

Sharper Vision  
Smarter Solutions

**INDUSTRIAL  
LENS.**



**HIFLY GREAT**  
Industrial lens **MASTER**

Shenzhen HIFLY Technology Co., Ltd.  
Add: 6A, 168 Zhizao Building, Henggangtou Industrial Zone,  
Xin'an Community, Chang'an Town, Dongguan City  
TEL: +86 13926593066 +86 13688897003  
E-mail: [sally@szhifly.com](mailto:sally@szhifly.com)



## COMPANY PROFILE

HIFLY Technology company Limited was established in 2006 located in Shenzhen Guangdong China which is a high-tech enterprise focusing on machine vision light source, industrial camera lenses and vision system solutions.

As a global leader in machine vision solutions, we have 15 years of expertise in management, R&D, software engineers, imaging engineers and sales teams.

We are equipped with state-of-the-art production facilities, adhering to ISO 9001:2015 quality system management standard. At the same time, we have more than 30 invention patents and Certifications, serving more than 2,500 customers in 30 countries all over the world.

We eagerly await your communication, anticipating a fruitful partnership in the near future.

# CONTENTS

**FIXED LENS FOR FA LENS ..... 01-13**

01 1/1.8" 5MP FA LENS ..... 01

02 2/2.3" 5MP FA LENS ..... 03

03 2/3" 10MP FA LENS ..... 05

04 1" 5MP FA LENS ..... 07

05 1.1" 20MP FA LENS ..... 09

06 4/3" 20MP FA LENS ..... 11

07 MACRO LENS ..... 13

**LINE SCAN LENS ..... 15-25**

08 4K LINE SCAN LENS ..... 15

09 8K LINE SCAN LENS ..... 17

10 12K LINE SCAN LENS ..... 19

11 16K3.5 $\mu$  LINE SCAN LENS ..... 21

12 16K5 $\mu$  LINE SCAN LENS ..... 23

13 COAXIAL ILLUMINATION LINE SCAN LENS ..... 25

**LARGE FORMAT LENS ..... 27-29**

14 LARGE FORMAT LENS ..... 27

15 HIGH RESOLUTION F-MOUNT LARGE FORMAT LENS ..... 29

**SPECIALIZED LENS ..... 33-38**

16 360° IMAGING SYSTEM(OUTER SURFACE) ..... 33

17 360° IMAGING SYSTEM(INNER SURFACE) ..... 34

18 HIGH RESOLUTION SCAN LENS ..... 35

19 VARI-MAGNIFICATION TELECENTRIC LENS ..... 36

20 3CCD LENS ..... 37

21 5MP S-MOUNT LOW DISTORTION BOARD LENS ..... 38

**APPENDIX PAGE ..... 39-52**

22 ACCESSORIES ..... 39

23 DETAILED PARAMETERS ..... 41

**FIXED LENS  
FOR FA**



**工业FA镜头**

**FA**

**/ 01**

- 1/1.8" 5MP  
1/1.8" 5MP FA LENS
- 2/3" 5MP  
2/3" 5MP FA LENS
- 2/3" 10MP  
2/3" 10MP FA LENS

- 1" 5MP  
1" 5MP FA LENS
- 1.1" 20MP  
1.1" 20MP FA LENS
- 4/3" 20MP  
4/3" 20MP FA LENS

MACRO LENS

# FIXED LENS FOR FA

## 1/1.8" 5MP

### CHARACTORISTIC

500万像素, 适用于200万, 300万, 500万相机  
 固定光圈, 手动可调光圈可选  
 TV畸变小于0.1%  
 焦距涵盖4-75mm  
 体积小, 超紧凑型设计  
 高对比度工业FA镜头

5MP, suitable for 2MP, 3MP, 5MP cameras  
 Aperture manually adjustable, fix aperture optional  
 TV distortion < 0.1%  
 Complete EFL range, from 4mm to 75mm  
 Small size, ultra-compact design  
 High contrast industrial FA lens

### APPLICATION



Automobile  
 Yes or no / identify  
 Identify the type of  
 safety belt harness.



Container  
 Blemish / stain  
 Check the appearance  
 of the bottle cap.



Electronic equipment  
 Yes or no / identify  
 Check the bundling of  
 motor wires.  
 Bad and broken leads.

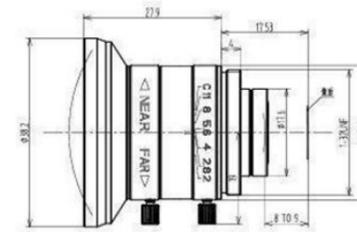


Food  
 Recognition  
 Barcode reading of  
 the package.

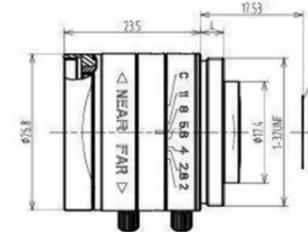


焦距	F/NO	接口	畸变
4-75mm	2.0-C	C-Mount	< 0.1%

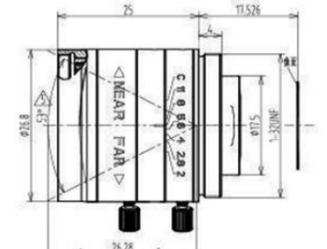
PRODUCT SIZE (mm) / 尺寸图



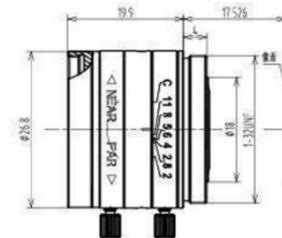
FA0401C



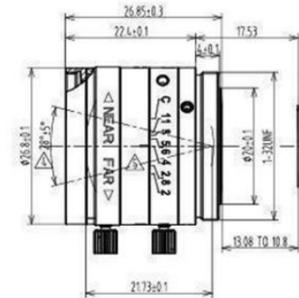
FA0601C



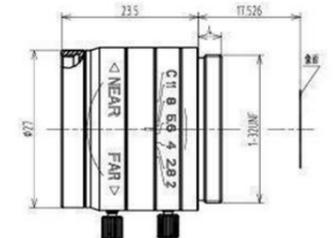
FA0801C



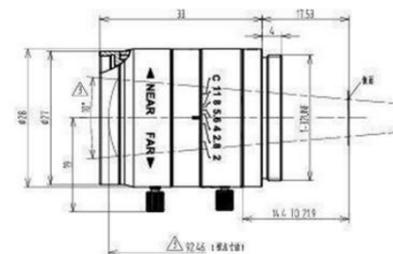
FA1201C



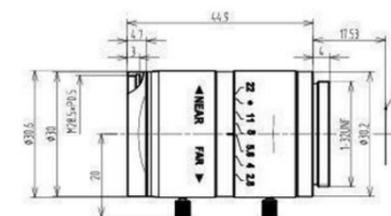
FA1601C



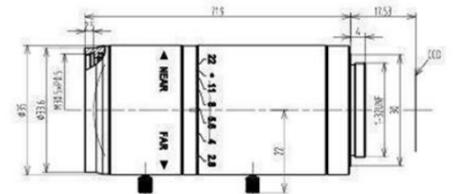
FA2501C



FA3501C



FA5001C



FA7501C

# FIXED LENS FOR FA

## 2/3" 5MP

### CHARACTORISTIC

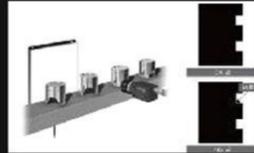
500万像素, 适用于200万,300万, 500万相机  
高相对照度, 大通光孔径  
对焦范围从0.1m到无穷远  
F/NO 1.4-16超大光圈, 一致性好  
高对比度画像

5MP, suitable for 2MP, 3MP, 5MP cameras  
High relative illumination, big aperture  
Focus range from 0.1m to infinity  
F/NO 1.4-16 large aperture, good uniformity  
High contrast image

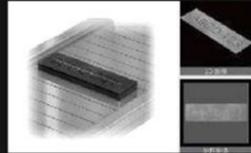
### APPLICATION



Container  
Yes or no / identify  
Check if there are different types of bottle caps mixed in.



Automobile  
Blemish / stain  
Check the piston for chip attachment.



Industrial  
Height  
Detection of metal marks.

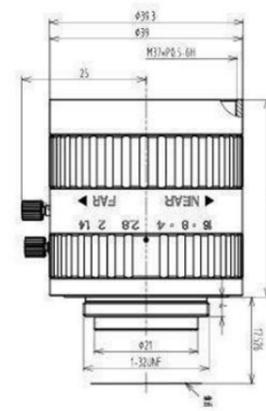


Industrial  
Position / tilt  
Confirm the working installation position in the metal mold.

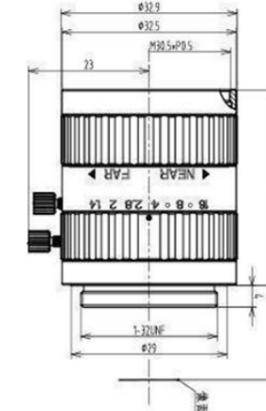


焦距	F/NO	接口	畸变
8-50mm	1.4-16	C-Mount	<-0.8%

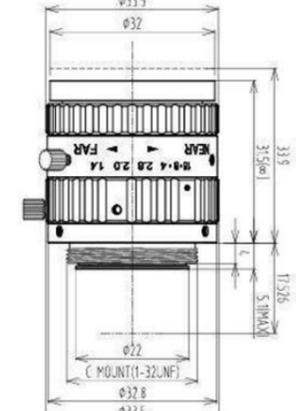
### PRODUCT SIZE (mm) / 尺寸图



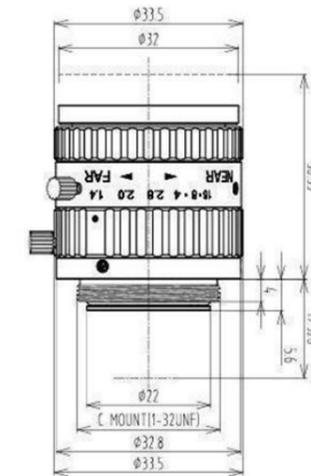
FA0802D



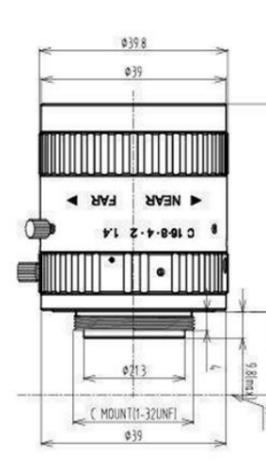
FA1202D



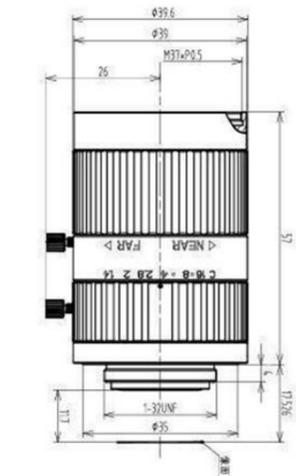
FA1602D



FA2502D



FA3502D



FA5002D

# FIXED LENS FOR FA

2/3" 10MP

## CHARACTORISTIC

超高成像质量  
适用于像元2.4μ 相机，最高可达1000万像素  
高相对照度，大通光孔径  
聚焦范围从0.1M到无穷远  
体积小，超紧凑型设计

Ultra-high imaging quality  
Suitable for 2.4μ sensor, resolution upto 10MP  
High relative illumination, with big aperture  
Focus range from 0.1m to infinity  
Small size, ultra-compact design

## APPLICATION



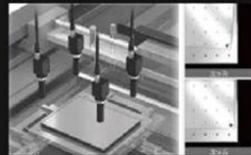
Electronic component  
Yes or no / identify  
Check the presence of IC in the carrier band.



Electronic equipment  
Blemish / stain  
Check the appearance of the battery outer tank.



Electronic component  
Position / tilt  
Detect the defective conductor of the capacitor.

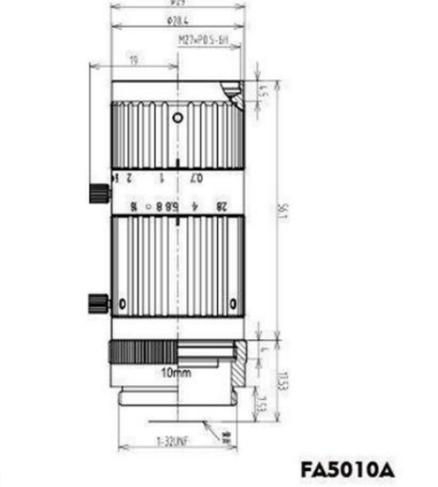
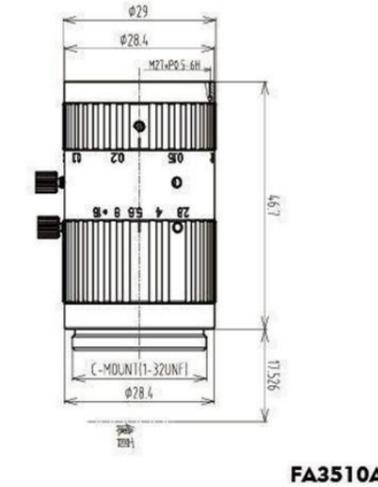
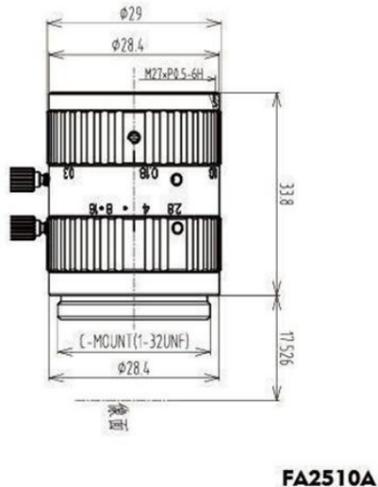
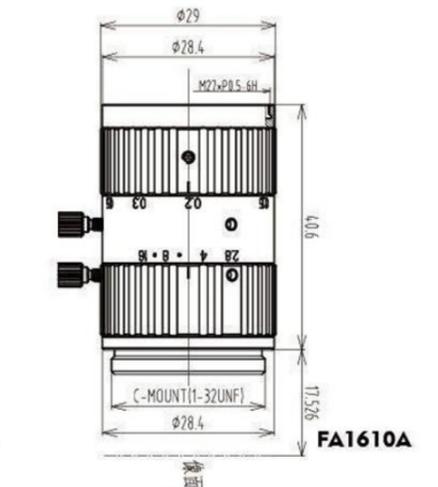
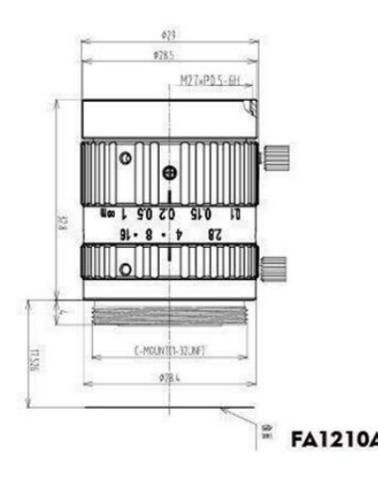
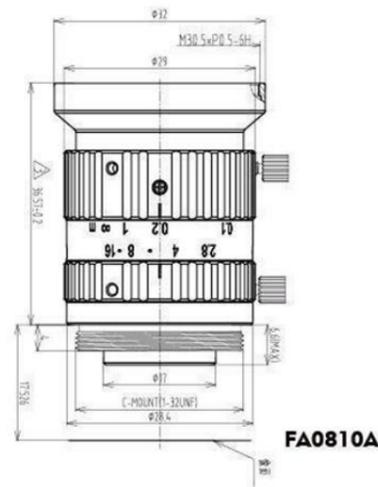


Liquid crystal, semiconductor, other  
Position / tilt  
Positioning of the glass circuit board.



