



MASTER OF INDUSTRIAL LENS

工业镜头产品手册

工业镜头巨匠

# MASTER OF INDUSTRIAL LENS

工业镜头产品手册

2022  
—  
Ver.01

## 始终致力于打造工业镜头标准化

持续不断为用户提供品质卓越、性价比超高的产品

Always Committed to Establish the Standardization  
of Industrial Lenses.

Continuously Provide Customers with Excellently Qualified and Ultra-high Cost-effective Products.



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MACRO LENS

1/1.7" 12MP  
1/1.7" 12MP FA LENS

抗振镜头  
ANTI-VIBRATION LENS

2/3" 5MP  
2/3" 5MP FA LENS

自动对焦镜头  
AUTO-FOCUS 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

1.1" 25MP  
1.1" 25MP FA LENS

**NEW** 1.4" 45MP  
1.4" 45MP FA LENS

### 02 线扫镜头 34-51 LINE SCAN LENS

4K 线扫镜头  
4K LINE SCAN LENS

**NEW** 4K7μ 线扫镜头  
4K7μ LINE SCAN LENS

8K 线扫镜头  
8K LINE SCAN LENS

12K 线扫镜头  
12K LINE SCAN LENS

16K3.5μ 线扫镜头  
16K3.5μ LINE SCAN LENS

16K5μ 线扫镜头  
16K5μ LINE SCAN LENS

同轴照明线扫镜头  
COAXIAL ILLUMINATION LINE SCAN LENS

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120MP/151MP LENS

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29MP LARGE FORMAT LENS

8K5μ 大靶面镜头  
8K5μ LARGE FORMAT LENS

### 04 远心镜头 62-71 TELECENTR- TRIC LENS

标准远心 65mm  
STANDARD TELECENTRIC LENS

标准远心 110mm  
STANDARD TELECENTRIC LENS

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360°成像系统 (外壁)  
360°IMAGING SYSTEM(OUTER SURFACE)

360°成像系统 (内壁)  
360°IMAGING SYSTEM(INNER SURFACE)

**NEW** 360°成像系统  
360°IMAGING SYSTEM

沙姆镜头  
SCHEIMFLUG LENS

短波近红外镜头  
SWIR LENS

**NEW** 可见近红外镜头  
VISIBLE INFRARED LENS

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

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配件  
LENS ACCESSARY

详细参数  
DETAILED PARAMETERS

LS2003C

TC6552A  
MF5001C

LS1620LP01  
MV11051A

TC1207C  
RF33601F

RF24001A

LS1607

TD2803A  
LS1603F

LS2801A

RF3651E  
FS0605F

BA2001F

BA1501A  
MV65051F

LS80201

FS1205F



MF5013F

MF3503A

ML3510A  
FK350E

MS9015F  
MS5515A

LS1602

MF5001C

V11202A

LS04050A

LS1205F

LH1635F

MV65401B

LH1635F

TC1531E

MV11101F

FA254E

FA12255  
FA25165M

IR2502F

TC2275B

FIXED LENS  
FOR FA

# FA

工业FA镜头



# FIXED LENS FOR FA



## 工业 FA 镜头系列

Master of Industrial Lens

01

### SERIES

#### 系列产品

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

微距镜头  
MACRO LENS

1/1.7" 12MP  
1/1.7" 12MP FA LENS

抗振镜头  
ANTI-VIBRATION LENS

2/3" 5MP  
2/3" 5MP FA LENS

自动对焦镜头  
AUTO-FOCUS 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

1.1" 25MP  
1.1" 25MP FA LENS

1.4" 45MP  
1.4" 45MP FA LENS



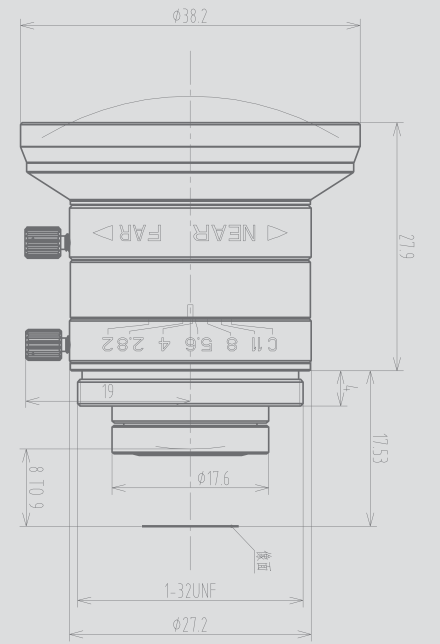
FIXED LENS FOR FA

01

# 1/1.8<sup>c</sup> 5MP

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

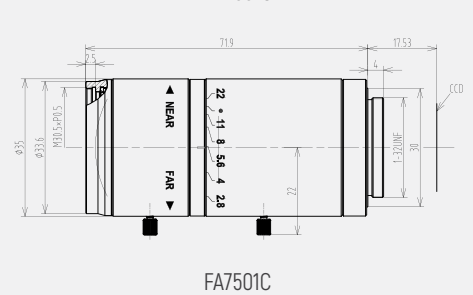
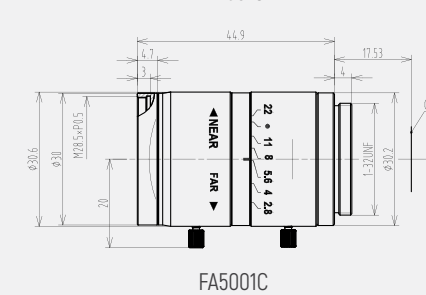
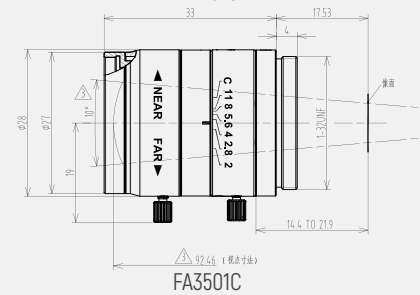
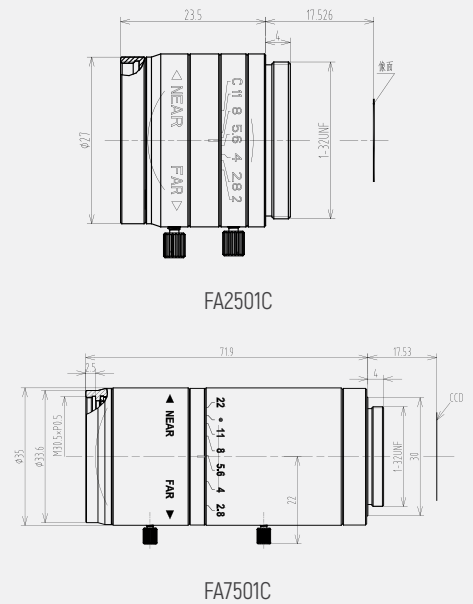
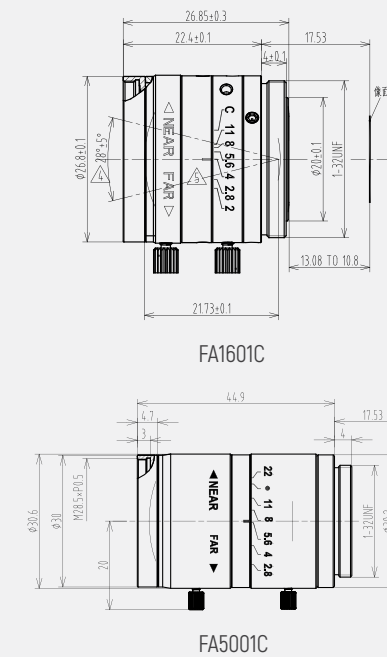
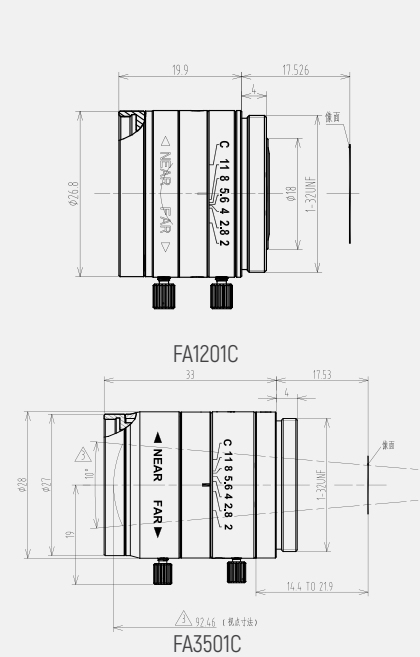
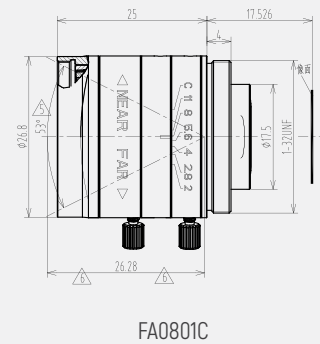
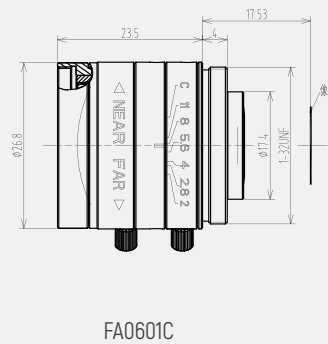
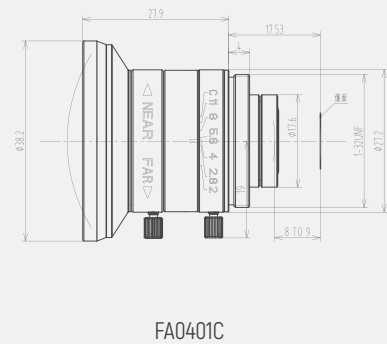


应用展示 / APPLICATION

<p><b>汽车 / Automobile</b>                  有无 / 辨别                  辨别安全带金属的品种                  Identify existence / Identify classification                  Identify the types of seat belt fittings</p>	<p><b>容器 / Container</b>                  瑕疵 / 污点                  检测瓶盖的外观                  Defective/Spot                  Check the appearance of bottle caps</p>	<p><b>电子设备 / Electronics equipment</b>                  有无 / 辨别                  检测电机线的捆扎不良和引线断裂                  Identify existence / Identify classification                  Detection of poor binding and broken leads of motor wires</p>	<p><b>食品 / Food</b>                  识别                  纸包装的条形码读取                  Identify                  Bar-code reading of paper packages</p>
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规格图 / SPECIFICATION DRAWING



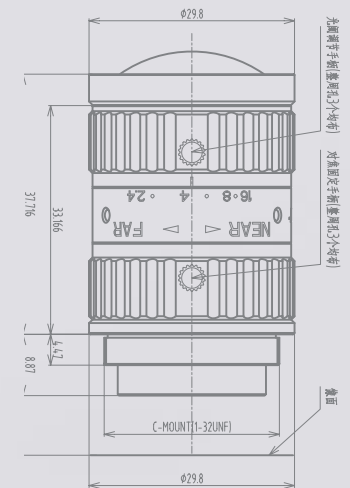
FIXED LENS FOR FA

02

# 1/1.7" 12MP

超高成像质量  
适用于像元 1.85um 相机，最高可达 1200 万像素  
匹配 IMX226 芯片 (1/1.7" 12MP)  
焦距覆盖 6-50mm  
体积小，超紧凑型设计

Ultra high imaging quality  
Suitable for 1.85um pixel camera, resolution up to 12MP  
Matching imx226 sensor (1/1.7" 12MP)  
EFL covers 6-50mm  
Small size, ultra compact design



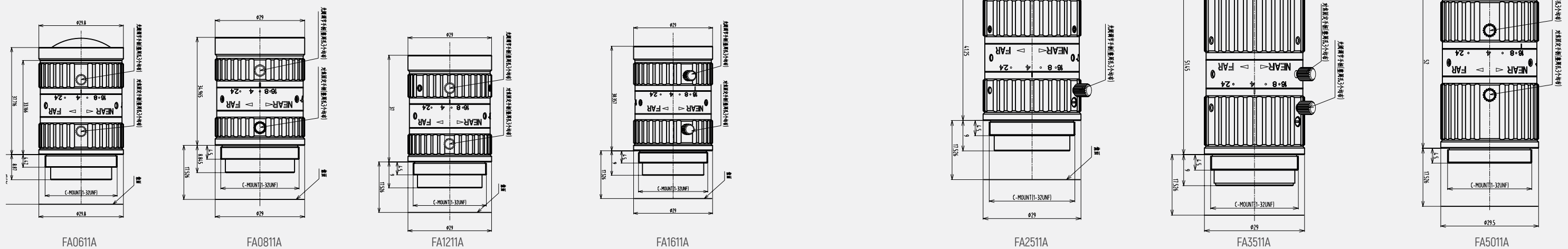
应用展示 / APPLICATION

 <p><b>电子零件 / Electronic parts</b></p> <p>瑕疵 / 污点 检测 相机缺陷 Defective/Spot Detect camera defects</p>	 <p><b>液晶、半导体、其他</b> Liquid crystal, semiconductor, others</p> <p>几何测量 检测 IC 导线弯曲 Geometric measurement Detects IC Lead Bending</p>	 <p><b>电子设备 / Electronics equipment</b></p> <p>有无 / 辨别 检测电机线的捆扎不良和引线断裂 Identify existence / Identify classification Detection of poor binding and broken leads of motor wires</p>	 <p><b>汽车 / Automobile</b></p> <p>有无 / 辨别 辨别安全带金具的品种 Identify existence / Identify classification Identify the types of seat belt fittings</p>
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焦距	F/NO	接口	畸变
6-50mm	2.4-16	C-Mount	<0.03%



规格图 / SPECIFICATION DRAWING





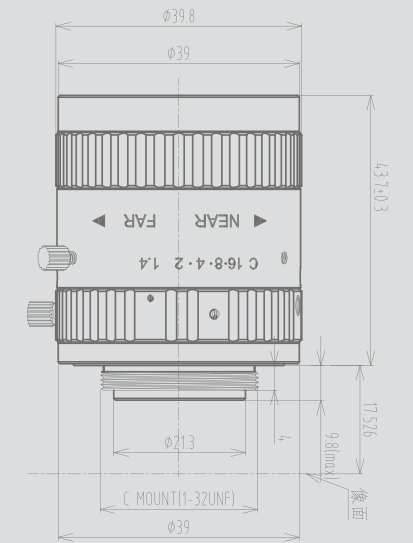
FIXED LENS FOR FA

03

# 2/3" 5MP

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  
 高对比度图像

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



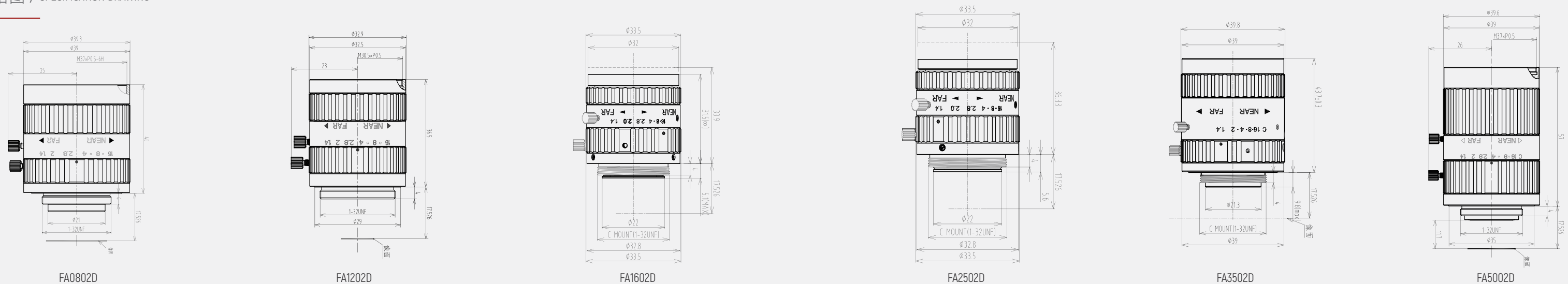
焦距	F/NO	接口	畸变
8-50mm	1.4-16	C-Mount	<0.1%

应用展示 / APPLICATION

<p><b>容器 / Container</b>                  有无 / 辨别                  检测是否有不同品种的瓶盖混入                  Identify existence / Identify classification                  Detect whether there are different types of bottle caps mixed in</p>	<p><b>汽车 / Automobile</b>                  瑕疵 / 污点                  检测活塞的切屑附着                  Blemish / Stain                  Detection of cutting adhesion of the piston</p>	<p><b>工业 / Industry</b>                  高度                  检测金属的刻印                  Height                  Detect metal markings</p>	<p><b>工业 / Industry</b>                  位置 / 倾斜                  金属模内的工作安装位置确认                  Position/Obliqueness                  Confirmation of the work piece mounting position in the mold</p>
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规格图 / SPECIFICATION DRAWING



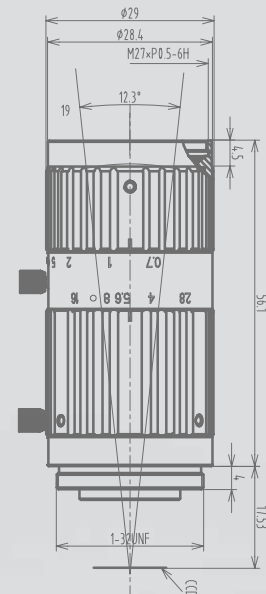
FIXED LENS FOR FA

04

# 2/3" 10MP

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



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

应用展示 / APPLICATION



电子零件 / Electronic parts

有无 / 辨别  
检测载带内有无 IC  
Identify existence / Identify classification  
Check whether ic is in the belt



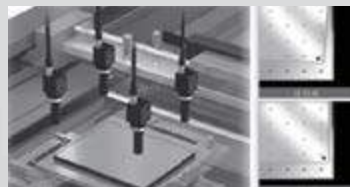
电子设备 / Electronic equipment

瑕疵 / 污点  
检测电池外罐的外观  
Defective/Spot Check the appearance on the battery outer tank



电子零件 / Electronic parts

位置 / 倾斜  
检测电容器的导线不良  
Position / Tilt  
Defective lead wire of the detection capacitor

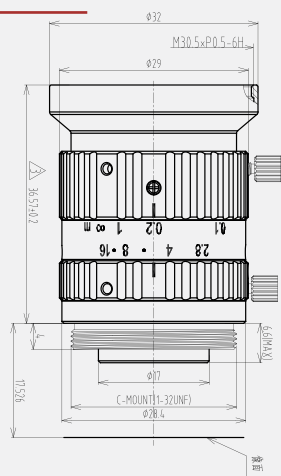


液晶、半导体、其他

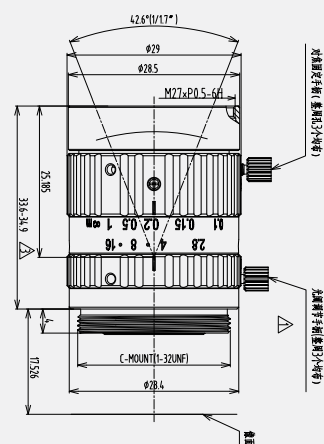
Liquid crystal, semiconductor, others  
位置 / 倾斜  
玻璃电路板的定位  
Position/Obligueness  
Positioning of glass circuit boards



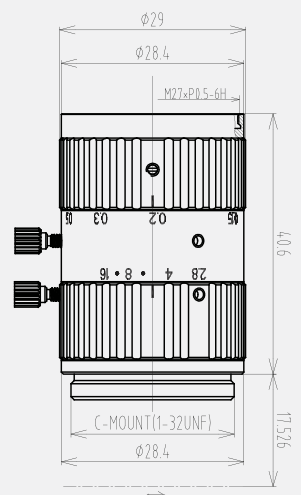
规格图 / SPECIFICATION DRAWING



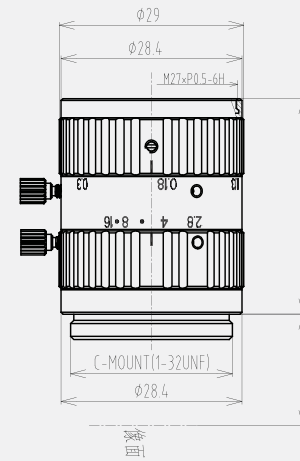
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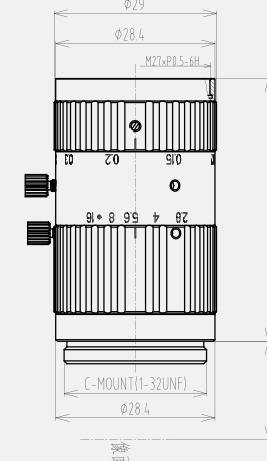
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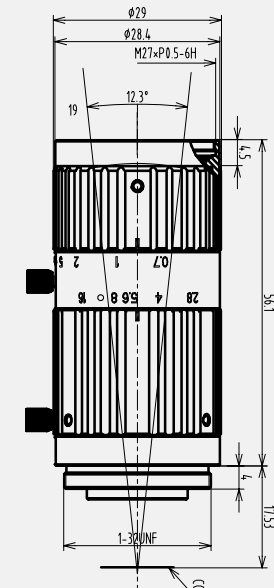
FA1610A



