

Product Description

Typically, power battery is a new clean energy and currently a research hotspot across the world. It is a kind of storage battery providing the power source for such vehicles as an electric car, electric train, electric bicycle and golf cart. It has been applied to a wide range of industries and become part of people's lives. ([Power battery Manufacturer China](#))

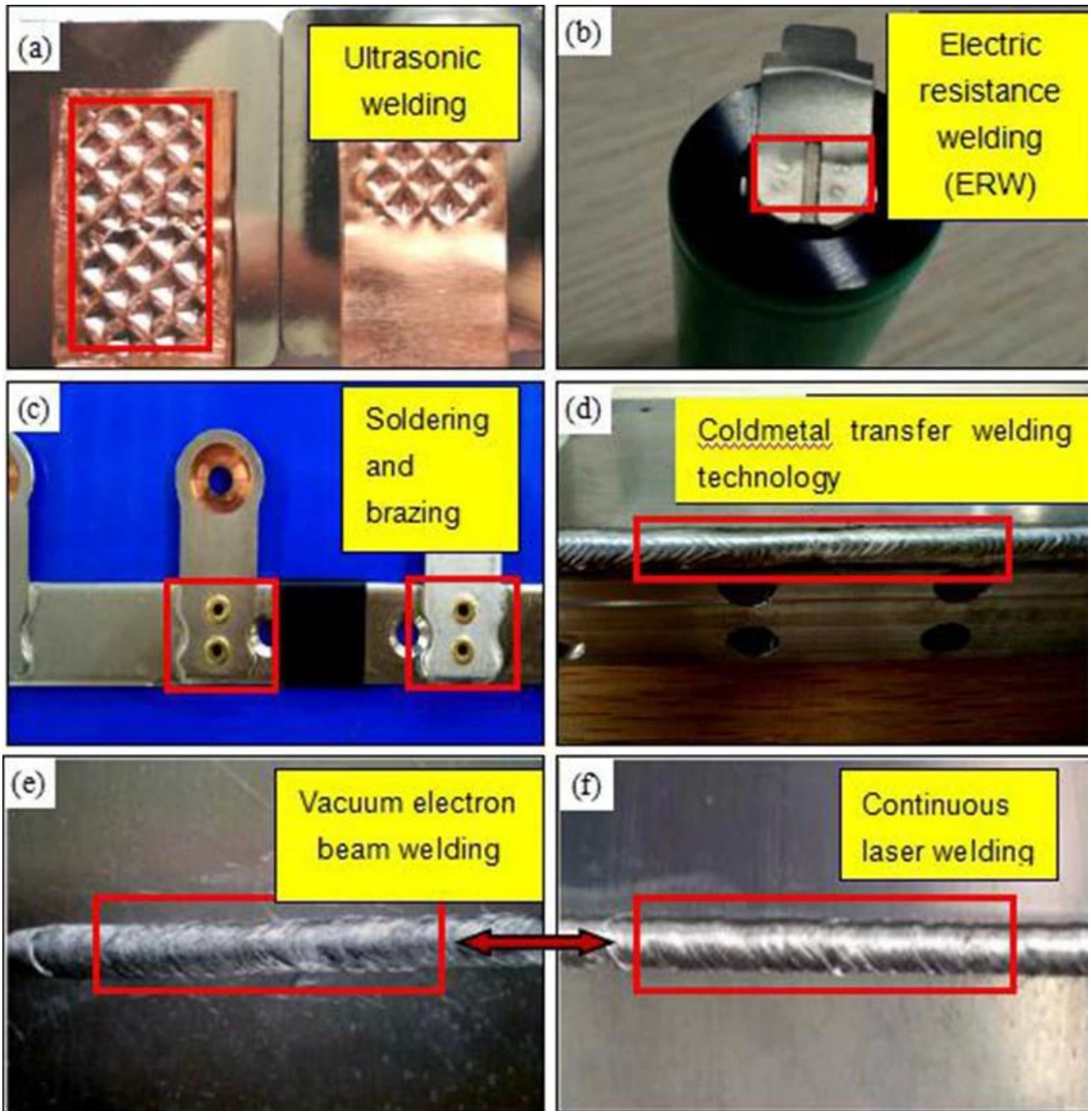
Power battery is mainly made up of anode material, cathode material (carbon material), separator, electrolyte, battery shell, etc. As the core component of new energy vehicles, it directly determines the vehicle performance. Laser welding is a kind of manufacturing process to weld these raw materials into the battery cell, battery pack, etc., which is very critical for the whole production process of the power battery.