焦距	F/NO	接口	畸变
8-50mm	2.8-16	C-Mount	< 0.1%

PRODUCT SIZE (mm) / 尺寸图



# FIXED LENS FOR FA

1" 5MP

## CHARACTORISTIC

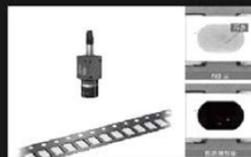
500万像素, 适用于200万、300万、500万  
 手动可调光圈, C接口  
 高相对照度, 大通光孔径  
 TV畸变 < 0.1%  
 对焦范围从0.1m到无穷远

5MP, suitable for 2MP, 3MP, 5MP cameras  
 Aperture manually adjustable, C mount  
 High relative illumination, big aperture  
 TV distortion < 0.1%  
 Focus range from 0.1m to infinity

## APPLICATION



Liquid crystal, semiconductor Count  
 SD card number calculation.



Electronic component Blemish / stain  
 LED appearance inspection.



Electronic equipment Yes or no / Identify  
 Detect poor binding and lead breakage of motor wires.

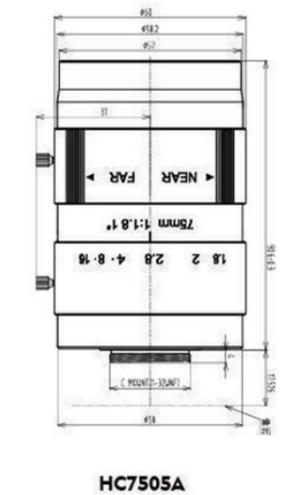
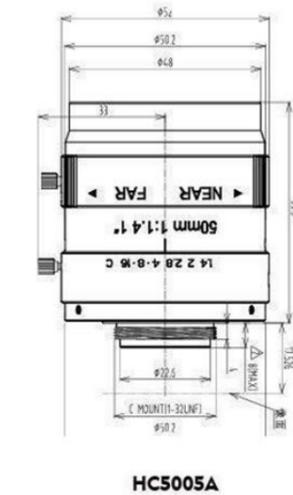
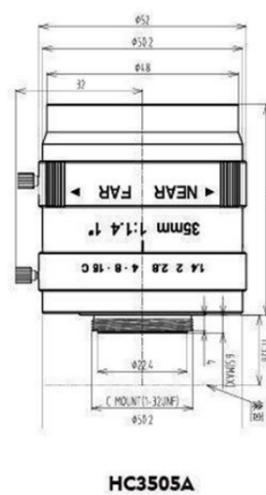
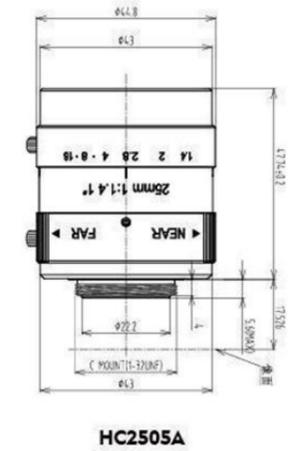
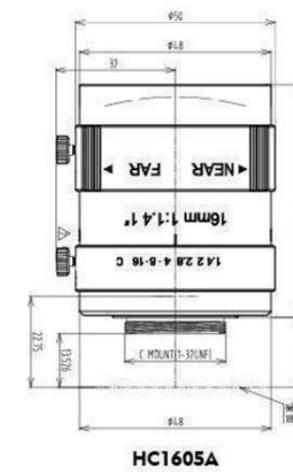
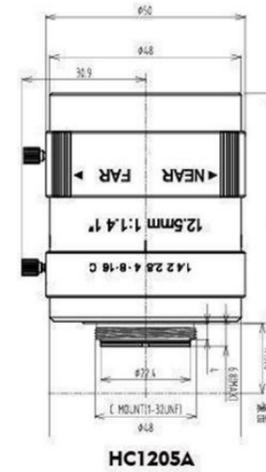


Electronic equipment Geometrical measurement  
 Check the battery shrapnel terminal welding position is poor.



焦距	F/NO	接口	畸变
12.5-75mm	1.4-16	C-Mount	< 0.1%

PRODUCT SIZE (mm) / 尺寸图



# FIXED LENS FOR FA

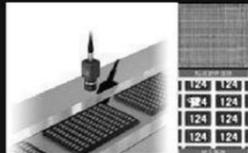
## 1.1" 20MP

### CHARACTORISTIC

超高成像质量  
支持2000万像素面阵相机  
高相对照度 大通光孔径  
畸变 < 0.1%  
聚焦范围从0.1m到无穷远  
兼容1"、2/3" 芯片

Ultra-high imaging quality  
Support 20MP area scan cameras  
High relative illumination, with big aperture  
Distortion < 0.1%  
Focus range from 0.1m to infinity  
Compatible with 1" and 2/3" sensor

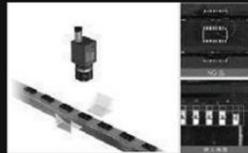
### APPLICATION



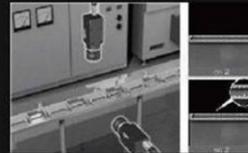
Electronic component  
Yes or no / identify  
Check the number of  
tiny chips & poor imprint.



Electronic component  
Blemish / stain  
Detecting camera  
defects.



Liquid crystals,  
semiconductors.others.  
geometrical  
measurement.  
Detect IC wire bending.

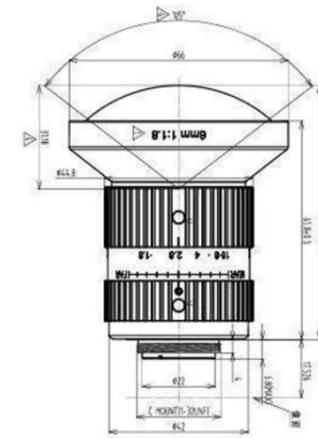


Electronic component  
Connector  
Connector pin flatness  
detection.

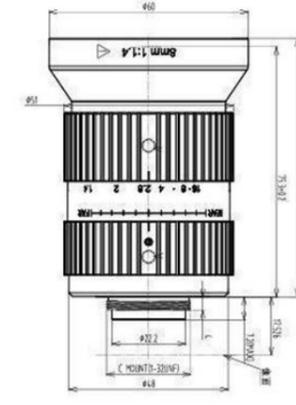


焦距	F/NO	接口	畸变
6-50mm	2.8-22	C-Mount	<0.1%

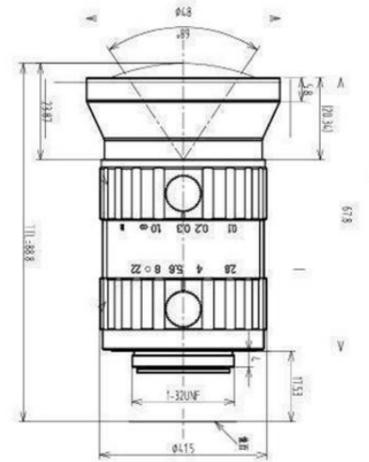
PRODUCT SIZE (mm) / 尺寸图



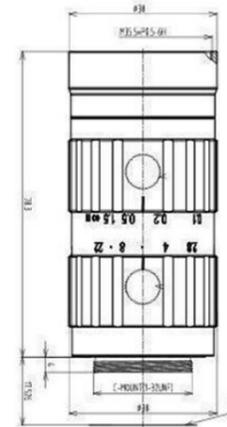
FA0615A



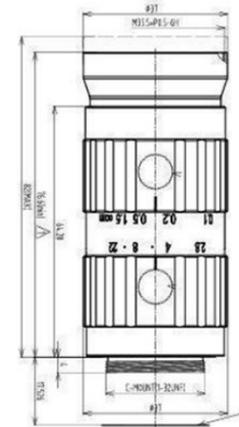
FA0815A



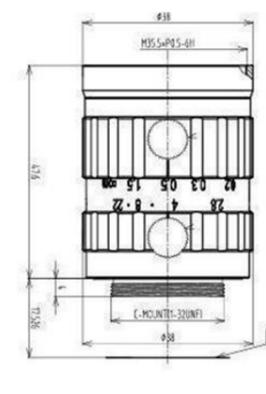
FA1216A



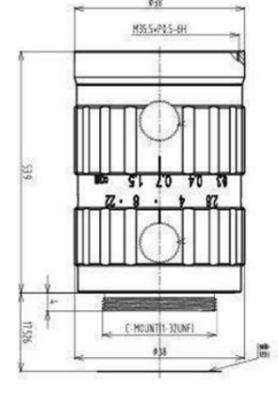
FA1616A



FA2516A



FA3516A



FA5016A

# FIXED LENS FOR FA

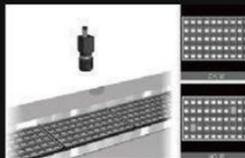
## 4/3" 20MP

### CHARACTORISTIC

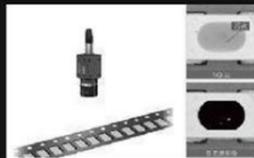
支持4/3"芯片, 兼容1.1"、2/3"芯片  
支持2000万像素面阵相机  
高相对照度, 大通光孔径  
卓越的光学性能, 紧凑型结构设计  
高对比度工业FA镜头

Support 4/3", and compatible with 1.1", 2/3" sensor  
Support 20 MP area array camera  
High relative illuminance, large aperture  
Excellent optical performance, compact structure design  
High contrast industrial FA lens

### APPLICATION



Liquid crystal, semiconductor, other Count  
SD card number calculation.



Electronic component Blemish/stain  
LED appearance inspection.



Electronic equipment  
Yes or no / identify  
Detect poor binding and lead breakage of motor wires.

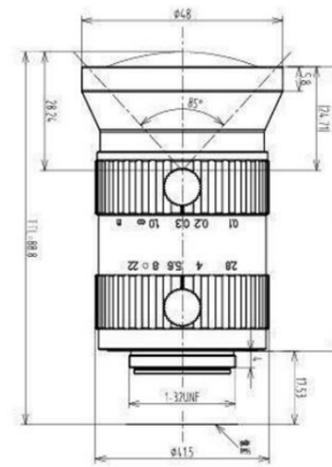


Electronic equipment geometrical measurement.  
Check the battery shrapnel terminal welding position is poor.

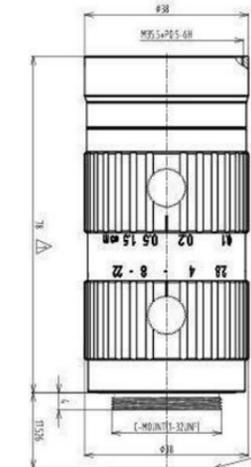


焦距	F/NO	接口	畸变
12-50mm	2.8-22	C-Mount	<0.1%

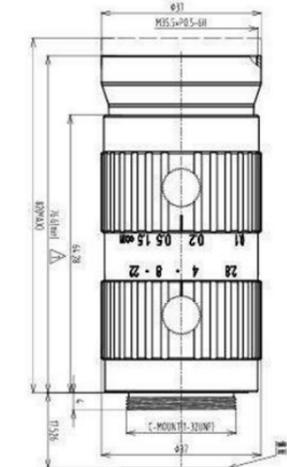
PRODUCT SIZE (mm) / 尺寸图



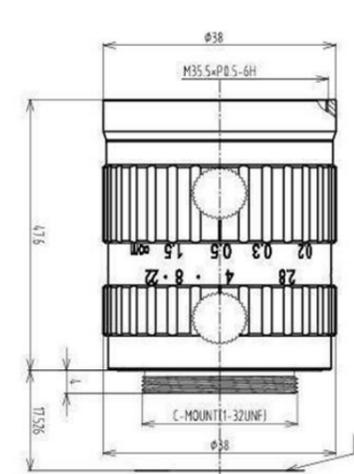
FA1220A



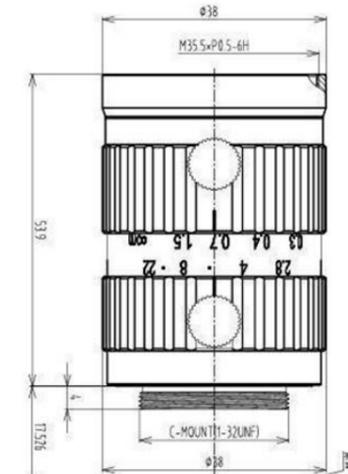
FA1620A



FA2520A



FA3520A



FA5020A

# MACRO LENS

## 1.1" 12MP

### CHARACTORISTIC

1200万高像素  
 专为满足微距精确成像设计，工作距离：52-546mm  
 大靶面，可配IMX253LLR芯片（1.1" 12MP）  
 焦距涵盖范围：16-75mm  
 倍率范围：0.03x-0.8x  
 超低畸变（<0.05%）  
 高对比度，低失真

High resolution up to 12MP  
 Designed for precise imaging with limited space,  
 WD from 52mm to 546mm  
 Large image circle, suitable for IMX253LLR(1.1" 12MP)  
 EFL range from 16mm to 75mm  
 Magnification range from 0.03x-0.8x  
 Ultra-low distortion (<0.05%)  
 High contrast, low distortion

### APPLICATION



Industrial  
 Blemish / stain  
 Inspect steel plate  
 for defects and  
 blemishes.



Electronic component  
 Yes or no / identify  
 Check the number  
 of tiny chips &  
 poor imprint.



Electronic component  
 Blemish / stain  
 Detecting camera defects.

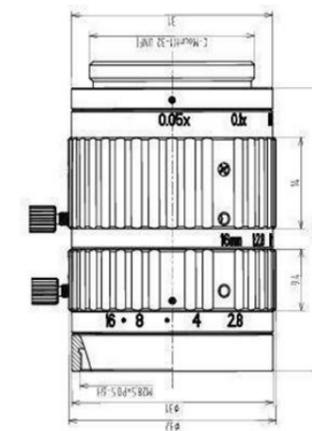


Electronic equipment  
 Yes or no / identify  
 Detect poor binding  
 and lead breakage of  
 motor wires.

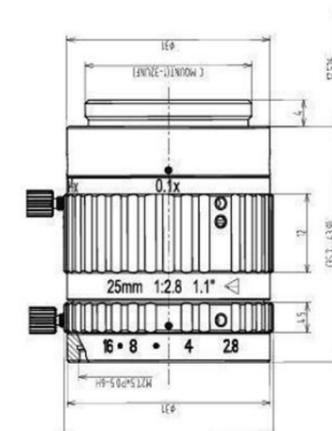


焦距	F/NO	接口	畸变
16-75mm	2.8-16	C-Mount	<0.05%

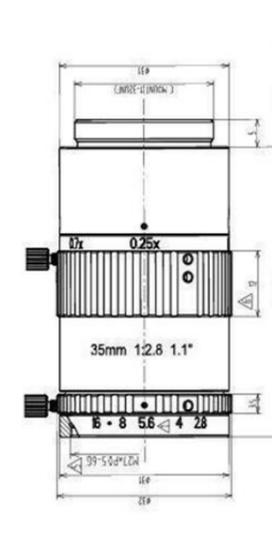
PRODUCT SIZE (mm) / 尺寸图



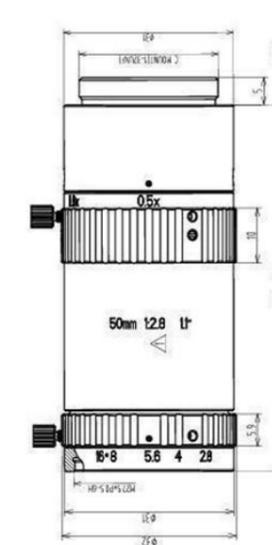
ML1610A



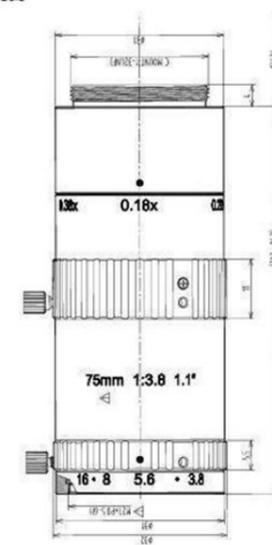
ML2510A



ML3510A



ML5010A



ML7510A

LINE SCAN  
LENS



线扫镜头

# LINE SCAN LENS

/ 02

- 4k线扫镜头  
4k LINE SCAN LENS
- 8k线扫镜头  
8k LINE SCAN LENS
- 12k线扫镜头  
12k LINE SCAN LENS

- 16k3.5 $\mu$ 线扫镜头  
16k3.5 $\mu$  LINE SCAN LENS
- 16k5 $\mu$ 线扫镜头  
16k5 $\mu$  LINE SCAN LENS
- 同轴照明线扫镜头  
COAXIAL ILLUMINATION LINE SCAN LENS

# LINE SCAN LENS

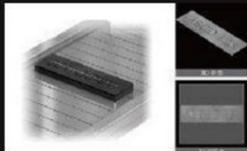
## 4K Line scan lens

### CHARACTORISTIC

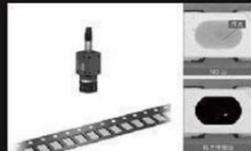
专为小型线扫描相机而设计  
标准焦距及倍率可供选择  
倍率覆盖0.02x-0.33x  
V-Mount, 灵活适配不同接口相机  
适用于印刷包装检测

Designed for compact line scan camera  
Standard EFL and magnification available  
Magnification from 0.02x-0.33x  
V-mount as standard, adaptable to various camera mount  
Applied to printing and packaging inspection

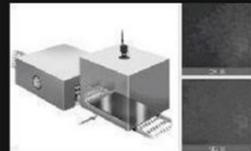
### APPLICATION



Industrial Height  
Detecting metal markings.



