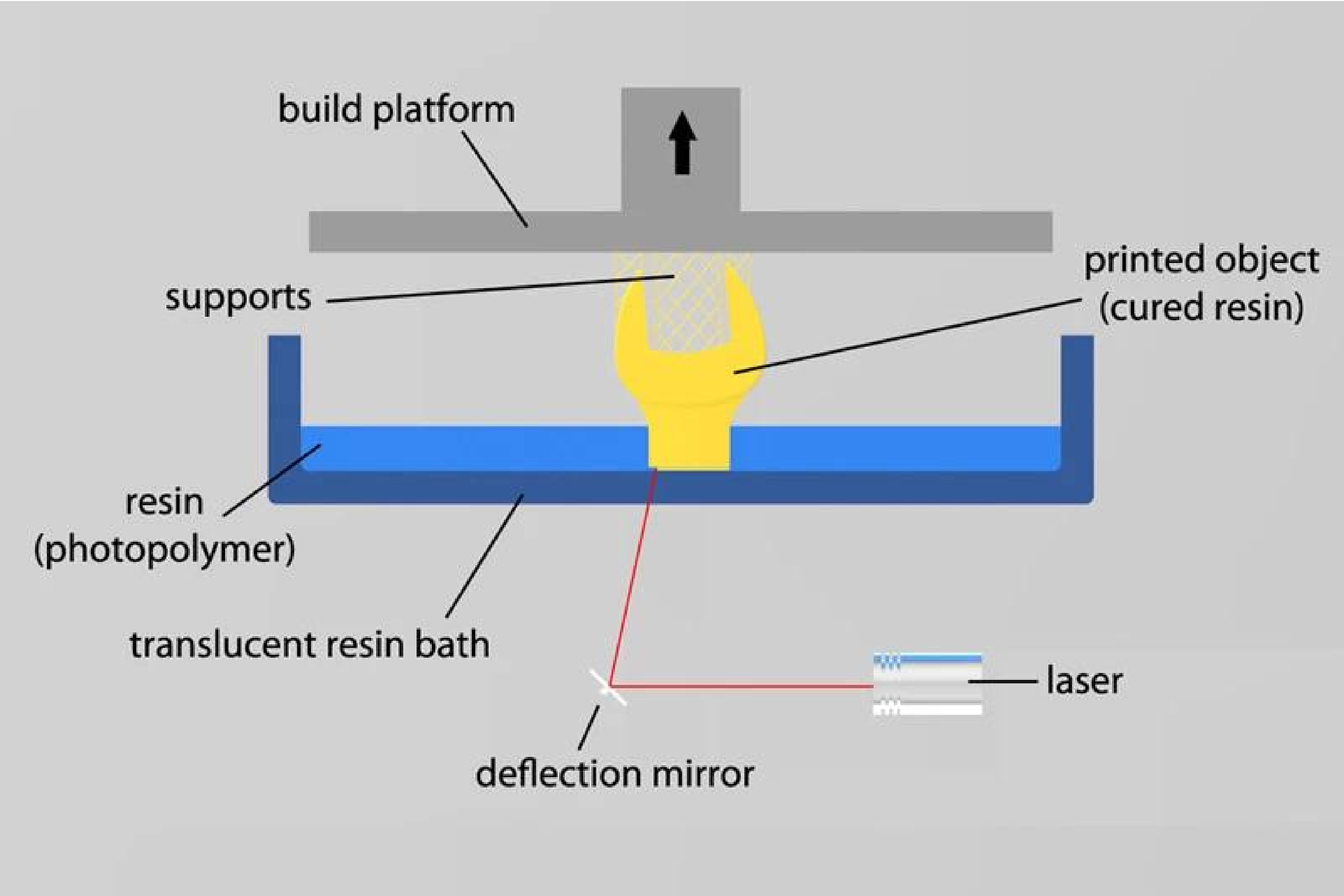
》》》》》 Product Information

Product Description:

SLA(Stereolithography) is an additive manufacturing process that works by focusing an UV laser on to a vat of photopolymer resin. With the help of computer aided manufacturing or computer aided design(CAM/CAD) software, the UV laser is used to draw a pre-programmed design or shape on to the surface of the photopolymer vat. Photopolymers are sensitive to ultraviolet light, so the resin is photochemically solidified and forms a single layer of the desired 3D object. This process is repeated for each layer of the design until the 3D object is complete.

