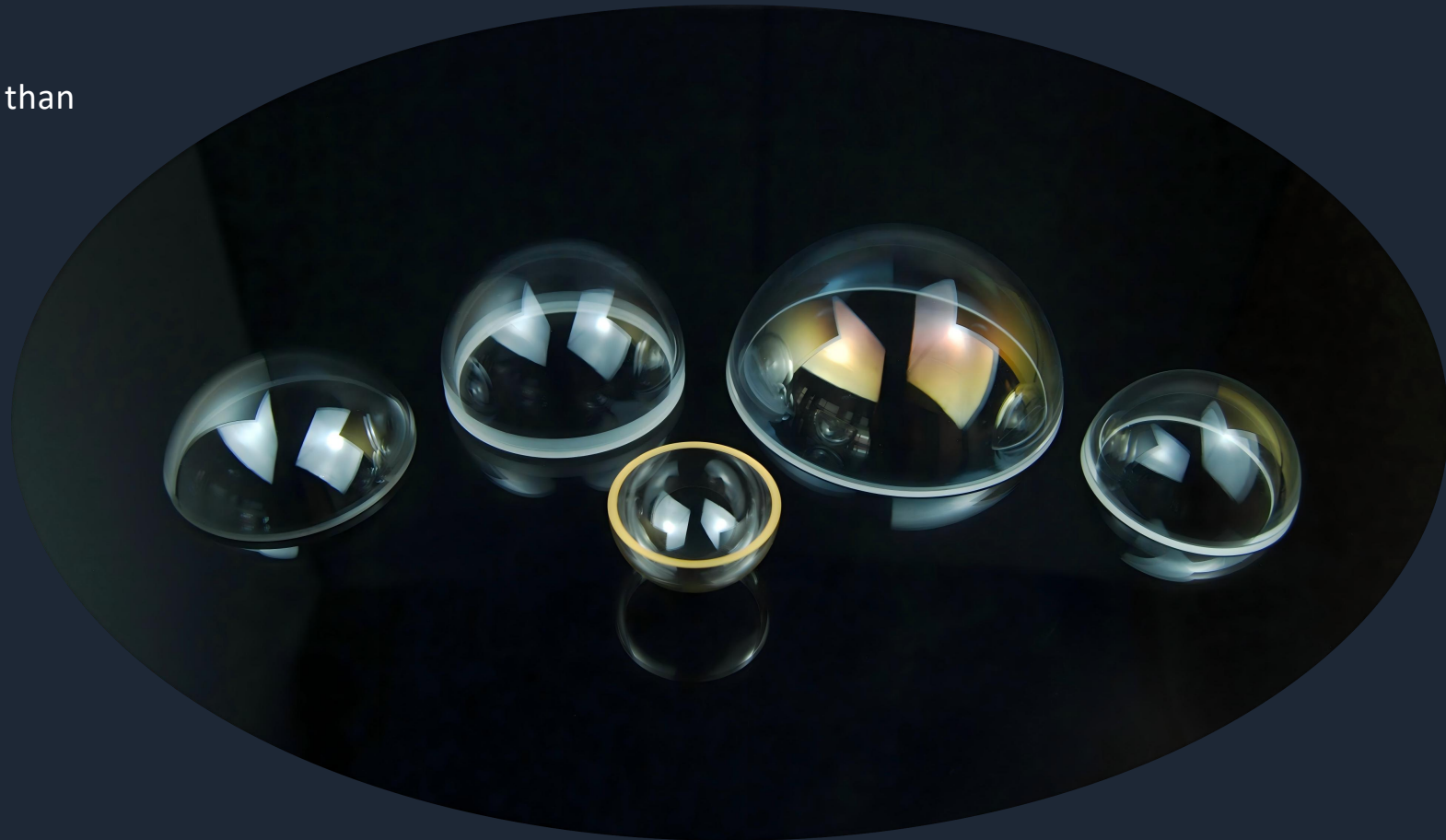
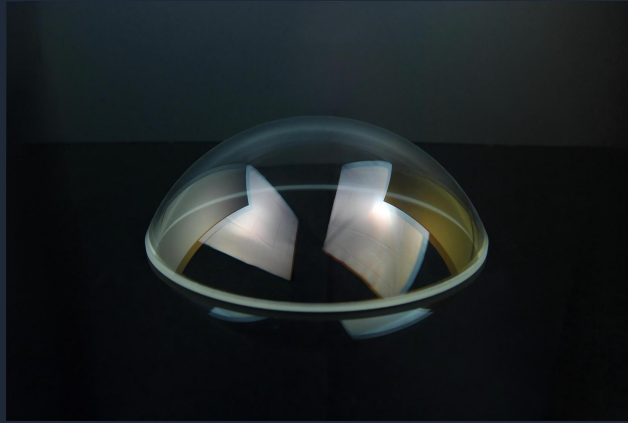


# OPTICAL DOME

Professional custom processing dome lens more than fourteen years. Recognized quality worldwide.