Electronic component  
Blemish / stain  
LED appearance inspection.



Electronic component  
Yes or no / identify  
Identify the battery pack color.

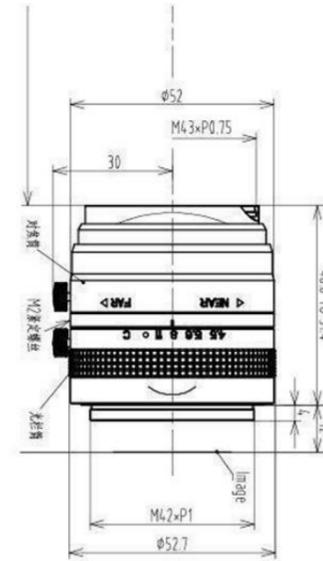


Industrial Blemish / stain  
Check the electrode coating for defects.

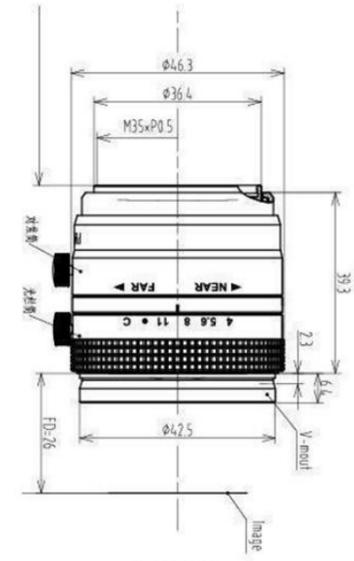


焦距	最大像面尺寸	接口	畸变
20-40mm	φ30	V-Mount	<0.01%

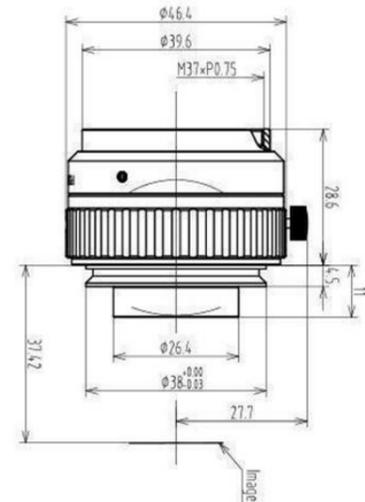
PRODUCT SIZE (mm) / 尺寸图



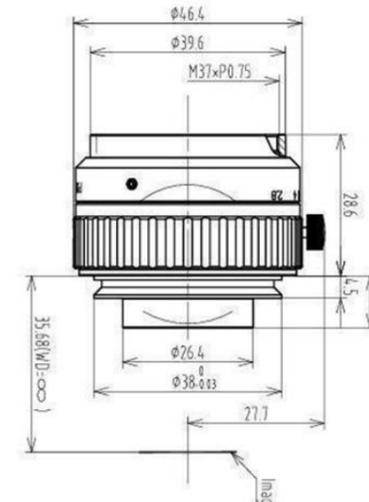
LS2003C



LS2801A



LS3508A



LS4010A



# LINE SCAN LENS

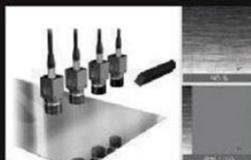
## 12K Line scan lens

### CHARACTORISTIC

最大像面可达φ66mm  
适用于8k/12k分辨率的相机  
标准放大倍率覆盖0.2x-1.24x区域  
大通光量设计可达F4.5  
超低光学畸变

Max image circle is up to φ66  
Suitable for 8k/12k line scan cameras  
Standard magnification from 0.2x to 1.24x  
Big aperture, FNO.4.5  
Ultra-low optical distortion

### APPLICATION



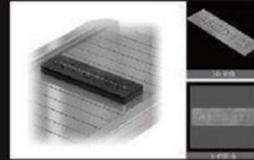
Industrial Height  
Detecting metal markings.



Liquid crystal, semiconductor, other  
Count.  
SD card number calculation.



Liquid crystal, semiconductor, other  
Geometrical measurement.  
Detect IC wire bending.

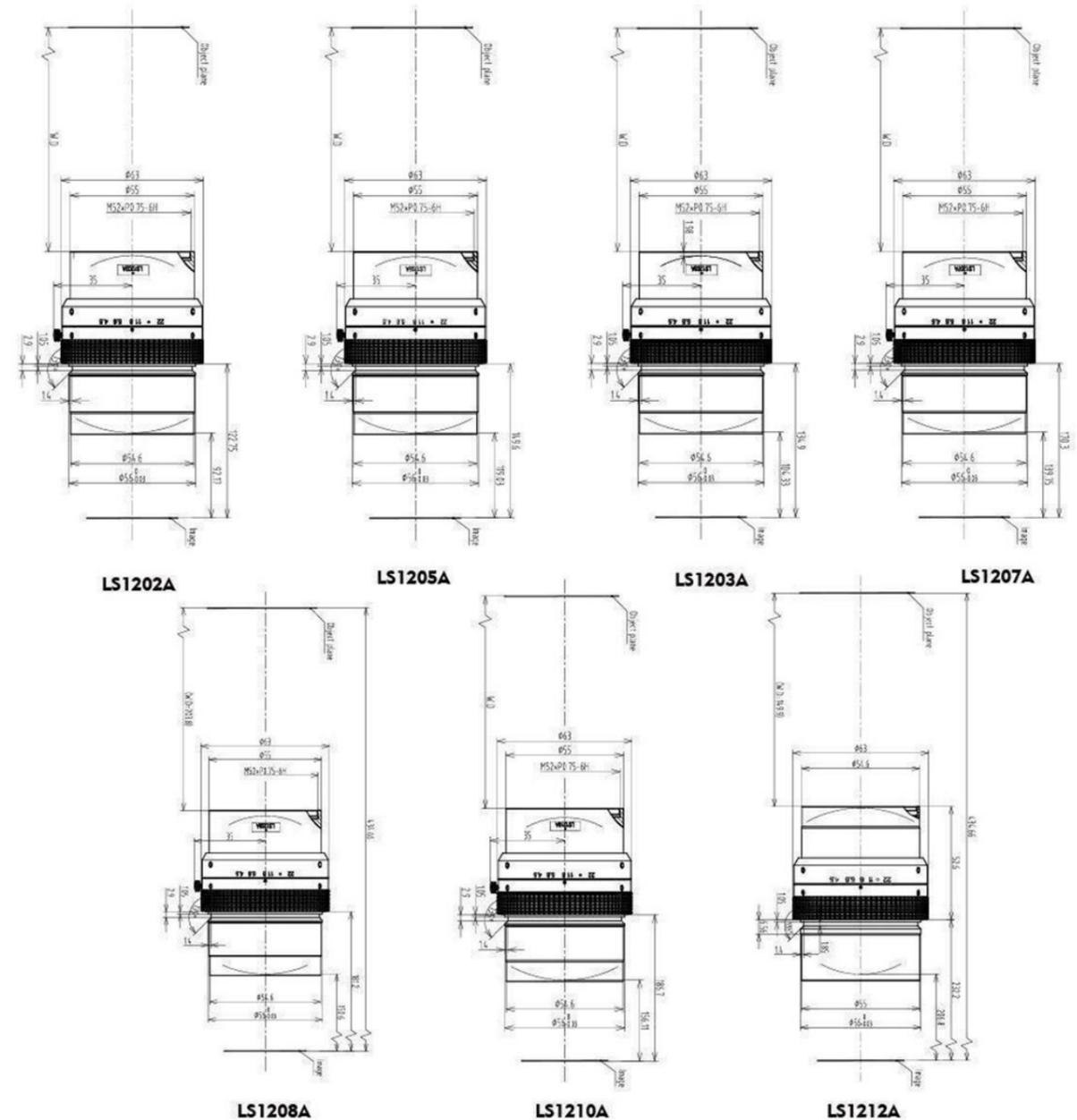


Industrial Height  
Detecting metal markings.



焦距	最大像面尺寸	接口	畸变
116mm	φ62	V-Mount	< 0.005%

PRODUCT SIZE (mm) / 尺寸图

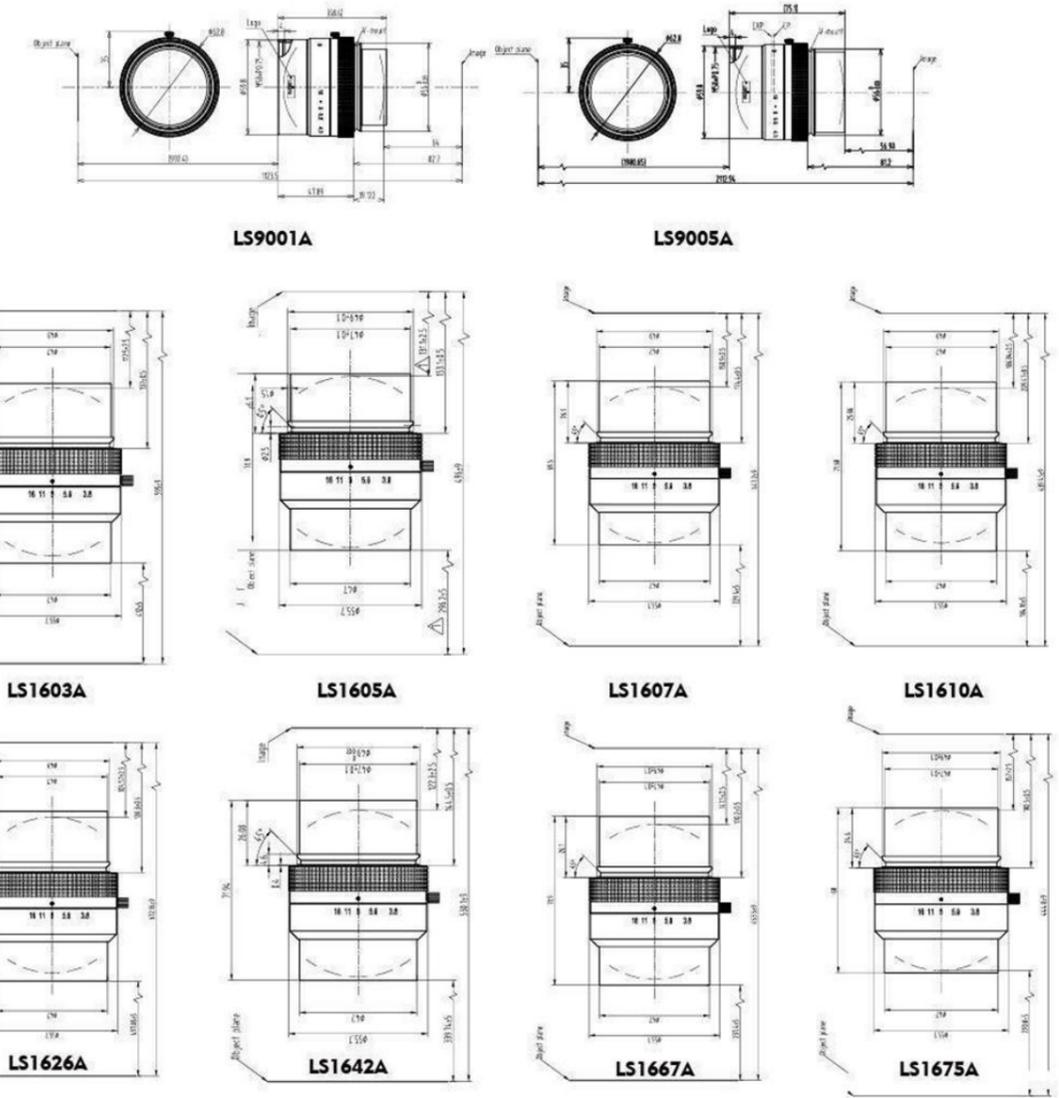


# LINE SCAN LENS

## 16K3.5μ Line scan lens



PRODUCT SIZE (mm) / 尺寸图



### CHARACTORISTIC

专为16K3.5μ超高精细线扫描相机而开发  
为满足3.5μ的解像力，镜头实际分辨率  
可达到160lp/mm  
最大像面可达66mm，兼容12K5μ相机  
光学畸变小于1 pixel  
大通光量设计可达Fno 3.8

Specially designed for 16K3.5μ super high resolution  
line scan camera  
lens real resolution is upto 160lp/mm  
Max image circle is upto to 66mm  
Compatible with 12K5 μ camera  
Optical distortion is<1 pixel size  
Big aperture design Fno. 3.8

### APPLICATION



Industrial  
Height  
Detecting metal  
markings.



Electronic component  
Yes or no / identify  
Check the number  
of tiny chips & poor  
imprint.



Electronic component  
Blemish / stain  
Detecting camera defects.



Electronic equipment  
Yes or no / identify  
Detect poorly bundled  
lead breakage of  
motor wires.

# LINE SCAN LENS

## 16K5μ Line scan lens

### CHARACTORISTIC

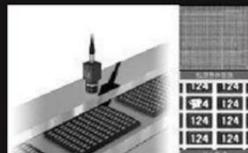
专为16K5μ超大型靶面线扫描相机而开发  
镜头分辨率可达到160lp/mm  
为相机提供更高的对比度  
最大像面可达82mm，兼容16K3.5μ/12K5μ相机  
光学畸变小于1 pixel  
标准放大倍率覆盖0.26x-3x

Specially designed for 16K5μ super high resolution line scan camera  
lens real resolution is upto 160lp/mm  
Provide higher contrast for cameras  
Max image circle is upto 82mm,  
Compatible with 16K3.5μ/12K5μ camera  
Optical distortion is <1 pixel size  
Magnification from 0.26x-3x

### APPLICATION



Industrial Height  
Detecting metal markings.



Electronic component  
Yes or no / identify  
Check the number of tiny chips & poor imprint.



Electronic component  
Blemish / stain  
Detecting camera defects.

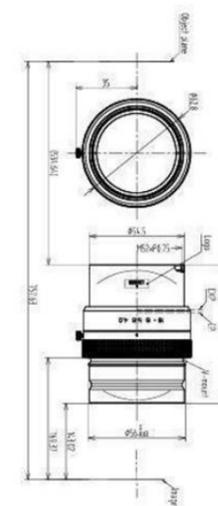


Electronic equipment  
Yes or no / identify  
Detect poorly bundled lead breakage of motor wires.