Comparison of Common Welding Methods of Power Battery

Many packaging technologies are applied to the actual production process of power battery: laser welding, electric resistance welding, ultrasonic welding, cold metal transfer welding technology (CMT), soldering and brazing, vacuum electron beam welding, etc. Appropriate welding methods and optimized process parameters play a significant role in saving the production cost of power battery and ensuring its uniformity, reliability, and safety. Flexible, efficient and precision, laser welding is one kind of non-contact process which can not only meets the performance requirements of the production process of the power battery but great advances the development of new energy power technology.

The following Figure shows some welding seam pictures with common welding methods, each of which has their advantages and disadvantages in certain application areas. The welding effect of vacuum electron beam welding and laser welding is almost the same since they both are high energy density welding. However, electron beam welding has high requirements for facility and working environment (vacuum), so there is great difficulty in mass production. Currently, it is only used in the production of some special supercapacitor. Laser welding has the advantages of: low welding material loss, no welding flux required, beautiful welding seam, stable performance, easy operation, good welding quality, the high degree of automation and process repeatability, which cannot be matched by other welding methods.

[Laser Welding Supplier China](#)



- (a) Ultrasonic welding;
- (b) Electric resistance welding (ERW);
- (c) Soldering and brazing;
- (d) Cold metal transfer welding technology;
- (e) Vacuum electron beam welding;
- (f) Continuous laser welding

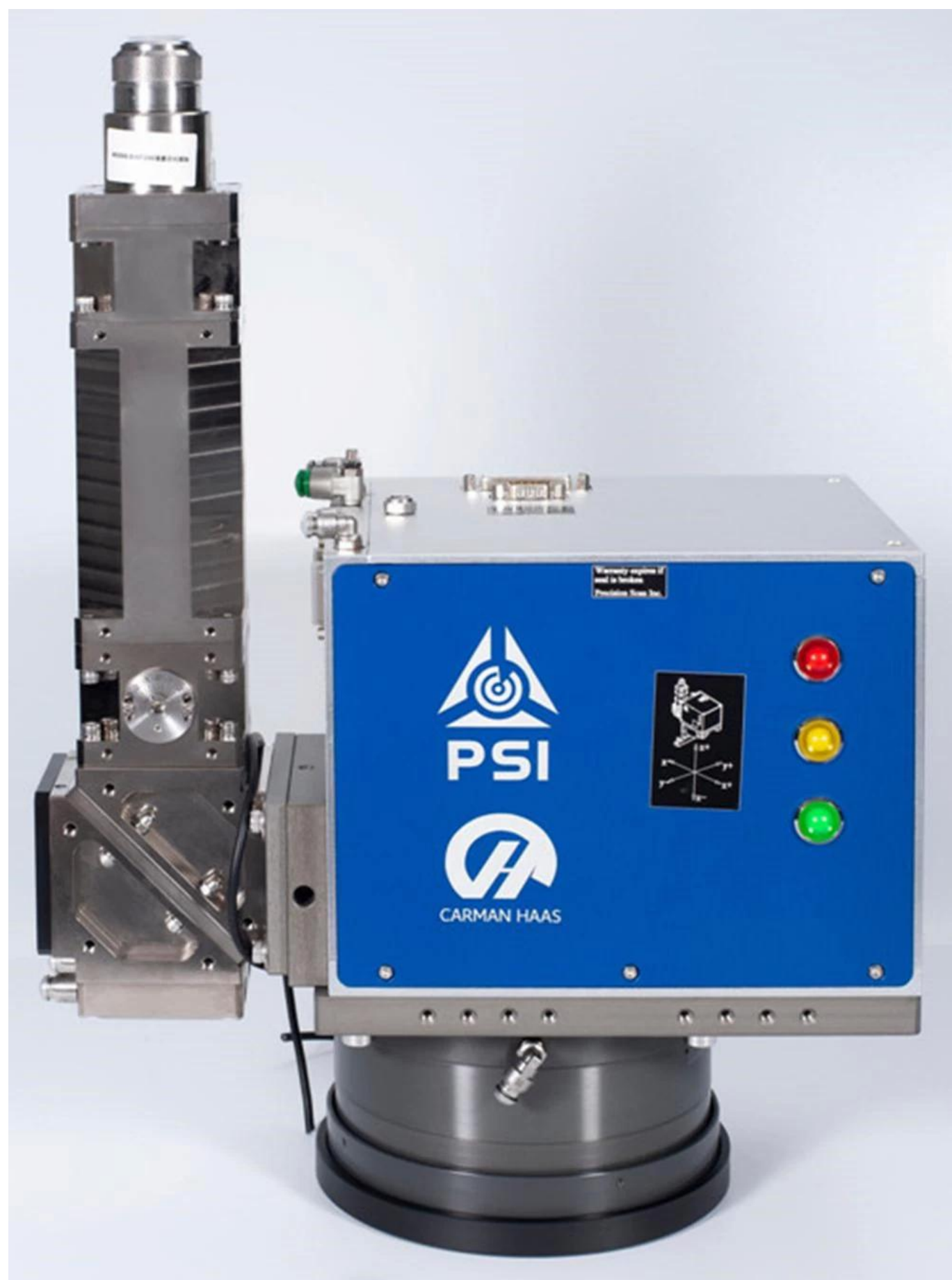
Technical Parameter:

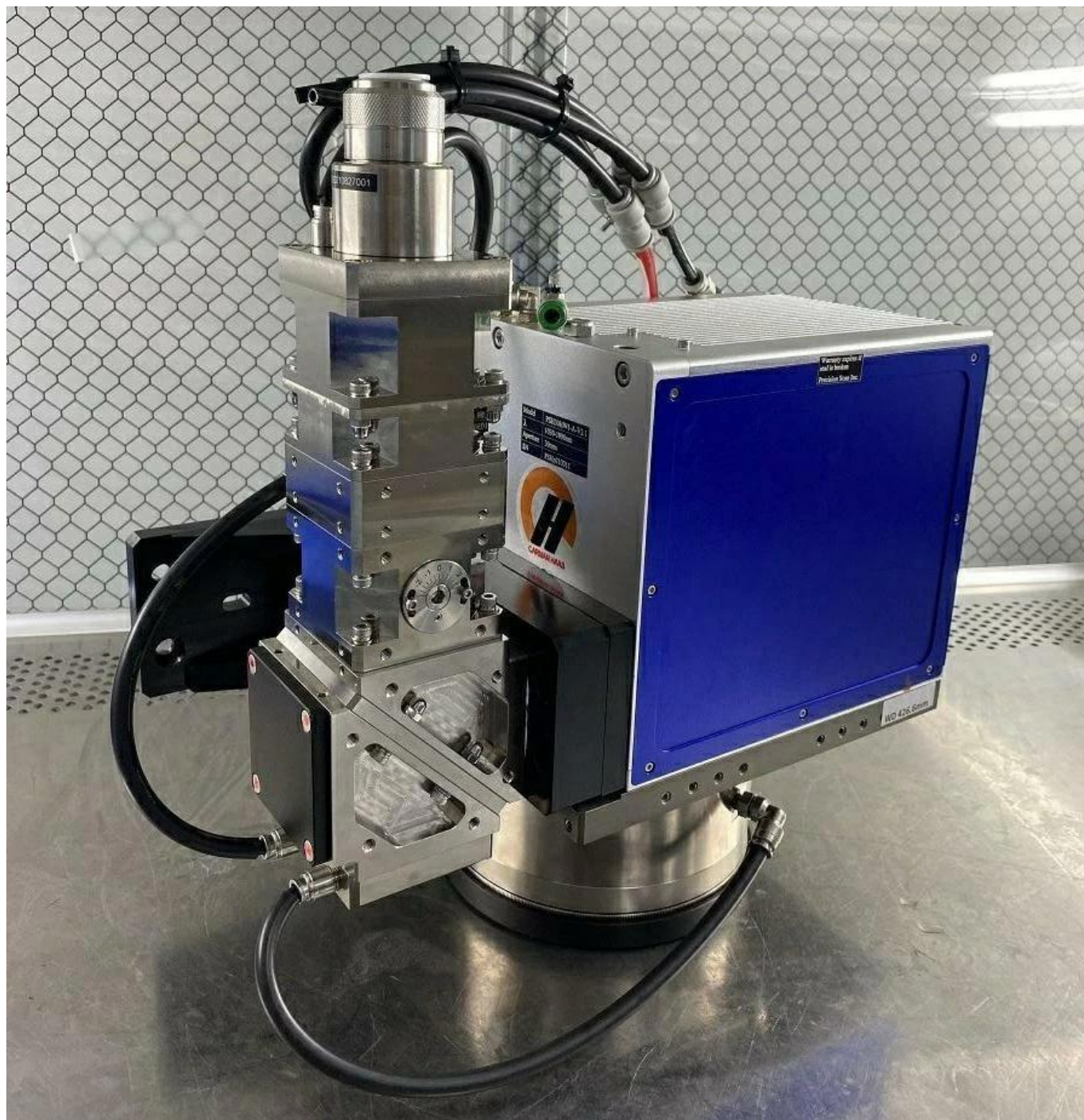
- 1.Wavelength: 1030~1090nm
- 2.Laser Power
- 3.Laser Power