CARMANHAAS could offer customer the optical system mainly includes fast Galvanometer Scanner and F-THETA scan lens, Beam expander, Mirror, etc.(**Additive Manufacturing China**)



Technical Parameters:

355nm Galvo Scanner Head

Model	PSH14-H	PSH20-H	PSH30-H
Water cool/sealed scan head	yes	yes	yes
Aperture (mm)	14	20	30
Effective Scan Angle	±10°	±10°	±10°
Tracking Error	0.19 ms	0.28ms	0.45ms
Step Response Time(1% of full scale)	≤ 0.4 ms	≤ 0.6 ms	≤ 0.9 ms
Typical Speed			
Positioning / jump	< 15 m/s	< 12 m/s	< 9 m/s
Line scanning/raster scanning	< 10 m/s	< 7 m/s	< 4 m/s
Typical vector scanning	< 4 m/s	< 3 m/s	< 2 m/s
Good Writing quality	700 cps	450 cps	260 cps
High writing quality	550 cps	320 cps	180 cps
Precision			
Linearity	99.9%	99.9%	99.9%
Resolution	≤ 1 urad	≤ 1 urad	≤ 1 urad
Repeatability	≤ 2 urad	≤ 2 urad	≤ 2 urad
Temperature Drift			
Offset Drift	≤ 3 urad/℃	≤ 3 urad/℃	≤ 3 urad/℃
Qver 8hours Long-Term Offset Drift （After 15min warn-up）	≤ 30 urad	≤ 30 urad	≤ 30 urad
Operating Temperature Range	25℃±10℃	25℃±10℃	25℃±10℃
Signal Interface	Analog: ±10V Digital: XY2-100 protocol	Analog: ±10V Digital: XY2-100 protocol	Analog: ±10V Digital: XY2-100 protocol
Input Power Requirement (DC)	±15V@ 4A Max RMS	±15V@ 4A Max RMS	±15V@ 4A Max RMS

355nm F-Theta Lenses

Part Description	Focal Length (mm)	Scan Field (mm)	Max Entrance Pupil (mm)	Working Distance(mm)	Mounting Thread
SL-355-360-580	580	360x360	16	660	M85x1
SL-355-520-750	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

355nm Beam Expander

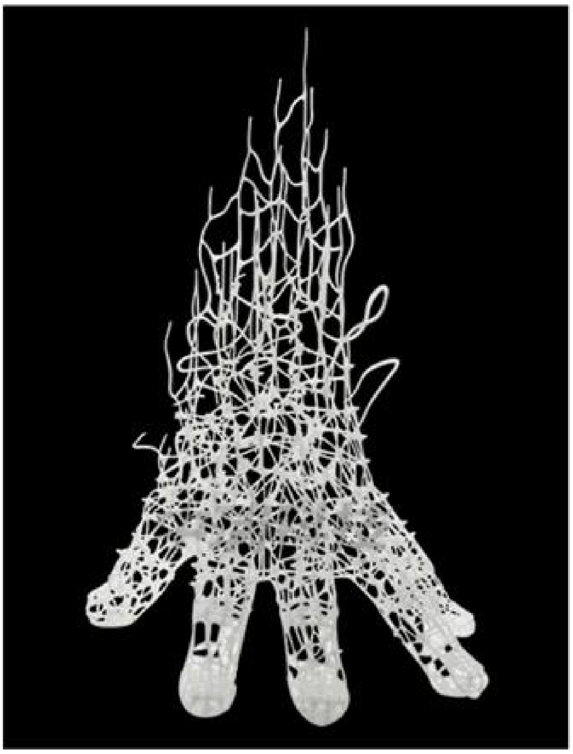
Part Description	Expansion Ratio	Input CA (mm)	Output CA (mm)	Housing Dia(mm)	Housing Length(mm)	Mounting Thread
BE3-355-D30:84.5-3x-A(M30*1-M43*0.5)	3X	10	33	46	84.5	M30*1-M43*0.5
BE3-355-D33:84.5-5x-A(M30*1-M43*0.5)	5X	10	33	46	84.5	M30*1-M43*0.5
BE3-355-D33:80.3-7x-A(M30*1-M43*0.5)	7X	10	33	46	80.3	M30*1-M43*0.5
BE3-355-D30:90-8x-A(M30*1-M43*0.5)	8X	10	33	46	90.0	M30*1-M43*0.5
BE3-355-D30:72-10x-A(M30*1-M43*0.5)	10X	10	33	46	72.0	M30*1-M43*0.5