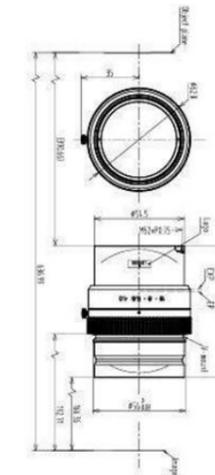


焦距	倍率	接口	畸变
116mm	0.26X-3X	V-Mount	< 0.001%

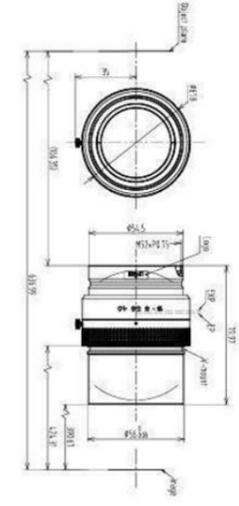
PRODUCT SIZE (mm) / 尺寸图



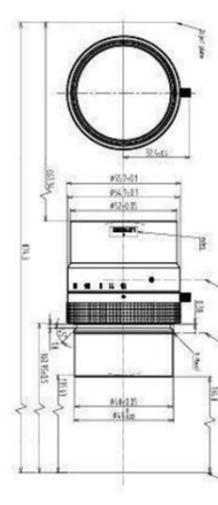
LS1603B



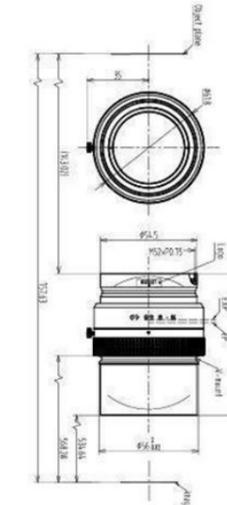
LS1605B



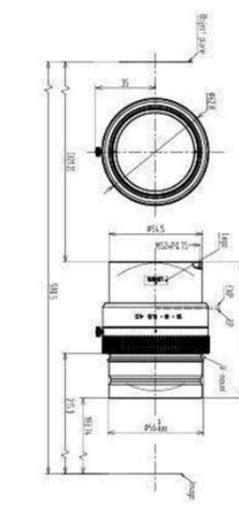
LS1620B



LS1626B



LS1603B



LS1667B

# LINE SCAN LENS

## COAXIAL ILLUMINATION LINE SCAN LENS

### CHARACTORISTIC

专为同轴照明光源系统设计  
 消除了使用分光透镜引起的分辨率下降  
 达到高分辨率，高对比度的检测要求  
 16K/5μ并兼容16K/3.5μ以及12K/5μ的线扫相机  
 附带30\*80mm分光透镜  
 超小的光学畸变小于0.001%，小于1Pixel  
 大通光量设计可达F3.8

Designed for coaxial lighting system  
 Avoid the resolution deduction caused by using the beam splitter  
 Achieve the detection requirements of high resolution and high contrast  
 16K / 5 μ and compatible with 16K / 3.5 μ and 12K / 5 μ line scan cameras  
 With 30 \* 80mm beam splitter  
 Ultra-low optical distortion, less than 0.001%, or 1 pixel  
 Big aperture, FNO. 3.8

### APPLICATION



Industrial Height  
 Detecting metal markings.



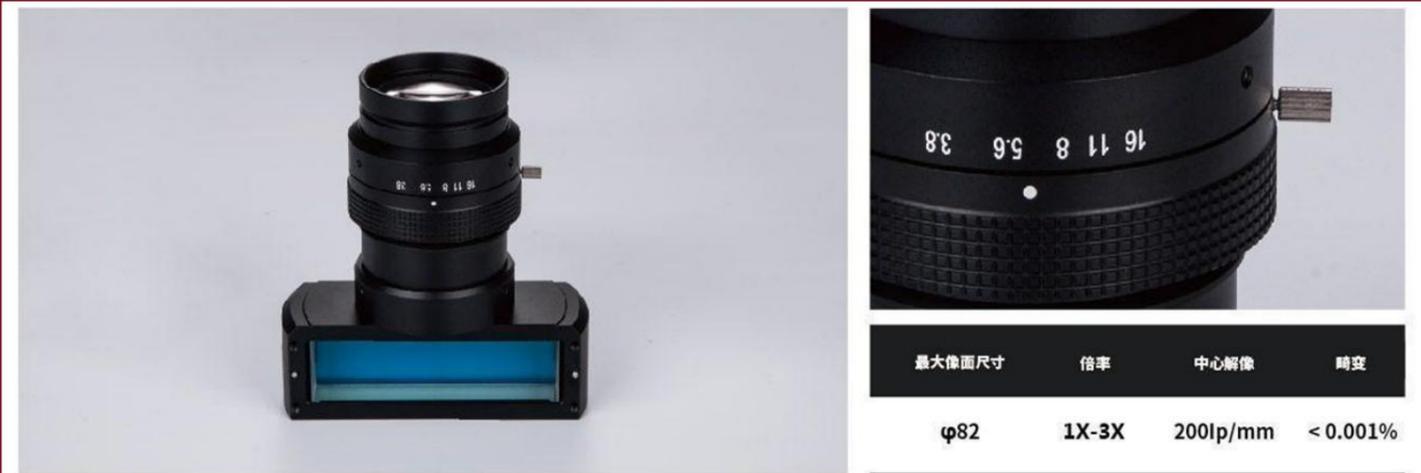
Electronic component  
 Yes or no / identify  
 Check the number of tiny chips & poor imprint.



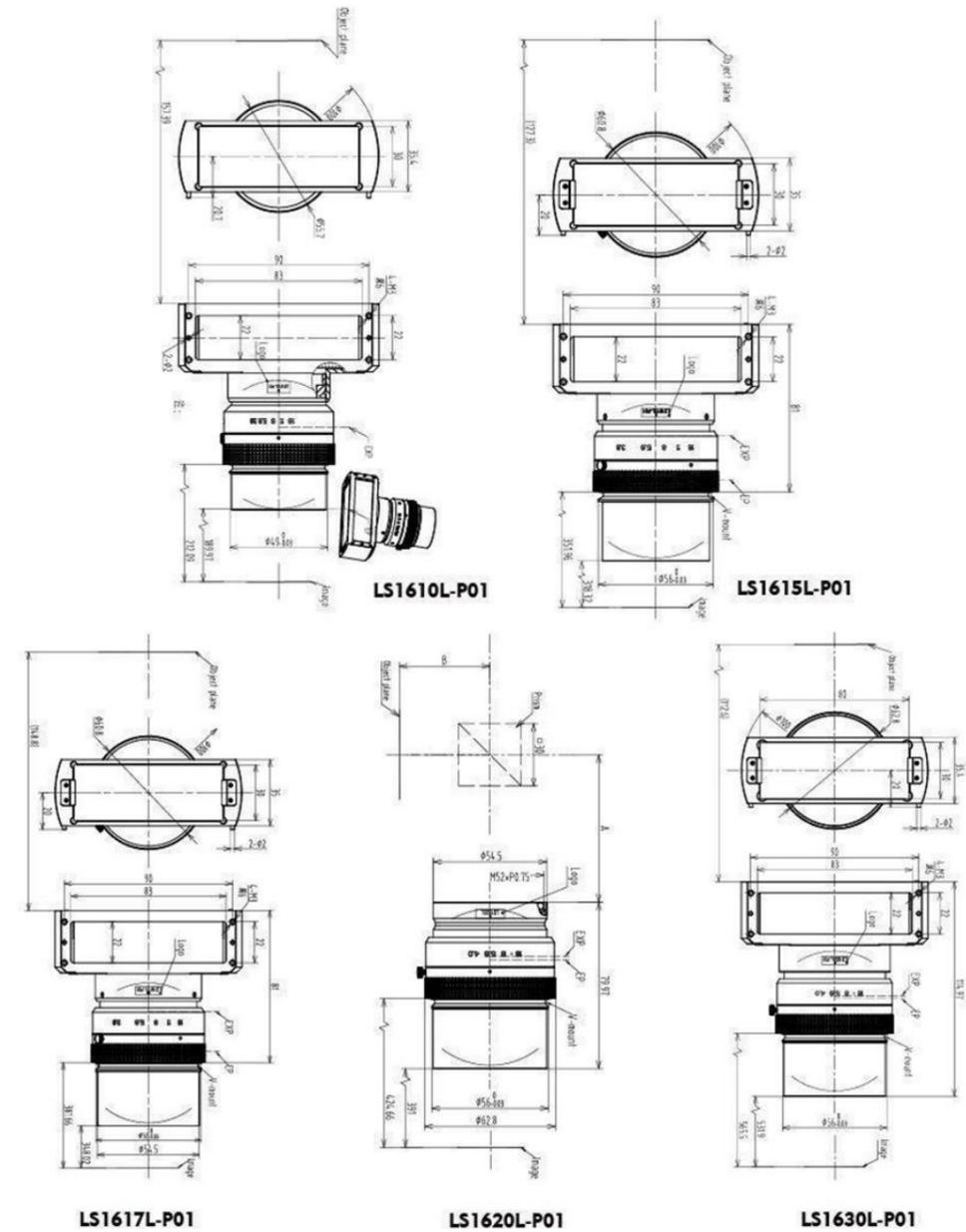
Electronic component  
 Blemish / stain  
 Detecting camera defects.



Electronic equipment  
 Yes or no / identify  
 Detect poorly bundled lead breakage of motor wires.



PRODUCT SIZE (mm)/ 尺寸图



LARGE FORMAT  
LENS



大靶面镜头

# LARGE FORMAT LENS

/ 03

— 大靶面工业镜头  
LARGE FORMAT LENS

— 高解析F接口大靶面镜头  
HIGH RESOLUTION F-MOUNT LARGE FORMAT LENS

# LARGE FORMAT LENS

## LARGE FORMAT LENS

### CHARACTORISTIC

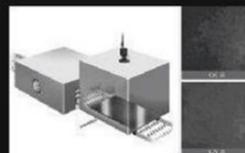
最大像面可达43mm，支持2900万像素芯片  
可适配4k线扫相机，对应5μ/7μ像元  
光学性能优于单反镜头  
标准焦距及倍率可供选择  
适用于印刷包装检测

Support 29MP sensor/suitable for 4k line scan  
cameras with 5μ/7μ pixel size/Max image  
circle is upto 43mm  
Better optical performance than SLR Lens  
Standard EFL and magnification available  
Applied to printing and packaging inspection

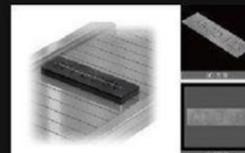
### APPLICATION



Industrial  
Blemish / stain  
Detect defects and  
blemishes on  
steel plates.



Electronic equipment  
Yes or no / identify  
Identify the color of  
the battery pack.



Electronic component  
Height  
Detecting metal  
markings

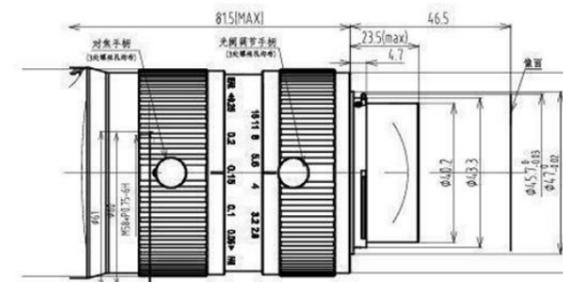


Liquid crystal,  
semiconductor, other.  
Calculate  
SD card number  
calculation.



焦距	倍率	接口	畸变
35-90mm	0.01X-0.4X	F-Mount	< 0.01%

### PRODUCT SIZE (mm) / 尺寸图



# LARGE FORMAT LENS

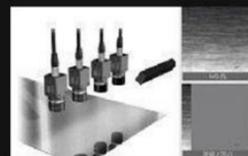
## HIGH RESOLUTION F-MOUNT LARGH FORMAT LENS

### CHARACTORISTIC

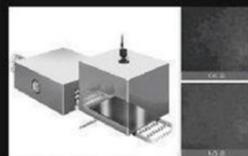
超高解像力对应3.5μ  
支持2900万-7100万像素芯片  
光学性能优于单反镜头  
标准焦距及倍率可供选择  
适用于大幅面高精度检测

Super high resolution for 3.5μ  
Support 29MP to 71MP sensor  
Better optical performance than SLR Lens  
Standard EFL and magnification available  
Applied to large format and high precision detection

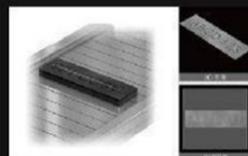
### APPLICATION



Electronic equipment  
Yes or no / identify  
Identify the color of  
the battery pack.



Electronic equipment  
Yes or no / identify  
Identify the color of  
the battery pack.



Electronic component  
Height  
Detecting metal  
markings

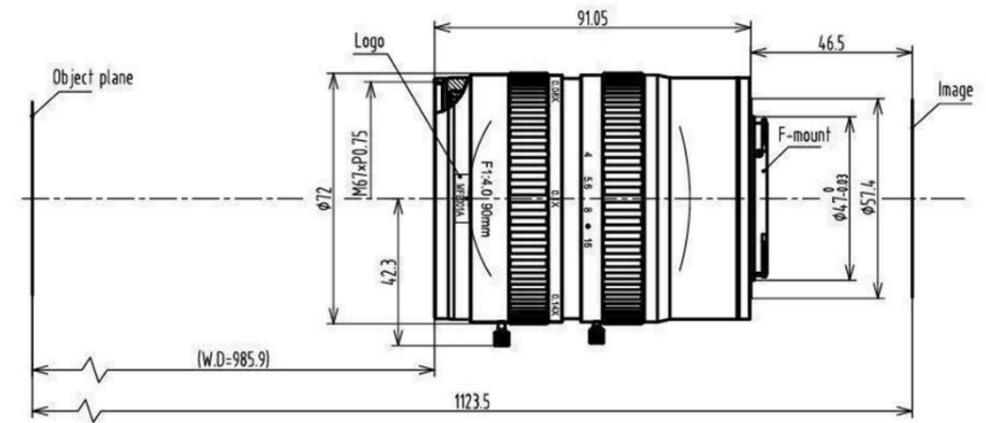


Liquid crystal,  
semiconductor, other.  
Calculate  
SD card number  
calculation.

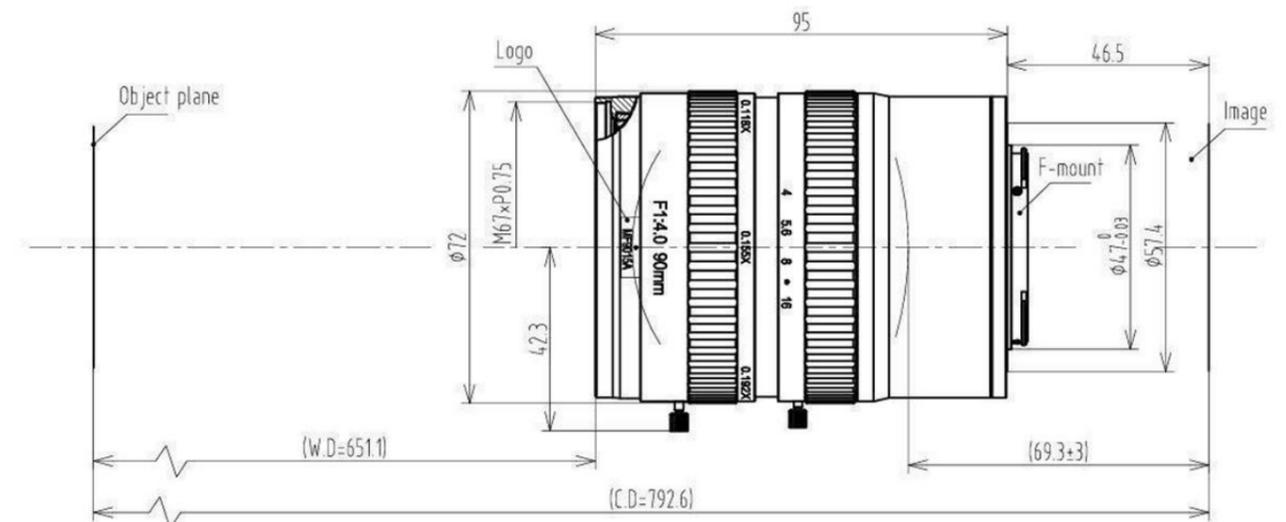


焦距	倍率	接口	畸变
90mm	0.08X-0.19X	F-Mount	<0.01%

PRODUCT SIZE (mm)/ 尺寸图



MF9001A



MF9015A

SPECIALIZED  
LENS

SERIES  
PHOTO

SPECIALIZED  
LENS

# SPECIALIZED LENS

## — 特种镜头系列产品

### — 360°成像系统(内壁)

360°IMAGING SYSTEM(INNER SURFACE)