FA2510A



FA3510A



FA5010A

FIXED LENS FOR FA

05

# 1° 5MP

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

应用展示 / APPLICATION



**液晶、半导体、其他**  
 Liquid crystal, semiconductor, others  
 计数  
 SD卡数量计算  
 Counting  
 Calculation of the number of SD cards



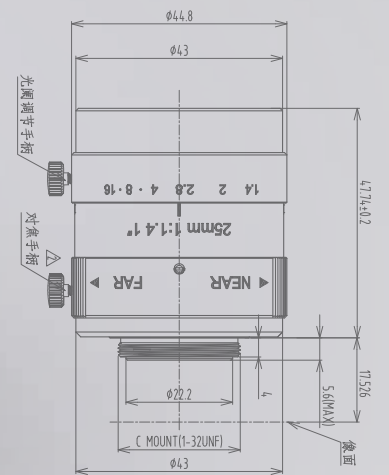
**电子零件 / Electronic parts**  
 瑕疵 / 污点  
 LED外观检测  
 Defective/Spot  
 LED appearance inspection



**电子设备 / Electronics equipment**  
 有无 / 辨别  
 检测电机线的捆扎不良和引线断裂  
 Identify existence / Identify classification  
 Detection of poor binding and broken leads of motor wires



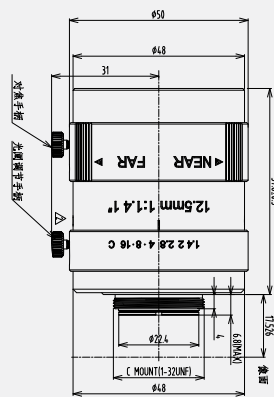
**电子设备 / Electronic equipment**  
 几何测量  
 检测电池的弹片端子焊接位置不良  
 Geometric measurement  
 Detecting the bad welding position of the shrapnel terminal of the battery



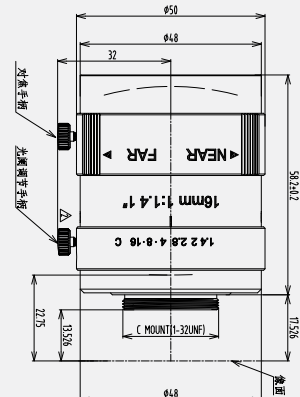
焦距	F/NO	接口	畸变
12.5-75mm	1.4-16	C-Mount	< 0.1%



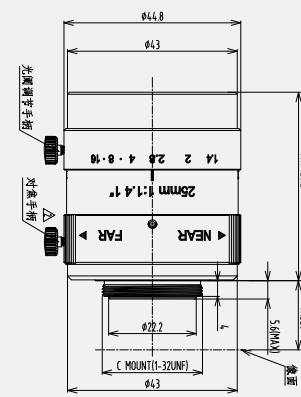
规格图 / SPECIFICATION DRAWING



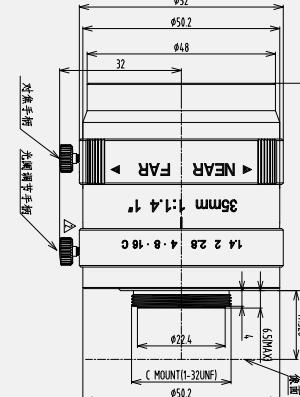
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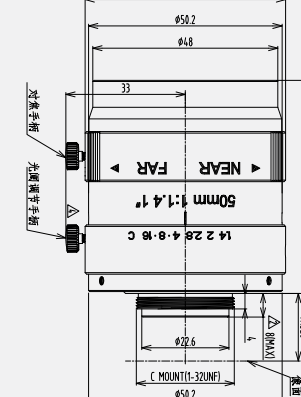
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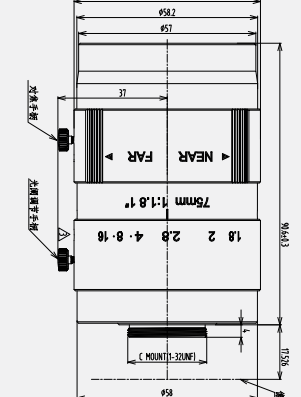
HC2505A



HC3505A



HC5005A



HC7505A

FIXED LENS FOR FA

06

# 1.1" 20MP

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

应用展示 / APPLICATION



电子零件 / Electronic parts

有无 / 辨别  
检测微小芯片的个数 & 刻印不良  
Identify existence / Identify classification  
Detect the number of microchips & mark defects



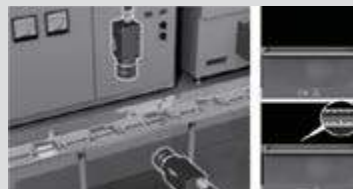
电子零件 / Electronic parts

瑕疵 / 污点  
检测 相机缺陷  
Defective/Spot  
Detect camera defects



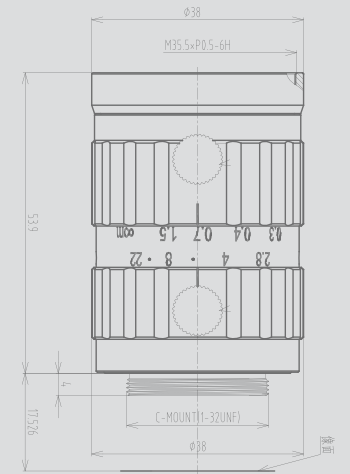
液晶、半导体、其他  
Liquid crystal, semiconductor, others

几何测量  
检测 IC 导线弯曲  
Geometric measurement  
Detects IC Lead Bending



电子零件 / Electronic parts

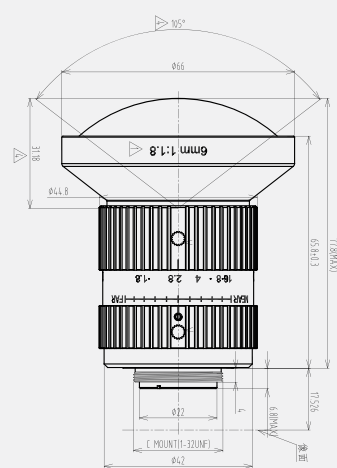
连接器  
连接器针脚的平整度检测  
Connector  
Flatness detection of connector pins



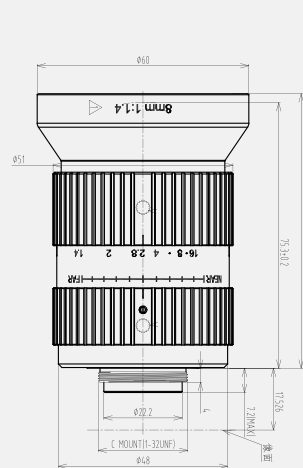
焦距	F/NO	接口	畸变
6-50mm	2.8-22	C-Mount	< 0.1%



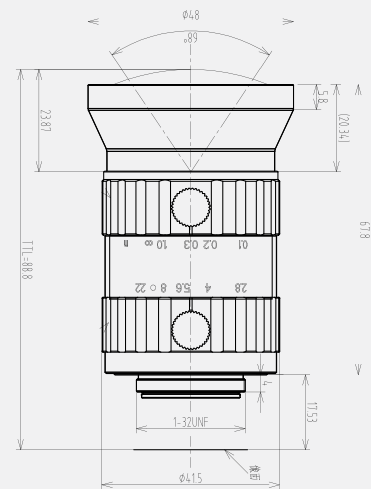
规格图 / SPECIFICATION DRAWING



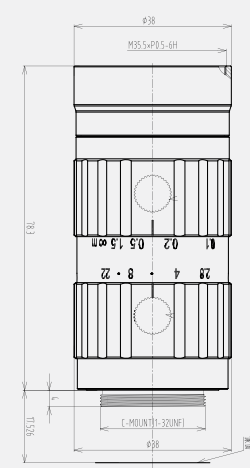
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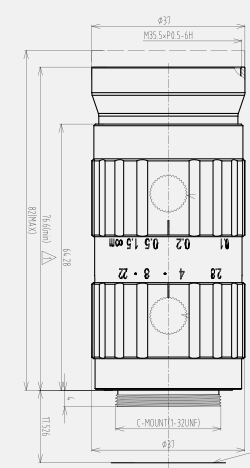
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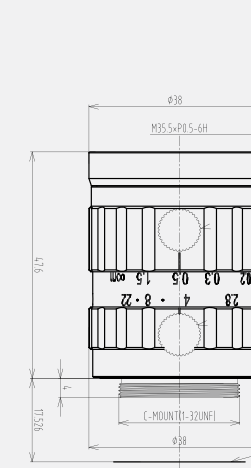
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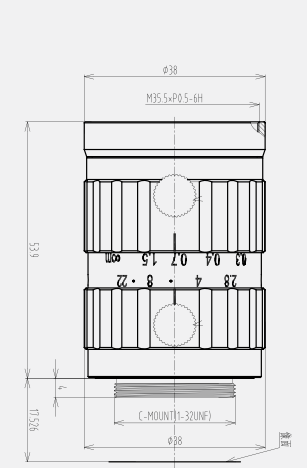
FA1616A



FA2516A



FA3516A



FA5016A

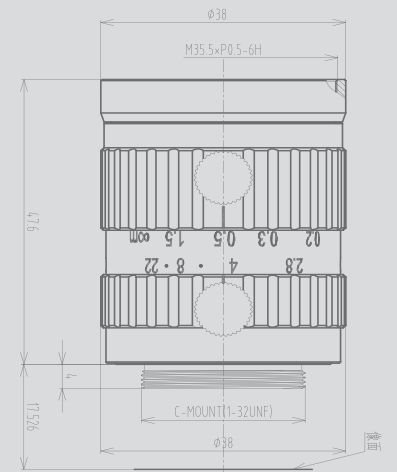
FIXED LENS FOR FA

07

# 4/3" 20MP

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



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

应用展示 / APPLICATION

**电子零件 / Electronic parts**  
瑕疵 / 污点  
LED 外观检测  
Defective/Spot  
LED appearance inspection

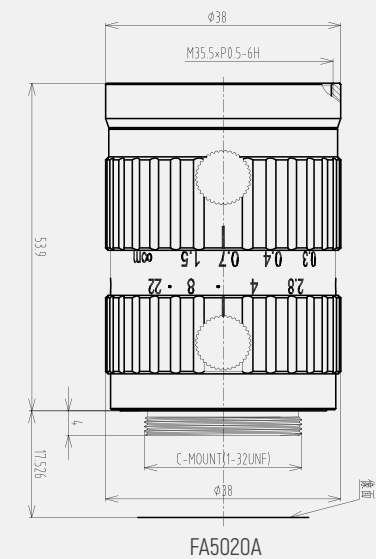
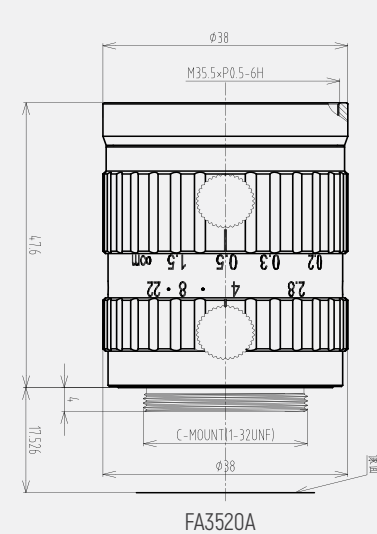
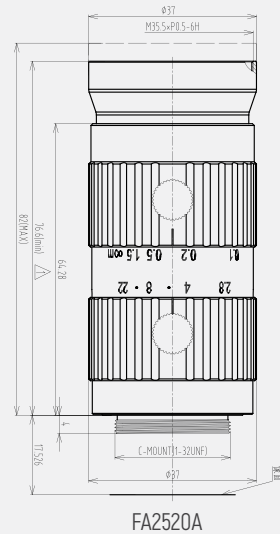
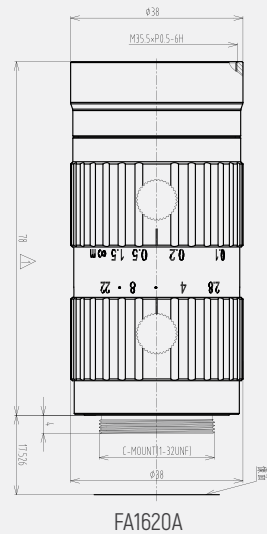
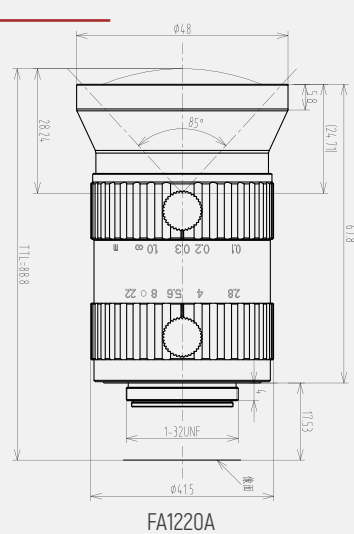
**电子设备 / Electronic equipment**  
有无 / 辨别  
检测电机线的插扎不良和引线断裂  
Identify existence / Identify classification  
Detection of poor binding and broken leads of motor wires

**电子设备 / Electronic equipment**  
几何测量  
检测电池的弹片端子焊接位置不良  
Geometric measurement  
Flatness detection of connector pins

**液晶、半导体、其他**  
Liquid crystal, semiconductor, others  
计数  
SD 卡数量计算  
Counting  
Calculation of the number of SD cards



规格图 / SPECIFICATION DRAWING



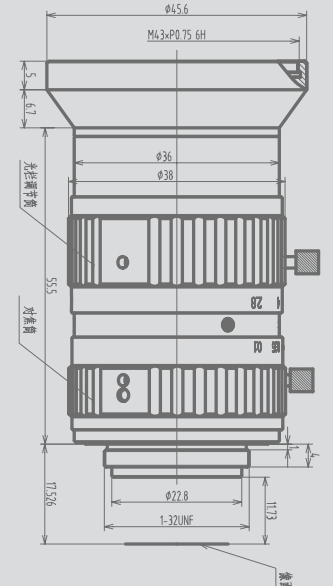
FIXED LENS FOR FA

08

# 1.1° 25MP

全视场分辨率可达 200lp/mm  
 适用于像元 2.4um 相机，最高可达 2500 万像素  
 兼容 1.1° 25MP 和 1° 20MP 芯片  
 高均匀性，高相对照度  
 TV 畸变 < 0.1%

Full field resolution can reach 200 lp/mm  
 Suitable for 2.4um pixel camera, up to 25MP  
 Compatible with 1.1° 25MP and 1° 20MP sensors  
 High uniformity, high relative illumination  
 TV distortion < 0.1%



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

应用展示 / APPLICATION

**工业 / Industry**  
 瑕疵 / 污点  
 检测钢板上的瑕疵污点  
 Defective/Spot Check for flaws/stains on steel plates

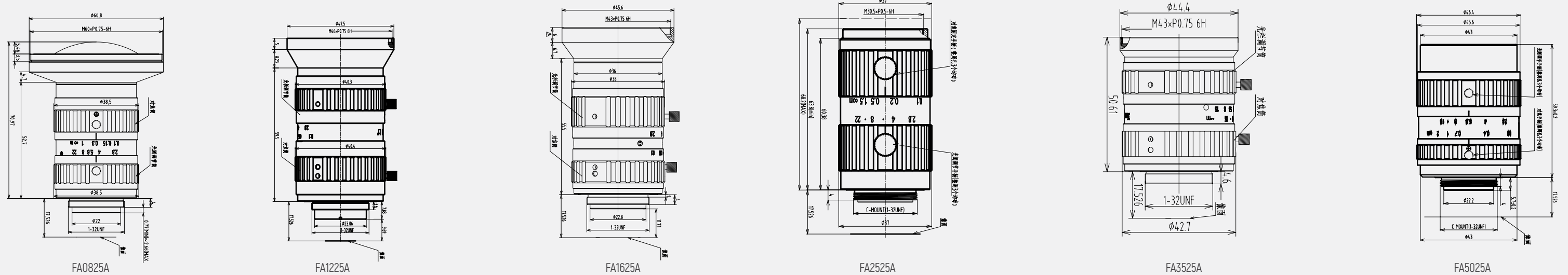
**电子零件 / Electronic parts**  
 连接器  
 连接器针脚的平整度 检测  
 Connector  
 Flatness detection of connector pins

**电子零件 / Electronic parts**  
 瑕疵 / 污点  
 LED 外观检测  
 Defective/Spot  
 LED appearance inspection

**电子设备 / Electronic equipment**  
 瑕疵 / 污点  
 检测电池外罐的外观  
 Defective/Spot  
 Check the appearance on the battery outer tank



规格图 / SPECIFICATION DRAWING





FIXED LENS FOR FA

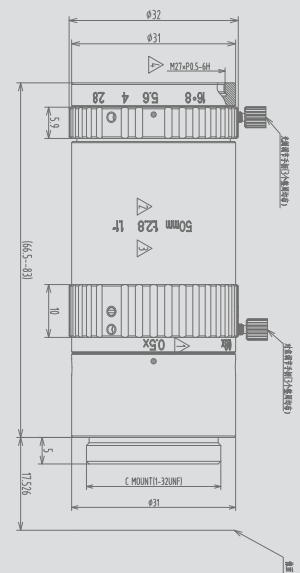
10

# MACRO LENS

1.1 12MP  
微距镜头  
MACRO LENS

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



应用展示 / APPLICATION



**工业 / Industry**  
瑕疵 / 污点  
检测钢板上的瑕疵污点  
Defective/Spot Check for flaws/  
stains on steel plates



**电子零件 / Electronic parts**  
有无 / 辨别  
检测微小芯片的个数 & 刻印不良  
Identify existence / Identify classification  
Detect the number of microchips & mark defects



**电子零件 / Electronic parts**  
瑕疵 / 污点  
检测 相机缺陷  
Defective/Spot  
Detect camera defects

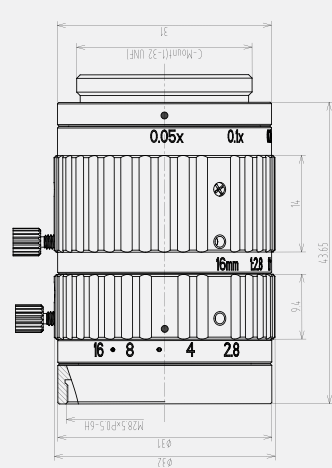


**电子设备 / Electronic equipment**  
有无 / 辨别  
检测电机线的捆扎不良和引线断裂  
Identify existence / Identify classification  
Detection of poor binding and broken leads of  
motor wires

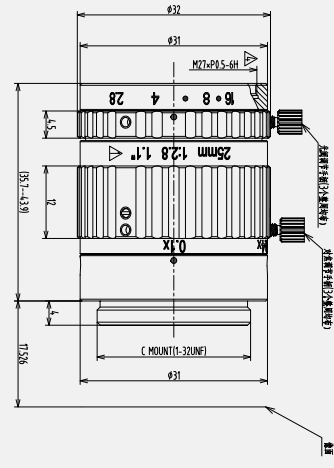


焦距	F/NO	接口	畸变
16-75mm	2.8-16	C-Mount	< 0.05%

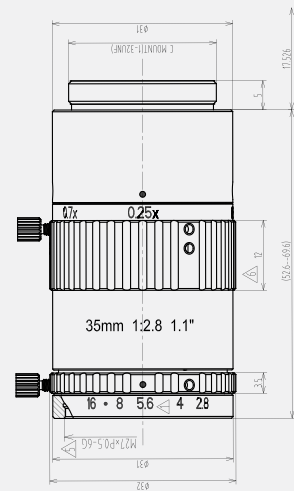
规格图 / SPECIFICATION DRAWING



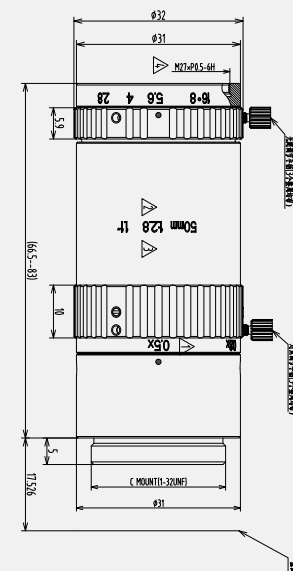
ML1610A



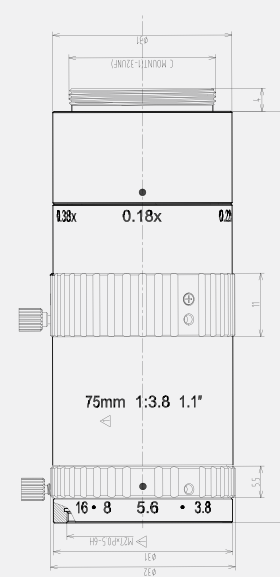
ML2510A



ML3510A



ML5010A



ML7510A



FIXED LENS FOR FA

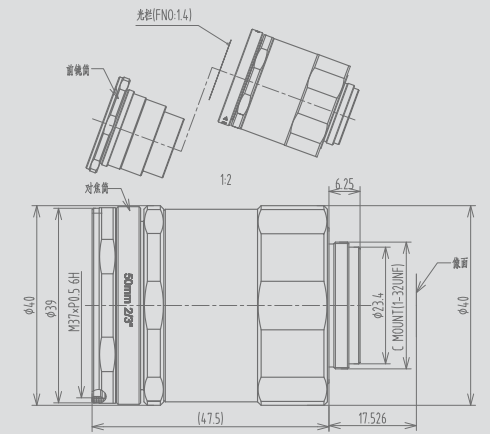
11

# ANTI-VIBRATION LENS

1.1' 20MP  
2/3' 5MP  
抗振镜头  
Anti-vibration Lens

稳定的结构设计  
可抵御强烈振动和冲击  
固定光圈，多种光圈规格可选  
支持 2/3" 500 万像素相机  
适用于机械手等高振动、高冲击环境

Stable structural design  
Resist strong shock and impact  
Fixed aperture, various aperture available  
Support 2/3" 5MP camera  
Suitable for high vibration and high impact environment such as robot arms