355nm Mirror

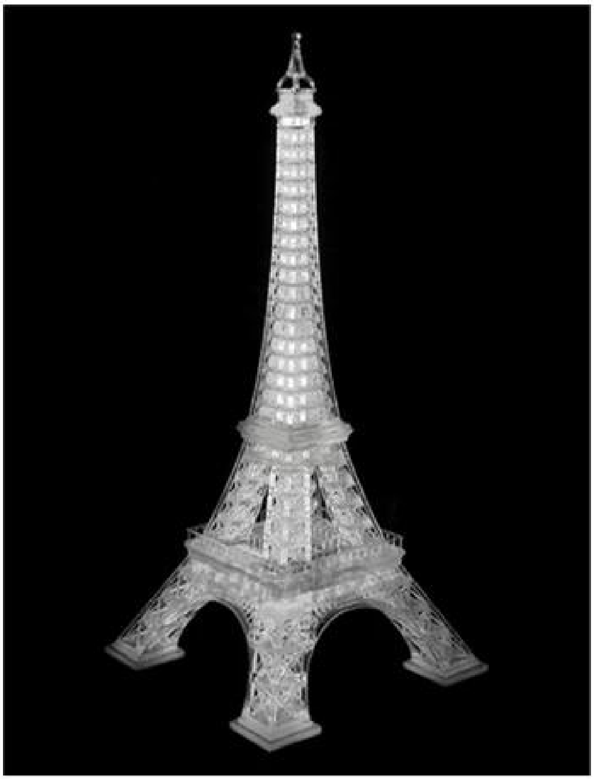
Part Description	Diameter(mm)	Thickness(mm)	Coating
355 Mirror	30	3	HR@355nm,45°AOI
355 Mirror	20	5	HR@355nm,45°AOI
355 Mirror	30	5	HR@355nm,45°AOI

[3D Printing metal wholesales China]

PHYSICAL CHARACTERISTICS (LIQUID STATE)	Appearance: White liquid Density: 1.10 g/cm³ @25℃ Viscosity: 450 CPS @25℃ Dp: ≥0.16 mm Ec: 8.5 mJ/cm²
MOLDING PERFORMANCE A MOLDING PERFORMANCE @355nm point laser @330mW power @5.0m/s scanning @No UV post-cure	Bending Modulus: 1500~1700 MPa Bending Strength: 55~60 MPa Notched Impact Strength: 60~68 J/m 1.2mm Bend Angle: 140~170°
MOLDING PERFORMANCE B MOLDING PERFORMANCE @90min UV post-cure	Bending Modulus: 2688~2790 MPa Bending Strength: 66~73 MPa Notched Impact Strength: 60~68 J/m Hardness: 88 Elongation at break: 10~15% HDT Heat deflection temperature: 52 ℃ Tg Glass transition temperature: 62 ℃ CTE Coefficient of thermal expansion: 93*E-6



PHYSICAL CHARACTERISTICS (LIQUID STATE)	Appearance: White liquid Density: 1.10 g/cm³ @25℃ Viscosity: 400 CPS @25℃ Dp: ≥0.16 mm Ec: 7.9 mJ/cm²
MOLDING PERFORMANCE A MOLDING PERFORMANCE @355nm point laser @330mW power @5.0m/s scanning @No UV post-cure	Bending Modulus: 2000~2300 MPa Bending Strength: 75~85 MPa Notched Impact Strength: 35~45 J/m 1.2mm Bend Angle: ≥170~180°
MOLDING PERFORMANCE B MOLDING PERFORMANCE @90min UV post-cure	Bending Modulus: 2813~3520 MPa Bending Strength: 83~90 MPa Notched Impact Strength: 42~50 J/m Hardness: 87~92 Elongation at break: 13~20% HDT Heat deflection temperature: 52 ℃ Tg Glass transition temperature: 62 ℃ CTE Coefficient of thermal expansion: 93*E-6



PHYSICAL CHARACTERISTICS (LIQUID STATE)	Appearance: Transparent liquid Pale Purple Density: 1.10 g/cm³ @25℃ Viscosity: 190 CPS @25℃ Dp: ≥0.18 mm Ec: 6.9 mJ/cm²
MOLDING PERFORMANCE A MOLDING PERFORMANCE @355nm point laser @150mW power @5.0m/s scanning @No UV post-cure	Appearance: High Transparency Transmittance: 85% (MAX) Bending Modulus: 1500~1700 MPa Bending Strength: 45~55 MPa Notched Impact Strength: 25~35 J/m 1.2mm Bend Angle: 140~170°
MOLDING PERFORMANCE B MOLDING PERFORMANCE @90min UV post-cure	Bending Modulus: 1890~2340 MPa Bending Strength: 55~62 MPa Notched Impact Strength: 40~55 J/m Hardness: 79 Elongation at break: 10~15% HDT Heat deflection temperature: 52 ℃ Tg Glass transition temperature: 62 ℃ CTE Coefficient of thermal expansion: 93*E-6