### 360°成像系统(外壁)

360°IMAGING SYSTEM(OUTER SURFACE)

### 超高解析线扫镜头

HIGH RESOLUTION LINE SCAN LENS

### 变倍远心镜头

VARI-MAGNIFICATION TELECENTRIC LENS

### 3CCD 镜头

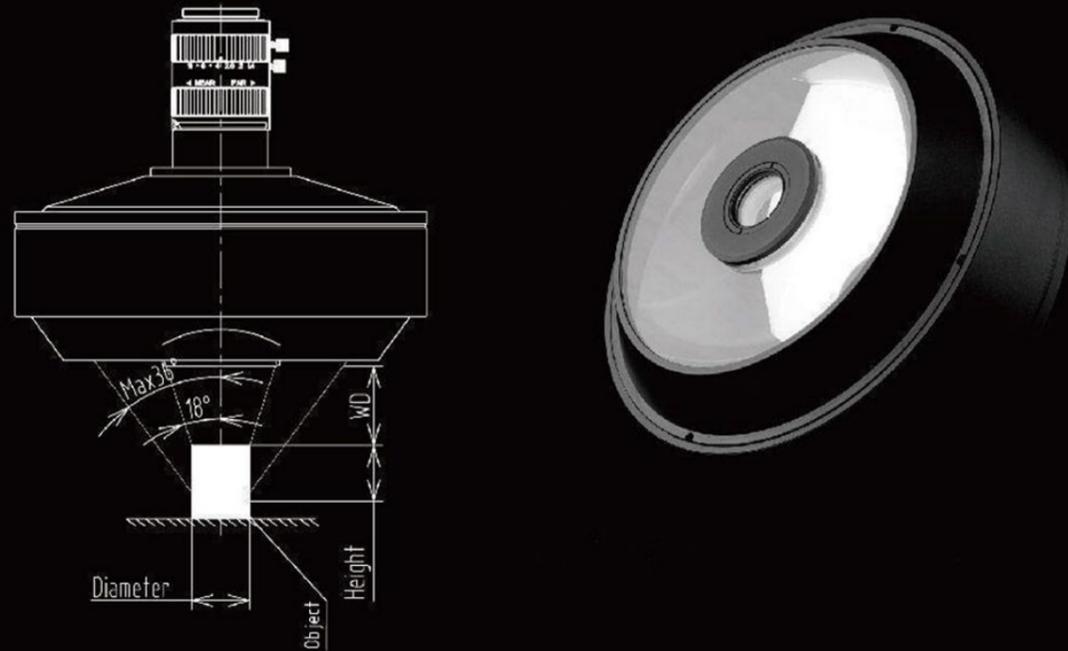
3CCD LENS

### 5百万像素S接口低畸变工业镜头

5MP S-MOUNT LOW DISTORTION BOARD LENS

# 360° 成像系统(外壁)

360° IMAGING SYSTEM  
(OUTER SURFACE)



## CHARACTORISTIC

紧凑型设计和高分辨率性能  
用于实现小物体的360°侧视图成像  
可选工作距离: 19mm-46.2mm,  
19mm-45.4mm,14mm-48.2mm,  
9mm-45.4mm, 9mm-46.5mm  
适用于检测药物容器, 塑料盖, 预成型件,  
瓶颈, 螺丝和其他螺纹物体等组件  
测量物体最小至4.5mm (外壁)

Compact design and high resolution  
360° side view imaging for small objects  
WD optional: 19mm-46.2mm,  
19mm-45.4mm,14mm-48.2mm,  
9mm-45.4mm, 9mm-46.5mm  
Suitable for inspecting drug containers,  
plastic caps, preforms,  
bottlenecks, screws and other threaded objects  
Min. object diameter 4.5mm(outer surface)

## APPLICATION



Bottle cap inspection

Coil outer wall detection

Medicine bottle detection

Outer ring character detection

# 360° 成像系统(内壁)

360° IMAGING SYSTEM  
(INNER SURFACE)



## CHARACTORISTIC

镜头自带集成式LED光源  
凸显被检测物体微小的缺陷  
能在非常广的视角下检测微小的缺陷  
能清晰地检测隐藏在内部的特征和缺陷  
高分辨率及紧凑型设计  
适用于内部特征只能通过内壁检测镜头进入孔洞检查的物体  
如发动机零件、容器、管子等超大景深  
大视场角测量物体最小至5mm

With integrated LED light source  
Highlight the tiny defects of the detected object  
Can detect tiny defects from a super wide angle of view  
Can clearly detect hidden features and defects  
High resolution and compact design  
Suitable for the objects whose internal features can  
only be inspected  
through the inner surface inspection lens, such as  
engine parts,  
pipes, etc., super large DOF  
Measuring objects, whose diameter is min. 5mm,  
with big view angle

## APPLICATION



Screwthread detection

Rubber detection

Ceramic detection

Bottle cap detection

## 超高解析线扫镜头

HIGH RESOLUTION LINE SCAN LENS



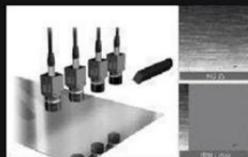
Focal length	F / N O	Interface	Distortion
100mm	1.6-22	V-Mount	< 0.01%

### CHARACTORISTIC

超高解析度线扫镜头  
对应16K5μ/3.5μ相机  
解析度达到1μ  
畸变0.001%以下  
φ82像面  
画面中心到周边的均一性高  
应用于OLED 屏检测

Ultra-high resolution line scan lens  
Suitable for 16K5μ/3.5μ line scan cameras  
Resolution up to 1 μ  
Distortion below 0.001%  
Max image circle φ82  
High uniformity from the center of the image to the edge  
Applied to OLED screen detection

### APPLICATION



Industrial  
Blemish/stain  
Detect defects and blemishes on steel plates.



Electronic component  
Yes/no, distinguish  
Check the number of micro chips & poor imprint.



Electronic component  
Blemish/stain  
Detecting camera defects.



Electronic equipment  
Yes/no, distinguish  
Detect poor binding and lead breakage of motor wires.

## 变倍远心镜头

VARI-MAGNIFICATION TELECENTRIC LENS



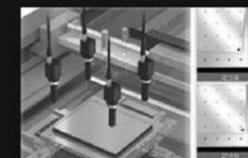
Magnification	Max. image plane size	Interface	Distortion
0.5X-2X	2/3"	C-Mount	< 0.05%

### CHARACTORISTIC

无需改变工作距离, 0.5x-2.0x实现连续变倍  
双远心光路设计, 全倍率范围内远心度≤0.05°  
最大可兼容2/3"芯片  
低畸变, TV畸变 < 0.05%  
可支持电动马达调节  
广泛应用于电子、半导体等高精度行业

No need to change the working distance, the magnification can be continuously adjusted from 0.5x to 2.0x  
Bi-telecentric optical design  
Telecentricity is ≤0.05° under full magnification range  
Maximumly support 2/3" sensor  
TV distortion < 0.05%/Motorized control is optional  
Widely used in electronic, semiconductor and other high-precision industries

### APPLICATION



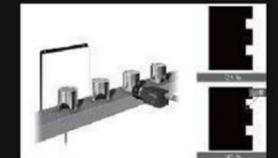
Liquid crystal, semiconductor, other.  
Position/tilt  
Positioning of the glass circuit board.



Electronic equipment  
Geometrical measurement  
Cut rotation Angle of the lens.



Electronic component  
Position/tilt  
Detect the defective conductor of the capacitor.



Automobile  
Blemish/stain  
Detect piston chip attachment.

# 3CCD镜头

3CCD LENS



Focal length	Interface	Distortion
28mm	F-Mount	< 0.2%

## CHARACTORISTIC

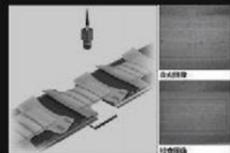
专为3CCD相机设计，重新定义色彩还原度  
工作距离从0.4m-2m  
最大可兼容φ30靶面  
低畸变，全视场畸变<0.2%  
应用于对色彩要求高的项目，如色选等

Designed for 3CCD camera redefining color reduction  
WD from 0.4m-2m  
Max image circle φ30  
Low distortion full field distortion < 0.2%  
Applied to projects with high requirements on color  
such as sorting, etc.

## APPLICATION



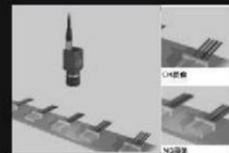
Electronic equipment  
Color discrimination  
Identify the color  
difference of the  
battery.



Textile  
Color discrimination  
Non-woven product  
color inspection.



Food  
Color discrimination  
Food grain color  
screening.



Electronic component  
Color discrimination  
Measure color phase,  
chroma, brightness, etc.

# 5百万像素S接口低畸变工业镜头

5MP S-MOUNT LOW DISTORITION BOARD LENS



Focal length	F / N O	Interface	Distortion
3.37-25mm	2.8	M12xP0.5	< 0.1%

## CHARACTORISTIC

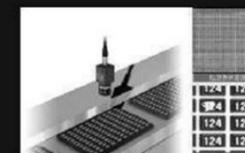
超低畸变，小于0.1%，500万像素  
镜头结构设计紧凑  
光学性能优异，边缘亮度高  
适用于工业检测，条码扫描，监控，视频会议，运动相机等  
焦距涵盖范围有:3.37-25mm  
M12xP0.5接口

Ultra-low distortion, < 0.1%, 5MP  
Compact design  
Excellent optical performance, high brightness at the edge  
Suitable for industrial inspection, barcode scanning,  
monitoring, video conference, sports camera, etc.  
EFL range from 3.37mm to 25mm  
M12xP0.5 Mount

## APPLICATION



Industrial  
Blemish/stain  
Detect defects and  
blemishes on steel  
plate.



Electronic component  
Yes/no, distinguish  
Check the number  
of tiny chips &  
poor imprint.



Electronic component  
Blemish/stain  
Detect camera  
defects.



Electronic equipment  
Yes/no, distinguish  
Detect poor binding  
and lead breakage of  
motor wires.

# ACCESSORIES

## 1. Lens Holder

No.	Mount	Length	Thread Pitch	M72	M60	M58	M54	M52	M50	M49	M42	M90	M95
				P0.75	P1	P1	P1						
LH4930	V(ø49) to M49	30											●
LH5420	V(ø49) to M54	20					●						
LH6015	V(ø56) to M60	10			●								
LH7206	V(ø64) to M72	6		●									

## 2. Focusing Ring

No.	Mount	Length	M25	M72	M60	M58	M54	M52	M50	M49	M42	M90	M95	Threadless
			P0.75	P1	P1	P1								
MT02	M54 to M62	42.3-67.3				●								
MT03	M54 to M58	42.3-67.3				●								
MT04	V(ø38) to V(ø38)	17.4-29.4(23.4±6)												●
MT05	M58 to M42	21.1-42.1									●			
MT07	M54 to M72	42.3-67.3 (54.8±12.5)		●										
MT08	V(ø38) to M58	24-45(34.5±10.5)				●								
MT09	M60 to M72	44-69(56.5±12.5)		●										
MT10	M49 to M50	33-45							●					
MT11	V Moun to C Mount	14-26		●										
MT12	M35 to M72	24-45		●										
MT14	F Mount to M58	10.2				●								
MT15	V(ø64) to M72	43.3-68.3 (55.8±12.5)		●										

## 3. Extension Tube

No.	Mount	Length	Thread Pitch	M72	M60	M58	M54	M52	M50	M49	M42	M90	M95
				P0.75	P1	P1	P1						
EX5210	M58 to M52	10						●					
EX7210	M72 to M72	10		●									
EX7220	M72 to M72	20		●									
EX7250	M72 to M72	50		●									
EX9020	M90 to M90	20										●	
EX9050	M90 to M90	50										●	
EX9520	M95 to M95	20											●

No.	Mount	Length	Thread Pitch	M72	M60	M58	M54	M52	M50	M49	M42	M90	M95
				P0.75	P1	P1	P1						
EX9530	M95 to M95	30											●
EX9550	M95 to M95	50											●
AD5810	M58 to M58	10				●							
AD5824	M58 to M58	24				●							
AD5825	M58 to M58	25				●							
AD5850	M58 to M58	50				●							
AD5800	M58 to M58	100				●							
AD7216	M58 to M72	16.75				●							
AD7200	M58 to M72	100				●							
AD7225	M58 to M72	25				●							
AD7250	M58 to M72	50				●							
AD9525	M58 to M95	25											●
AD9550	M58 to M95	50											●

## 4. Adapter Ring

No.	Mount	Length	M25 P0.75	M58 P0.75	M42 P1	Threadless	No.	Mount	Length	Threadless	M72	M58	M84.5	M90	M95
											P0.75	P0.75	P0.5	P1	P1
AT2510	M58 to C	10	●				AT5806	M72 to M58	6			●			
AT4204	M50 to M42	10			●		AT5809	M58 to F Mount	9	●					
AT4208	V to C	8.47	●				AT5814	M54 to M58	14.2			●			
AT4210	M58 to M42	10			●		AT5826	M58 to F Mount	26.8	●					
AT4212	C to M42	12.5			●		AT5842	M58 to F Mount	10	●					
AT4214	V Mount to M42	12.1			●		AT7204	M42 to M72	4		●				
AT4224	M58 to M42	24.3			●		AT7210	M72 to F Mount	10	●					
AT4255	C to M42	5.526			●		AT7278	M72 to F Mount	78	●					
AT4275	M58 to M42	10			●		AT8425	M72 to M84.5	25				●		
AT4597	M50 to F Mount	97				●	AT9050	M72 to M90	50					●	
AT5247	M52 to F Mount	10				●	AT9503	M72 to M95	3						●
AT5408	M58 to F Mount	8				●	AT9510	M95 to F Mount	10	●					
AT5804	M42 to M58	4		●			AT9550	M75 to M95	50						●

## 1/1.8" 5MP FA LENS

Model	EFL	F/NO	Image Size (Dia)	Field of View Angle			Distortion(TV)	MOD	Filter size	Mount
				1/1.8"	1/2.5"	1/3"				
FA0401C	4mm	2.0-C	1/1.8"	82.9°×66.5°	70.7°×56.7°	61.1°×47.5°	<0.5%	0.1m	无	C-Mount
FA0601C	6mm	2.0-C	1/1.8"	59.6°×46°	48.7°×36.5°	41.9°×31.4°	<0.1%	0.1m	M25.5×P0.5	C-Mount
FA0801C	8mm	2.0-C	1/1.8"	46.8°×36°	38.2°×29.11°	32.2°×24.5°	<0.1%	0.1m	M25.5×P0.5	C-Mount
FA1201C	12mm	2.0-C	1/1.8"	33°×24.3°	27.2°×20.7°	22.9°×17.6°	<0.3%	0.1m	M25.5×P0.5	C-Mount
FA1601C	16mm	2.0-C	1/1.8"	24.7°×18.2°	20.6°×15.8°	17.4°×13.5°	<0.1%	0.1m	M25.5×P0.5	C-Mount
FA2501C	25mm	2.0-C	1/1.8"	13.6°×11.3°	13.4°×10.3°	11.4°×8.8°	<0.1%	0.1m	M25.5×P0.5	C-Mount
FA3501C	35mm	2.0-C	1/1.8"	11.8°×8.7°	9.4°×7.1°	7.9°×5.9°	<0.1%	0.2m	M25.5×P0.5	C-Mount
FA5001C	50mm	2.8-22	1/1.8"	8.2°×6.1°	6.6°×4.9°	5.5°×4.1°	<0.05%	0.3m	M28.5×P0.5	C-Mount
FA7501C	75mm	2.8-22	1/1.8"	5.4°×4.04°	4.4°×3.3°	3.66°×2.75°	<0.05%	0.5m	M30.5×P0.5	C-Mount