焦距	F/NO	接口	畸变
8-50mm	1.4-16	C-Mount	<0.1%

应用展示 / APPLICATION

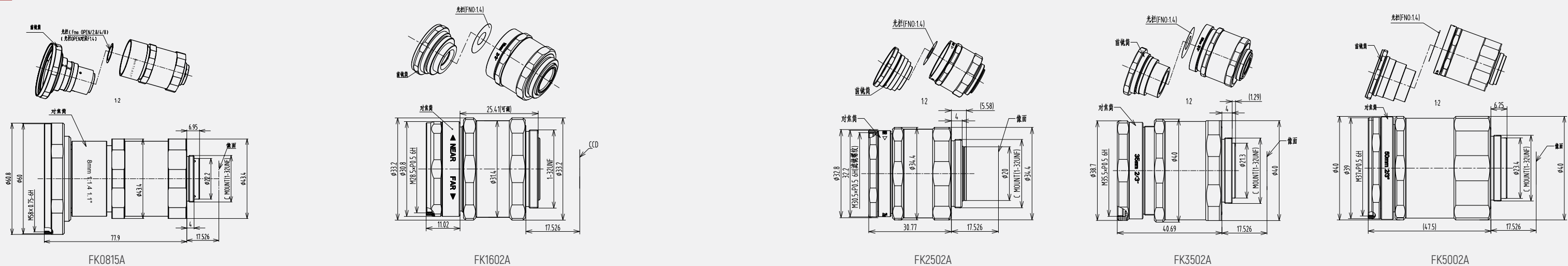
**工业 / Industry**  
位置 / 倾斜  
判断螺丝位置及紧固情况  
Position / tilt  
Identify screw position and fastening condition

**工业 / Industry**  
识别 / 检测  
振动环境下的视觉检测  
Identify / Detect  
Visual Inspection in Vibration Environments

**机械手 / Manipulator**  
定位 / 辨别  
机械手抓取定位及辨别  
Locate / Identify  
Robotic grasping positioning and identification

**汽车 / Automobile**  
位置 / 倾斜  
汽车自动化装配中的定位组装  
Position / Tilt  
Positioning assembly in automotive automation assembly

规格图 / SPECIFICATION DRAWING



FIXED LENS FOR FA

12

# AUTO- FOCUS LENS

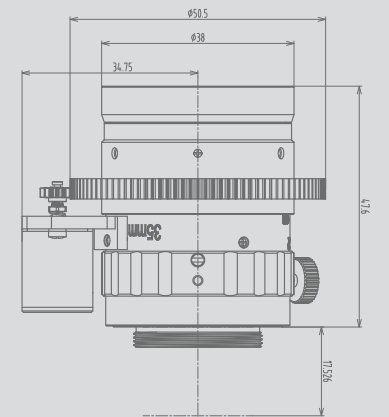
2/3" 5MP  
1.1" 20MP

自动对焦镜头

Auto-focus Lens

优异的自动对焦性能  
支持多种通讯方式：RS232/TTL/脉冲  
自动对焦精度  $\pm 0.001^\circ$   
响应速度快，响应时间  $< 1\text{ms}$   
焦距涵盖 8-50mm

Excellent autofocus performance  
Support multiple communication modes: RS232 / TTL/pulse  
Autofocus accuracy  $\pm 0.001$  degree  
The response time is less than 1ms  
EFL covers 8-50mm



焦距	F/NO	接口	畸变
8-50mm	1.4-16	C-Mount	$< 0.1\%$

应用展示 / APPLICATION



**工业 / Industry**  
位置 / 倾斜  
热锻金属模具的工件安装位置确认  
Position/Obliqueness  
Confirmation of the work piece mounting position in the mold



**工业 / Industry**  
外观 / 瑕疵  
确认模塑品是否填充不良  
Appearance/ defect  
Confirm the molded parts are properly filled

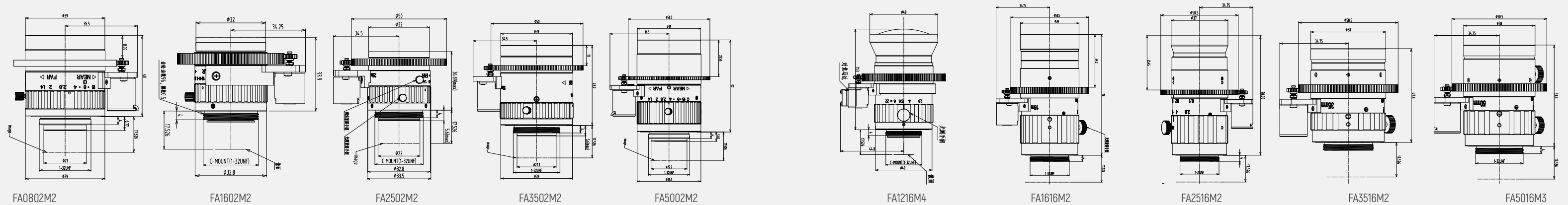


**汽车 / Automobile**  
外观 / 瑕疵  
汽车仪表盘各个位置的外观检测  
Appearance/Blemishes  
Appearance Inspection of Various Positions of Automobile Dashboard



**工业 / Industry**  
识别 / 检测  
恶劣环境下的视觉检测  
Identify/ Detect  
Visual Inspection in Harsh Environments

规格图 / SPECIFICATION DRAWING



# LINE SCAN LENS

线扫镜头

LINE SCAN  
LENS

# LINE SCAN LENS



## 线扫镜头

Master of Industrial Lens

02



### SERIES

#### 系列产品

4K 线扫镜头  
4K LINE SCAN LENS



4K7 $\mu$  线扫镜头  
4K7 $\mu$  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

01

# 4K

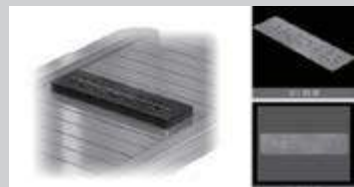
4K  
线扫镜头  
4k LINE SCAN LENS

专为小型线扫描相机而设计  
标准焦段及倍率可供选择  
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

# LINE SCAN LENS

## 应用展示 / APPLICATION



### 工业 / Industry

高度  
检测金属的刻印  
Height  
Detect metal markings



### 电子零件 / Electronic parts

瑕疵 / 污点  
LED 外观检测  
Defective/Spot  
LED appearance inspection



### 电子零件 / Electronic parts

有无 / 辨别  
辨别电池组的颜色  
Identify existence / Identify classification  
Determine the color of the battery pack



### 工业 / Industry

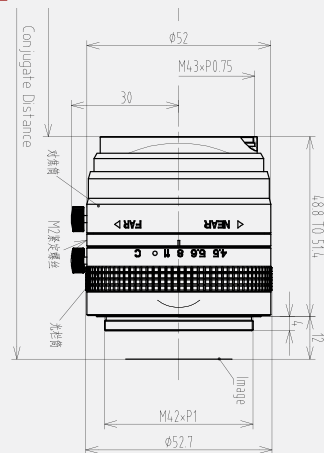
瑕疵 / 污点  
检查极片涂布上的瑕疵 / 污点  
Blemishes/stains  
Inspect for blemishes and stains on electrode sheet coating



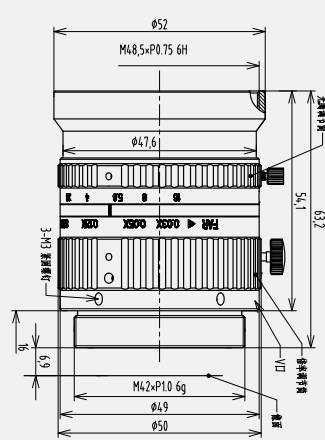
焦距	倍率	接口	畸变
20-40mm	0.02X-0.33X	V-Mount	< 0.01%



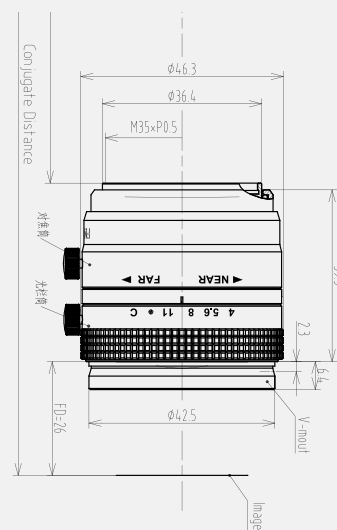
## 规格图 / SPECIFICATION DRAWING



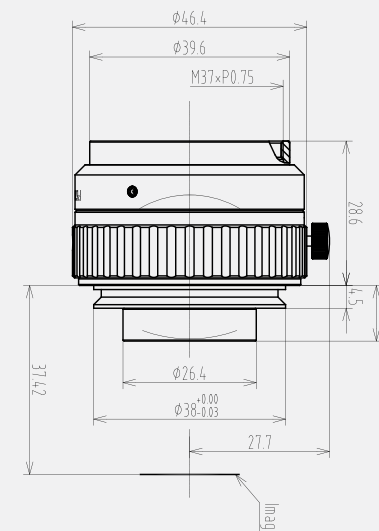
LS2003C



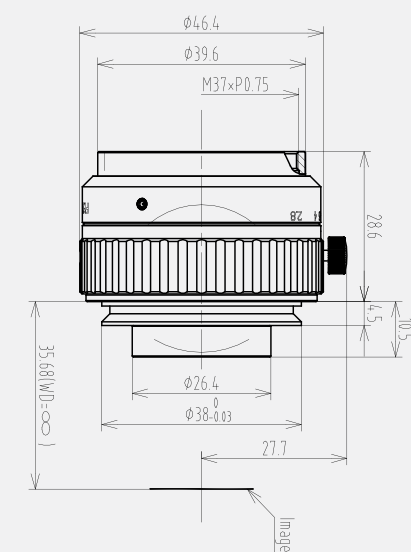
LS2502B



LS2801A



LS3508A



LS4010A

LINE SCAN LENS

02

# 4K<sup>NEW</sup> 7μ 4K7μ 线扫镜头

4K7μ LINE SCAN LENS

# LINE SCAN LENS

多焦段多倍率覆盖，宽对焦范围设计  
 均匀 MTF 设计，光学无热化设计  
 超低畸变，高相对照度  
 接口 M42×P1，专为小型线扫相机设计  
 适用于印刷包装检测

Covers multi focal length & magnification, wide focus range design  
 Uniform MTF design and optical athermal design  
 Ultra-low distortion and high relative illumination  
 M42×P1 Mount, specially designed for compact line scan cameras  
 Applicable to printing and packaging inspection



焦距	倍率	接口	畸变
20-100mm	0.005X-0.46X	M42×P1	<0.2%

应用展示 / APPLICATION

**工业 / Industry**  
 高度检测金属的刻印  
 Height Detect metal markings

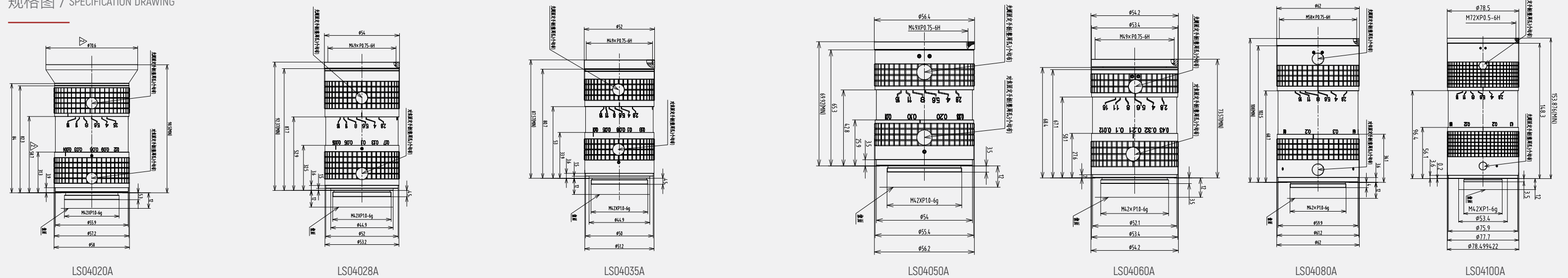
**电子零件 / Electronic parts**  
 瑕疵 / 污点 LED 外观检测  
 Defective/Spot LED appearance inspection

**电子零件 / Electronic parts**  
 有无 / 辨别 辨别电池组的颜色  
 Identify existence / Identify classification Determine the color of the battery pack

**工业 / Industry**  
 瑕疵 / 污点 检查极片涂布上的瑕疵 / 污点  
 Blemishes / Spots Check for flaws/spots on the pole piece coating



规格图 / SPECIFICATION DRAWING



# LINE SCAN LENS

03

# 8K<sup>8K</sup>

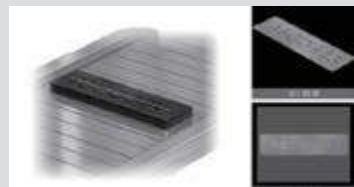
8K  
线扫镜头  
8K LINE SCAN LENS

专为 8k7μ 线扫描相机而设计  
标准焦段及倍率可供选择  
倍率覆盖 0.02x-0.4x  
V-Mount, 灵活适配不同接口相机  
适用于锂电等大尺寸检测

Specially designed for 8k7μ line scan camera  
Standard EFL and magnification available  
Magnification from 0.02x-0.4x  
V-mount as standard, adaptable to various camera mount  
Applied to big size detection such as lithium battery

# LINE SCAN LENS

## 应用展示 / APPLICATION



**工业 / Industry**  
高度  
检测金属的刻印  
Height  
Detect metal markings



**电子零件 / Electronic parts**  
瑕疵 / 污点  
LED 外观检测  
Defective/Spot  
LED appearance inspection



**电子零件 / Electronic parts**  
有无 / 辨别  
辨别电池组的颜色  
Identify existence / Identify classification  
Determine the color of the battery pack



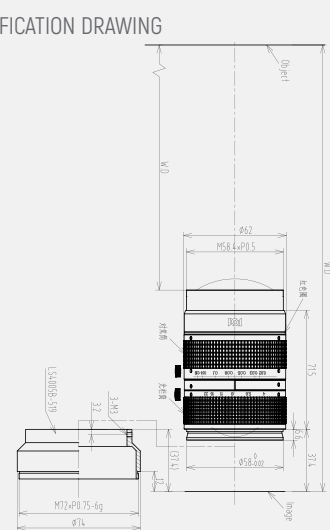
**工业 / Industry**  
瑕疵 / 污点  
检查极片涂布上的瑕疵 / 污点  
Blemishes / Spots  
Check for flaws/spots on the pole piece coating



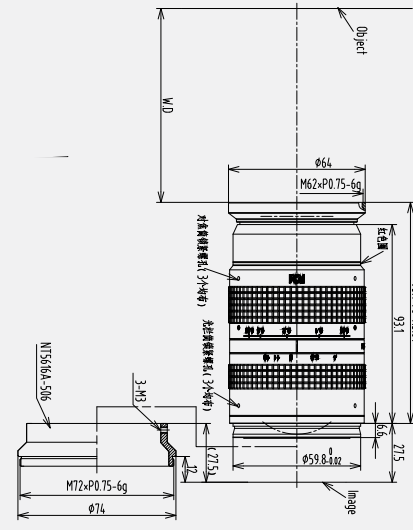
焦距	倍率	接口	畸变
40-100mm	0.02X-0.4X	V-Mount	< 0.01%



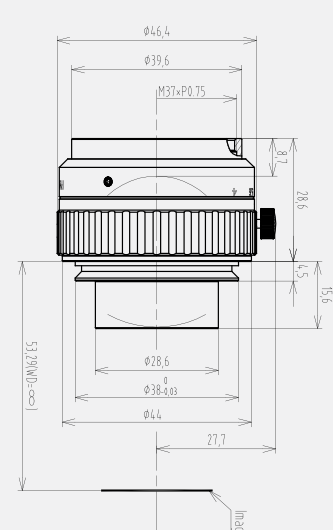
## 规格图 / SPECIFICATION DRAWING



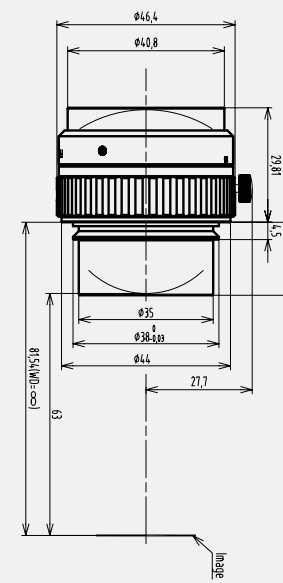
LS4005B



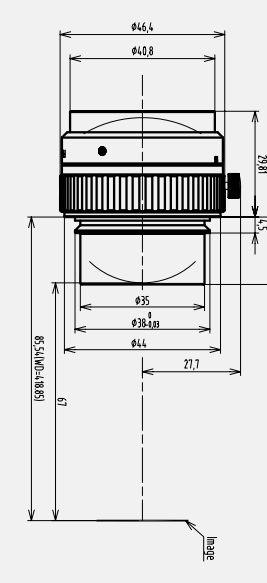
**NEW** MS4505A



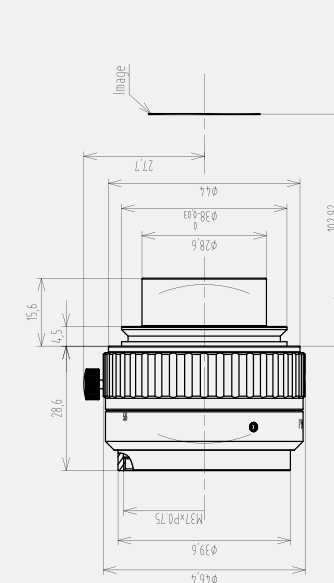
LS6016A



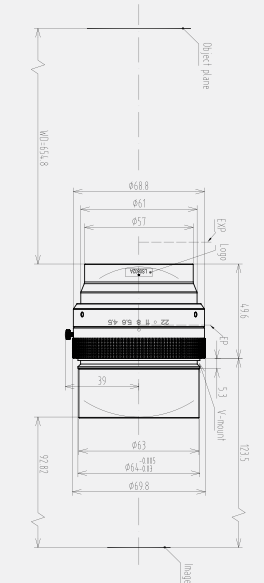
LS8014A



LS8020A



LS8003A



LS8002A

LINE SCAN LENS

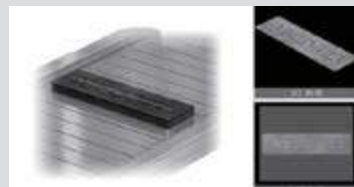
04

12K<sup>o</sup>

12K  
线扫镜头  
12k LINE SCAN LENS

LINE SCAN LENS

应用展示 / APPLICATION



工业 / Industry

高度  
检测金属的刻印  
Height  
Detect metal markings



工业 / Industry

瑕疵 / 污点  
检测钢板上的瑕疵污点  
Blemishes/ Spots  
Detect flaws and stains on steel plates



液晶、半导体、其他  
Liquid crystal, semiconductor, others

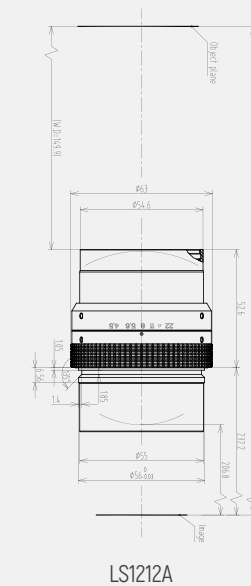
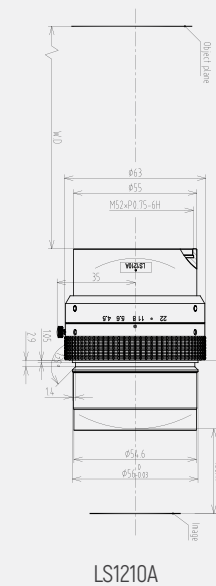
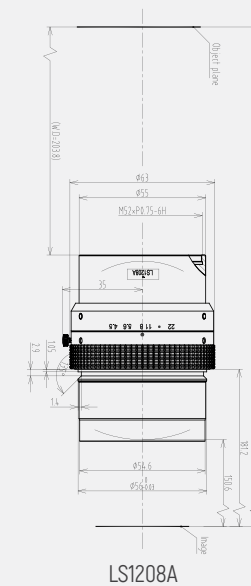
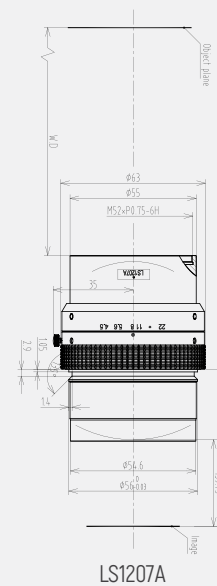
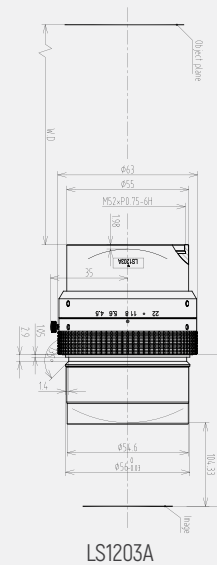
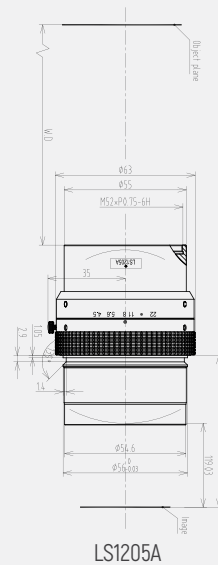
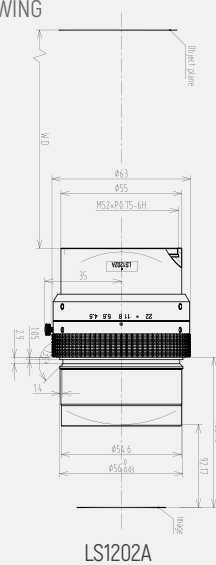
计数  
SD卡数量计算  
Counting  
Calculation of the number of SD cards