Real ABS (ABS Like)

PHYSICAL CHARACTERISTICS (LIQUID STATE)	Appearance: Bright yellow liquid Density: 1.10 g/cm³ @25℃ Viscosity: 400 CPS @25℃ Dp: ≥0.16 mm Ec: 7.9 mJ/cm²
MOLDING PERFORMANCE A MOLDING PERFORMANCE @355nm point laser @330mW power @5.0m/s scanning @No UV post-cure	Bending Modulus: 2000~2300 MPa Bending Strength: 75~85 MPa Notched Impact Strength: 35~45 J/m 1.2mm Bend Angle: ≥170~180°
MOLDING PERFORMANCE B MOLDING PERFORMANCE @90min UV post-cure	Bending Modulus: 2813~3520 MPa Bending Strength: 83~90 MPa Notched Impact Strength: 42~50 J/m Hardness: 87~92 Elongation at break: 13~20% HDT Heat deflection temperature: 52 ℃ Tg Glass transition temperature: 62 ℃ CTE Coefficient of thermal expansion: 93*E-6

Red Wood (Tooling Board Like)

PHYSICAL CHARACTERISTICS (LIQUID STATE)	Appearance: Epoxy Tooling Board Like (Pink) liquid Density: 1.10 g/cm³ @25℃ Viscosity: 400 CPS @25℃ Dp: ≥0.16 mm Ec: 7.9 mJ/cm²
MOLDING PERFORMANCE A MOLDING PERFORMANCE @355nm point laser @330mW power @5.0m/s scanning @No UV post-cure	Bending Modulus: 2000~2300 MPa Bending Strength: 75~85 MPa Notched Impact Strength: 35~45 J/m 1.2mm Bend Angle: ≥170~180°
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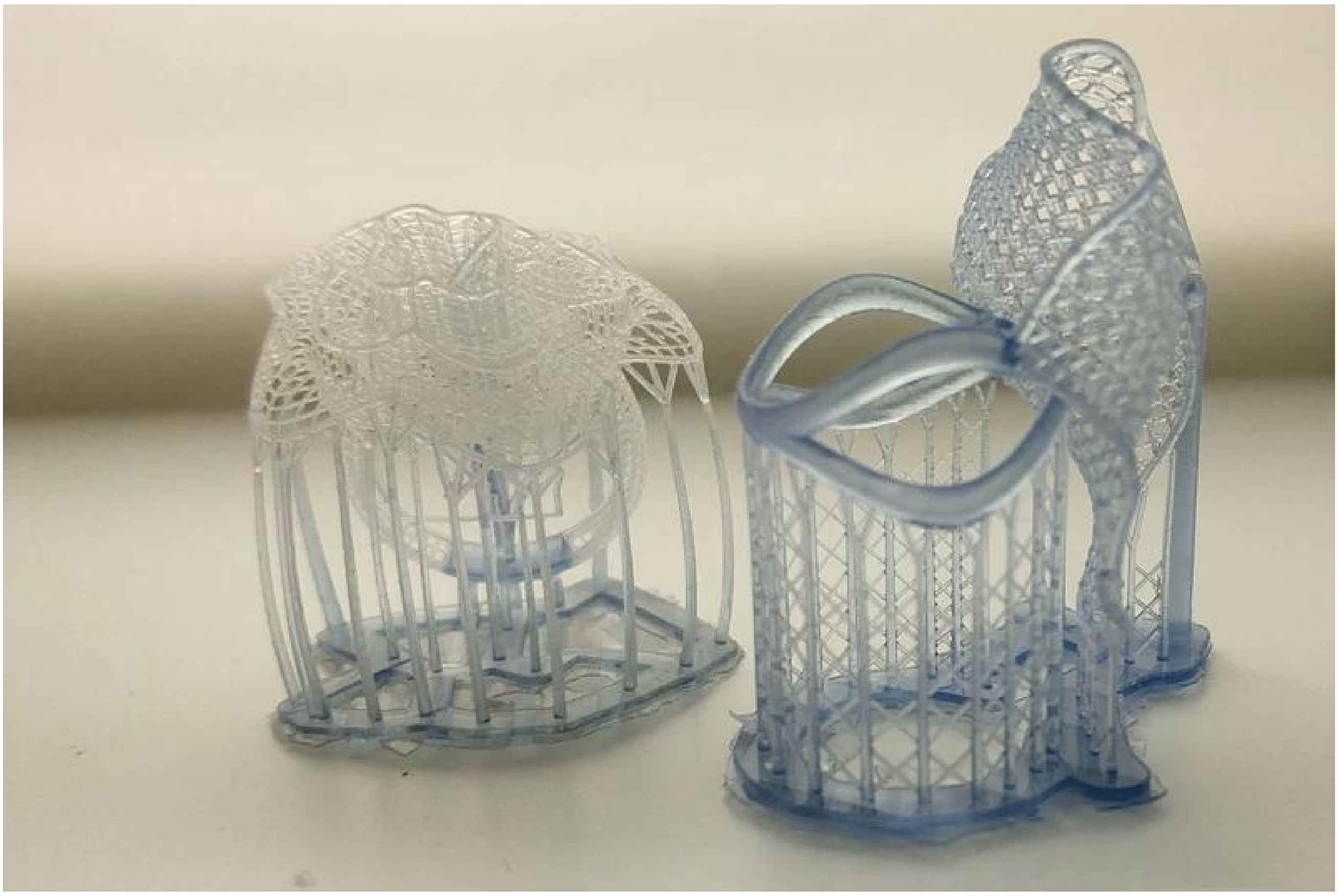
Desktop FDM
Industrial FDM
Desktop SLA
Industrial SLA
Industrial SLS

