



## Product Information

### Product Description:

CARMANHAAS [China 3D Printer Optical System Manufacturer](#), 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 Advantages:

(1)The optical lens can ensure that the roundness is greater than 93% in the range of 1.5 times the

sharp length;

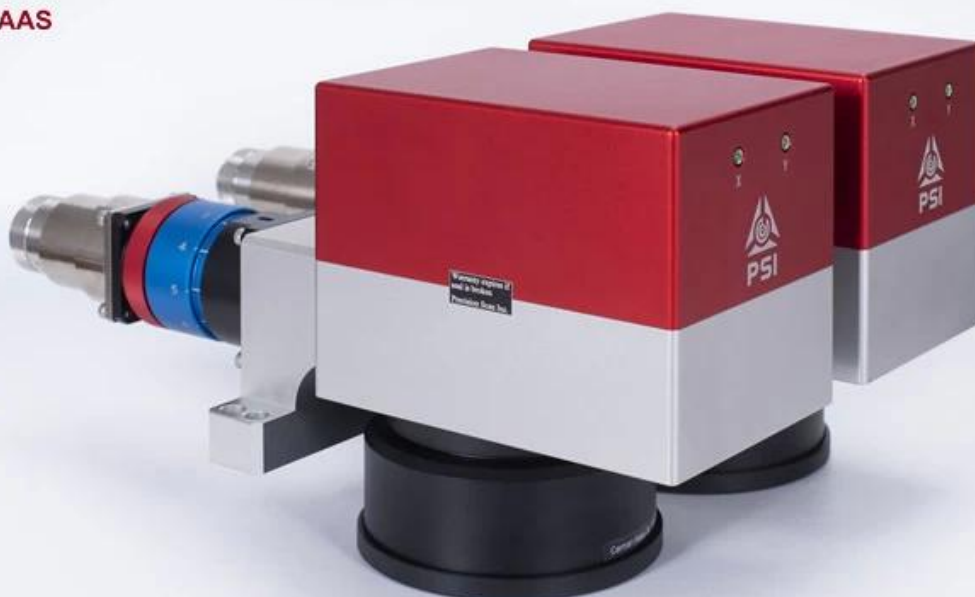
(2)The lens adopts imported ultra-low absorption quartz, Coating Absorption $\leq$ 20ppm. The film damage threshold is 50J/cm<sup>2</sup>, which can withstand 2000W single mode;

(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 M<sup>2</sup> $\leq$ 0.04.

Click [SLS Optical System in China](#) to learn more





## 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**

### 1030-1090nm QBH Collimating Optical Module

Part Description	Focal Length (mm)	Clear Aperture (mm)	NA	Coating
CL2-(1030-1090)-25-F50-QBH-A-WC	50	23	0.15	AR/AR@1030-1090nm
CL2-(1030-1090)-30-F60-QBH-A-WC	60	28	0.22	AR/AR@1030-1090nm
CL2-(1030-1090)-30-F75-QBH-A-WC	75	28	0.17	AR/AR@1030-1090nm
CL2-(1030-1090)-30-F100-QBH-A-WC	100	28	0.13	AR/AR@1030-1090nm

## 1030-1090nm Beam Expander

Part Description	Expansion Ratio	Input CA (mm)	Output CA (mm)	Housing Dia(mm)	Housing Length(mm)
BE-(1030-1090)-D26:45-1.5X-A	1.5X	18	26	44	45
BE-(1030-1090)-D53:118.6-2X-A	2X	30	53	70	118.6
BE-(1030-1090)-D37:118.5-2X-A-WC	2X	18	34	59	118.5

## 1030-1090nm Protective Window

Part Description	Diameter (mm)	Thickness (mm)	Coating
Protective Window	98	4	AR/AR@1030-1090nm
Protective Window	113	5	AR/AR@1030-1090nm
Protective Window	120	5	AR/AR@1030-1090nm
Protective Window	160	8	AR/AR@1030-1090nm





### Aluminum Alloy Hydrazine Bottle Adapter

The product is thin in wall thickness with lattice structure inside, and the overall size is too large to be made by traditional manufacturing. However, precise laser forming technology can be integrated into one piece, with short manufacturing cycle and controllable deformation.