液晶、半导体、其他  
Liquid crystal, semiconductor, others

几何测量  
检测 IC 导线弯曲  
Geometric measurement  
Detects IC Lead Bending

规格图 / SPECIFICATION DRAWING



最大像面可达  $\phi 62\text{mm}$   
适用于 8k/12k 分辨率的相机  
标准放大倍率覆盖 0.18X-1.29X 区域  
大通光量设计可达 F4.5  
超低光学畸变

Max image circle is up to  $\phi 62\text{mm}$   
Suitable for 8k/12k resolution camera  
Standard magnification from 0.18X-1.29X  
Big aperture, FNO.4.5  
Ultra-low optical distortion



焦距	倍率	接口	畸变
116mm	0.18X-1.29X	V-Mount	< 0.005%





LINE SCAN LENS

05

# 16K<sup>3.5μ</sup> LINE SCAN LENS

16K3.5μ  
线扫镜头  
16k LINE SCAN LENS

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



焦距	倍率	接口	畸变
90-116mm	0.03X-0.8X	V-Mount	< 0.005%



应用展示 / APPLICATION



**工业 / Industry**  
瑕疵 / 污点  
检测钢板上的瑕疵污点  
Defective/Spot  
Check for flaws/stains on steel plates



**电子零件 / Electronic parts**  
有无 / 辨别  
检测微小芯片的个数 & 刻印不良  
Identify existence / Identify classification  
Detect the number of microchips & mark defects

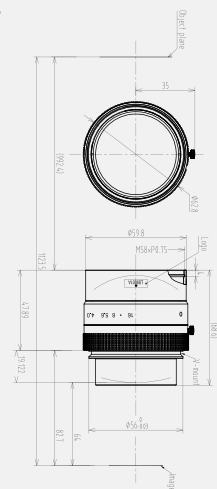


**电子零件 / Electronic parts**  
瑕疵 / 污点  
检测相机缺陷  
Defective/Spot  
Detect camera defects

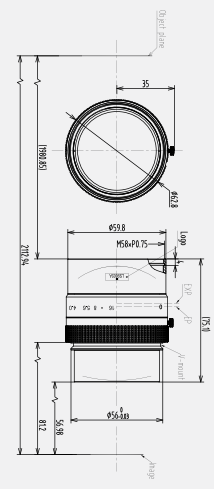


**电子设备 / Electronics equipment**  
有无 / 辨别  
检测电机线的捆扎不良和引线断裂  
Identify existence / Identify classification  
Detection of poor binding and broken leads of motor wires

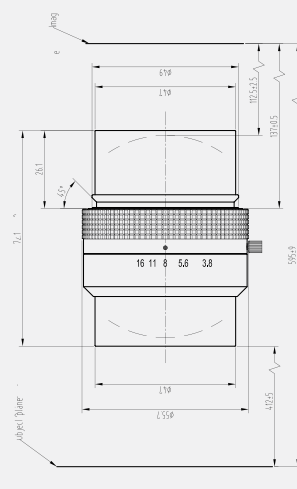
规格图 / SPECIFICATION DRAWING



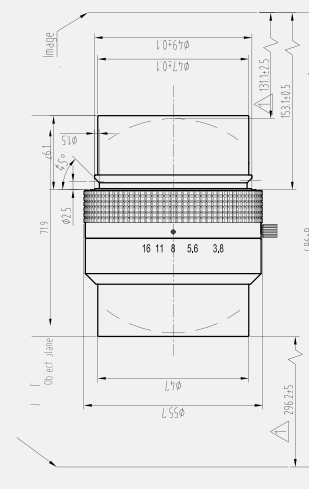
LS9001A



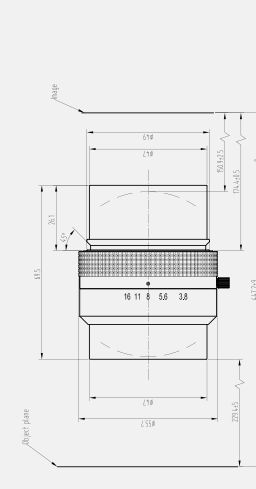
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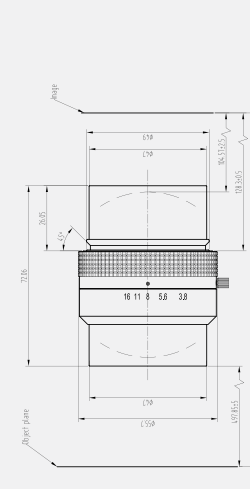
LS1603A



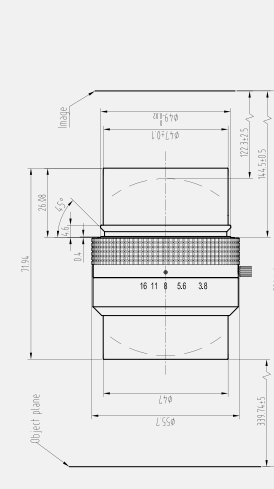
LS1605A



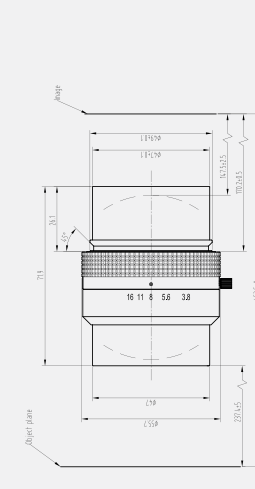
LS1607A



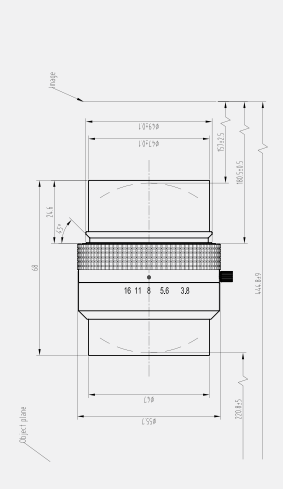
LS1626A



LS1642A



LS1667A



LS1675A

LINE SCAN LENS

06

# 16K<sup>5</sup> 5μ

16K5μ  
线扫镜头  
16K LINE SCAN LENS

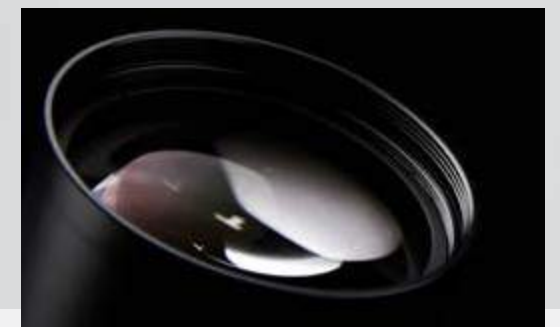
# LINE SCAN LENS

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 0.22X-4.5X

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 0.22X-4.5X



焦距	倍率	接口	畸变
116mm	0.22X-4.5X	V-Mount	< 0.001%



应用展示 / APPLICATION



**工业 / Industry**  
瑕疵 / 污点  
检测钢板上的瑕疵污点  
Defective/Spot  
Check for flaws/stains on steel plates



**电子零件 / Electronic parts**  
有无 / 辨别  
检测微小芯片的个数 & 刻印不良  
Identify existence / Identify classification  
Detect the number of microchips & mark defects

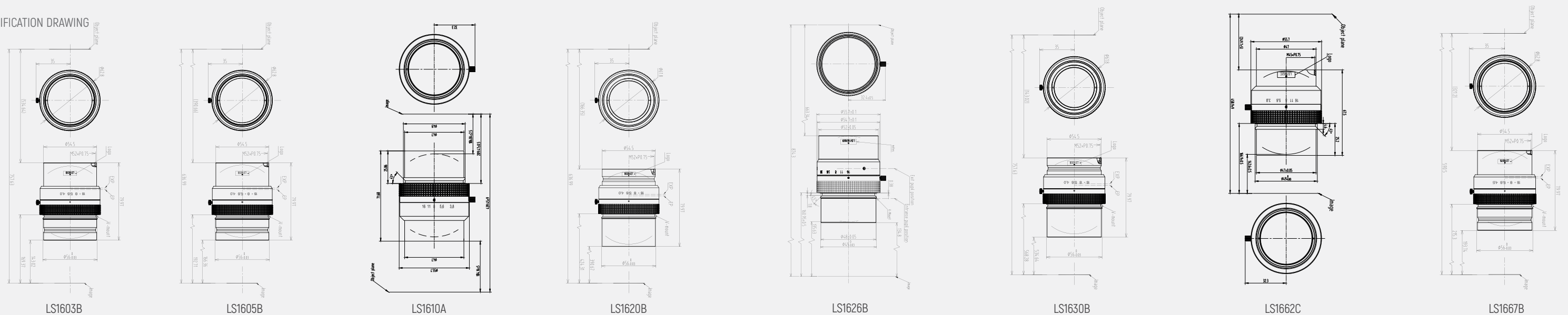


**电子零件 / Electronic parts**  
瑕疵 / 污点  
检测相机缺陷  
Defective/Spot  
Detect camera defects



**电子设备 / Electronics equipment**  
有无 / 辨别  
检测电机线的捆扎不良和引线断裂  
Identify existence / Identify classification  
Detection of poor binding and broken leads of motor wires

规格图 / SPECIFICATION DRAWING



# COAXIAL ILLUMINATION LINE SCAN LENS

## 同轴照明线扫镜头

16k5μ LINE SCAN LENS

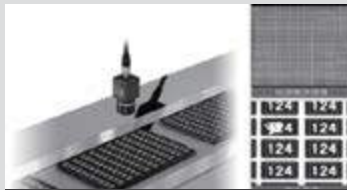
专为同轴照明光源系统设计  
消除了使用分光棱镜引起的分辨率下降  
达到高分辨率，高对比度的检测要求  
16K/5μ 并兼容 16K/3.5μ 以及 12K/5μ 的线扫相机  
附带 30\*80mm 分光棱镜  
超小的光学畸变小于 0.001%，小于 1Pixel  
大通光量设计可达 F3.8

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

### 应用展示 / APPLICATION



**工业 / Industry**  
瑕疵 / 污点  
检测钢板上的瑕疵污点  
Defective/Spot  
Check for flaws/stains on steel plates



**电子零件 / Electronic parts**  
有无 / 辨别  
检测微小芯片的个数 & 刻印不良  
Identify existence / Identify classification  
Detect the number of microchips & mark defects



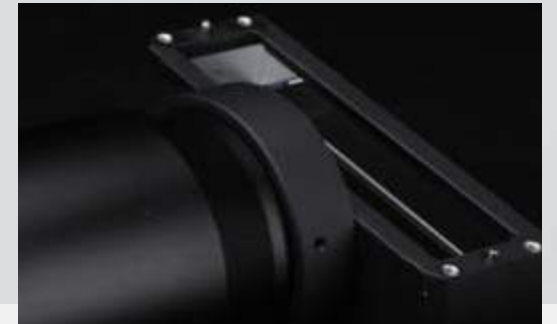
**电子零件 / Electronic parts**  
瑕疵 / 污点  
检测 相机缺陷  
Defective/Spot  
Detect camera defects



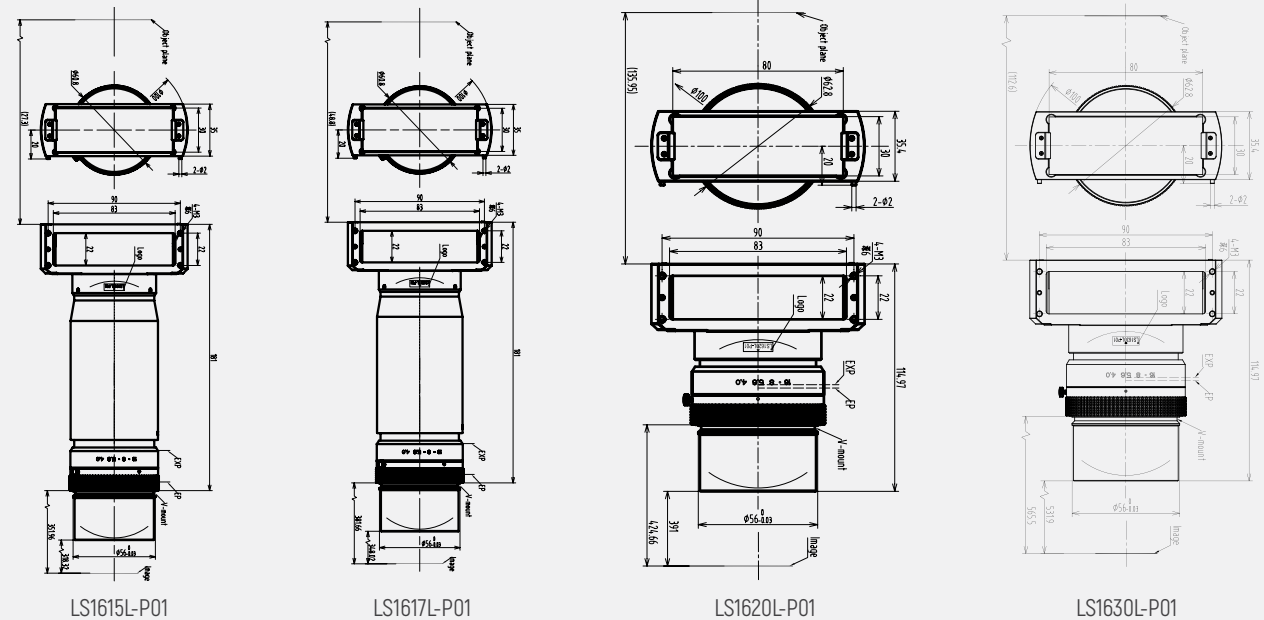
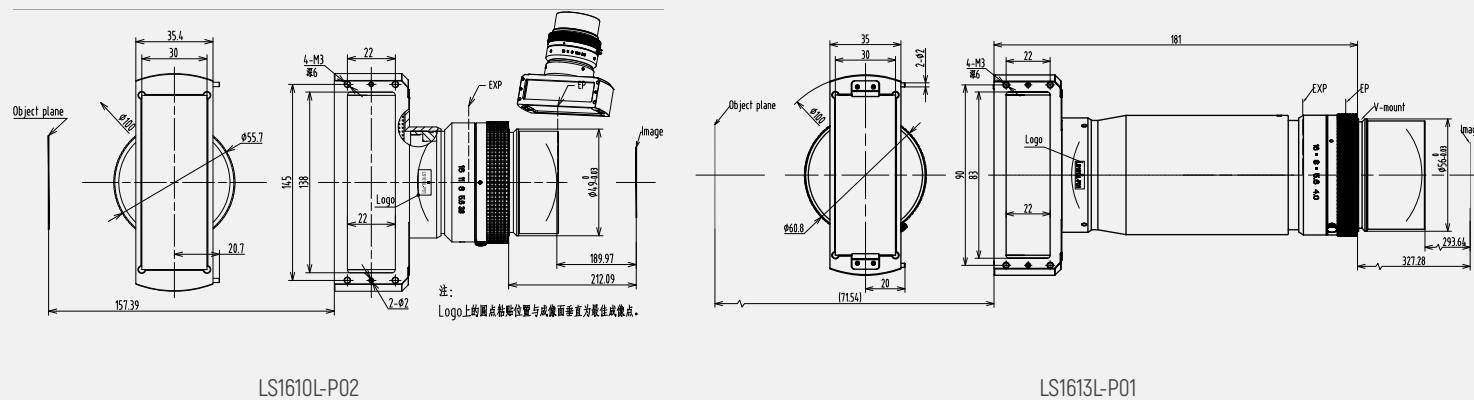
**电子设备 / Electronics equipment**  
有无 / 辨别  
检测电机线的捆扎不良和引线断裂  
Identify existence / Identify classification  
Detection of poor binding and broken leads of motor wires



最大像面尺寸	倍率	接口	畸变
φ82	0.9X-3.5X	V-Mount	< 0.001%



### 规格图 / SPECIFICATION DRAWING



大靶面镜头

# LA BORG LENS

LARGE  
LENS  
FORMAT

# LARGE FORMAT LENS



## 大靶面镜头

Master of Industrial Lens

03

SERIES

系列产品



1.2 亿 / 1.5 亿镜头  
120MP / 151MP LENS

29MP 大靶面镜头  
29MP LARGE FORMAT LENS

8k5μ 大靶面镜头  
8k5μ LARGE FORMAT LENS



# 120MP • 151MP



120MP/151MP LENS

## 1.5 亿超高清像素 大靶面工业镜头

荣获“机器视觉产业联盟金奖”  
支持 0.01X-0.5X 倍率范围  
专为面板行业而生，影像从未如此清晰

### 应用展示 / APPLICATION



OLED 检测



手表屏检测



电视大屏检测



3C 手机点亮检测



120MP/151MP



焦距	最大像面尺寸	倍率范围	畸变
50mm/55mm/90mm	Φ48/Φ67	0.01x-0.5x	< 0.05%

### 镜头特点 / CHARACTERISTIC

行业首款 1.5 亿像素镜头  
MS5515A 可实现超大靶面 (Φ66.7mm)  
全视场均匀成像, 同时满足高精度像元 (3.76um) 的需求  
MS5515A 支持 0.01X-0.5X 倍率范围变化,  
超大倍率范围能满足更多不同的视野要求  
MS5515A 焦距为 55mm, 在同样的倍率下,  
MS5515A 比传统方案共轭距减少一半  
适用于 OLED 屏幕检测, 小至电子手表屏,  
大至电视屏, 让屏幕缺陷无所遁形

First 150MP lens in global field  
MS5515A can realize uniform imaging of large  
format (66.7mm) in full field of view, and meet the  
requirement of high-precision pixel (3.76um)  
MS5515A supports 0.01x-0.5x super large magnification  
range, which can meet wide FOV requirements  
EFL of MS5515A is 55mm, at the same magnification,  
the conjugate distance of MS5515A is only half of traditional lens  
It is suitable for OLED screen detection, ranging from  
electronic watch screen to TV screen, so that screen  
defects can not be missed.