## The Basic Information

ECOPTIK was founded in 2011, located in Changchun, China. The factory area 5000 square meters, employs 120 workers, Set R&D, production, sales and after-sales.

## Processing Capacity

Machined sizes range from Diameter 6-350mm;

Thickness: 0.5mm-30mm;

Dome Shape :Hemisphere, Hyper-hemisphere, Dome with Flanged, etc.  
Dome material: K9 (CDGM), Sapphire, Si, MgF2, N-BK7, N-BK10, Corning 7980, JGS1, Borofloat 33, ZnSe, ZnS, etc.

## Quality Management System

ECOPTIK have advanced production and inspection equipment to ensure that your components meet specifications. The inspection equipment includes: ZYGO Laser Interferometers, ZEISS CMM Spectrum, 6-inch Laser Interferometer, Pantometer, Center Deviation Measuring Instrument, Hitachi U-4100 Spectrophotometer, Agilent Cary 7000 Universal Measurement Spectrophotometer (UMS), White Light Interferometer and Surface Profilometer.

## Excellent Service

ECOPTIK are accustomed to collaborating with optical experts and non experts, so regardless of your optical knowledge, we can provide assistance. We have high-quality employees and a professional technical team, from sales engineers, production to final inspection.

**CERTIFICATE OF REGISTRATION**



**Kaixin Certification (Beijing) Co.,Ltd.**  
**Certificate of Registration**

Registration No. : 06924Q10491R0

*This is to certify that*

**ECOPTIK (CHANGCHUN) LTD**

Unified Social Credit Code:912201015711262218

Address: 101, Building 13, Changchun Xinxing Industrial Science and Technology Park,  
832 Chengyuan Road, High-tech Zone, Changchun, China.

The Management system is in conformity with

**GB/T19001-2016 / ISO9001:2015 standard**

**Scope: Manufacturing of optical lens assembly, optical lenses,  
and optical components; Sales of optical glass and optical  
instruments**

Issue Date : 2024-04-25  
Term of Validity : 2027-04-24

NOTE: The certified organization must accept the surveillance audit duly, and the certificate shall be approved by the  
certifying body before approving that this certificate can maintain as valid. On and after the expiration date, the certificate shall  
all be used together with notice of maintaining certification and registration.



KCB Certification



MEMBER OF MULTILATERAL  
RECOGNITION ARRANGEMENT



中国认可  
国际互认  
管理体系  
MANAGEMENT SYSTEM  
CNAS C069-M

本证书的有效性依赖于获证组织符合管理体系标准的要求。获证组织应接受本机构的监督审核，并接受本机构的复评。本证书的有效性依赖于获证组织符合管理体系标准的要求。获证组织应接受本机构的监督审核，并接受本机构的复评。

Users can login www.cnca.gov.cn or www.kcb-china.com to check the certificate status, to confirm by means of kcb@kcb-china.com to check the certificate status, to confirm by means of kcb@kcb-china.com. This certificate should be used under national specified administrative qualification license scope and within the expiration date.

中国北京中关村西区中街4号 邮编: 100027 服务热线: 400 616 1188 电话: +86-10-6533 5910/1121213 传真: +86-10-6531 1889  
 Address: Suite 303, Xinxing Building, Xinxing West Street #4, Dongcheng District, Beijing, 100027, China. Service hotline: 400 616 1188. Tel: +86-10-6533 5910/1121213. Fax: +86-10-6531 1889

**CERTIFICATE OF REGISTRATION**



**Kaixin Certification (Beijing) Co.,Ltd.**  
**Certificate of Registration**

Registration No. : 06925Q10059R0

*This is to certify that*

**ECOPTIK (CHINA) LTD**

Unified Social Credit Code:91220100MA7GL2PT0W

Address: 102, Building 13, Changchun Xinxing Industrial Science and Technology  
Park, 832 Chengyuan Road, High-tech Zone, Changchun, China.