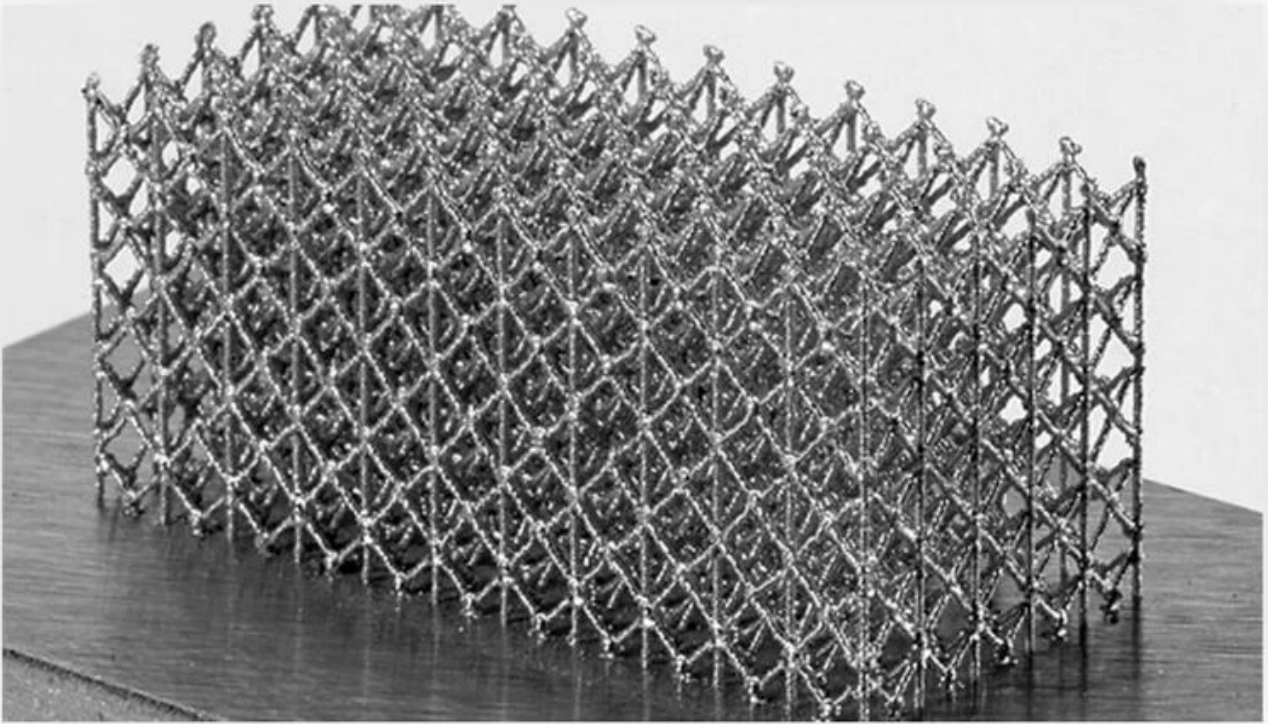
### Breathable Steel Mold

The product is printed in one piece, with high precision of special-shaped structure and smooth surface roughness, which reduces the post procedures. Due to the light-weight process, the waste of material is significantly reduced compare to the traditional manufacturing.



SELECTIVE LASER MELTING (SLM)