- 4.Collimating Lens FL□Optional□□
- 5.f-θ Scan Lens FL (Optional)□
- 6.Coaxial CCD Module□C connector□
- 7.Focus range□±3mm collimating lens moving□
- 8.Connector QBH□
- 9.Optional power detection□Sampling Rate 0.5%□Detection frequency 100Hz□
- 10.Air knife (Optional)□
- 11.Safety System (Optional)□
- 12.Focus indicator (Optional)□
- 13.Air Cooling system (Optional)□
- 14.Control system XY2-100□
- 15.Gross Weight: 18kg.

[Galvo Head Laser Welding Factory China](#)







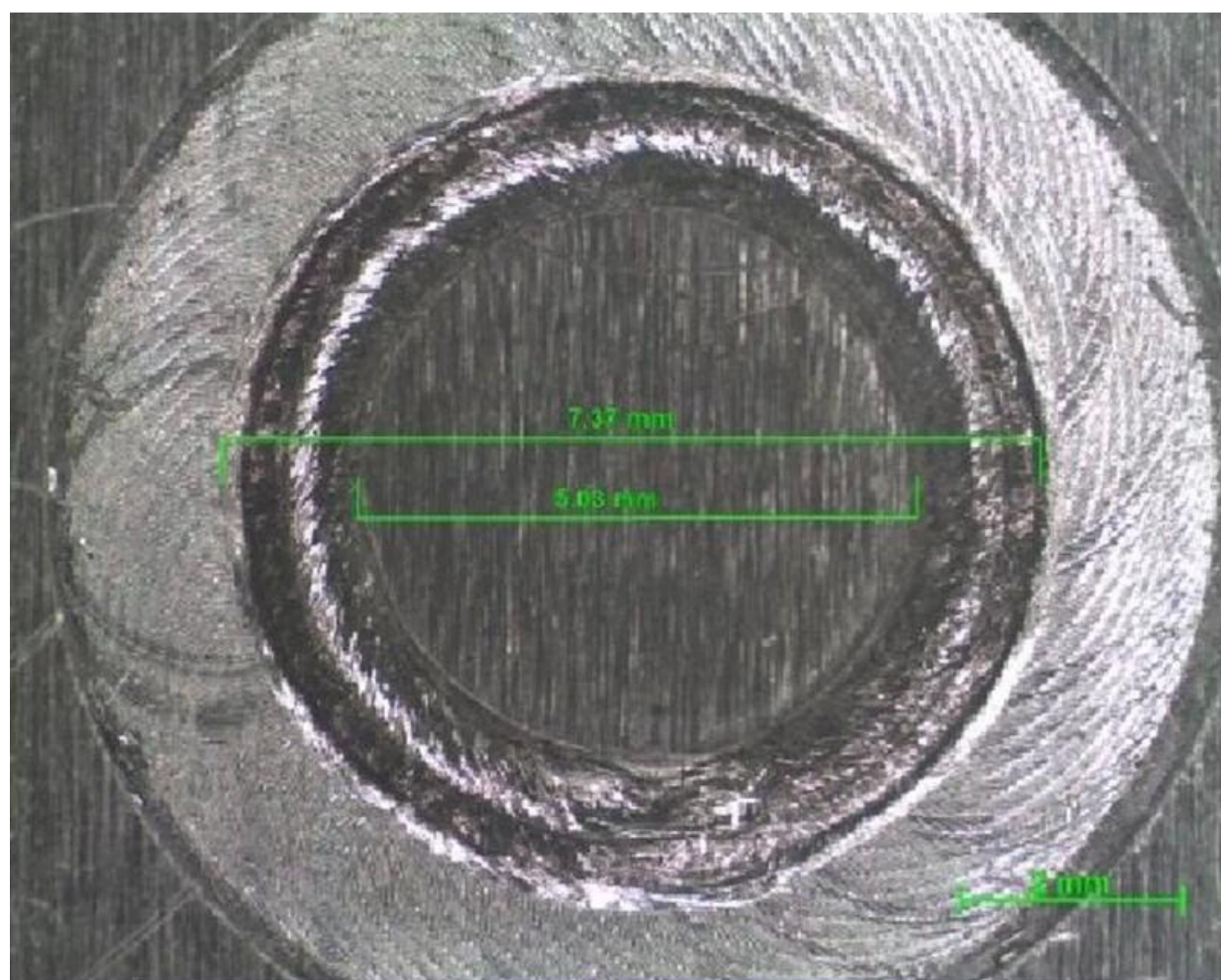
1030-1090nm F-Theta Lenses

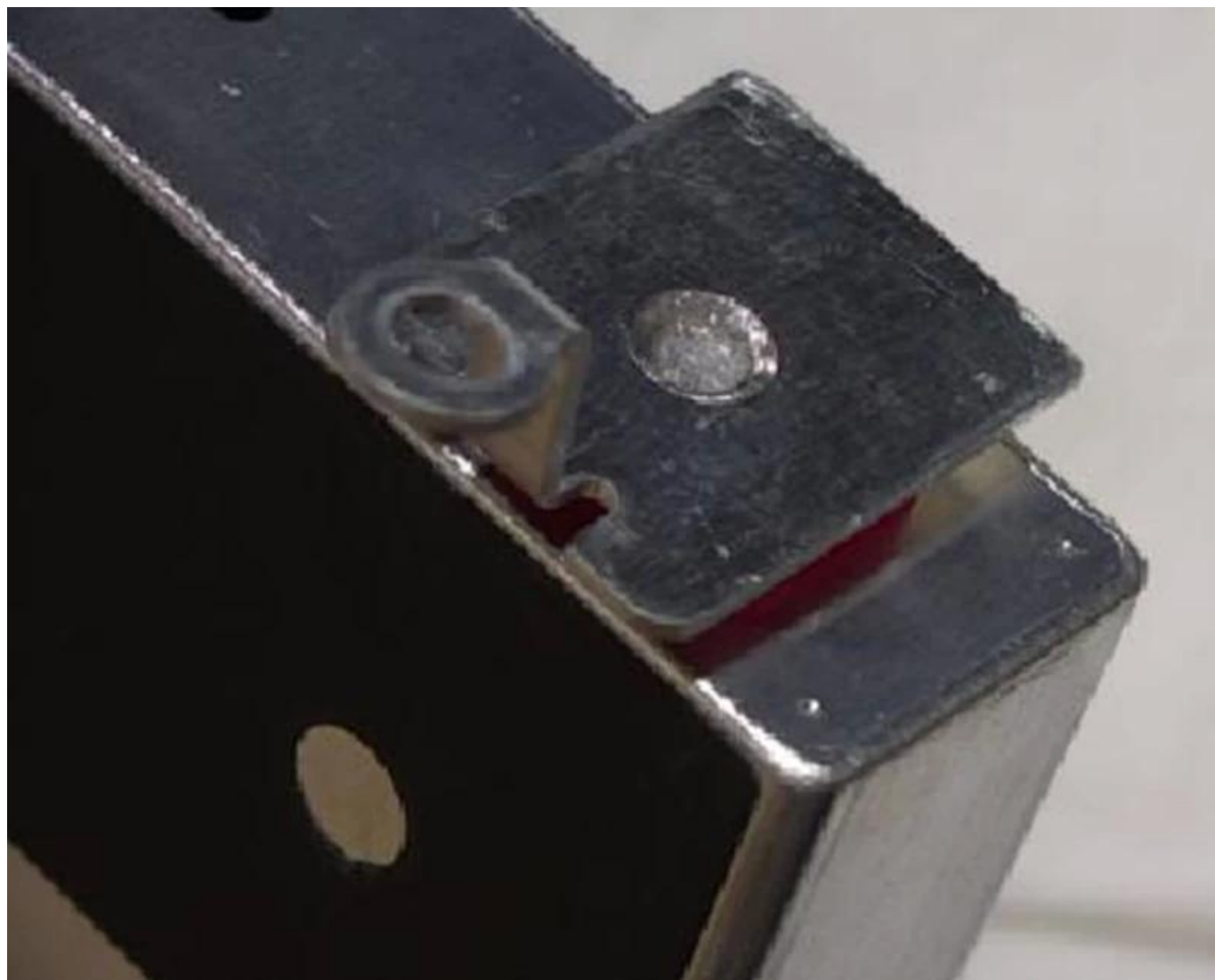
Part Description	Focal Length (mm)	Scan Field (mm)	Max Entrance Pupil (mm)	Working Distance(mm)	Mounting Thread
SL-(1030-1090)-100-254-(30CA)-M102*1-WC	254	100x100	30	333	M102x1/M85x1