The Management system is in conformity with

**GB/T19001-2016 / ISO9001:2015 standard**

**Scope: Manufacturing of optical lens assembly, optical lenses,  
and optical components; Sales of optical glass and optical  
instruments**

Issue Date : 2025-02-07  
Term of Validity : 2028-02-06

NOTE: The certified organization must accept the surveillance audit duly, and the certificate shall be approved by the  
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KCB Certification



MEMBER OF MULTILATERAL  
RECOGNITION ARRANGEMENT



中国认可  
国际互认  
管理体系  
MANAGEMENT SYSTEM  
CNAS C069-M

本证书的有效性依赖于获证组织符合管理体系标准的要求。获证组织应接受本机构的监督审核，并接受本机构的复评。本证书的有效性依赖于获证组织符合管理体系标准的要求。获证组织应接受本机构的监督审核，并接受本机构的复评。

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# CONTENTS

1

## EXPERT IN DOME PRODUCING

Fourteen years of dedicated research, processing technology continues to improve, to achieve unique quality standards

2

## SPECIFICATIONS OF DOME

High-precision, customizable processing solutions.

3

## APPLICATIONS OF DOME

From environmental monitoring to national defense technology, a wide range of applications



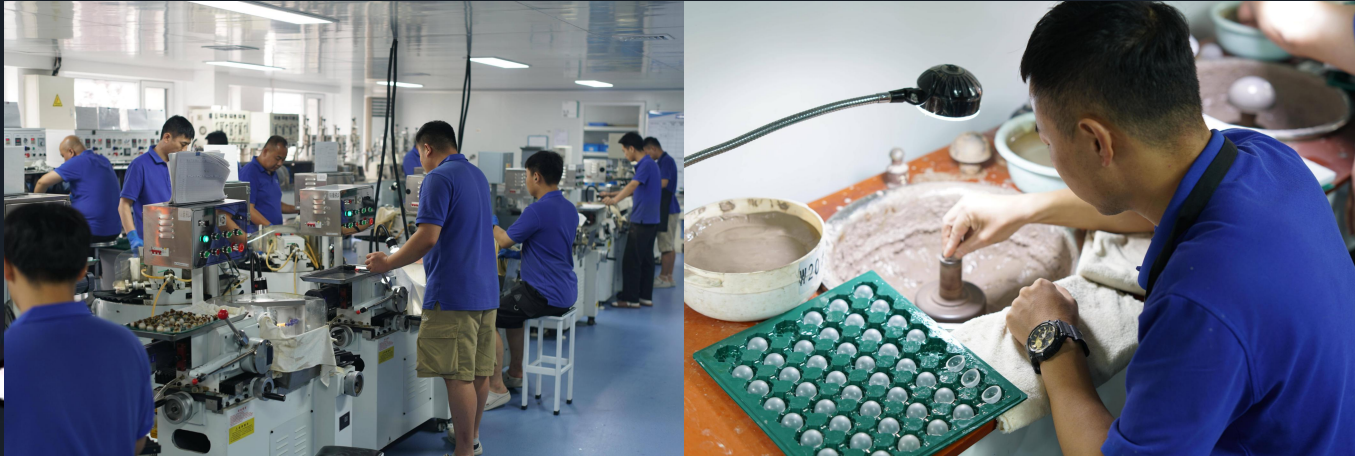
# PART ONE

## EXPERT IN DOME PRODUCING

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Fourteen years of dedicated research, processing technology continues to improve, to achieve unique quality standards.

## DESCRIPTIONS OF DOME



1

### Visible Optical Dome

Visible Optical Dome needs to maintain high transmittance, low distortion, and excellent mechanical and environmental stability in the visible light band (400-700nm). ECOPTIK optical dome utilizes optical grinding and polishing techniques to endow its products with unique optical properties. Visible domes are widely used in fields such as photoconductive heads, drone cameras, underwater detection, and security monitoring.

2

### Ultraviolet Optical Dome

Ultraviolet Optical Dome needs to have high transmittance in the ultraviolet band (usually 100-400nm) and possess characteristics such as environmental resistance and radiation resistance. Common materials: fused silica,  $MgF_2$ ,  $CaF_2$ , sapphire. It has important applications in missile guidance heads, space exploration, ultraviolet communication, biomedical detection, and other fields.

