

Product Description:

Carmanhaas Laser marking can be applied to the marking of all non-transparent materials. General optical system: Expanding the beam through the beam expander to improve the divergence angle, after the beam combines the indicator light into the galvanometer system for beam deflection and scanning, finally, the workpiece is scanned and focused by the F-THETA scan lens. Laser marking optical components mainly include beam expander and F-THETA scan lens. The role of the beam expander is to enlarge the beam diameter and reduce the beam divergence angle. F-Theta scan lens achieves uniform focusing of the laser beam.



CO2 focus lens:

- Dia Tol: $+0/-0.13\text{mm}$
- Thk Tol: $\pm 0.25\text{mm}$
- FI Tol: $< \pm 2\%$
- ETV: $< 3 \text{ arc min}$
- CA: $> 90\%$
- Surface Figure: L/20 @10.6um
- AR: $R < 0.25\% \text{ @ } 10.6\text{um}$

Detail Image

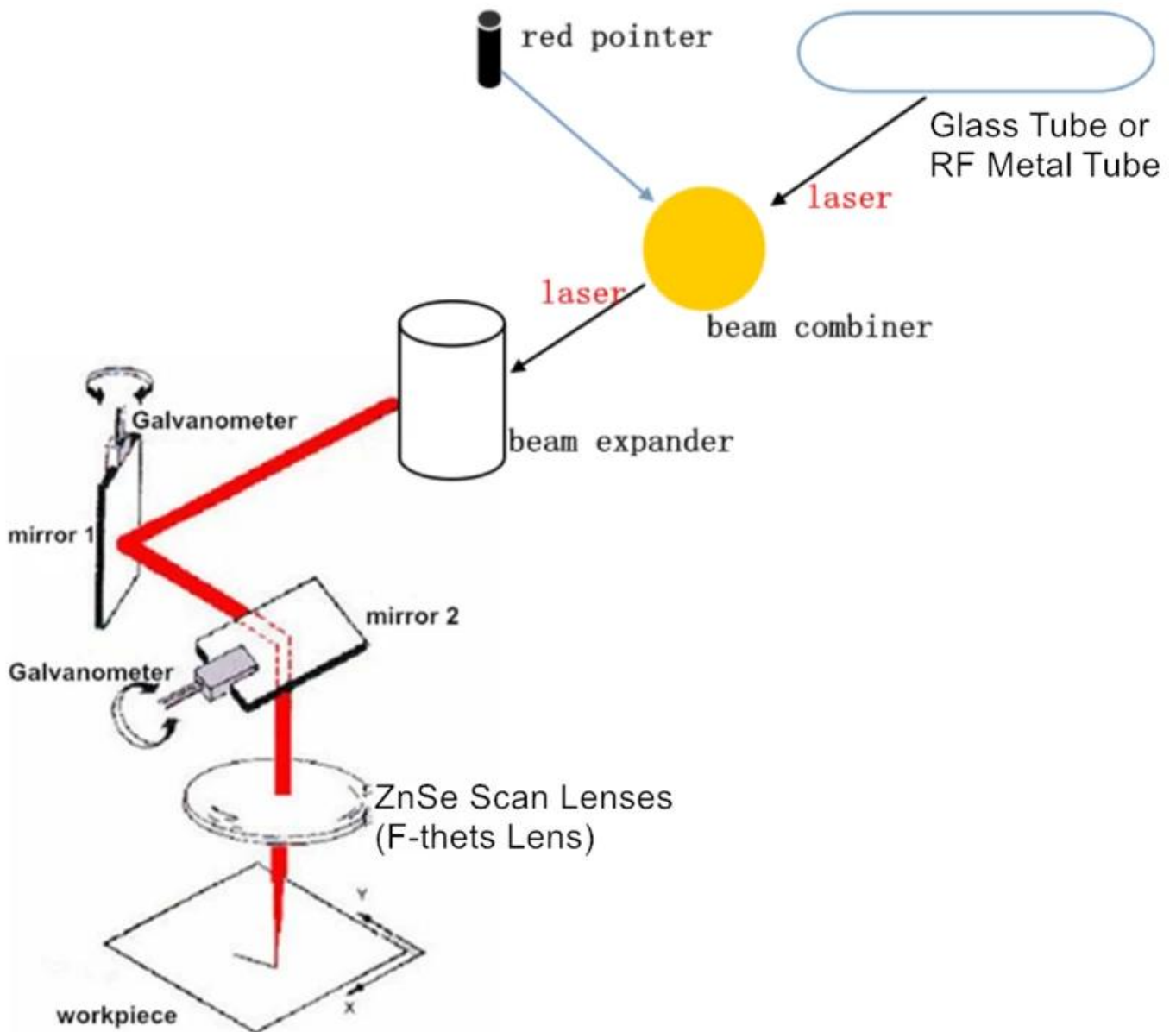


Related Optics:



CO2 F-Theta Lens

Part Description	FL (mm)	Scan Field (mm)	Max Entrance Pupil (mm)	Working Distance (mm)	Mounting Thread
SL-10.6-50-75	75	50*50	14/20	57.5	M85*1
SL-10.6-70-100	100	70*70	14/20	85.7	M85*1
SL-10.6-90-125	125	90*90	14/20	111.9	M85*1
SL-10.6-110-150	150	110*110	14/20	135.9	M85*1
SL-10.6-140-230	230	140*140	14/20	227	M85*1
SL-10.6-160-197	197	160*160	14/20	184.2	M85*1
SL-10.6-175-250	250	175*175	14/20	232	M85*1
SL-10.6-210-300	300	210*210	14/20	288	M85*1
SL-10.6-250-360	360	250*250	14/20	352.9	M85*1
SL-10.6-300-430	430	300*300	14/20	414.7	M85*1
SL-10.6-400-542	542	400*400	14/20	536.5	M85*1
SL-10.6-500-650	650	500*500	14/20	635.6	M85*1
SL-10.6-600-800	800	600*600	14/20	765.2	M85*1



Lens Cleaning

1. For light pollution (dust, fiber particles) were flexible cleaning.

Using a blowing balloon, Blow off scattered contaminants on the surface of the optical element.



2. For light pollution (stains, fingerprints) were flexible cleaning.

Propanol, acetone glue with a cotton swab or alcohol to gently wipe the surface.



3. For moderately polluted (saliva, oil) in moderate-intensity cleaning.

Infiltrating distilled white vinegar with a cotton swab, wipe the surface a little pressure.

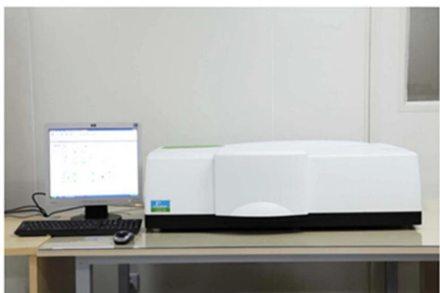


Packaging 3





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



PerkinElmer Lambda 950---Testing Transmission and Reflectivity



Carmanhaas Coating Machine







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**

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



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 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 76
E-mail: info@udemtd.com.tr www.udem.com.tr



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

Room2503, 22nd Floor, 2nd Unit, Block 1, No.4 Yant, 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

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