SL-(1030-1090)-180-348-(30CA)-M102*1-WC	348	180x180	30	438	M102x1
SL-(1030-1090)-180-400-(30CA)-M102*1-WC	400	180x180	30	501	M102x1
SL-(1030-1090)-250-500-(30CA)-M112*1-WC	500	250x250	30	607	M112x1/M100x1

QBH Collimation Module

Part Description	Focal Length (mm)	Clear Aperture (mm)	Max NA	Coating
CL2-(900-1100)-30-F60-QBH-A-WC	60	28	0.22	AR/AR@1030-1090nm
CL2-(900-1100)-30-F100-QBH-A-WC	100	28	0.13	AR/AR@1030-1090nm
CL2-(900-1100)-30-F125-QBH-A-WC	125	28	0.10	AR/AR@1030-1090nm
CL2-(900-1100)-38-F100-QBH-A-WC	100	34	0.16	AR/AR@1030-1090nm
CL2-(900-1100)-38-F125-QBH-A-WC	125	34	0.13	AR/AR@1030-1090nm
CL2-(900-1100)-38-F135-QBH-A-WC	135	34	0.12	AR/AR@1030-1090nm
CL2-(900-1100)-38-F150-QBH-A-WC	150	34	0.11	AR/AR@1030-1090nm
CL2-(900-1100)-38-F200-QBH-A-WC	200	34	0.08	AR/AR@1030-1090nm







Factory









PerkinElmer Lambda 950---Testing Transmission and Reflectivity





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. 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 10 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: Muratkerem Mahallesi 2073 Sokak (Eski 93 Sokak) No:10 Çankaya - Ankara - TÜRKİYE

Phone: +90 0312 443 03 90 Fax: +90 0312 443 03 76

E-mail: info@udemtd.com.tr www.udemtd.com.tr

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 ZhongLianTianRun
Certification center (<http://www.zltr.com.cn>)



Beijing ZhongLianTianRun Certification Center

Room2003, 22nd Floor, 2nd Unit, Block 1, No.4 Yard, Qiyang Road, Chaoyang District, Beijing, P.R. China 100022

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



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.