3

### Infrared Optical Dome

Infrared optical domes need to have high transmittance in specific infrared bands, usually hemispherical or hyper hemispherical, to expand the field of view (FOV) and reduce optical distortion.

ECOPTIK provides customized super-hemispherical lenses to our customers. We excel in special shapes and high-precision processing, and design the processing flow based on customers' drawings and specifications. Super-hemispherical lenses play a significant role in fields such as robotics, biological nanoscale imaging, optical storage, and quantum technology, through immersion focusing and super-diffraction-limit resolution.

ECOPTIK large clear optical glass dome lens mainly are hemisphere, hyper-hemisphere, and customized designing. Whether it is a visible dome, UV dome, or IR dome, ECOPTIK Dome has been confirmed in the international market.



# PART TWO

## SPECIFICATIONS OF DOME

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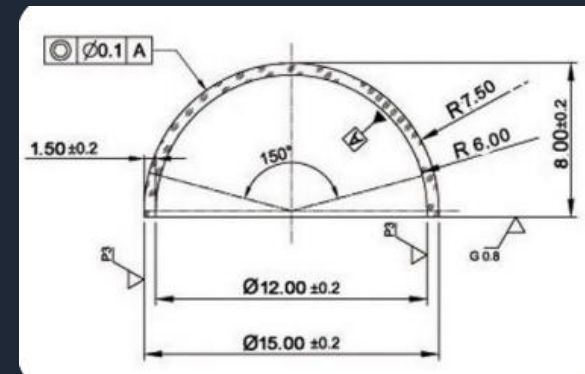
High-precision, customizable processing solutions.



# SPECIFICATIONS OF DOMES



1. Substrate: UV material (fused silica JGS1, Coning 7980, Borosilicate glass)  
Visible material-----All Optical glass (Schott N-BK7, N-BK10, WG295,N-K5,etc.)  
IR material (Fused Silica JGS3, Sapphire, Silicon, ZnSe, etc.)
2. Dimension: 6mm-350mm
3. Thickness: 0.5mm-30mm
4. Thickness tolerance : In general  $\pm 0.1\text{mm}$  , Best  $\pm 0.02\text{mm}$
5. Surface Quality: 60/40, 40/20, 20/10,10/5
6. Surface fringe: 10(5)-3(0.5)
7. Chemical strengthening treatment
8. Coating: Antireflection(AR)coating or upon customers'request
9. Annual production capacity: over 300,000 pcs





# TYPE OF DOMES

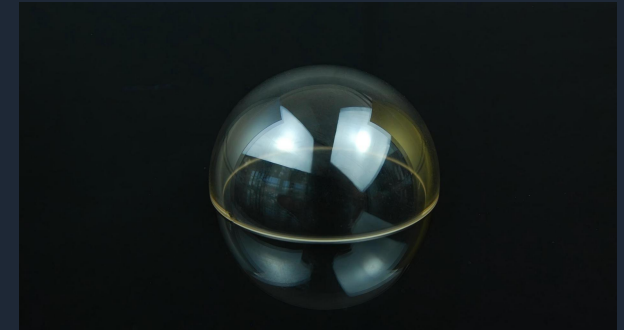
**Visible (VIS) Dome**



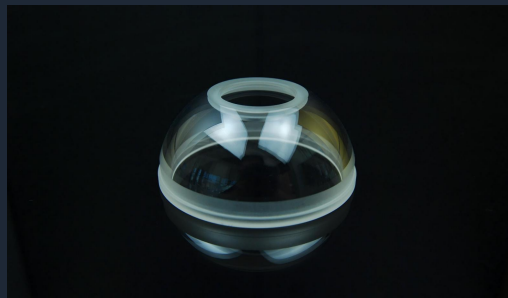
**Ultraviolet (UV) Dome**



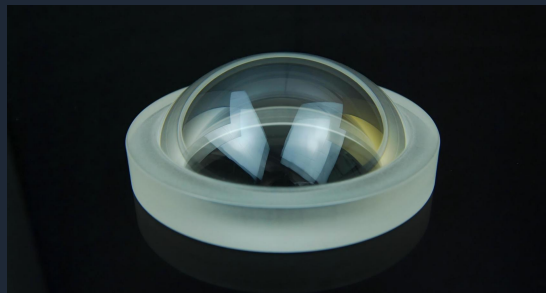
**Infrared (IR) Dome**



**Dome with Hole**



**Dome With Flange**



**Hyper-hemisphere Dome**

Exceeding 55% of the maximum achievable radius of the size.