## 1/1.8" 5MP FA FIELD OF VIEW

Model WD(mm)	FA0401C	FA0601C	FA0801C	FA1201C	FA1601C	FA2501C	FA3501C	FA5001C	FA7501C
100	202×151	125.7×94.3	95.2×71.4	63.7×47.8	44.6×33.5	24.4×18.3			
150	288×216	181.1×135.8	138.6×103.9	93.3×70	67.1×50.3	38.9×29.2			
200	374×281	236.6×177.4	182.2×136.6	123×92.3	89.5×67.1	53.3×40	37.3×28		
250	459×344	295×221.2	225.5×169.1	152.7×114.5	111.9×83.9	67.7×50.8	47.6×35.7		
300	544×409	351×263.3	269.4×202	182.4×136.8	134.4×100.8	82.1×61.6	57.9×43.4	36.1×27.1	
350	631×473	407.5×305.6	313×234.8	212.1×159.1	156.8×117.6	96.5×72.3	68.2×51.1	43.4×32.4	
400	717×538	463.7×347.8	356.6×267.5	241.8×181.4	179.2×134.4	110.8×83.1	78.4×58.8	50.5×37.7	
450	803×602	519.9×389.9	400.3×300.2	271.5×203.6	201.6×151.2	125.2×93.9	88.7×66.5	57.6×43.1	
500	889×667	576.2×432.1	443.9×332.9	301.2×225.9	221.1×168	139.6×104.7	99×74.2	64.8×48.4	44.4×29.8
550	974×731	632.4×474.3	487.5×365.6	330.9×248.2	216.5×184.9	153.9×115.4	109.2×81.9	71.9×53.7	45.3×33.3
600	1060×796	688.6×506.5	531.2×398.3	360.6×270.4	268.9×201.7	168.3×126.2	119.5×89.6	78.9×59	50×36.5
650	1147×860	744.9×558.6	574.2×430.7	390.3×292.7	291.3×218.5	182.6×137	129.8×97.3	86.1×64.3	55×40.5
700	1233×942	801.1×600.8	618.4×463.8	419.9×314.9	313.8×235.3	197×147.8	140×105	93.2×69.6	59.5×43.8
750	1317×988	857.3×643	662×496.5	449.6×337.2	336.2×252.1	211.4×158.5	150.3×112.7	100.3×74.9	64.3×47.3
800	1403×1052	913.5×685.2	705.7×529.2	479.3×359.5	358.6×268.9	225.7×169.3	160.5×120.4	107.4×80.2	69.2×51
850	1489×1116	969.8×727.3	749.3×562	509×381.7	381×285.8	240.1×180.1	170.1×127.6	114.5×85.50	74.2×54.6
900	1574×1181	1026×769.5	792×594	538.7×404	403.5×302.6	254.4×190.8	181.1×135.8	121.6×90.8	79.1×58.2
950							191.3×143.5	128.7×96.1	83.7×61.6
1000							201.6×151.2	135.8×101.4	88.9×65.4
1500									135.8×100
2000									184.6×135.6
3000									276.9×203.8
4000									378.9×278.9
5000									480×353.3
6000									553.8×407.7

## 2/3" 5MP FA LENS

Model	EFL	F/NO	Image Size (Dia)	Field of View Angle			Distortion(TV)	MOD	Filter size	Mount
				2/3"	1/2"	1/3"				
FA0802D	8mm	1.4-16	2/3"	56.3°×43.7°	42.5°×32.4°	30.7°×23.8°	<1%	0.1m	M37×P0.5	C-Mount
FA1202D	12mm	1.4-16	2/3"	39°×30.3°	29.48°×22.8°	21.3°×16.5°	<-0.8%	0.15m	M30.5×P0.5	C-Mount
FA1602D	16mm	1.4-16	2/3"	30.3°×23°	22.3°×16.8°	16.8°×12.6°	<0.1%	0.1m	M30.5×P0.5	C-Mount
FA2502D	25mm	1.4-16	2/3"	20°×15°	14.6°×11°	11°×8.2°	<0.2%	0.1m	M30.5×P0.5	C-Mount
FA3502D	35mm	1.4-16	2/3"	13.9°×10.4°	10.1°×7.6°	7.6°×5.7°	<-0.8%	0.15m	M37×P0.5	C-Mount
FA5002D	50mm	1.4-C	2/3"	10.46°×7.86°	7.6°×5.27°	5.7°×4.3°	<-0.8%	0.3m	M37×P0.5	C-Mount

## 2/3" 5MP FA FIELD OF VIEW

Model WD(mm)	FA0802D	FA1202D	FA1602D	FA2502D	FA3502D	FA5002D
100	120.7×89.8		61.7×45.9	35.3×26.3		
150	174.2×129.9	114.3×85.7	89.3×66.6	53×39.5	41.8×31.2	
200	227.7×170	149.2×111.9	116.9×87.3	70.7×52.7	54.7×40.9	
250	281.2×210.2	183.3×137.5	144.5×108	88.3×66	67.7×50.6	
300	334.8×250.3	220×165	170.4×127.6	108×82	80.7×60.4	49.7×37.3
350	388.3×290.4	251.4×188.6	199.7×149.4	123.6×92.4	93.7×70.1	58.7×44
400	441.8×330.5	293.3×220	227.3×170	141.2×105.6	106.6×79.8	67.2×50.4
450	495.3×370.6	325.9×244.4	254.9×190.7	158.9×118.8	119.6×89.5	75.9×56.9
500	548.8×410.7	352×264	282.5×211.4	176.5×132	132.5×99.2	84.6×63.5
550	602.3×450.8	400×300	310×232.1	194.1×145.2	145.5×108.9	93.6×70.2
600	655.8×490.9	419×314.3	337.6×252.8	211.8×158.4	158.4×118.6	102.6×76.9
650	709.3×531	463.2×347.4	365.2×273.4	229.4×171.6	171.4×128.4	111.4×83.5
700	762.8×571.1	488.9×366.7	392.8×294.1	247×184.9	184.3×138.1	120.5×90.4
750	816.3×611.2	517.6×388.2	420.4×314.8	264.6×198.1	197.3×147.8	129.4×97.1
800	869.8×651.3	550×412.5	448×335.5	282.3×211.3	210.3×157.5	137.5×103.1
850	923.3×691.4	586.7×440	475.6×356.2	299.9×224.5	223.2×167.2	146.7×110
900	976.8×731.5	628.6×471.4	503.2×376.8	317.5×237.7	236.2×176.9	154.4×115.8
1000						172.5×129.4
2000						352×264

## 2/3" 10MP FA LENS

Model	EFL	F/NO	Image Size (Dia)	Field of View Angle			Distortion(TV)	MOD	Filter size	Mount
				2/3"	1/2"	1/3"				
FA0810A	8mm	2.8-16	2/3"	57.6°×44°	42.8°×32.7°	32.7°×24.7°	<1%	0.1m	M30.5×P0.5	C-Mount
FA1210A	12mm	2.8-16	2/3"	39.8°×30.4°	29.5°×22.3°	22.3°×16.8°	<-0.2%	0.1m	M27×P0.5	C-Mount
FA1610A	16mm	2.8-16	2/3"	30.8°×23.1°	22.6°×17°	17.1°×12.8°	<0.1%	0.1m	M27×P0.5	C-Mount
FA2510A	25mm	2.8-16	2/3"	20°×15.3°	14.9°×11.4°	11.4°×8.8°	<0.1%	0.1m	M27×P0.5	C-Mount
FA3510A	35mm	2.8-16	2/3"	13.1°×9.9°	9.5°×7.2°	7.2°×5.5°	<0.1%	0.1m	M27×P0.5	C-Mount
FA5010A	50mm	2.8-16	2/3"	10.4°×8.4°	8.2°×7.2°	6.2°×5.4°	<-0.1%	0.3m	M27×P0.5	C-Mount

## 2/3" 10MP FA FIELD OF VIEW

Model WD(mm)	FA0810A	FA1210A	FA1610A	FA2510A	FA3510A	FA5010A
100	120×90	80.7×60.3	58.6×43.9	36.1×27.1	25.2×19.2	
150	173.6×130.2	117.4×88	86.1×64.6	53.7×40.3	38.1×28.6	
200	227.2×170.4	153.8×115.4	113.6×85.2	71.5×53.5	50.7×38	
250	280.8×210.6	190.2×142.7	141.1×105.8	88.8×66.6	63.2×47.4	
300	334.4×250.8	226.6×170	168.6×126.5	106.4×79.8	75.8×56.8	46.81×35.11
350	387.9×291	263×197.2	196.2×147.1	123.9×92.9	88.3×66.2	55×41.25
400	441.5×331.2	299.3×224.5	223.6×167.8	141.4×106.1	100.8×75.6	63.31×47.48
450	495.1×371.3	335.7×251.8	251.2×188.4	158.9×119.2	113.4×85	71.54×53.66
500	548.7×411.5	372×279	278.7×209.1	176.5×132.4	125.9×94.4	79.28×59.46
550	602.3×451.7	408.4×306.3	306.2×229.7	194×145.5	138.4×103.8	88×66
600	655.9×491.9	444.7×306.3	333.8×250.4	211.5×158.6	150.9×113.2	95.65×71.74
650						104.76×78.57
700	763.1×572.3	517.4×388	388.8×291.7	246.6×185	176×132	112.82×84.62
750						120.55×90.41
800	870.3×652.7	590×442.5	443.7×332.9	281.6×211.2	201×150.8	129.41×97.06
900	977.4×733.1	662.7×497	498.6×374.1	316.6×237.5	226.1×169.6	
1000	1084.6×813.5	735.4×551.5	553.7×415.4	351.7×263.7	251.1×188.4	162.96×122.22
2000	2156.4×1617.3	1462×1096.5	1103.3×828	702×526.5	501.6×376.2	325.93×244.44
3000						488.89×366.67
5000	5371.8×4028.8	3641.7×2731.7	2758.5×2070.5	1753×1315	1253×940	800×600

## 1" 5MP FA LENS

Model	EFL	F/NO	Image Size (Dia)	Field of View Angle			Distortion (TV)	MOD	Filter size	Mount
				1"	2/3"	1/2"	1"			
HC1205A	12.5mm	1.4-16	1"	54.5°×42°	38.5°×29.1°	28.8°×21.7°	<1.8%	0.1m	M46×P0.75	C-Mount
HC1605A	16mm	1.4-16	1"	42.4°×32.4°	29.9°×22.7°	21.2°×16.5°	<0.2%	0.1m	M46×P0.75	C-Mount
HC2505A	25mm	1.4-16	1"	28.7°×22.06°	20.34°×15.78°	15.34°×11.84°	<0.1%	0.1m	M40.5×P0.5	C-Mount
HC3505A	35mm	1.4-16	1"	19.28°×14.32°	13.14°×9.8°	9.58°×7.16°	<0.1%	0.15m	M46×P0.75	C-Mount
HC5005A	50mm	1.4-16	1"	13.86°×10.4°	9.56°×7.16°	6.96°×5.3°	<0.1%	0.3m	M46×P0.75	C-Mount
HC7505A	75mm	1.8-16	1"	9.8°×7.4°	6.74°×5°	4.9°×3.6°	<0.1%	0.8m	M55×P0.75	C-Mount

## 1" 5MP FA FIELD OF VIEW

Model	HC1205A	HC1605A	HC2505A	HC3505A	HC5005A	HC7505A
100	126.4×93	88.2×66	47.4×35.55			
150	170.67×128			53.2×39.72		
200	223×167.24	169.4×126.7	98.46×73.85			
250	274.09×205.56			89.46×66.84		
300	325.7×244.27	249.5×186.8	146.28×109.71		79.34×59.2	
350	376.47×282.35			120.890.4		
400	426.66×320	329.3×246.5	196.92×147.69		104.4×78.34	
450	479.4×359.55			161.6×121		
500	533.33×400	408.9×306.3	246.15×184.61		128.48×96	
550	581.8×436.36			197.74×148		
600	640×480	488.6×366	294.93×221.2		155.76×116.6	
650	684.5×513.37			231.6×173.2		
700	735.63×551.7		344.08×258.06		181.2×135.72	
750	790.12×592.6					
800	836.6×627.45	647.9×485.2	393.85×295.38		206.6×154.84	111.3×83.47
850	888.89×666.66			305.9×229		
900	941.17×705.88				232.06×174.54	128×96
1000		806.9×604.6		356×269.6	256.6×192.34	150.59×112.94
1100						168.42×126.32
1200						180.28×135.21
1300						200×150
1400						216.95×162.71
1500						232.73×174.54

## 1.1" 20MP FA LENS

Model	EFL	F/NO	Image Size (Dia)	Field of View Angle			Distortion (TV)	MOD	Filter size	Mount
				1.1"	1"	2/3"	1.1"			
FA0615A	6mm	1.8-16	1.1"	104.9°×86.2°	95.4°×78.4°	73.3°×57.5°	<2.5%	0.1m	无	C-Mount
FA0815A	8mm	1.4-16	1.1"	84.8°×68°	77.1°×61.8°	57.6°×44.9°	<5.5%	0.1m	M58×P0.75	C-Mount
FA1216A	12mm	2.8-22	1.1"	57°×45°	54.8°×42.3°	38.9°×29.6°	<1.5%	0.1m	无	C-Mount
FA1616A	16mm	2.8-22	1.1"	46.3°×36°	43.6°×33.4°	30.8°×23.3°	<0.5%	0.1m	M35.5×P0.5	C-Mount
FA2516A	25mm	2.8-22	1.1"	30.4°×23°	27.6°×20.9°	19.2°×14.5°	<0.1%	0.1m	M35.5×P0.5	C-Mount
FA3516A	35mm	2.8-22	1.1"	22.6°×17°	20.6°×15.45°	14.3°×10.7°	<0.02%	0.2m	M35.5×P0.5	C-Mount
FA5016A	50mm	2.8-22	1.1"	15.9°×11.9°	14.6°×10.9°	10.1°×7.5°	<0.04%	0.3m	M35.5×P0.5	C-Mount

## 1.1" 20MP FA FIELD OF VIEW

Model	FA0615A	FA0815A	FA1216A	FA1616A	FA2516A	FA3516A	FA5016A
100	257.02×192.77	199.2×149.4	141×105.6	96.5×72.4	63.8×48		
150			197.2×148.4	141.3×106	91.6×68.8		
200	462.09×346.57	354.3×265.7	254.9×191.1	186×139.6	119.4×89.5	78.2×58.7	
250			312×233.9	230.8×173.2	146.9×110.4	99.4×74.7	
300	666.66×500	509.9×382.5	368.9×276.6	275.4206.8	174.1×130.9	115.9×89.9	79×59.3
350			425.9×319.4	320.2×240.3	207.4×151.4	174.5×140	92.9×69.7
350			425.9×319.4	320.2×240.3	207.4×151.4	174.5×140	92.9×69.7
450			539.9×405	409.5×307.6	256.4×192.7	180×135.5	121×90.7
500	1075.63×806.72	821.6×616.2	596.9×447.7	454.2×341	282×212	200.3×187.6	134.9×99
550			653.9×490.4	498.7×374.6	313.3×235.5	220.5×165.9	148.9×111.7
600	1280×960	977.5×733.1	710.9×533.2	543.6×408.3	335.7×252.4	240.8×181.2	162.8×122.1
650							176.7×132.5
700	1333.33×1000	1133.3×850	824.9×618.5	632.9×475.4	391.7×294.4	281.4×211.8	190.6×143
750							204.5×153.4
800	1690.88×1268.16	1289.2×966.9	938.9×704.2	722.4×542.6	454.8×341.9	322×242.4	218.3×163.8
900			1052.9×789.7	811.3×609.4	503.6×378.6	362.6×273	245.6×184.3
1000			1166.9×875.2	900.6×676.4	564×424	503×303.5	273.5×205.3
2000			2307×1730.2	1793.5×1347.4	1084.6×815.4	809.4×609.6	547.1×410.7
5000			5727×4295.3	4473.2×3361	2820×2120	2029×1528.2	1379×1035.5