# LARGE FORMAT LENS

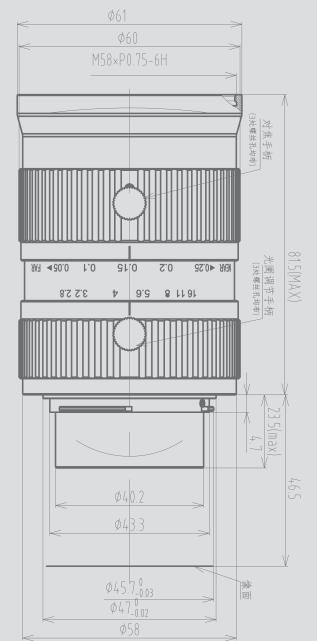
02

# 29MP<sup>o</sup>

大靶面工业镜头  
29MP LARGE FORMAT LENS

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  
标准焦段及倍率可供选择  
适用于印刷包装检测

The maximum image area can reach 43mm, supporting 29 million pixel sensor  
Compatible with 4K line scan cameras, corresponding to 5μ/7μ pixels  
Optical performance much better than SLR lenses  
Standard focal lengths and magnifications are available  
Suitable for printing and packaging inspection



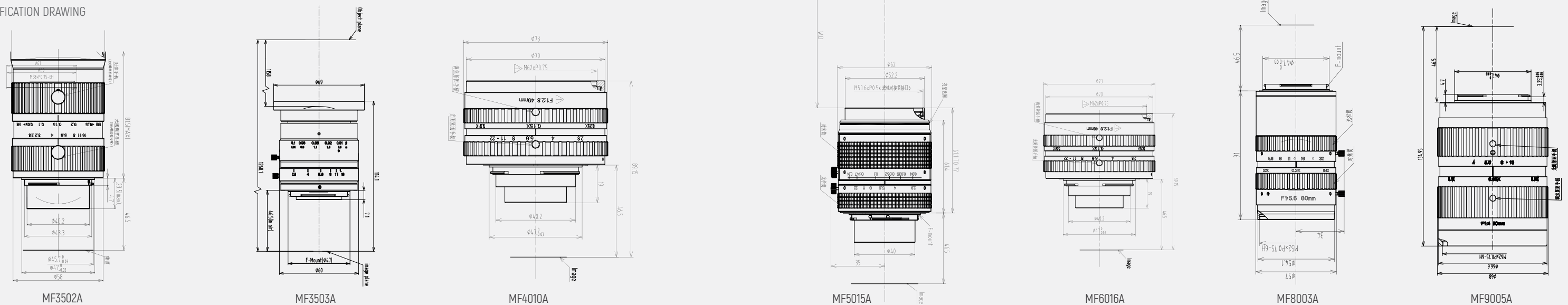
焦距	倍率	接口	畸变
35-90mm	0.01X-0.4X	F-Mount	<0.01%

## 应用展示 / APPLICATION

<p><b>工业 / Industry</b> 瑕疵 / 污点 检测钢板上的瑕疵污点 Defective/Spot Check for flaws/stains on steel plates</p>	<p><b>电子设备 / Electronics equipment</b> 有无 / 辨别 辨别电池组的颜色 Identify existence / Identify classification Determine the color of the battery pack</p>	<p><b>电子零件 / Electronic parts</b> 高度 检测金属的刻印 Height Detect metal markings</p>	<p><b>液晶、半导体、其他</b> Liquid crystal, semiconductor, others 计数 SD 卡数量计算 Counting Calculation of the number of SD cards</p>
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## 规格图 / SPECIFICATION DRAWING



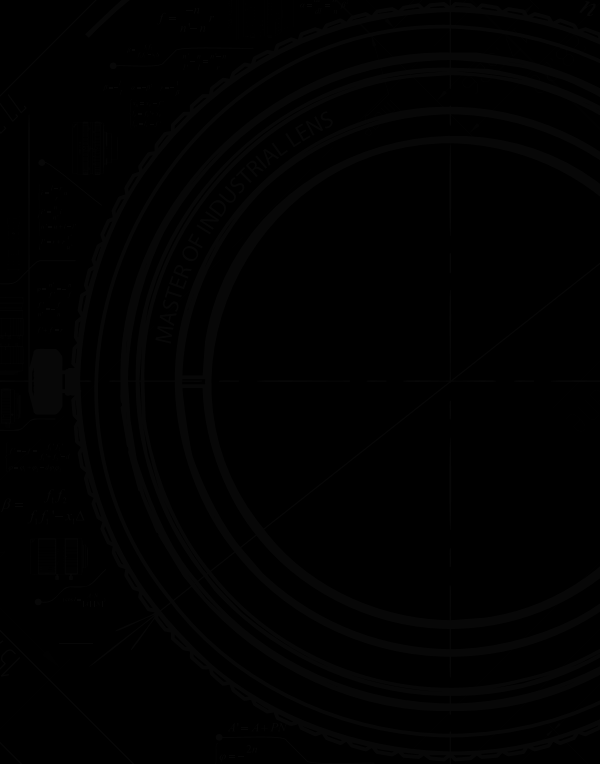




# TELECENTRIC LENSES

TELECENTRIC  
LENS

远心镜头



# TELEGEN- TRIC LENS



SERIES

系列产品



标准远心 65mm  
STANDARD TELECENTRIC LENS

标准远心 110mm  
STANDARD TELECENTRIC LENS

远心镜头

Master of Industrial Lens

04

WELCOME  
CUSTOMIZATION

欢迎定制

# 65mm • 110mm



STANDARD TELECENTRIC LENS

## 标准远心镜头

### 双远心设计

高分辨率  
高远心度、超低畸变、超高性价比  
采用双远心（物方、像方）设计  
专有识别集成电路、玻璃、液晶板等特征，  
以便于进行自动化的高速作业

### 应用展示 / APPLICATION



玻璃电路  
板定位



镜头 D 切  
刻旋角度



电容器导线



活塞切屑附着



65mm / 110mm

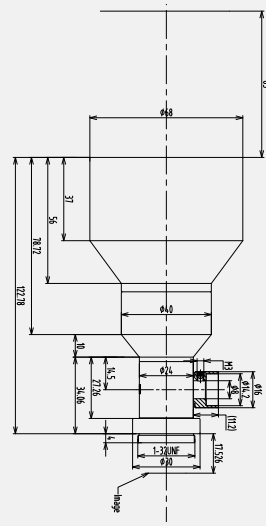


工作距离	最大像面尺寸	倍率	畸变
65mm/110mm	2/3"	0.2X-6X	< 0.05%

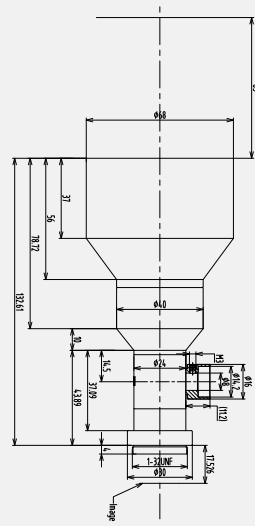
### 镜头特点 / CHARACTERISTIC

标准工作距离：65mm/110mm  
标准倍率：0.2X-6X  
高分辨率 可支持 5MP 2/3" 相机  
高远心度、超低畸变、超高性价比  
支持同轴、非同轴  
采用双远心（物方、像方）设计

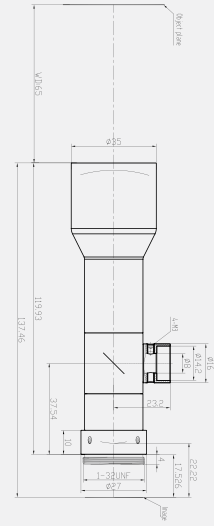
Standard working distance: 65mm/110mm  
Standard magnification: 0.2X-6X  
High resolution, support 2/3" 5MP camera  
Excellent telecentricity, ultra low distortion,  
perfect cost performance  
Coaxial and non-coaxial optional  
Bi-telecentric(image side, object side) design



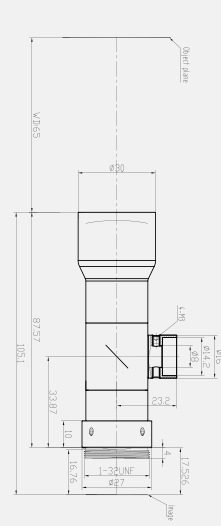
MV65021A



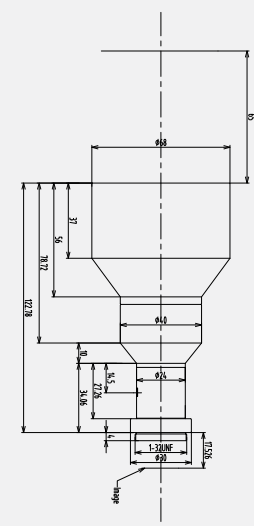
MV65031A



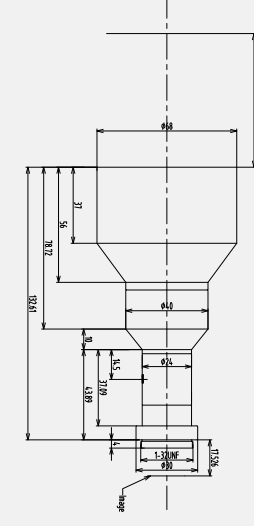
MV65051A



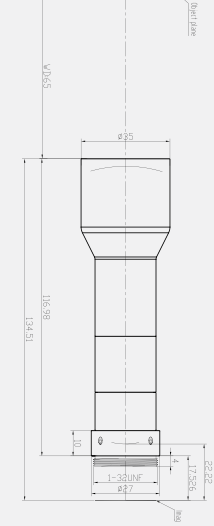
MV65075A



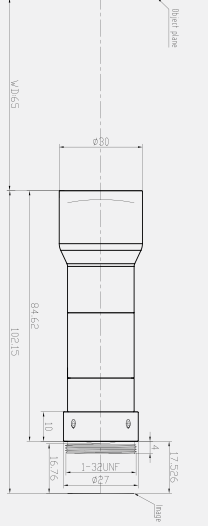
MV65021B



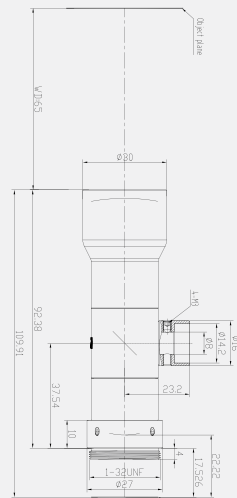
MV65031B



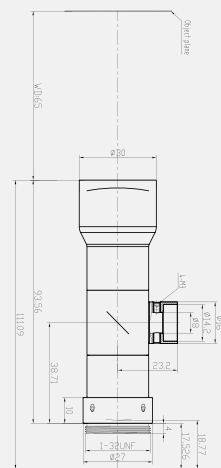
MV65051B



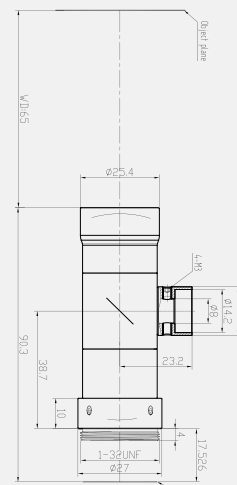
MV65075B



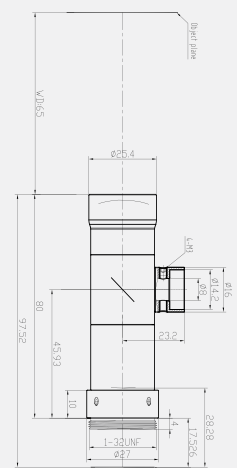
MV65081A



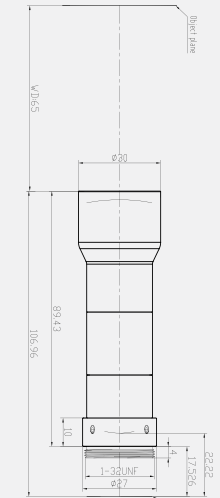
MV65101A



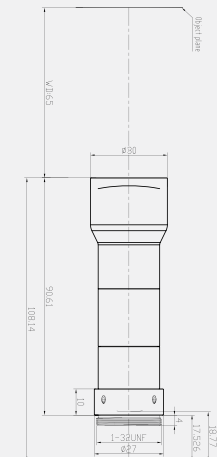
MV65151A



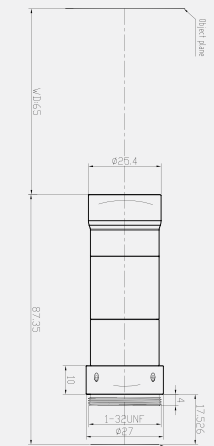
MV65201A



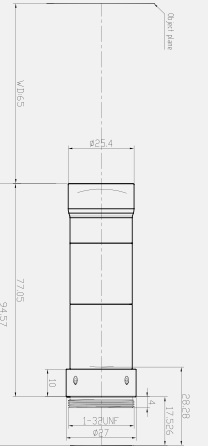
MV65081B



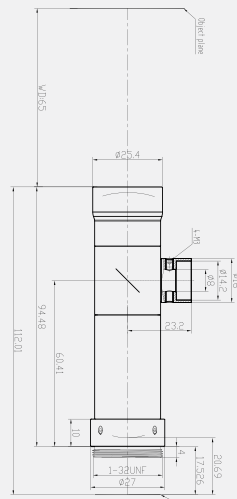
MV65101B



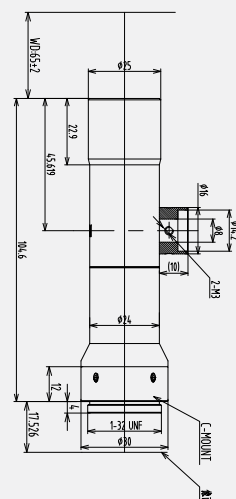
MV65151B



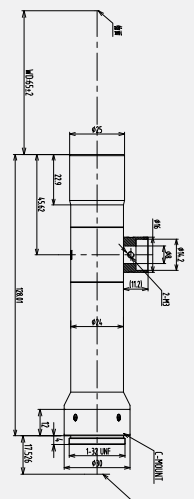
MV65201B



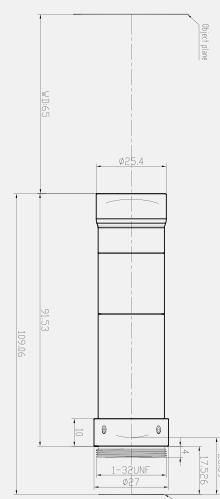
MV65301A



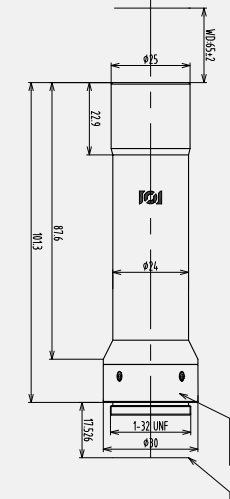
MV65401A



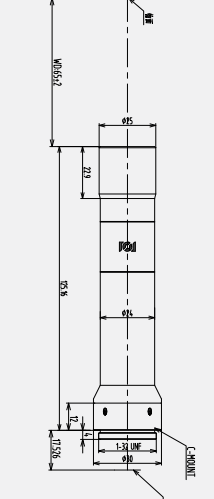
MV65601A



MV65301B



MV65401B



MV65601B

TELECENTRIC  
LENS  
**65MM**  
同轴远心  
欢迎定制  
Welcome customization

TELECENTRIC  
LENS  
**65MM**  
非同轴远心  
欢迎定制  
Welcome customization



SPECIALIZED  
LENS

SPECIALIZED LENSES  
特种镜头

# SPECIAL- IZED LENS



## 特种镜头

Master of Industrial Lens

05

## SERIES

### 系列产品

360°成像系统 (外壁)  
360°IMAGING SYSTEM(OUTER SURFACE)

360°成像系统 (内壁)  
360°IMAGING SYSTEM(INNER SURFACE)



360°成像系统  
360°IMAGING SYSTEM

沙姆镜头  
SCHEMPFLUG LENS

短波近红外镜头  
SWIR LENS



可见近红外镜头  
VISIBLE INFRARED LENS

超高解析线扫镜头  
HIGH RESOLUTION LINE SCAN LENS

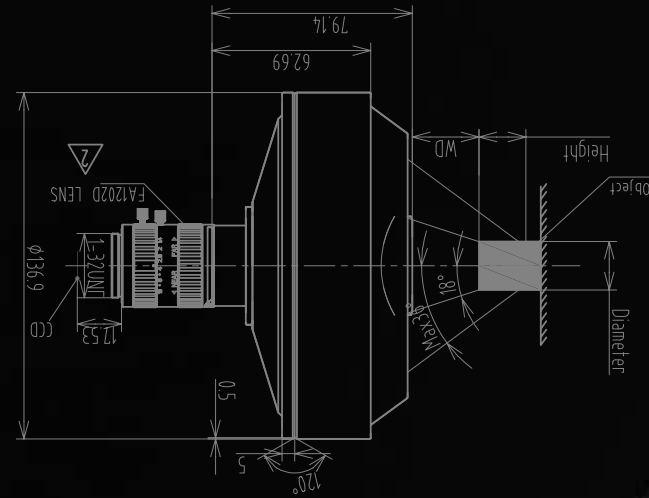
变倍远心镜头  
VARI-MAGNIFICATION TELECENTRIC LENS

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 LENS

# 360°

## 外壁



360°IMAGING SYSTEM(OUTER SURFACE)

## 最全视角

### 360°成像系统（外壁）

只需要一个系统就能全面检测物体  
实现小物体的 360°侧视图成像  
测量物体最小至 4.5mm

#### 应用展示 / APPLICATION



瓶盖检测



线圈外壁检测



药瓶检测



环外侧字符检测

360°外壁

#### 镜头特点 /CHARACTORISTIC

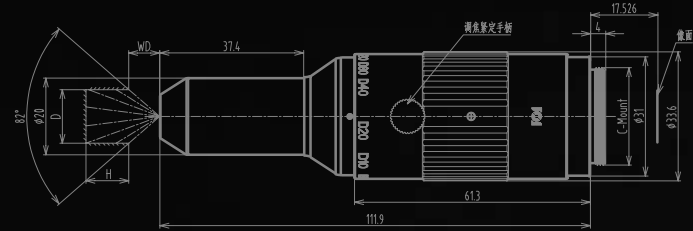
紧凑型设计和高分辨率性能  
用于实现小物体的 360°侧视图成像  
可选工作距离：19mm-46.2mm，  
19mm-45.4mm,14mm-48.2mm，  
9mm-45.4mm, 9mm-46.5mm  
适用于检测药物容器，塑料盖，预成型件，  
瓶颈，螺丝和其他螺纹物体等组件  
测量物体最小至 4.5mm（外壁）

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]



# 360°

## 内壁



360° 内壁

360°IMAGING SYSTEM(INNER SURFACE)

## 超大景深

### 360°成像系统 (内壁)

从外部检查腔内  
 无需在孔洞内放置光学探头  
 带孔对象的 360 度完美对焦  
 腔体内壁和底部都可实现高分辨率成像

#### 应用展示 / APPLICATION



#### 镜头特点 / CHARACTERISTIC

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  
 适用于带孔洞物体的内壁检测  
 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

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, containers, pipes, etc., super large DOF  
 Measuring objects, whose diameter is min. 5mm, with big view angle

# 360° IMAGING SYSTEM



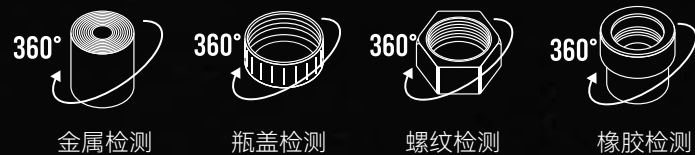
360°IMAGING SYSTEM

## 多视角，高分辨率

### 360°成像系统

无需架设多台相机  
一次拍摄同时获得内外表面图像  
可拍侧面八种不同角度  
高分辨率，高通光量  
适用于螺丝、密封圈、预成型件等物体内外壁检测

#### 应用展示 / APPLICATION

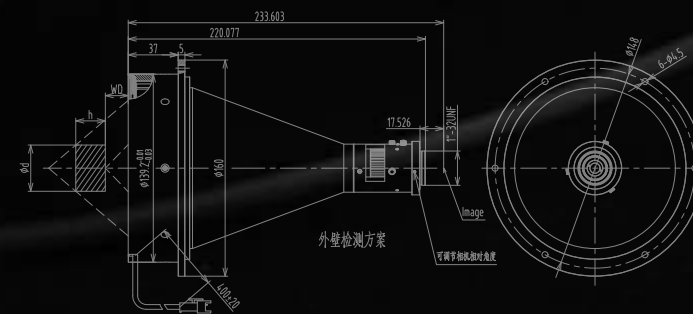


360°  
IMAGING SYSTEM



#### 镜头特点 / CHARACTERISTIC

拍摄物体内外壁，无需架设多台相机  
只需一台相机，一次拍摄即可同时获得物体内表面和外表面图像  
45°宽视角成像，可拍摄物体侧面八种不同角度的图像  
高分辨率，高通光量  
适用于螺丝、密封圈、预成型件等物体内外壁检测



No need to set up multiple cameras to shoot the inner and outer walls of the object  
45° wide viewing angle imaging, which can take images of eight different angles on object side  
The inner wall of an object with holes can also be detected at the same time to form a combined view of the inner surface and the outer surface;  
With only one camera, the images of the inner surface and outer surface of the object can be obtained at the same time;  
High resolution and big aperture;  
Suitable for detecting the inner and outer walls of screws, sealing rings, preforms and other objects

# SCHEIMPFLUG

# LENS

1.1 20MP  
沙姆镜头  
SCHEIMPFLUG LENS

应用展示 / APPLICATION

 <p><b>电子 / Electronics</b> 位置 / 倾斜 检测 SMT 中元器件的有无和位置 Position / tilt Detect the presence and location of components in SMT</p>	 <p><b>工业 / Industry</b> 瑕疵 / 污点 检测齿轮侧面螺纹的瑕疵伤痕等 Blemish / Stain Detects flaws, scratches, etc. of gear flank threads</p>	 <p><b>工业 / Industry</b> 有无 / 辨别 检测成型机的模具残留 Identify existence / Identify classification Detection of abrasive residues in the molding machine</p>	 <p><b>汽车 / Automobile</b> 瑕疵 / 污点 汽车零部件表面检测 Blemish / Stain Surface inspection of auto parts</p>
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独特的沙姆角调节机构设计  
完美解决普通镜头景深限制问题  
多种焦距镜头可选  
支持 1.1" 相机，最高可达 2000 万像素  
适用于 SMT、3D 检测等应用