# PRODUCTS LIST OF DOME

Type No.	Out diameter (mm)	Height (mm)	Wall thickness (mm)
ECO-D-10	10	5	1
ECO-D-15	15	8	1.5
ECO-D-24A	24	12	2
ECO-D-24B	24	13	2
ECO-D-25A	25	12.5	2
ECO-D-25B	25	12.5	4
ECO-D-25C	25	14.5	2
ECO-D-28A	28	14	1.5
ECO-D-28B	28	16	1.5
ECO-D-30A	30	15	2
ECO-D-30B	30	16	2
ECO-D-30C	30	16	4
ECO-D-30D	30	16.5	2
ECO-D-30E	30	17	2
ECO-D-32A	32	16	2
ECO-D-32B	32	16	4
ECO-D-32C	32	17	2
ECO-D-32D	32	17	4
ECO-D-36	36	18	2
ECO-D-40A	40	20	2
ECO-D-40B	40	21	2
ECO-D-50A	50	25	2
ECO-D-50B	50	25	4
ECO-D-50C	50	26	2
ECO-D-50D	50	26.6	2
ECO-D-50E	50	28	2
ECO-D-60	60	30	5

Type No.	Out diameter (mm)	Height (mm)	Wall thickness (mm)
ECO-D-70A	70	35	5
ECO-D-70B	70	35	8
ECO-D-75	75	37.5	3
ECO-D-76	76	38	6
ECO-D-80	80	40	4
ECO-D-100A	100	50	2
ECO-D-100B	100	50	4
ECO-D-100C	100	50	5
ECO-D-127	127	50.8	4
ECO-D-136	136	60	4
ECO-D-140A	140	70	4
ECO-D-140B	140	70	12
ECO-D-170	170	56	6.5
ECO-D-180	180	60	7.5
ECO-D-184	184	61	7
ECO-D-190	190	95	5
ECO-D-203	203	80	4
ECO-D-212	212	106	6
ECO-D-230	229.6	87.4	8



# PART THREE

## APPLICATIONS OF DOMES

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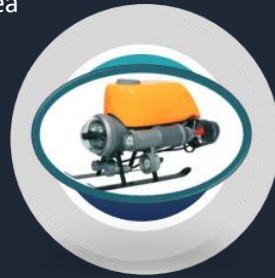
From environmental monitoring to national defense technology, a wide range of applications



# APPLICATIONS OF DOME

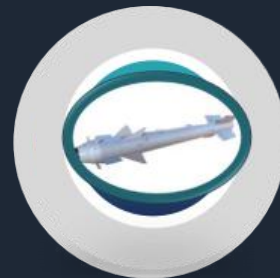
## Deep sea exploration

ROVs is a mainstream imaging instrument for deep-sea exploration at present. dome not only provides a perfect imaging protection system, but also ensures that the imaging will not be distorted due to its high-precision surface, making it a helpful aid for deep-sea exploration. ECOPTIK's dome is currently operating at a depth of 6,000 m.



## National defense and security

Dome's application in the field of defense should not be underestimated, mainly as a missile guide head. The high precision infrared dome greatly improves the accuracy of the missile.



## Meteorological monitoring

A device that collects sunlight in a total solar radiometer. The nearly absolute parallel design makes no refraction loss of light, perfect record of the radiation data of sunlight.



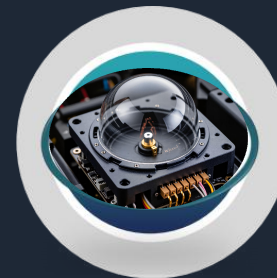
## Observation to space

Dome in all-sky camera is designed to provide high quality sky images for weather and meteor observations. The purpose of these systems is to carry out All or Full Sky (180°x180°) surveillance of the night or day sky, and in a continuous fashion. It is possible to assess, in real time, the night sky quality, and to record fast phenomena (meteors and fireballs) or slower (satellites, rockets, noctilucent clouds, zodiacal light, aurora, airglow).



## Enhance the intelligence and safety of vehicles

The intelligent car light system uses a semi-transparent dome, while the sensor uses the dome made of high-strength optical glass.



# ecoptik<sup>®</sup>

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