## 4/3" 20MP FA LENS

Model	EFL	F/NO	Image Size (Dia)	Field of View Angle			Distortion (TV)	MOD	Filter size	Mount
				4/3"	1"	2/3"	4/3"			
FA1220A	12mm	2.8-22	4/3"	71.2°×56.3°	54.8°×42.3°	38.9°×29.6°	<2%	0.1m	无	C-Mount
FA1620A	16mm	2.8-22	4/3"	57.6°×44.8°	43.6°×33.4°	30.8°×23.3°	<1%	0.1m	M35.5×P0.5	C-Mount
FA2520A	25mm	2.8-22	4/3"	37.5°×28.5°	27.6°×20.9°	19.2°×14.5°	<0.3%	0.1m	M35.5×P0.5	C-Mount
FA3520A	35mm	2.8-22	4/3"	27.9°×20.9°	20.6°×15.45°	14.3°×10.7°	<0.04%	0.2m	M35.5×P0.5	C-Mount
FA5020A	50mm	2.8-22	4/3"	19.8°×14.9°	14.6°×10.9°	10.1°×7.5°	<0.1%	0.3m	M35.5×P0.5	C-Mount

## 4/3" 20MP FA FIELD OF VIEW

Model	FA1220A	FA1620A	FA2520A	FA3520A	FA5020A
100	176.1×132.1	120.5×90.1	79.8×59.8		
150	247.4×185.5	176.4×132	114.6×86		
200	318.6×238.9	232.2×173.8	149.2×111.9	97.7×73.2	
250	389.9×292.4	288.1×215.7	183.8×137.8	124.1×93	
300	461.1×345.8	343.8×257.5	218.2×163.7	149.2×111.9	98.6×73.9
350	532.4×399.3	399.7×299.3	252.6×189.5	217.8×174.3	116×87
400	603.6×452.7	455.5×341.2	287×215.3	199.5×149.7	133.5×100.1
450	674.9×506.2	511.2×383	321.4×241	224.7×168.7	151×113.2
500	746.1×559.6	566.9×424.7	355.7×266.8	250×187.6	168.4×123.6
550	817.4×613	622.7×466.5	390×292.5	275.3×206.6	185.8×139.4
600	888.6×666.5	678.5×508.4	424.4×318.3	300.6×225.6	203.2×152.4
650					220.5×165.4
700	1031.1×773.4	790×592	493×369.8	351.2×263.7	237.9×178.5
750					255.2×191.5
800	1173.6×880.2	901.7×675.7	561.6×421.2	401.9×301.8	272.5×204.5
900	1316.1×987.1	1012.7×758.9	630.2×427.1	452.6×339.9	306.6×230.1
1000	1458.6×1094	1124.1×842.3	698.8×524.1	627.8×378	341.4×256.2
2000	2883.7×2162.8	2238.7×1677.9	1384.5×1038.4	1010.5×759.1	682.9×512.7
5000	7158.8×5369.1	5583.6×4185.4	3441.1×2580.8	2532.7×1903.1	1721.3×1292.5

## MACRO LENS

Model	EFL	F/NO	Image Size (Dia)	Optical Magnification	O/I	Distortion(TV)	Working Distance	Filter size	Mount
ML1610A	16mm	2.8-16	1.1"	-0.25X ~ -0.03X	115.5-606.9	< 0.33%	52-546	M28.5×P0.5	C-Mount
ML2510A	25mm	2.8-16	1.1"	-0.4X ~ -0.1X	126-314.1	< 0.07%	65-260.4	M27×P0.5	C-Mount
ML3510A	35mm	2.8-16	1.1"	-0.7X ~ -0.25X	145.3-220.6	< 0.05%	59-150	M27×P0.5	C-Mount
ML5010A	50mm	2.8-16	1.1"	-0.8X ~ -0.5X	195.6-220.1	< 0.05%	95.4-132.4	M27×P0.5	C-Mount
ML7510A	75mm	3.8-16	1.1"	-0.38X ~ -0.18X	357-557	< 0.05%	257-471	M27×P0.5	C-Mount

## ML2510A

Close-up ring(mm)	"Field of View Length*Width"			WD	Magnification
	1.1*(14.19*10.4)	1*(14.19*7.5)	2/3*(8.5*7.1)		
0	36.2*26	36.2*18.8	21.3*17.8	45.5	0.4X
	144*104.3	144*75.5	85.6*71.5	242.0	0.1X
0.5	34.2*24.6	34.2*17.8	20.1*16.8	41.9	0.423X
	121*87	121*63	71.4*59.6	198.7	0.12X
1	32.7*23.5	32.7*17	19.1*16.1	39.1	0.442X
	104.4*75.1	104.4*54.4	60.16*51.5	168.8	0.138X
1.5	31.2*22.5	31.2*16.3	18.4*15.4	36.7	0.461X
	91.4*65.9	91.4*47.6	54*45.1	145.5	0.157X
2	30*21.6	30*15.6	17.7*14.8	34.4	0.481X
	81*58.6	81.5*42*4	48.1*40.2	127.3	0.177X
5	24.2*17.4	24.2*12.6	14.2*11.8	23.9	0.6X
	50.2*35.4	50.2*25.6	29*24.2	68.9	0.293X
10	18.2*13.1	18.2*9.5	10.8*9	13.3	0.79X
	29.6*21.2	29.6*15.4	17.4*14.6	33.7	0.487X
15	14.7*10.6	14.7*7.6	8.6*7.2	6.8	0.98X
	21.2*15.2	21.2*11	12.5*10.4	18.6	0.68X
20	12.2*8.8	12.2*6.4	7.2*6	2.5	1.17X
	16.5*11.8	16.5*8.6	9.6*8.1	10.1	0.87X

## ML3510A

Close-up ring(mm)	"Field of View Length*Width"			WD	Magnification
	1.1*(14.19*10.4)	1*(14.19*7.5)	2/3*(8.5*7.1)		
0	20.6*14.8	20.6*10.7	12.1*10.1	45.7	0.7X
	57.3*41.2	57.3*29.8	33.8*28.2	134.9	0.25X
0.5	20.2*14.5	20.2*10.5	11.9*10.1	44.8	0.71X
	54.6*39.3	54.6*28.4	32.2*27.3	128.3	0.264X
1	19.8*14.2	19.8*10.2	11.7*10	43.9	0.728X
	52.1*37.4	52.1*27.1	30.7*26	122.1	0.276X
1.5	19.4*14	19.4*10.1	11.4*9.7	43	0.74X
	49.5*35.6	49.5*25.8	29.2*24.7	116.1	0.29X
2	19*13.6	19*9.9	11.2*9.5	42.1	0.756X
	47.2*33.9	47.2*24.6	27.8*23.6	110.4	0.305X
5	17.1*12.3	17.1*8.9	10.1*8.5	37.4	0.84X
	36.8*26.4	36.8*19.1	21.7*18.4	85.1	0.391X
10	14.6*10.5	14.6*7.6	8.6*7.2	31.3	0.99X
	26.8*19.2	26.8*14	15.8*13.4	60.9	0.53X
15	12.8*9.2	12.8*6.6	7.4*6.4	26.8	1.13X
	21.2*15.2	21.2*11	12.5*10.6	47.3	0.68X
20	11.3*8.1	11.3*5.9	6.7*5.6	23.3	1.27X
	17.4*12.6	17.4*9	10.2*8.7	38.3	0.824X

## ML5010A

Close-up ring(mm)	"Field of View Length*Width"			WD	Magnification
	1.1*(14.19*10.4)	1*(14.19*7.5)	2/3*(8.5*7.1)		
0	18*13	18*9.4	10.6*9.9	95.39	0.8X
	28.7*20.7	28.7*14.9	17*14.1	132.39	0.5X
0.5	19.8*12.8	19.8*9.2	10.3*9	94.69	0.81X
	28*20.2	28*14.6	16.6*14	130.44	0.51X
1	17.6*12.6	17.6*9.1	10.4*8.8	93.99	0.82X
	27.8*19.8	27.8*14.4	16.2*13.8	128.59	0.52X
1.5	17.4*12.4	17.4*9	10.2*8.7	93.19	0.83X
	27*19.4	27*14	16*13.4	126.69	0.53X
2	17.2*12.3	17.2*8.9	10.1*8.6	92.49	0.84X
	26.5*19.1	26.5*13.8	15.6*13.2	124.99	0.54X
5	16*11.45	16*8.2	9.4*8	88.49	0.9X
	23.8*17.2	23.8*12.4	14.1*11.9	115.79	0.6X
10	14.4*10.2	14.4*7.5	8.5*7.2	82.89	1X
	20.5*14.6	20.5*10.6	12.1*10.2	103.89	0.7X
15	12.8*9.4	12.8*6.8	7.7*6.5	78.39	1.1X
	17.9*12.9	17.9*9.3	10.6*9	94.99	0.8X
20	12*8.6	12*6.2	7.1*6	74.49	1.2X
	15.9*11.4	15.9*8.3	9.4*7.9	92.59	0.9X
25	11.1*8	11.1*5.7	6.5*5.5	71.29	1.3X
	14.4*10.1	14.4*7.4	8.4*7.1	82.59	1X
30	10.2*7.4	10.2*5.3	6*5.1	68.49	1.4X
	13*9.3	13*6.8	7.7*6.5	78.09	1.1X
35	9.6*7	9.6*5	5.6*4.8	66.19	1.5X
	11.9*8.6	11.9*6.2	7*6	74.29	1.2X

## ML7510A

Close-up ring(mm)	*Field of View Length*Width*			WD	Magnification
	1.1*(14.19*10.4)	1*(14.19*7.5)	2/3*(8.5*7.1)		
0	37.9*27.2	37.9*19.7	22.4*18.6	253.249	0.38X
	79.8*57.5	79.8*41.6	47.2*39.4	467.249	0.18X
0.5	37.2*26.8	37.2*19.3	22*18.3	247.169	0.387X
	77.06*55.4	77.06*40.1	45.4*38	449.319	0.187X
1	36.6*26.3	36.6*18	21.6*18	243.949	0.393X
	74.3*53.5	74.3*38.7	43.88*36.6	435.549	0.193X
1.5	36*25.8	36*18.7	21.2*17.6	240.749	0.4X
	71.8*51.6	71.8*37.4	42.2*35.4	422.549	0.2X
2	35.3*25.4	35.3*18.4	20.8*17.4	237.649	0.407X
	69.4*49.9	69.4*36.1	40.9*34.2	411.049	0.207X
5	32.1*23.1	32.1*16.7	18.9*15.8	241.149	0.448X
	57.9*41.6	57.9*30.1	34.1*28.5	352.049	0.248X
10	27.8*20	27.8*14.5	16.4*13.6	199.549	0.517X
	45.3*32.6	45.3*23.6	26.8*22.3	288.449	0.317X
15	24.6*17.6	24.6*12.8	14.5*12.1	183.049	0.585X
	37.3*26.8	37.3*19.4	22.4*18.3	247.549	0.386X
20	22*15.8	22*11.4	13*10.8	170.049	0.654X
	31.6*22.8	31.6*16.5	18.7*15.6	223.949	0.454X
25	19.8*14.3	19.8*10.4	11.7*9.8	159.449	0.723X
	27.5*19.8	27.5*14.3	16.2*13.5	197.949	0.523X
30	18.2*13.1	18.2*9.5	10.8*9	150.649	0.791X
	24.3*17.5	24.3*12.6	14.3*12	181.749	0.592X
35	16.7*12	16.7*8.7	9.8*8.2	143.349	0.86X
	21.8*15.6	21.8*11.3	12.8*10.7	169.049	0.66X
40	15.5*11.1	15.5*8	9.1*7.6	137.049	0.93X
	19.7*14.2	19.7*10.2	11.6*9.7	158.549	0.73X
45	14.4*10.2	14.4*7.5	8.5*7.1	131.949	0.997X
	18*12.9	18*9.4	10.6*8.7	149.949	0.798X
50	12.7*9.1	12.7*6.6	7.5*6.2	122.849	1.13X
	15.4*11	15.4*8	9.1*7.6	136.549	0.93X
60	11.3*8.1	11.3*5.9	6.7*5.5	115.849	1.27X
	13.4*9.6	13.4*7	7.9*6.6	126.549	1.07X
70	10.2*7.3	10.2*5.3	6*5	110.349	1.408X
	11.9*8.6	11.9*6.2	7*5.8	118.849	1.209X
80	9.3*6.7	9.3*4.8	5.5*4.5	105.649	1.54X
	10.7*7.7	10.7*5.5	6.3*5.2	112.649	1.34X
90	8.5*6.1	8.5*4.4	5*4.2	101.849	1.68X
	9.7*7	9.7*5	5.6*4.8	107.749	1.48X
100	7.8*5.6	7.8*4.1	4.6*3.9	98.649	1.8X
	8.8*6.4	8.8*4.6	5.2*4.4	103.549	1.6X

## 4K7μ LINE SCAN LENS

Model	EFL	Standard Magnification	Image Size (Dia)	F/NO	Optical Distortion	Working Distance	Mount	Conjugate Distance	Flange Distance	Central Resolution
LS2003C	20mm	0.0358X	φ30	4.5-C	0.2%	557.4	M42×P1	619.1	12	160lp/mm
LS2801A	29mm	0.1X	φ30	4.0-C	0.1%	299.7	V-Mount	368	26	160lp/mm
LS3508A	35mm	0.08X	φ30	4.5-16	<0.01%	508.49	V-Mount	574.5	37.42	125lp/mm
LS4010A	40mm	0.1X	φ43.2	2.8-22	0.5%	429.9	V-Mount	498.48	39.62	80lp/mm

## 8K7μ LINE SCAN LENS

Model	EFL	Standard Magnification	Image Size (Dia)	F/NO	Optical Distortion	Working Distance	Mount	Conjugate Distance	Flange Distance	Central Resolution
LS4005B	40mm	0.05X	φ60	4.0-22	<0.2%	818.8	M72×P0.75	943.08	12	125lp/mm
LS6016A	60mm	0.167X	φ64	4.0-32	0.19%	404.4	V-Mount	496.32	63.31	80lp/mm
LS8003A	80mm	0.3X	φ64	5.6-32	<0.01%	320.26	V-Mount	451.78	102.92	100lp/mm
LS0802A	100mm	0.2X	φ66	4.5-22	0.005%	654.8	V-Mount	827.8	123.5	160lp/mm

## 12K5μ LINE SCAN LENS

Model	EFL	Standard Magnification	Image Size (Dia)	F/NO	Optical Distortion	Working Distance	Mount	Conjugate Distance	Flange Distance	Filter size
LS1202A	116mm	0.2X	φ62	4.5-22	<0.01%	652.4	V-Mount	824.9	122.8	M52×P0.75
LS1203A	116mm	0.33X	φ62	4.5-22	<0.005%	415.1	V-Mount	599.7	134.9	M52×P0.75
LS1205A	116mm	0.5X	φ62	4.5-22	<0.01%	291.7	V-Mount	491	149.6	M52×P0.75
LS1207A	116mm	0.75X	φ62	4.5-22	<0.005%	209.8	V-Mount	429.85	170.3	M52×P0.75
LS1208A	116mm	0.806X	φ62	4.5-22	<0.005%	203.8	V-Mount	434.66	181.2	M52×P0.75
LS1210A	116mm	1X	φ62	4.5-22	<0.05%	164.2	V-Mount	400.56	186.7	M52×P0.75
LS1212A	116mm	1.24X	φ62	4.5-22	<0.005%	149.9	V-Mount	434.66	232.2	M52×P0.75

## 16K3.5μ LINE SCAN LENS

Model	EFL	Standard Magnification	Image Size (Dia)	F/NO	Optical Distortion	Working Distance	Mount	Conjugate Distance	Flange Distance	Central Resolution
LS9005A	95mm	0.05X	φ62	4.0-16	0.005%	1980.85	V-Mount	2112.94	81.2	200lp/mm
LS9001A	90mm	0.1X	φ64	4.0-16	0.01%	992.4	V-Mount	1123.5	82.7	200lp/mm
LS1626A	114mm	0.26X	φ66	3.8-16	0.01%	497.85	V-Mount	672.16	128.3	200lp/mm
LS1603A	116mm	0.33X	φ66	3.8-16	0.001%	412	V-Mount	595	137	200lp/mm
LS1642A	116mm	0.42X	φ66	3.8-16	0.007%	339.74	V-Mount	530.1	144.5	200lp/mm
LS1605A	116mm	0.5X	φ66	3.8-16	0.0008%	296.2	V-Mount	496	153.3	200lp/mm
LS1667A	116mm	0.67X	φ66	3.8-16	0.1%	237.4	V-Mount	453.5	170.2	200lp/mm
LS1607A	116mm	0.7X	φ66	3.8-16	0%	229.4	V-Mount	447.2	174.4	200lp/mm
LS1675A	100mm	0.75X	φ66	3.8-16	0.0008%	220.8	V-Mount	444.8	180.5	200lp/mm
LS1610A	116mm	1X	φ66	3.8-16	0.0005%	184.16	V-Mount	439.45	209.47	200lp/mm