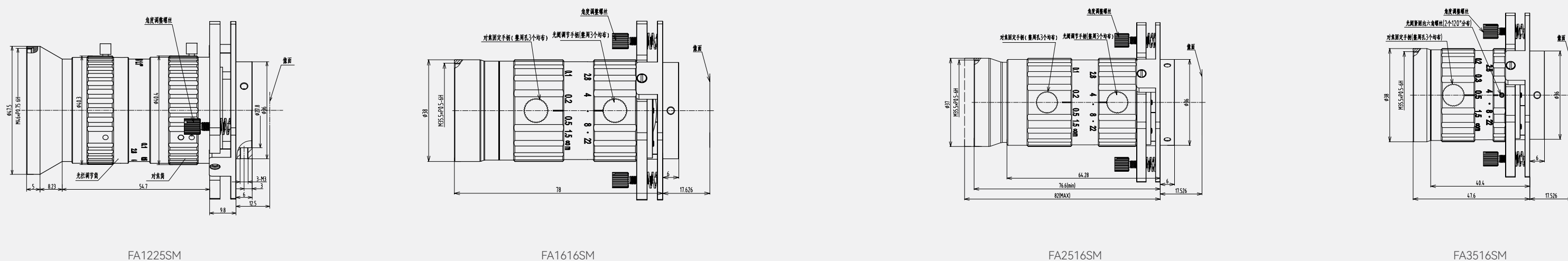
Unique design of Scheimpflug angle adjusting mechanism  
Perfectly solved the DOF limitation on normal lens  
Various EFL available  
Support 1.1" camera, up to 20MP  
suitable for SMT, 3D detection and other applications



焦距	F/NO	接口	畸变
12-35mm	2.8-22	C-Mount(φ27.9)	<0.1%



规格图 / SPECIFICATION DRAWING



SPECIALIZED LENS

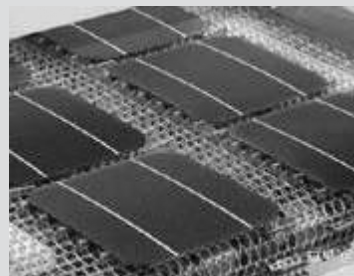
05

# SWIR LENS<sup>®</sup>

## 短波近红外镜头

SWIR LENS

### 应用展示 / APPLICATION



硅片隐裂检测  
Silicon chip  
hidden crack  
detection



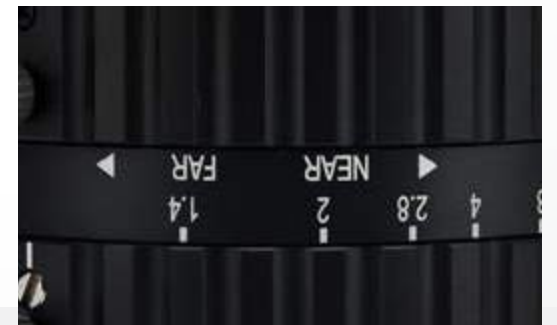
电池片产品检测  
Battery cell  
product testing

工作波长 800nm-1700nm  
专为近红外波段优化设计  
解决一系列红外应用  
高透过率, 高均匀性  
体积小, 外形紧凑

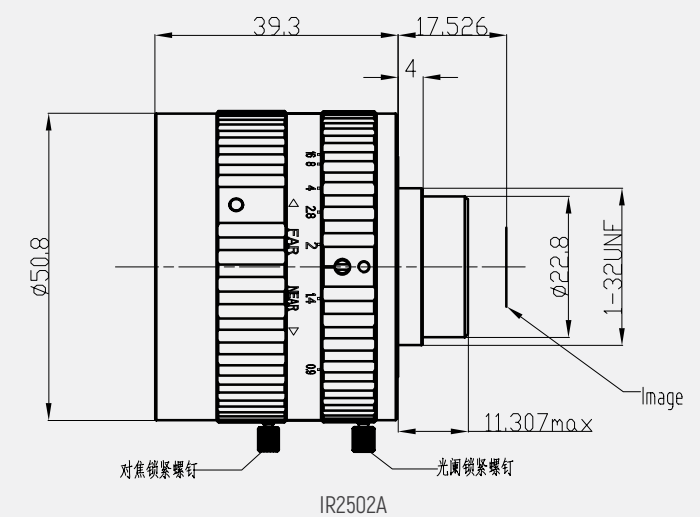
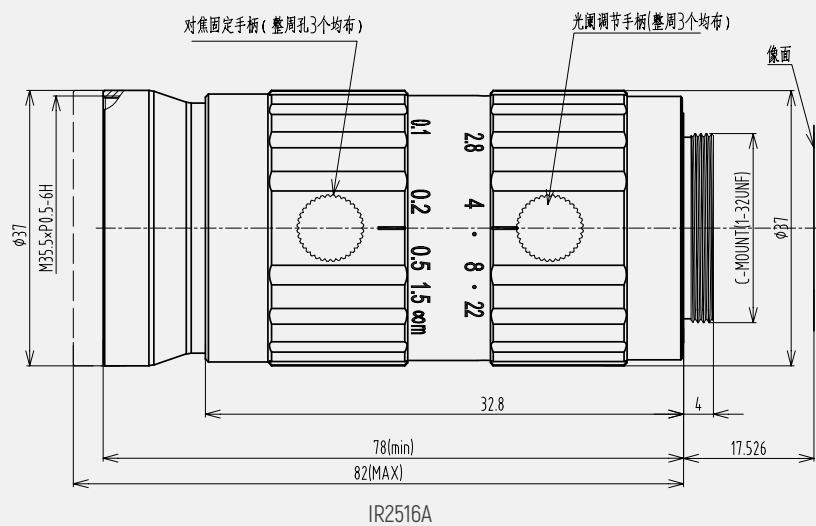
The working wavelength is 800nm-1700nm  
Optimized design for near infrared band  
Suitable for various infrared applications  
High transmittance, high uniformity  
Small size, compact structure



焦距	F/NO	工作波长	畸变
25mm	0.9-16	800-1700nm	<0.1%



### 规格图 / SPECIFICATION DRAWING



# VISIBLE INFRARED LENS

可见近红外镜头  
VISIBLE INFRARED LENS



专为 SWIR 芯片 IMX990/IMX991 设计  
波长范围覆盖可见光 + 近红外波段 (400-1700nm)  
使用超低色散玻璃, 在超宽的波长范围内, 完全校正了焦点偏移  
高透射率, 高均匀性  
广泛应用于工业分选、色差检测、食品检测、医学制药等领域

Specially designed for SWIR sensor IMX990/IMX991  
The wavelength range covers visible light + near infrared band (400-1700nm)  
Using ultra-low dispersion glass, the focus shift is completely corrected in an ultra-wide wavelength range  
High transmittance, high uniformity  
It is widely apply to industrial sorting, color selection, food detection, Medical Pharmacy and other fields

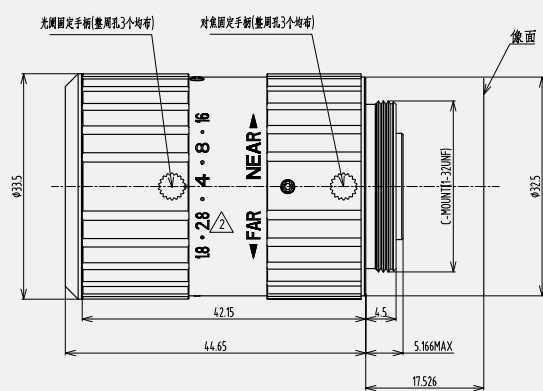


焦距	F/NO	工作波长	畸变
12-35mm	1.8-16	400-1700nm	<0.4%

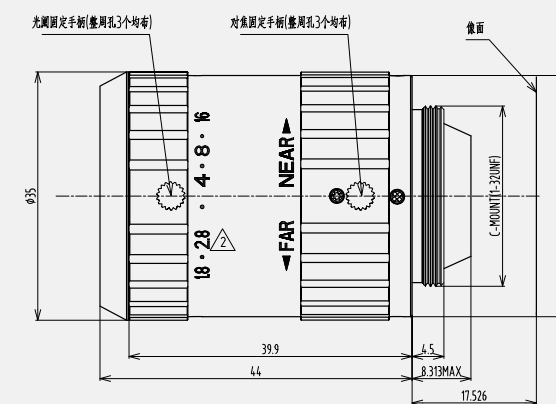
应用展示 / APPLICATION



规格图 / SPECIFICATION DRAWING



VI1602A



VI2502A

# HIGH RESOLUTION LINE SCAN LENS

## 超高解析线扫镜头

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



焦距	F/NO	接口	畸变
100mm	1.6-22	V-Mount	< 0.01%



### 应用展示 / APPLICATION



**工业 / Industry**  
 瑕疵 / 污点  
 检测钢板上的瑕疵污点  
 Defective/Spot  
 Check for flaws/stains on steel plates



**电子零件 / Electronic parts**  
 有无 / 辨别  
 检测微小芯片的个数 & 刻印不良  
 Identify existence / Identify classification  
 Detect the number of microchips & mark defects

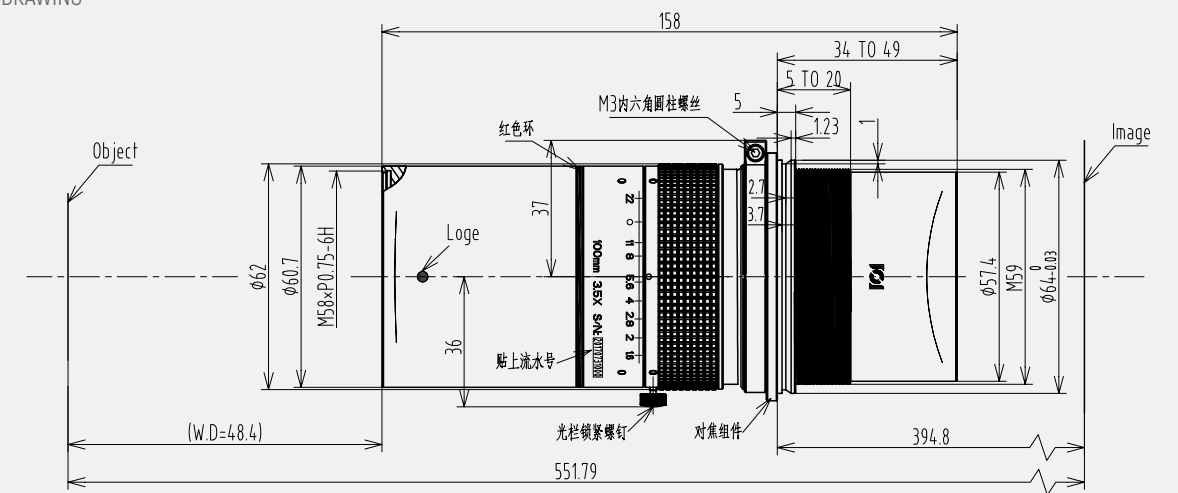


**电子零件 / Electronic parts**  
 瑕疵 / 污点  
 检测 相机缺陷  
 Defective/Spot  
 Detect camera defects



**电子设备 / Electronics equipment**  
 有无 / 辨别  
 检测电机线的捆扎不良和引线断裂  
 Identify existence / Identify classification  
 Detection of poor binding and broken leads of motor wires

### 规格图 / SPECIFICATION DRAWING



LH1635A

# VARI-MAGNIFICATION TELECENTRIC LENS

## 变倍远心镜头

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 $\leq 0.05^\circ$   
 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  $\leq 0.05^\circ$  under full magnification range  
 Widely used in electronic, semiconductor and other high-precision industries



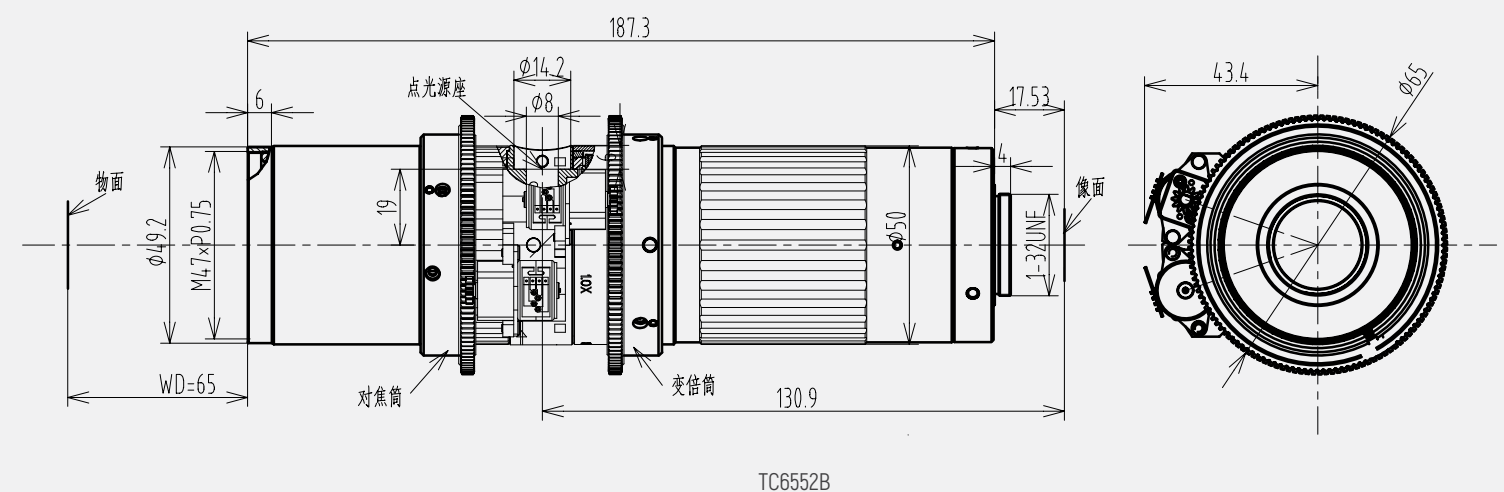
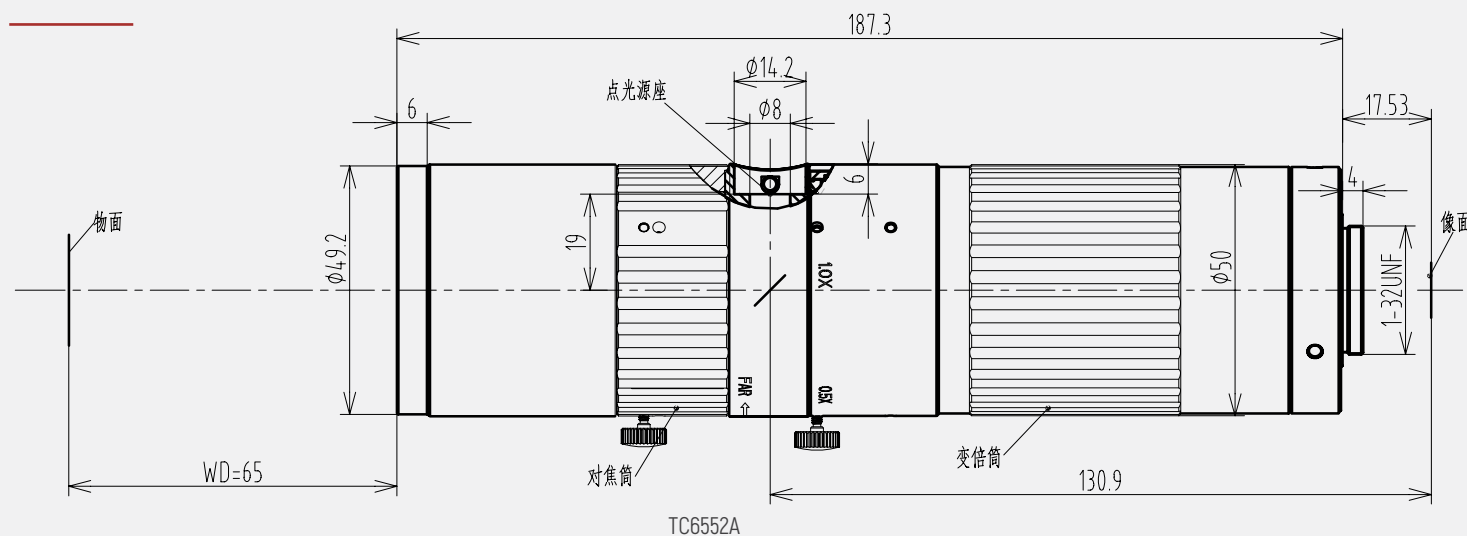
倍率	最大像面尺寸	接口	畸变
0.5X-2X	2/3"	C-Mount	< 0.05%

### 应用展示 / APPLICATION

<p><b>液晶、半导体、其他</b> Liquid crystal, semiconductor, others</p> <p>位置 / 倾斜 玻璃电路板的定位 Position/Obliqueness Positioning of glass circuit boards</p>	<p><b>电子设备 / Electronic equipment</b></p> <p>几何测量 镜头的 D 切刻旋角度 Geometric measurement D-cut engraving rotation angle of the lens</p>	<p><b>电子零件 / Electronic parts</b></p> <p>位置 / 倾斜 检测电容器的导线不良 Position/Obliqueness Check the wire defective of capacitor</p>	<p><b>汽车 / Automobile</b></p> <p>瑕疵 / 污点 检测活塞的切屑附着 Defective/Spot Check the cutting adhesion of piston</p>
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### 规格图 / SPECIFICATION DRAWING



# 3CCD LENS<sup>®</sup>

3CCD 镜头

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  $\phi 30$  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  $\phi 30$   
 Low distortion full field distortion <0.2%  
 Applied to projects with high requirements on color  
 such as sorting, etc.



焦距	F/NO	接口	畸变
28mm	2.8-16	F-Mount	<0.2%



应用展示 / APPLICATION

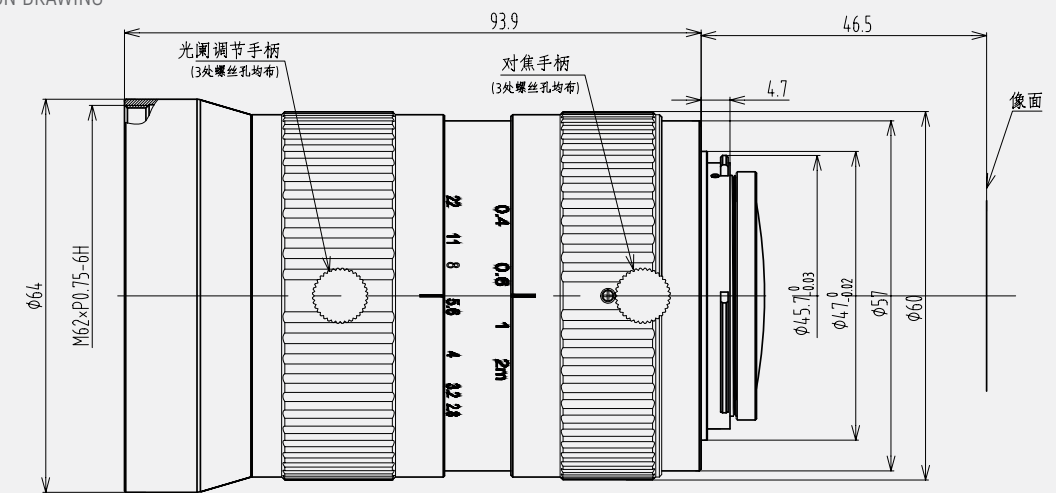
**食品 / Food**  
 颜色识别  
 食品粮食的颜色筛选  
 Color recognition  
 Food color selection

**电子零件 / Electronic parts**  
 有无 / 辨别  
 辨别电池组的颜色  
 Identify existence / Identify classification  
 Determine the color of the battery pack

**汽车 / Automobile**  
 颜色识别  
 检测保险丝是否组装错误  
 Color recognition  
 Check if the fuse is assembled incorrectly

**纺织 / Textile**  
 颜色识别  
 无纺布产品颜色检查  
 Color recognition  
 Non-woven product color inspection

规格图 / SPECIFICATION DRAWING



TD2803A



# 5MP S-MOUNT LOW DISTORTION LENS

5 百万像素 S 接口  
低畸变工业镜头

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

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.