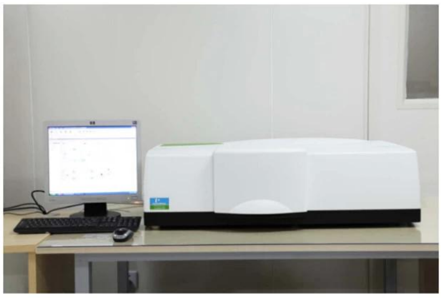



HANDMADE

Factory

TRIOPTICS OptiSpheric 2000 AF

---Testing EFL、R、Centering Error、Wedge Angle、BFL、MTF

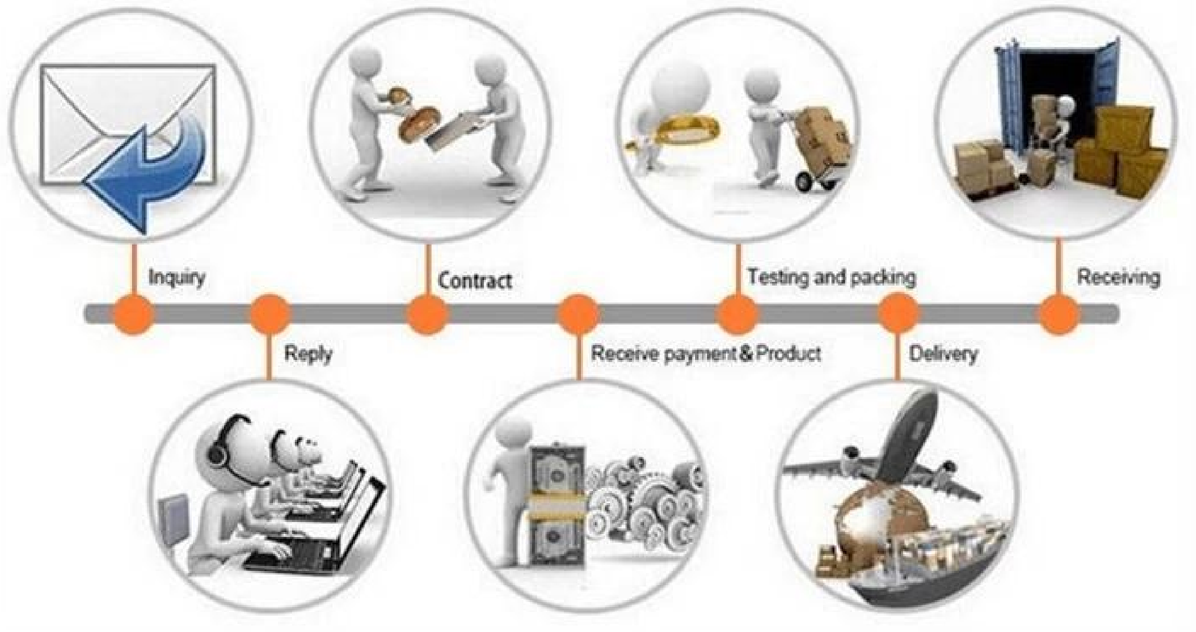


PerkinElmer Lambda 950---Testing Transmission and Reflectivity

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.