## Pros and Cons



Factory

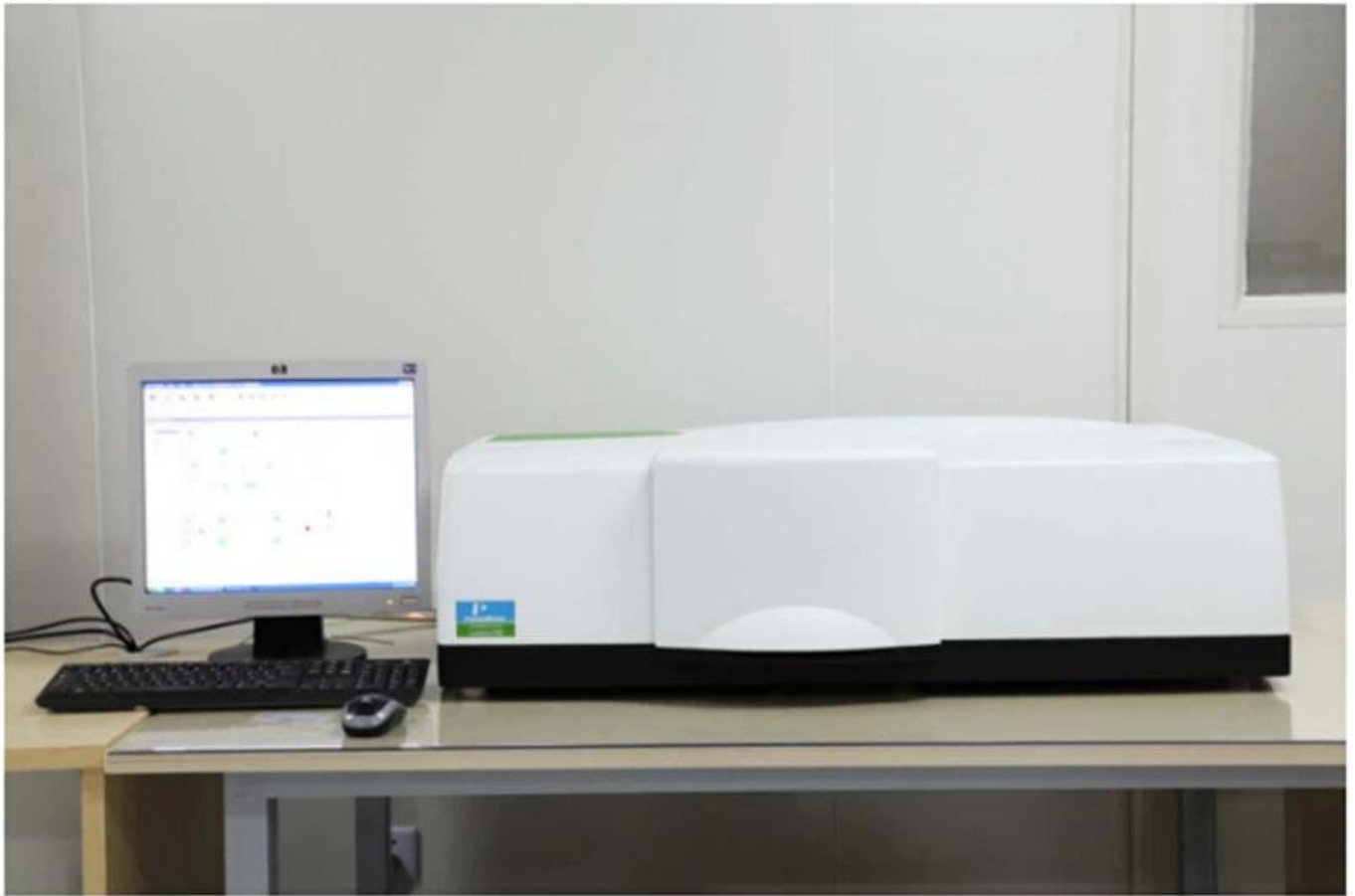












PerkinElmer Lambda 950---Testing Transmission and Reflectivity





## Certificate&Exhibition





# CERTIFICATE

## 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**

The validity of the certificate can be checked through [www.udem.com.tr](http://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: Mithakent 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@udemtd.com.tr](mailto:info@udemtd.com.tr) [www.udem.com.tr](http://www.udem.com.tr)

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



## 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 ZhongLianTianRun 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

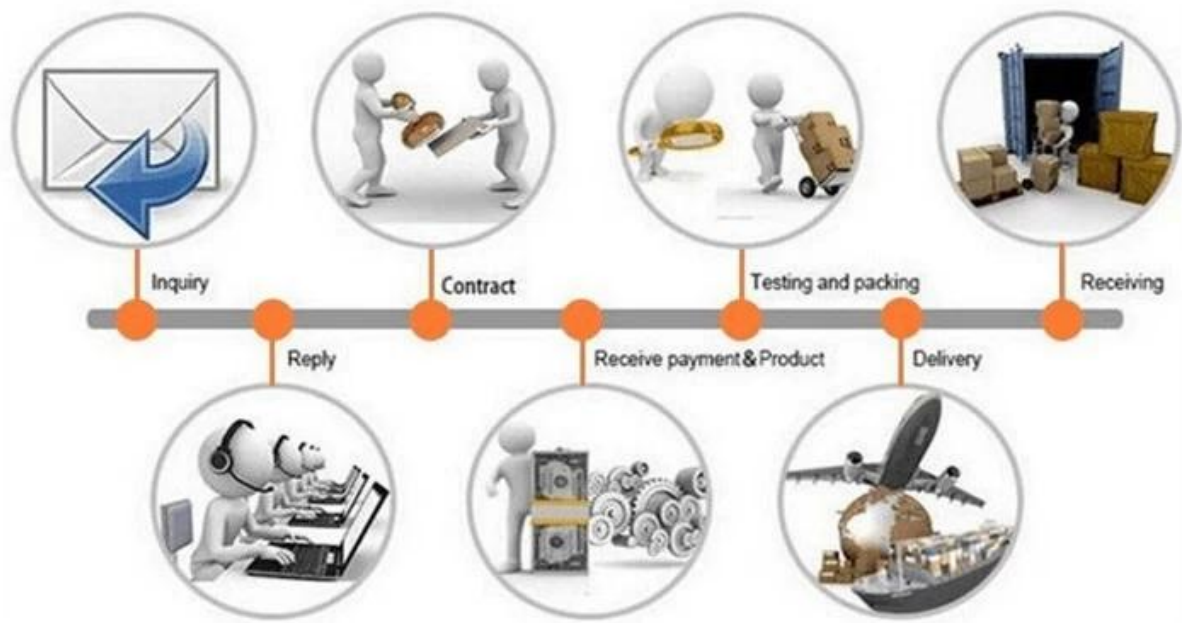
ISO 9001



## Packing List

### Packaging & Shipping





**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.