应用展示 / APPLICATION



**工业 / Industry**  
瑕疵 / 污点  
检测钢板上的瑕疵污点  
Defective/Spot  
Check for flaws/stains on steel plates



**电子零件 / Electronic parts**  
有无 / 辨别  
检测微小芯片的个数 & 刻印不良  
Identify existence / Identify classification  
Detect the number of microchips & mark defects



**电子零件 / Electronic parts**  
瑕疵 / 污点  
检测 相机缺陷  
Defective/Spot  
Detect camera defects



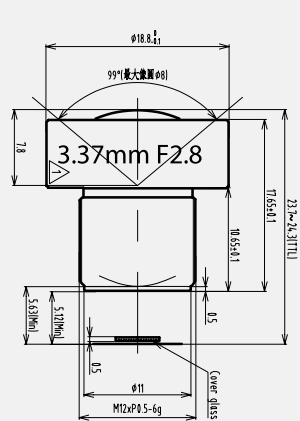
**电子设备 / Electronics equipment**  
有无 / 辨别  
检测电机线的捆扎不良和引线断裂  
Identify existence / Identify classification  
Detection of poor binding and broken leads of motor wires



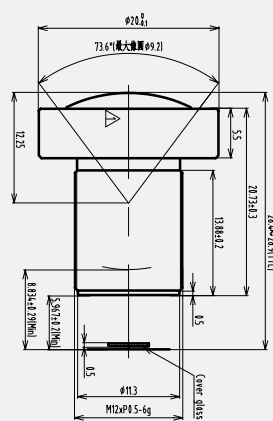
焦距	F/NO	接口	畸变
3.37-25mm	2.8	M12xP0.5	< 0.05%



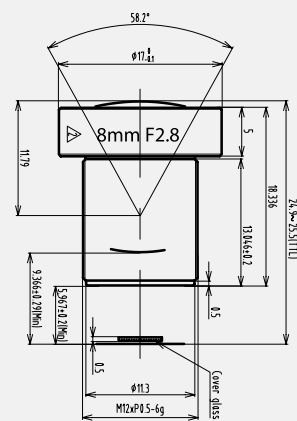
规格图 / SPECIFICATION DRAWING



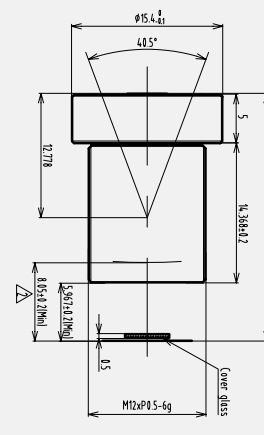
FS0305A



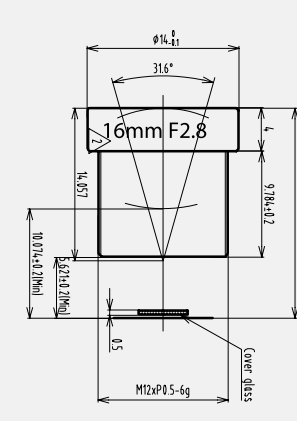
FS0605A



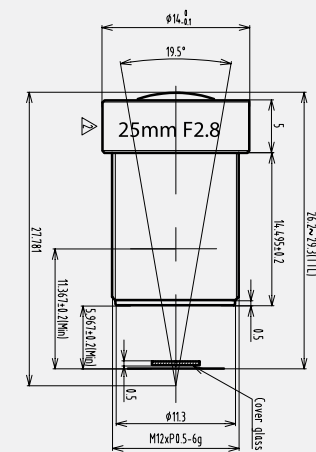
FS0805A



FS1205A



FS1605A



FS2505A

# ACCESSORIES

配件



ACCESSORIES

# LENS ACCESS- SARY



## 镜头配件

Master of Industrial Lens

06

SERIES

系列产品

扩倍镜  
MAGNIFYING LENS

延长环  
EXTENSION RING



# MAGNIFYING<sup>®</sup> LENS



## 扩倍镜

MAGNIFYING  
LENS



### 镜头特点 /CHARACTERISTIC

安装于镜头与相机之间，可以实现工业距离不变而倍率上升  
使用增倍镜时，光圈会缩小相应的系数  
扩倍镜有 1.5X、2.0X、2.5X、3.0X、4.0X 共计 5 种类可选  
搭配 2/3" 镜头使用，搭配 C 接口镜头使用

Installed between the lens and the camera, can achieve the same industrial distance and increase the magnification  
When using an extender, the aperture will be reduced by a corresponding factor  
5 types of expander options; 1.5X, 2.0X, 2.5X, 3.0X, 4.0X  
Applicated with 2/3" lens, suitable for C mount lens

# EXTENSION<sup>®</sup> RING



## 延长环

EXTENSION RING



### 镜头特点 /CHARACTERISTIC

镜头的工作距离有一定范围，不能在任意物距下对焦清晰  
当工作距离小于镜头最小工作距离时，搭配延长环可使镜头对焦清晰  
延长环有 0.5mm、1mm、2mm、5mm、10mm、20mm、40mm 共计 7 种类可选  
搭配 C 接口镜头使用

There is a certain range for lens working distance, and it cannot focus sharply at any object distance  
When the working distance is less than the lens minimum working distance, and the lens focus will be much clear with the extension ring  
7 types of extension ring available: 0.5mm, 1mm, 2mm, 5mm, 10mm, 20mm, 40mm  
Suitable for C mount lens

# LENS SELECTION

## 镜头选型

### Master of Industrial Lens

### 芯片大小 / SENSOR SIZE

芯片大小 = 像元大小 × 像元数量

例如：

像元大小：3.45μm × 3.45μm

像元数量：2448 × 2048

芯片大小 (H)：0.00345 × 2448 = 8.44mm

芯片大小 (V)：0.00345 × 2048 = 7.06mm

芯片大小：8.44 × 7.06mm

Sensor size = pixel size × pixel number

E.g:

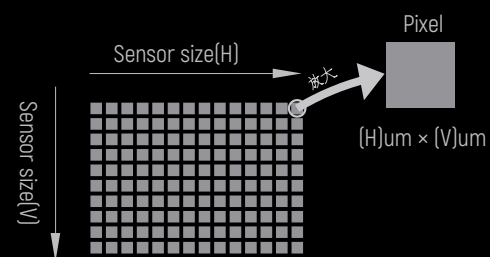
Pixel size: 3.45μm × 3.45μm

Pixel number: 2448 × 2048

Sensor size (H): 0.00345 × 2448 = 8.44mm

Sensor size (V): 0.00345 × 2048 = 7.06mm

Sensor size: 8.44 × 7.06mm

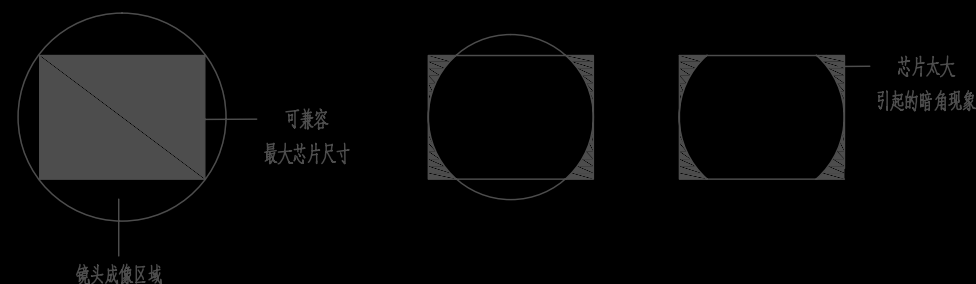


### 镜头的可兼容最大芯片尺寸 与 相机芯片尺寸匹配关系

THE CAMERA COMPATIBLE MAXIMUM SENSOR SIZE IS MATCHED WITH THE CAMERA SENSOR SIZE

可兼容最大芯片尺寸：是指镜头能够支持的最大清晰成像的范围。在实际选择相机和镜头时，要注意所选择的镜头的可兼容最大芯片尺寸要大于或等于所选择的相机芯片尺寸。当镜头的可兼容最大芯片尺寸小于相机芯片尺寸时，表明镜头在芯片的成像面会出现四周暗角现象而无法满足客户要求。

Compatible with maximum sensor size: refers to the range of maximum clear imaging that the lens can support. when actually selecting the camera and lens, pay attention to the compatible maximum sensor size of the selected lens is greater than or equal to the selected camera sensor size. when the compatible maximum sensor size of the lens is smaller than the camera sensor size, it indicates that the lens will appear around the imaging surface of the sensor to meet the customer requirements.



### 相机接口 / CAMERA MOUNT

每款相机接口都有不同的大小和法兰距  
选择正确的相机接口以及法兰距才能完美成像

常规接口为 C 口，F 口，M72 口，也可以提供一些其他特殊的接口，详情请咨询业务人员。  
常见的相机法兰距如：

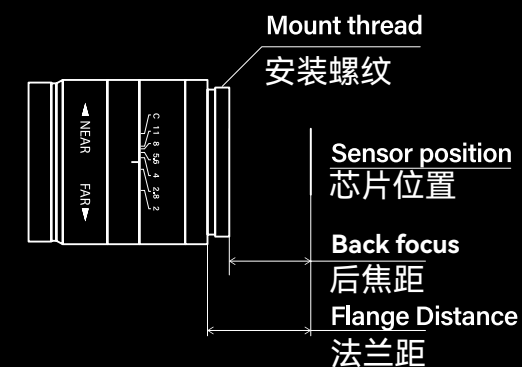
相机接口	法兰距 (mm)
C-mount	17.526
CS-mount	12.526
F-mount	46.5

Each camera mount has different sizes and flange distance  
Choose the correct camera mount and the flange distance can perfectly imaging

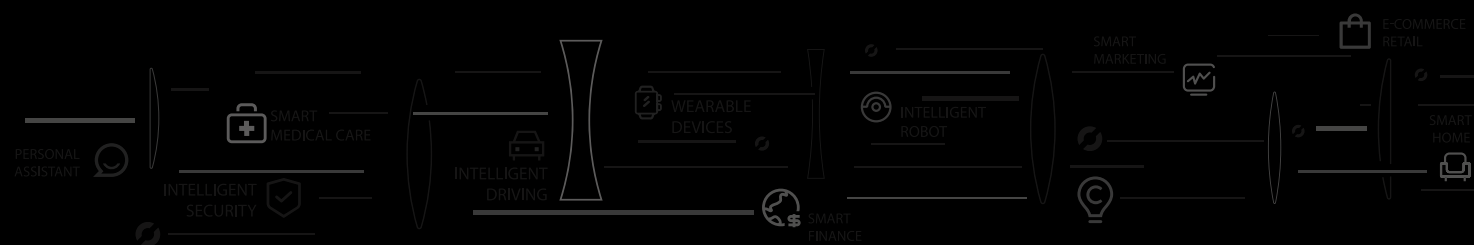
The regular mount is a C port, F, M72, and some other special mount can also be provided.

Please consult the business staff for details.

Common cameras after flange distance :



镜头类型	特点	优势	劣势
定焦镜头	能够无限远距离对焦 可调工作距离和可调光圈	视野范围和工作距离大 适用于大视野 低成本	短工作距离情况下不能成像清晰 存在视差：放大倍率随工作距离改变
微距镜头	专为短工作距离设计	低畸变 工作距离和倍率可调	只能在特定范围内对焦 存在视差
远心镜头	主光线平行于光轴 可使用同轴照明	低畸变 平行光路，无视差	成本高 尺寸大
线扫镜头	专为线扫相机设计	高解析度，低畸变	倍率调整范围小
变焦镜头	可在不改变工作距离以及相机位置的情况下调整放大倍率	适用于需要频繁改变倍率的应用	成本高



1、确定应用需求（视野、精度、安装距离等）



2、根据需求确定使用相机类型（面阵相机 & 线扫相机），镜头类型（定焦镜头 & 变焦镜头 & 远心镜头）



3、根据需求计算镜头光学参数，如远心镜头计算放大倍率

**放大倍率 = 芯片尺寸 / 视野**

定焦镜头根据视野、芯片尺寸以及工作距离，计算焦距

**计算焦距：芯片尺寸 / 视野 ≈ 焦距 / 工作距离**

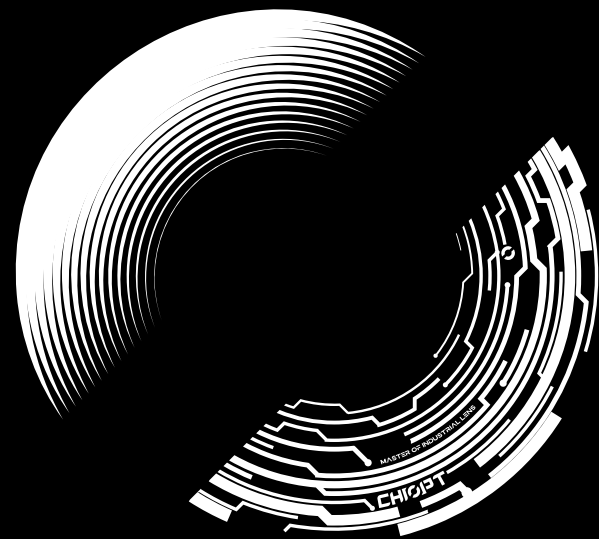


4、选择分辨率匹配（镜头分辨率不低于相机分辨率），芯片尺寸匹配，接口匹配的镜头



5、考虑与光源的配合以及工作环境

# APPENDIX



MASTER  
OF  
INDUSTRIAL LENS

[www.chiopt.com](http://www.chiopt.com)

附录

## ACCESSORIES

### 配件

#### 镜头底座 /LENS HOLDER

镜头底座型号	接口	接口 2	长度
LH5420	V (φ49)	M54×P0.75	20
LH6015	V (φ56)	M60×P0.75	10
LH7206	V (φ64)	M72×P0.75	6

#### 调焦环 /FOCUSING RING

调焦环型号	调焦环接口	调焦环接口 2	min	max	调焦长度
MT04	V (φ38)	V(φ38)	17.4	29.4	12
MT07	M54×P0.75	M72×P0.75	44	69	25
MT08	V (φ38)	M58×P0.75	24	45	21
MT09	M60×P0.75	M72×P0.75	44	69	25
MT14	F Mount	M58×P0.75	/	/	10.2
MT15	M72×P0.75	M72×P0.75	43.3	68.3	25
MT16	V (φ38)	M72×P0.75	40.7	64.7	24

#### 延伸环 /EXTENSION RING

延伸环型号	延伸环接口	延伸环接口 2	长度
AD5810	M58×P0.75	M58×P0.75	10
AD5824	M58×P0.75	M58×P0.75	24
AF5825	M58×P0.75	M58×P0.75	24.82
AD5825	M58×P0.75	M58×P0.75	25
AD5850	M58×P0.75	M58×P0.75	50
AD5800	M58×P0.75	M58×P0.75	100
EX7210	M72×P0.75	M72×P0.75	10
EX7220	M72×P0.75	M72×P0.75	20
EX7235	M72×P0.75	M72×P0.75	35
EX7250	M72×P0.75	M72×P0.75	50
EX9020	M90×P1	M90×P1	20
EX9050	M90×P1	M90×P1	50
EX9520	M95×P1	M95×P1	20
EX9550	M95×P1	M95×P1	50

#### 连接环 /ADAPTER

连接环型号	连接环接口	连接环接口 2	长度
AT4255	C Mount	M42×P1	5.526
AT4212	C Mount	M42×P1	12.5
AT5804	M42×P1	M58×P0.75	4
AT7204	M42×P1	M72×P0.75	4

#### 连接环 /ADAPTER

连接环型号	连接环接口	连接环接口 2	长度
AT2510	M58×P0.75	C Mount	10
AT5809	M58×P0.75	F Mount	9
AT4275	M58×P0.75	M42×P0.75	10
AT4210	M58×P0.75	M42×P1	10
AT4224	M58×P0.75	M42×P1	24.3
AT5848	M58×P0.75	M48×P0.75	10
AT4829	M58×P0.75	M48×P0.75	29.74
MT05-507	M58×P0.75	M72×P0.75	2
AD7216	M58×P0.75	M72×P0.75	16.75
AT7224	M58×P0.75	M72×P0.75	24.3
AD7225	M58×P0.75	M72×P0.75	25
AD7250	M58×P0.75	M72×P0.75	50
AD7200	M58×P0.75	M72×P0.75	100
AD9525	M58×P0.75	M95×P1	25
AD9550	M58×P0.75	M95×P1	50
AD9500	M58×P0.75	M95×P1	100
AT5806	M72×P0.75	M58×P0.75	6
AT9003	M72×P0.75	M90×P1	3
AT9050	M72×P0.75	M90×P1	50
AT9503	M72×P0.75	M95×P1	3
AT9550	M72×P0.75	M95×P1	50
MT04-513	V(φ38)	M42×P0.75	4.5
MT04-511	V(φ38)	M42×P1	4.5
MT04-508	V(φ38)	M42×P1	6.5
AT4208	V(φ42.5)	C Mount	8.47
AT4214	V(φ42.5)	M42×P1	14
AT5815	V(φ42.5)	M58×P0.75	14.52

接口 1 为镜头端接口，接口 2 为相机端接口  
mount 1 is the lens end, mount 2 is the camera end



## ACCESSORIES

### 镜头详细参数

#### 1/1.8" 5MP FA LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面尺寸 Image Size(Dia)	视场角 Field of View Angle			TV 畸变 Distortion(TV)	最近工作距离 MOD	滤镜螺纹 Filter Size	镜头接口 Mount
				1/1.8"	1/2.5"	1/3"	1/1.8"			
FA0401C	4mm	2.0-C	1/1.8"	82.9°×66.5°	70.7°×56.7°	61.1°×47.5°	<0.5%	0.1m、0.037X	/	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、0.058X	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、0.076X	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、0.113X	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、0.162X	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、0.296X	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、0.193X	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、0.196X	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、0.178X	M30.5×P0.5	C-Mount

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

WD(mm) \ 型号	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	40.5×29.9
550	974×731	632.4×474.3	487.5×365.6	330.9×248.2	246.5×184.9	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	1662.5×1246.9	1084.6×812.3	836×627	568.4×426.7	426.3×320.1	268.3×201.4	191.3×143.5	128.7×96.1	83.7×61.6
1000	1750×1312.5	1141.7×855	880×660	598.3×449.2	448.7×336.8	282.4×212	201.6×151.2	135.8×101.4	88.9×65.4
1500	2625×1968.8	1712.5×1282.5	1320×990	897.5×673.7	673.1×505.3	423.6×318	302.6×227.1	211.8×159	135.8×100
2000	3500×2625	2283.3×1710	1760×1320	1196.7×898.3	897.5×673.7	564.8×424	403.4×302.8	282.4×212	184.6×135.6
3000	5250×3937.5	3425×2565	2640×1980	1795×1347.5	1346.2×1010.6	847.2×636	605.1×454.3	423.6×318	276.9×203.8
4000	7000×5250	4566.7×3420	3520×2640	2393.3×1796.7	1795×1347.5	1129.6×848	806.8×605.7	564.8×424	378.9×278.9
5000	8750×6562.5	5708.3×4275	4400×3300	2991.7×2245.8	2243.7×1684.4	1412×1060	1008.9×757.1	706×530	480×353.3
6000	10606.1×7954.5	6860×5130	5280×3960	3590×2695	2692.5×2021.3	1694.4×1272	1210.3×908.6	847.2×636	553.8×407.7

#### 1/1.7" 12MP FA LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面尺寸 Image Size(Dia)	视场角 Field of View Angle			TV 畸变 Distortion(TV)	最近工作距离 MOD	滤镜螺纹 Filter Size	镜头接口 Mount
				1/1.7"	1/1.8"	1/2"	1/1.7"			
FA0611A	6mm	2.4-16	1/1.7"	64.51°×45.67°	61.28°×47.12°	53.76°×38.06°	<0.73%	0.1m、0.054X	/	C-Mount
FA0811A	8mm	2.4-16	1/1.7"	51.33°×35.34°	48.49°×36.68°	42.78°×29.45°	<-0.67%	0.1m、0.07X	M25.5×P0.5	C-Mount
FA1211A	12mm	2.4-16	1/1.7"	34.89°×23.81°	32.87°×24.50°	29.08°×19.84°	<0.15%	0.1m、0.106X	M25.5×P0.5	C-Mount
FA1611A	16mm	2.4-16	1/1.7"	26.06°×17.6°	24.51°×18.17°	21.72°×14.67°	<-0.02%	0.1m、0.138X	M25.5×P0.5	C-Mount
FA2511A	25mm	2.4-16	1/1.7"	16.84°×11.29°	15.82°×11.68°	14.03°×9.41°	<-0.01%	0.1m、0.284X	M25.5×P0.5	C-Mount
FA3511A	35mm	2.4-16	1/1.7"	11.48°×7.64°	10.78°×7.94°	9.57°×6.37°	<0.01%	0.15m、0.279X	M25.5×P0.5	C-Mount
FA5011A	50mm	2.4-16	1/1.7"	7.78°×5.2°	7.31°×5.38°	6.48°×4.33°	<0.03%	0.3m、0.192X	M25.5×P0.5	C-Mount

#### 1/1.7" 12MP FA FIELD OF VIEW

WD(mm) \ 型号	FA0611A	FA0811A	FA1211A	FA1611A	FA2511A	FA3511A	FA5011A
100	141.83x105.74	107.12x79.76	70.51x53.10	54.24x40.84	26.29x19.83	/	/
150	204.07x152.60	153.96x114.84	101.52x79.54	77.25x58.19	41.44x31.25	26.77x20.19	/
200	266.20x199.42	200.76x149.91	132.45x99.92	100.10x75.43	56.59x42.68	37.43x28.23	/
250	328.43x246.31	247.55x184.96	163.35x123.28	122.88x92.61	71.73x54.10	48.08x36.27	/
300	390.49x293.08	294.33x220.02	194.21x146.62	145.61x109.76	86.87x65.52	58.73x44.30	38.69x29.21
350	452.48x339.81	341.10x255.06	225.07x169.96	169.09x127.73	102.01x76.94	69.38x52.34	46.08x34.78
400	514.60x386.64	387.90x290.13	255.07x193.28	191.00x144.01	117.15x88.36	80.02x60.37	53.41x40.31
450	576.63x433.39	434.64x325.15	286.73x216.61	213.69x161.13	132.28x99.79	90.68x68.41	60.69x45.81
500	638.77x480.24	481.41x360.20	317.56x239.93	236.37x178.24	147.41x111.20	101.33x76.45	67.95x51.28
550	700.76x526.97	528.16x395.24	348.40x263.25	259.04x195.35	162.55x122.62	111.95x84.47	75.18x56.74
600	762.82x573.75	574.93x430.28	379.21x286.56	281.70x212.45	177.70x134.05	122.62x92.52	82.40x62.19
650	824.80x620.97	621.69x465.33	410.04x309.88	304.36x229.54	192.81x145.46	133.26x100.55	89.60x67.62
700	886.98x667.35	668.44x500.36	440.87x333.20	327.01x246.64	207.96x156.89	143.90x100.55	96.80x73.05
800	1011.13x760.94	761.96x570.44	502.50x379.82	372.31x280.82	238.21x179.72	165.16x124.63	111.16x83.89
900	1135.30x854.54	855.49x640.53	564.14x426.45	417.61x315.01	268.48x202.56	186.49x140.72	125.50x94.72
1000	1259.25x947.99	949.02x710.61	625.82x473.10	462.91x349.18	298.80x225.43	207.80x156.78	139.81x105.5

