending Strength: 57 MPa

### GF100 ( Glass Fiber Composite Nylon Powder )



<b>PHYSICAL CHARACTERISTICS</b>	Apparent density: ≥0.66 g/cm³
<b>THERMAL PROPERTY</b>	Melting Point: 183°C (10°C/min) HDT: 89°C @1.8MPa / 163°C @0.45MPa
<b>MOLDING PERFORMANCE</b>	Density: 1.24 g/cm³ Tensile Modulus: 3498 MPa Tensile Strength: 43 MPa Elongation at break: 5 % Un-notched Impact Strength: 19.26 KJ/m² Notched Impact Strength: 4.11 KJ/m² Bending Modulus: 2413 MPa Bending Strength: 67 MPa

## MF100 ( Mineral Fiber Composite Nylon Powder )



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

## ZRTPU ( Thermoplastic Polyurethanes Powder )

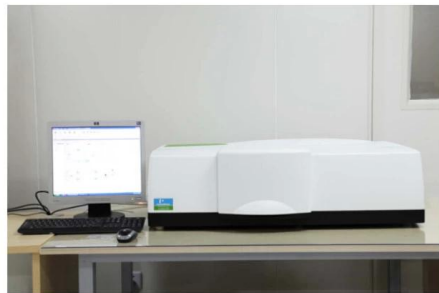


<b>PHYSICAL CHARACTERISTICS</b>	Grain Size: $60\mu\text{m}$ Shape: Spherical Apparent density: $0.47 \text{ g/cm}^3$
<b>THERMAL PROPERTY</b>	Melting Point: $165^\circ\text{C}$ HDT Heat deflection temperature: $-25^\circ\text{C}$
<b>MOLDING PERFORMANCE</b>	Density: $1.15 \text{ g/cm}^3$ Tensile Modulus: 61 MPa Tensile Strength: 21 MPa Elongation at break: 310 % Tear strength: 101 N/mm Bending Modulus: 74 MPa Bending Strength: 3.3 MPa

» » » » » **Factory**



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



**PerkinElmer Lambda 950**---Testing Transmission and Reflectivity

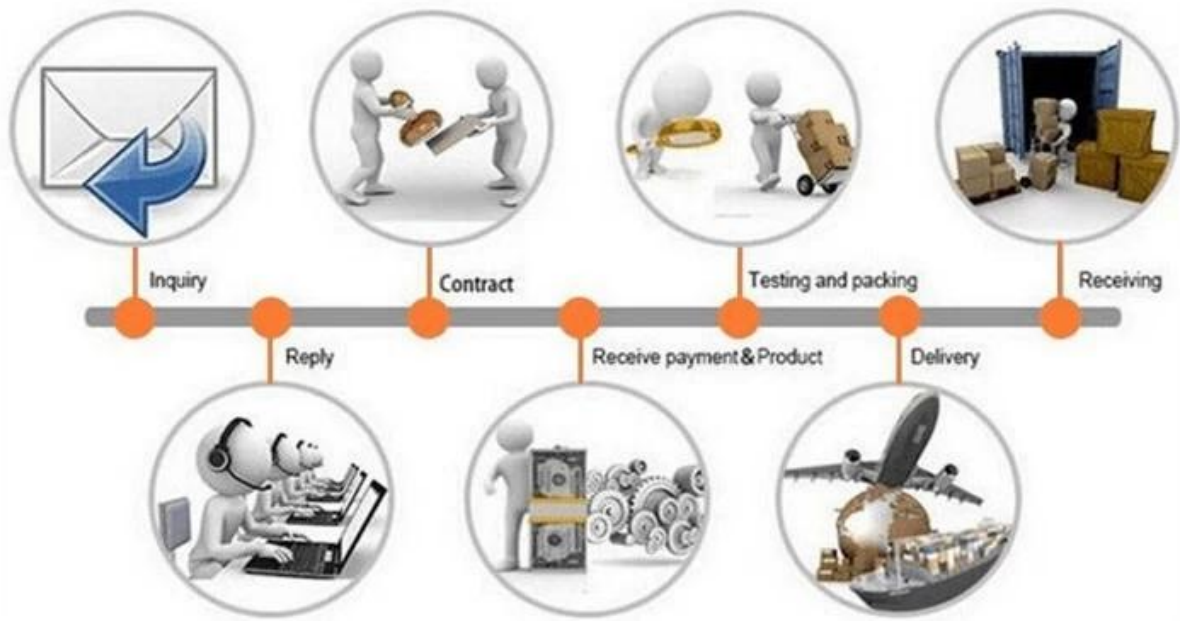


**Carmanhaas Coating Machine**

## 》》》》》 Certificate&Exhibition



## 》》》》》 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.

## » » » » » FAQ

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.