## 16K5μ LINE SCAN LENS

Model	EFL	Standard Magnification	Image Size (Dia)	F/NO	Optical Distortion	Working Distance	Mount	Conjugate Distance	Flange Distance	Central Resolution
LS1626B	116mm	0.26X	φ82	3.8-16	0.001%	663.34	V-Mount	874.3	160.95	200lp/mm
LS1603B	120mm	0.33X	φ82	4.0-16	0.005%	534.64	V-Mount	757.63	169.37	200lp/mm
LS1605B	120mm	0.5X	φ82	4.0-16	0.002%	390.66	V-Mount	636.99	192.71	200lp/mm
LS1662A	116mm	0.625X	φ82	3.8-16	0.17%	245.9	V-Mount	455.3	163.6	200lp/mm
LS1667B	147.6mm	0.667X	φ82	4.5-16	0.01%	321.2	V-Mount	590.5	215.3	200lp/mm
LS1683A	116mm	0.8387X	φ82	3.8-16	0.008%	204.1	V-Mount	437.1	189.5	200lp/mm
LS1687A	116mm	0.875X	φ82	3.8-16	0.005%	199	V-Mount	435.5	193.1	200lp/mm
LS1613A	116mm	1.33X	φ84	3.8-16	0.0003%	156.3	V-Mount	444.5	243.7	160lp/mm
LS1615A	116mm	1.5X	φ84	3.8-16	0.08%	143.9	V-Mount	453.7	263.8	200lp/mm
LS1617A	116mm	1.7X	φ84	3.8-16	0.05%	137.8	V-Mount	470	286.1	200lp/mm
LS1620A	116mm	2X	φ84	3.8-16	0.0008%	127.2	V-Mount	496	322.8	200lp/mm
LS1620B	120mm	2X	φ82	4.0-16	0.002%	166.35	V-Mount	636.99	424.31	200lp/mm
LS1630A	116mm	3X	φ84	3.8-16	0.001%	111.4	V-Mount	591.3	433.9	200lp/mm
LS1630B	120mm	3X	φ82	4.0-16	0.001%	143.02	V-Mount	757.63	568.28	100lp/mm

## COAXIAL ILLUMINATION LINE SCAN LENS

Model	EFL	Standard Magnification	Image Size (Dia)	F/NO	Optical Distortion	Working Distance	Mount	Conjugate Distance	Flange Distance	Central Resolution
LS1610L-P01	116mm	1X	φ82	3.8-16	0.0005%	157.39	V-Mount	449.53	212.09	200lp/mm
LS1613L-P01	116mm	1.33X	φ82	4.3-16	0.001%	171.54	V-Mount	579.35	327.28	200lp/mm
LS1615L-P01	145mm	1.5X	φ82	4.3-16	0.001%	127.3	V-Mount	592.1	351.96	200lp/mm
LS1617L-P01	116mm	1.7X	φ82	4.0-16	0.001%	148.83	V-Mount	611.85	381.66	200lp/mm
LS1620L-P01	120mm	2X	φ82	4.0-16	0.0005%	135.95	V-Mount	641.94	424.66	200lp/mm
LS1630L-P01	120mm	3X	φ82	4.0-16	0.005%	112.6	V-Mount	759.5	565.5	100lp/mm

## LARGE FORMAT LENS

Model	EFL	Standard Magnification	Image Size (Dia)	F/NO	Optical Distortion	Working Distance	Mount	Conjugate Distance	Flange Distance	Filter Size
MF3502A	35mm	0.1X	φ45	2.8-16	<0.4%	350.9	F-Mount	474.5	46.5	M58×P0.75
MF3515A	35mm	0.15X	φ44	2.8-16	1.2%	194.1	F-Mount	357.8	46.5	M82×P0.75
MF4010A	40mm	0.1X	φ43.2	2.8-22	<0.2%	409	F-Mount	498.48	46.5	M62×P0.75
MF5015A	50mm	0.062X	φ44	2.8-22	<0.3%	833.4	F-Mount	948.9	46.5	M50×P0.5
MF6016A	60mm	0.167X	φ64	4.0-32	0.19%	384.9	F-Mount	496.32	46.5	M65×P0.75
MF8003A	80mm	0.3X	φ58	5.6-32	<0.01%	306.2	F-Mount	451.78	46.5	M52×P0.75
MF9005A	90mm	0.05X	φ43.2	4.0-16	<0.01%	1985	F-Mount	2112	46.5	M62×P0.75

## HIGH RESOLUTION F-MOUNT LARGE FORMAT LENS

Model	EFL	Standard Magnification	Image Size (Dia)	F/NO	Optical Distortion	Working Distance	Mount	Conjugate Distance	Flange Distance	Filter Size
MF9001A	90mm	0.1X	φ64	4.0-16	0.01%	985.9	F-Mount	1123.5	46.5	M67×P0.75
MF9015A	90mm	0.155X	φ64	4.0-16	0.05%	651.1	F-Mount	792.6	46.5	M67×P0.75

## STANDARD TELECENTRIC LENS

Model	Magnification	Max Image Circle	F/NO	Object NAWD	Working Distance	FOV(H*V*D) 2/3°	Tv Distortion	Telecentricity	Resolution	Mount
MV65051A	0.5	2/3°	9.5	0.026	65mm	22x17.6x13.2	<0.05%	<0.1°	12.8μm	C-Mount
MV65051B	0.5	2/3°	9.5	0.026	65mm	22x17.6x13.2	<0.05%	<0.1°	12.8μm	C-Mount
MV65075A	0.75	2/3°	9.5	0.04	65mm	14.6x11.7x8.8	<0.1%	<0.1°	7μm	C-Mount
MV65075B	0.75	2/3°	9.5	0.04	65mm	14.6x11.7x8.8	<0.1%	<0.1°	7μm	C-Mount
MV65081A	0.8	2/3°	9.5	0.04	65mm	13.7x11x8.2	<0.05%	<0.1°	8.4μm	C-Mount
MV65081B	0.8	2/3°	9.5	0.04	65mm	13.7x11x8.2	<0.05%	<0.1°	8.4μm	C-Mount
MV65101A	1	2/3°	11	0.045	65mm	11x8.8x6.6	<0.1%	<0.1°	7.5μm	C-Mount
MV65101B	1	2/3°	11	0.045	65mm	11x8.8x6.6	<0.1%	<0.1°	7.5μm	C-Mount
MV65151A	1.5	2/3°	12	0.063	65mm	7.3x5.8x4.4	<0.1%	<0.1°	5.4μm	C-Mount
MV65151B	1.5	2/3°	12	0.063	65mm	7.3x5.8x4.4	<0.1%	<0.1°	5.4μm	C-Mount
MV65201A	2	2/3°	13.5	0.074	65mm	5.5x4.4x3.3	<0.1%	<0.05°	4.5μm	C-Mount
MV65201B	2	2/3°	13.5	0.074	65mm	5.5x4.4x3.3	<0.1%	<0.05°	4.5μm	C-Mount
MV65301A	3	2/3°	16	0.092	65mm	3.7x2.9x2.2	<0.1%	<0.1°	3.5μm	C-Mount
MV65301B	3	2/3°	16	0.092	65mm	3.7x2.9x2.2	<0.1%	<0.1°	3.5μm	C-Mount
MV65401A	4	2/3°	18	0.112	65mm	2.75x2.5x1.65	<0.03%	<0.05°	3μm	C-Mount
MV65401B	4	2/3°	18	0.112	65mm	2.75x2.5x1.65	<0.03%	<0.05°	3μm	C-Mount
MV11051A	0.5	2/3°	9.3	0.027	110mm	22x17.6x13.2	<0.05%	<0.1°	12μm	C-Mount
MV11051B	0.5	2/3°	9.3	0.027	110mm	22x17.6x13.2	<0.05%	<0.1°	12μm	C-Mount
MV11101A	1	2/3°	11	0.045	110mm	11x8.8x6.6	0%	<0.1°	7.4μm	C-Mount
MV11101B	1	2/3°	11	0.045	110mm	11x8.8x6.6	0%	<0.1°	7.4μm	C-Mount
MV11201A	2	2/3°	13.6	0.074	110mm	5.5x4.4x3.3	<0.05%	<0.1°	4.5μm	C-Mount
MV11201B	2	2/3°	13.6	0.074	110mm	5.5x4.4x3.3	<0.05%	<0.1°	4.5μm	C-Mount
MV11401A	4	2/3°	22	0.09	110mm	2.75x2.2x1.65	<0.05%	<0.1°	3.7μm	C-Mount
MV11401B	4	2/3°	22	0.09	110mm	2.75x2.2x1.65	<0.05%	<0.1°	3.7μm	C-Mount
MV11601A	6	2/3°	35	0.085	110mm	1.83x1.46x1.1	<0.02%	<0.1°	4μm	C-Mount
MV11601B	6	2/3°	35	0.085	110mm	1.83x1.46x1.1	<0.02%	<0.1°	4μm	C-Mount

## 360° IMAGING SYSTEM(OUTER SURFACE)

Model	Sensor	Image Size (Dia)	Working Distance	F/NO	Working Distance	Diameter(mm)	Height(mm)	F/NO	Mount
RF3601A	1/3°	φ3.6	19-46.2	6.0-16	46.2	7.5	4.6	16	C-Mount
					34.5	15	10.9	10	
RF3602A	1/1.8°	φ5.32	9-45.4	8.0-16	19	25	19.54	6	C-Mount
					45.4	7.5	5.3	16	
RF3603A	2/3°	φ6.6	14-48.2	8.0-16	33.8	15	11.86	12	C-Mount
					9	30	25	8	
RF3604A	1/1.8°	φ5.32	9-50	8.0-16	48.2	7.5	4	16	C-Mount
					36.8	15	10.6	12	
RF3605A	1/3°	φ3.6	9-48	6.0-16	14	30	23.4	8	C-Mount
					50	4.5	2.7	16	
RF3605A	1/3°	φ3.6	9-48	6.0-16	33.8	15	11.86	12	C-Mount
					9	30	25	8	
RF3605A	1/3°	φ3.6	9-48	6.0-16	48	4.5	3.1	16	C-Mount
					34.7	15	12.8	10	
RF3605A	1/3°	φ3.6	9-48	6.0-16	9.7	30	25.6	6	C-Mount

## 360° IMAGING SYSTEM(INNER SURFACE)

Model	Sensor	Image Size (Dia)	Working Distance	F/NO	Working Distance	Diameter(mm)	Height(mm)	Illumination	Mount
RF3651A	1/3"	φ3.6	12.5-50	14	2.7	25	12.4	内置光源	C-Mount
						65	36.8	Embedded Illumination	
						100	58.2		
RF3652B	2/3"	φ6.6	2.7-70	8	35	5	5	外接光源	C-Mount
						60	61.4	External Illumination	
						120	123		

## HIGH RESOLUTION LINE SCAN LENS

Model	EFL	Standard Magnification	Image Size (Dia)	F/NO	Optical Distortion	Working Distance	Mount	Conjugate Distance	Flange Distance	Central Resolution
LH1635A	100mm	3.5X	φ82	1.6-22	<0.01%	48.4	V-Mount	551.79	394.8	200lp/mm

## VARI-MAGNIFICATION TELECENTRIC LENS

Model	Magnification	Max Image Circle	Focus Mode	Object NAWD	Working Distance	Illuminating system	Tv Distortion	Telecentricity	Resolution	Mount
TC6552A	0.5X-2X	2/3"	手动	0.04	65mm	同轴	0.05%	0.05°	8um	C-Mount
TC6552B	0.5X-2X	2/3"	电动	0.04	65mm	同轴	0.05%	0.05°	8um	C-Mount

## 3CCD LENS

Model	EFL	F/NO	Image Size (Dia)	Optical Magnification	Flange Distance	Distortion(TV)	Working Distance	Filter size	Mount
TD2803A	28mm	2.8-16	φ30	0.01X-0.14X	46.5	< 0.2%	0.4m-2m	M62×P0.75	F-Mount

## 5MP S-MOUNT LOW DISTORTION BOARD LENS

Model	EFL	F/NO	Image Size (Dia)	Field of View Angle		FOV @ WD200(H*V)	Distortion(TV)	MOD	Relative illumination	Mount
				1/1.8"	1/3"					
FS0305A	3.37mm	2.8	1/2"	86°×70°	70°×50°	400×300	<1%	0.1m	78%	M12×P0.5
FS0605A	6mm	2.8	1/1.8"	60.6°×46.6°	42.4°×32.4°	243.2×182.4	<0.5%	0.1m	60%	M12×P0.5
FS0805A	8mm	2.8	1/1.8"	47°×35.6°	32.3°×24.6°	178.9×134.2	<0.3%	0.12m	60%	M12×P0.5
FS1205A	12mm	2.8	1/1.8"	32.8°×24.5°	22.2°×16.7°	120.3×90.2	<0.2%	0.1m	68%	M12×P0.5
FS1605A	16mm	2.8	1/1.8"	24.4°×18.4°	17.1°×12.3°	84.2×63.2	<0.1%	0.1m	80%	M12×P0.5
FS2505A	25mm	2.8	1/1.8"	15.6°×11.5°	10.5°×7.8°	51.6×38.7	<0.05%	0.2m	75%	M12×P0.5

## 5MP S-MOUNT LOW DISTORTION BOARD LENS

### FIELD OF VIEW

Model	FS0305A	FS0605A	FS0805A	FS1205A	FS1605A	FS2505A
WD(mm)						
100	200×150	125.8×94.3		60.2×45.2	39.3×29.5	
120			108.8×81.6			
150	290.9×218.2	184.5×138.4		90.3×67.7	61.8×46.3	
200	400×300	243.2×182.4	178.9×134.2	120.3×90.2	84.2×63.2	51.6×38.7
250	492.3×369.2	301.9×226.4	222.7×167.1	150.3×112.7	106.6×80	66×49.5
300	581.8×436.4	360.5×270.4	266.5×199.9	180.3×135.2	129.1×96.8	80.4×60.3
350	640×480	419.2×314.4	310.3×232.8	210.3×157.7	151.5×113.6	94.8×71.1
400	800×600	477.9×358.4	354.2×265.6	240.3×180.2	173.9×130.4	109.6×81.9
450	914.3×685.7	536.6×402.4	398×298.5	270.2×202.6	196.3×147.3	123.7×92.8
500	955.2×716.4	595.3×446.4	441.8×331.3	300.1×225.1	218.8×164.1	138.1×103.6
550	1049.2×786.9	653.9×490.4	485.6×364.2	330.1×247.6	241.2×180.9	152.5×114.4
600	1142.9×857.1	712.6×578.5	529.4×397	360.1×270.1	263.6×197.7	166.9×125.2
650	1230.7×923.1	771.3×578.5	573.2×429.9	390.1×292.5	286×214.5	181.3×136
700	1333.3×1000	829.9×622.5	617×462.7	420×315	308.4×231.3	195.8×146.8
750	1422.2×1006.6	888.6×666.5	660.8×495.6	450×337.5	330.8×248.1	210.2×157.6
800	1523.8×1142.8	947.3×710.5	704.6×528.4	480×360	353.3×264.9	224.6×168.4
850	1600×1200	1006×754.5	748.4×561.3	510×382.5	375.7×281.7	239×179.3
900			792.2×594.1			253.4×190.1
950						267.8×200.9

Due to continuous iterative update of products, the technical parameters in this manual are subject to change without notice. If you have any other questions or opinions about the product, but the contents of this manual are not referred, please consult in time, and we will be happy to answer your questions, suggestions and criticisms. Thank you again for your choice and your trust!