## 2/3" 5MP FA LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面尺寸 Image Size(Dia)	视场角 Field of View Angle			TV 畸变 Distortion(TV)	最近工作距 离 MOD	滤镜螺纹 Filter Size	镜头接口 Mount
				2/3"	1/2"	1/3"	2/3"			
FA0802D	8mm	1.4-16	2/3"	56.3°×43.7°	42.5°×32.4°	30.7°×23.8°	< 1%	0.1m, 0.075X	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, 0.077X	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, 0.145X	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, 0.253X	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, 0.213X	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, 0.177X	M37×P0.5	C-Mount

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

WD(mm)	型号	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		1082.5×810.3	704×528	557.3×416.3	350.5×263.4	260.1×194.7	172.5×129.4
2000		2181.1×1632.7	1437.9×1078.4	1122.8×838.7	704.6×529.5	510.2×381.9	352×264

## 2/3" 10MP FA LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面尺寸 Image Size(Dia)	视场角 Field of View Angle			TV 畸变 Distortion(TV)	最近工作距 离 MOD	滤镜螺纹 Filter Size	镜头接口 Mount
				2/3"	1/2"	1/3"	2/3"			
FA0810A	8mm	2.8-16	2/3"	57.6°×44°	42.8°×32.7°	32.7°×24.7°	< 1%	0.1m, 0.074X	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, 0.109X	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, 0.15X	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, 0.246X	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, 0.347X	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, 0.188X	M27×P0.5	C-Mount

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

WD(mm)	型号	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	444.7×333.1	333.8×250.4	211.5×158.6	150.9×113.2	95.65×71.74
650		713.2×534.7	480.8×360.4	360.7×270.5	228.9×171.6	163.6×122.7	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		821.9×616.2	553.8×415.2	417.1×312.8	263.9×197.9	188.8×141.6	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	146.2×109.9
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		3319.2×2488.5	2215.2×1660.7	1660.4×1245.3	1059.1×793.9	752.1×564.1	488.89×366.67
5000		5371.8×4028.8	3641.7×2731.7	2758.5×2070.5	1753×1315	1253×940	800×600
2000		5371.8×4028.8	3641.7×2731.7	2758.5×2070.5	1753×1315	1253×940	800×600
3000		5250×3937.5	3425×2565	2640×1980	1795×1347.5	1346.2×1010.6	847.2×636
4000		7000×5250	4566.7×3420	3520×2640	2393.3×1796.7	1795×1347.5	1129.6×848
5000		8750×6562.5	5708.3×4275	4400×3300	2991.7×2245.8	2243.7×1684.4	1412×1060

## 1" 5MP FA LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面尺寸 Image Size(Dia)	视场角 Field of View Angle			TV 畸变 Distortion(TV)	最近工作距离 MOD	滤镜螺纹 Filter Size	镜头接口 Mount
				1"	2/3"	1/2"				
HC1205A	12.5mm	1.4-16	1"	54.5°×42°	38.5°×29.1°	28.8°×21.7°	< 1.8%	0.1m、0.0106X	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、0.146X	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、0.27X	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、0.244X	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、0.163X	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、0.115X	M55×P0.75	C-Mount

## 1" 5MP FA FIELD OF VIEW

WD(mm)	型号	HC1205A	HC1605A	HC2505A	HC3505A	HC5005A	HC7505A
100		126.4×93	88.2×66	47.4×35.55	/	/	/
150		170.67×128	129×96.7	74.2×55.6	53.2×39.72	/	/
200		223×167.24	169.4×126.7	98.46×73.85	71.6×54.1	/	/
250		274.09×205.56	209.6×157.1	125.4×94.1	89.46×66.84	/	/
300		325.7×244.27	249.5×186.8	146.28×109.71	108.3×81.7	79.34×59.2	/
350		376.47×282.35	290.3×217.6	174.1×130.6	120.8×90.4	89.6×67.2	/
400		426.66×320	329.3×246.5	196.92×147.69	145.1×109.5	104.4×78.34	/
450		479.4×359.55	370.9×278.1	225.3×168.9	161.6×121	115.2×86.4	/
500		533.33×400	408.9×306.3	246.15×184.61	179.9×135.8	128.48×96	/
550		581.8×436.36	451.5×338.4	271.5×202.4	197.74×148	140.8×105.6	/
600		640×480	488.6×366	294.93×221.2	216.6×163.5	155.76×116.6	/
650		684.5×513.37	532.1×398.9	322.7×240.8	231.6×173.2	166.4×124.8	/
700		735.63×551.7	572.4×429.1	344.08×258.06	253.3×191.2	181.2×135.72	/
750		790.12×592.6	612.7×459.3	373.8×279.2	271.7×205.1	192×144	/
800		836.6×627.45	647.9×485.2	393.85×295.38	290.1×218.9	206.6×154.84	111.3×83.47
850		888.89×666.66	685.3×513.7	435.2×326.7	305.9×229	217.6×163.2	120.5×90.1
900		941.17×705.88	725.6×543.9	460.8×345.9	326.7×246.6	232.06×174.54	128×96
1000		1066.7×800	806.9×604.6	512×384.4	356×269.6	256.6×192.34	150.59×112.94
1100		1173.3×880	886.9×664.8	563.2×422.8	392.8×296.5	281.6×211.2	168.42×126.32
1200		1280×960	967.5×725.3	614.4×461.3	429.6×324.3	307.2×230.4	180.28×135.21
1300		1386.7×1040	1048.1×785.7	665.6×499.7	466.3×351.9	332.8×249.6	200×150
1400		1493.3×1120	1128.7×846.1	716.8×538.2	502.9×379.7	358.4×268.8	216.95×162.71
1500		1600×1200	1209.4×906.6	768×576.6	539.7×407.4	384×288	232.73×174.54

## 1.1" 20MP FA LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面尺寸 Image Size(Dia)	视场角 Field of View Angle			TV 畸变 Distortion(TV)	最近工作距离 MOD	滤镜螺纹 Filter Size	镜头接口 Mount
				1.1"	1"	2/3"				
FA0615A	6mm	1.8-16	1.1"	104.9°×86.2°	95.4°×78.4°	73.3°×57.5°	< 2.5%	0.1m、0.0498X	/	C-Mount
FA0815A	8mm	1.4-16	1.1"	84.8°×68°	77.1°×61.8°	57.6°×44.9°	< 5.5%	0.1m、0.064X	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、0.103X	/	C-Mount
FA1616A	16mm	2.8-22	1.1"	46.3°×36°	43.6°×33.4°	30.8°×23.3°	< 0.5%	0.1m、0.148X	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、0.221X	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、0.1805X	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、0.179X	M35.5×P0.5	C-Mount

## 1.1" 20MP FA FIELD OF VIEW

WD(mm)	型号	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		317×237.7	246.7×184.9	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		528.3×396.3	410.9×308.1	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		739.8×554.8	575.5×431.5	425.9×319.4	320.2×240.3	207.4×151.4	174.5×140	92.9×69.7
400		870.7×653.1	665.8×499.3	482.9×362.2	364.9×274	231.1×173.8	180×135.5	107×80.2
450		951.2×713.4	739.7×554.6	539.9×405	409.5×307.6	256.4×192.7	199.5×120.2	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		1162.3×871.7	904.1×677.9	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		1373.8×1030.3	1068.5×801.2	765×573.9	588.5×442.4	363.4×273.2	261.1×196.7	176.7×132.5
700		1491.84×1118.88	1133.3×850	824.9×618.5	632.9×475.4	391.7×294.4	281.4×211.8	190.6×143
750		1585×1188.75	1232.7×924.3	882.7×662.2	677.7×509.5	417.7×314.1	302.1×227.6	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		1901.9×1426.4	1479.4×1109.2	1052.9×789.7	811.3×609.4	503.6×378.6	362.6×273	245.6×184.3
1000		2113.3×1585	1643.7×1232.5	1166.9×875.2	900.6×676.4	564×424	503×303.5	273.5×205.3
2000		4226.7×3170	3287.5×2465	2307×1730.2	1793.5×1347.4	1084.6×815.4	809.4×609.6	547.1×410.7
5000		10566.7×7925	8218.7×6162.5	5727×4295.3	4473.2×3361	2820×2120	2029×1528.2	1379×1035.5

## 4/3" 20MP FA LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面尺寸 Image Size(Dia)	视场角 Field of View Angle			TV 畸变 Distortion(TV)	最近工作距离 MOD	滤镜螺纹 Filter Size	镜头接口 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、0.103X	/	C-Mount
FA1620A	16mm	2.8-22	4/3"	57.6°×44.8°	43.6°×33.4°	30.8°×23.3°	< 1%	0.1m、0.148X	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、0.221X	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、0.1805X	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、0.179X	M35.5×P0.5	C-Mount

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

WD(mm)	型号	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		957.2×717.8	734.9×551.4	458.4×342.9	317.6×237.7	220.5×165.4
700		1031.1×773.4	790×592	493×369.8	351.2×263.7	237.9×178.5
750		1104.5×828.2	846.4×635.1	526.8×374.2	367.6×275.1	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

## 1.1" 25MP FA LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面尺寸 Image Size(Dia)	视场角 Field of View Angle			TV 畸变 Distortion(TV)	最近工作距离 MOD	滤镜螺纹 Filter Size	镜头接口 Mount
				1.1"	1"	2/3"	1.1"			
FA0825A	8mm	2.8-22	1.1"	82.8°×65.8°	70.35°×70.35°	55.2°×47.5°	< 3.2%	0.1m、0.0696X	/	C-Mount
FA1225A	12mm	2.8-22	1.1"	60.66°×46.5°	50°×50°	38.6°×33°	< 0.3%	0.1m、0.1055X	M46×P0.75	C-Mount
FA1625A	16mm	2.8-16	1.1"	45.8°×35.3°	42.1°×32.2°	29.7°×22.5°	< 0.15%	0.1m、0.132X	M43×P0.75	C-Mount
FA2525A	25mm	2.8-22	1.1"	31.6°×24.2°	28.8°×22.1°	20.4°×15.6°	< 0.1%	0.1m、0.24X	M30.5×P0.5	C-Mount
FA3525A	35mm	2.8-16	1.1"	21.5°×15.9°	19.6°×14.7°	13.5°×10.2°	< 0.15%	0.15m、0.2313X	M43×P0.75	C-Mount
FA5025A	50mm	2.8-16	1.1"	16.1°×12.9°	14.6°×11.7°	11.6°×8.9°	< 0.1%	0.3m、0.185X	M40.5×P0.5	C-Mount

## 1.1" 25MP FA FIELD OF VIEW

WD(mm)	型号	FA0825A	FA1225A	FA1625A	FA2525A	FA3525A	FA5025A
100		212×154	134×98	106.6×80	58.8×44.1	/	/
150		302×219	191×140	140×105	87×65.4	60.9×45.6	/
200		387.5×282.9	241.2×177.7	192.4×144.3	115.1×86.5	81.5×61.0	/
250		478.7×349.5	300×221	227.5×170.6	143.3×107.7	102.7×77.2	/
300		570×416	362×265	271.2×203.4	171.5×128.9	122.8×92.4	69.19×51.89
350		661.1×482.6	417.7×307.7	318.8×239	199.7×150.1	142.1×106.5	81.92×62
400		752.3×549.1	476.5×351	358.7×269	227.8×171.2	163.2×122.6	94.85×71.11
450		843.5×615.7	535.3×394.3	402.5×301.8	255.9×192.4	183.3×137.8	107.5×81.5
500		929×678	591×433	444.7×333.5	282×212	202.8×152.1	120.75×90.57
600		1108×809	707×518	528.5×396.4	340.6×256	241.7×181.3	145.79×109.34
700		1287×940	822×602	612.3×459	397.2×298.6	284.2×213.1	171.35×128.51
800		1466×1071	936×685	696.2×522	453.4×340.8	324.7×243.5	196.92×147.69
900		1645×1202	1047×767	780.1×585	510.8×384	364.8×273.7	222.61×166.96
1000		1825×1334	1168×855	863.9×648	566.3×425.7	405.7×304.3	248.06×186.05
2000		3617×2645	2316×1697	1703×1277	1128×848	608.8×456.7	504.3×378.2
3000		5408×3965	3446×2524	2542.5×1906.9	1692×1272	1011.5×759.1	760.3×570.2
4000		7200×5268	4558×3339	3382×2536.5	2256×1696	1628×1221.5	1016.3×762.2
5000		8998×6582	5652×4140	4221.5×3166.1	2820×2120	2035×1526.9	1272.3×954.2

## 1.4" 45MP FA LENS NEW

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面尺寸 Image Size(Dia)	视场角 Field of View Angle	TV 畸变 Distortion(TV)	最近工作距离 MOD	滤镜螺纹 Filter Size	镜头接口 Mount
				1.4"				
FA1245A	12mm	2.8-16	1.4"	76.1°×55.7°	< -0.5%	0.1m	/	C-Mount
FA2545A	25mm	2.8-16	1.4"	41.6°×28.9°	< 0.05%	0.15m	M43×P0.75	C-Mount
FA5045A	50mm	2.8-16	1.4"	21.5°×14.7°	< -0.03%	0.25m	M35.5×P0.5	C-Mount

## 1.4" 45MP FA FIELD OF VIEW

WD(mm)	型号	FA1245A	FA2545A	FA5045A
100		187.9×125.1	/	/
150		266.6×178.2	120.8×81.8	/
200		345.2×231.1	158.8×107.8	/
250		423.6×283.9	196.8×133.6	79.8×54
300		502×336.9	234.8×159.2	98.7×66.9
350		580.4×389.6	272.8×185	117.8×79.8
400		658.8×442.4	310.8×210.8	136.9×92.7
450		737.1×495.3	348.8×236.6	156×105.7
500		815.6×548.1	386.8×262.2	175.1×118.6
550		893.8×600.9	424.6×288	194.3×131.6
600		972.1×653.7	462.6×313.8	213.4×144.6
700		1128.9×759.4	538.4×365.2	251.8×170.6
800		1285.4×864.9	614.4×416.6	290.2×196.6
900		1442.1×970.5	690.2×468.2	328.6×222.6
1000		1598.9×1076.2	766×519.6	367×248.6
2000		3164.8×2132	1524.6×1034	751.3×508.9

## MACRO LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	放大倍率 Magnification	共轭距 O/I	TV 畸变 Distortion(TV)	工作距离 WD	滤镜螺纹 Filter Size	镜头接口 Mount
ML1610A	16mm	2.8-16	-0.25X ~ -0.03X	115.5-606.9	< 0.33%	52-546	M28.5×P0.5	C-Mount
ML2510A	25mm	2.8-16	-0.4X ~ -0.1X	126-314.1	< 0.07%	65-260.4	M27×P0.5	C-Mount
ML3510A	35mm	2.8-16	-0.7X ~ -0.25X	145.3-220.6	< 0.05%	59-150	M27×P0.5	C-Mount
ML5010A	50mm	2.8-16	-0.8X ~ -0.5X	195.6-220.1	< 0.05%	95.4-132.4	M27×P0.5	C-Mount
ML7510A	75mm	3.8-16	-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	65.00	0.4X
	144×104.3	144×75.5	85.6×71.5	260.40	0.1X
0.5	34.2×24.6	34.2×17.8	20.1×16.8	61.35	0.423X
	121×87	121×63	71.4×59.6	210.83	0.12X
1	32.7×23.5	32.7×17	19.1×16.1	59.27	0.442X
	104.4×75.1	104.4×54.4	60.16×51.5	183.79	0.138X
1.5	31.2×22.5	31.2×16.3	18.4×15.4	56.57	0.461X
	91.4×65.9	91.4×47.6	54×45.1	161.84	0.157X
2	30×21.6	30×15.6	17.7×14.8	54.58	0.481X
	81.×58.6	81.5×42×4	48.1×40.2	143.66	0.177X
5	24.2×17.4	24.2×12.6	14.2×11.8	44.17	0.6X
	50.2×35.4	50.2×25.6	29×24.2	87.91	0.293X
10	18.2×13.1	18.2×9.5	10.8×9	34.27	0.79X
	29.6×21.2	29.6×15.4	17.4×14.6	54.07	0.487X
15	14.7×10.6	14.7×7.6	8.6×7.2	28.01	0.98X
	21.2×15.2	21.2×11	12.5×10.4	39.48	0.68X
20	12.2×8.8	12.2×6.4	7.2×6	23.85	1.17X
	16.5×11.8	16.5×8.6	9.6×8.1	31.15	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	59	0.7X
	57.3×41.2	57.3×29.8	33.8×28.2	150	0.25X
0.5	20.2×14.5	20.2×10.5	11.9×10.1	58.2	0.71X
	54.6×39.3	54.6×28.4	32.2×27.3	141.73	0.264X
1	19.8×14.2	19.8×10.2	11.7×10	57.1	0.728X
	52.1×37.4	52.1×27.1	30.7×26	135.86	0.276X
1.5	19.4×14	19.4×10.1	11.4×9.7	56.39	0.74X
	49.5×35.6	49.5×25.8	29.2×24.7	130	0.29X
2	19×13.6	19×9.9	11.2×9.5	54.94	0.756X
	47.2×33.9	47.2×24.6	27.8×23.6	123.49	0.305X
5	17.1×12.3	17.1×8.9	10.1×8.5	50.56	0.84X
	36.8×26.4	36.8×19.1	21.7×18.4	98.7	0.391X
10	14.6×10.5	14.6×7.6	8.6×7.2	44	0.99X
	26.8×19.2	26.8×14	15.8×13.4	75.35	0.53X
15	12.8×9.2	12.8×6.6	7.4×6.4	39.62	1.13X
	21.2×15.2	21.2×11	12.5×10.6	60.77	0.68X
20	11.3×8.1	11.3×5.9	6.7×5.6	36.71	1.27X
	17.4×12.6	17.4×9	10.2×8.7	51.29	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	0.393 X
	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

## ANTI-VIBRATION LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面 尺寸 Image Size(Dia)	视场角 Field of View Angle			TV 畸变 Distor- tion(TV)	最近工作距离 MOD	滤镜螺纹 Filter Size	镜头接口 Mount
				2/3"	1/2"	1/3"				
FK0815A	8mm	1.4/2.8/4/8	1.1"	84.8°×68° (1.1")	77.1°×61.8° (1")	57.6°×44.9° (2/3")	< 5.5%	0.1m、0.064X	M58×P0.75	C-Mount
FK1602	16mm	1.4/2.0/2.8/4/5.6/8/16	2/3"	30.3°×23°	22.3°×16.8°	16.8°×12.6°	< 0.1%	0.1m、0.145X	M28.5×P0.5	C-Mount
FK2502	25mm	1.4/2.0/2.8/4/5.6/8/16	2/3"	20°×15°	14.6°×11°	11°×8.2°	< 0.2%	0.1m、0.253X	M30.5×P0.5	C-Mount
FK3502	35mm	1.4/2.0/2.8/4/5.6/8/16	2/3"	13.9°×10.4°	10.1°×7.6°	7.6°×5.7°	< -0.8%	0.15m、0.213X	M35.5×P0.5	C-Mount
FK5002	50mm	1.4/2.0/2.8/4/5.6/8/16	2/3"	10.46°×7.86°	7.6°×5.27°	5.7°×4.3°	< -0.8%	0.3m、0.177X	M37×P0.5	C-Mount

FK0815A 的光阑叶片，客户可以自行替换；FK 系列其他镜头为固定光圈，不同型号后缀对应不同光圈大小  
FK1602A 光圈为 F1.4，以此类推，FK1602B/C/D/E/F/G 光圈分别为 F2.0/F2.8/F4/F5.6/F8/F16

FK0815A diaphragm blade, the customer can replace; Other lenses of FK series have fixed aperture, and different types of suffixes correspond to different aperture sizes

The aperture of FK1602A is F1.4, and so on, FK1602B/C/D/E/F/G are F2.0/F2.8/F4/F5.6/F8/F16 respectively.

## AUTO-FOCUS LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面 尺寸 Image Size(Dia)	视场角 Field of View Angle	TV 畸变 Distor- tion(TV)	最近工作距离 MOD	滤镜螺纹 Filter Size	镜头接口 Mount	通讯方式 Communication method	转速范围 Range of rotation	运动精度 Move- ment accuracy	响应时间 Corre- spond- ing time
FA0802M2	8mm	1.4-16	2/3"	56.3°×43.7° (2/3")	< 1%	0.1m、0.075X	M37×P0.5	C-Mount	RS232/TTL/ 脉冲	0-400RPM	±0.001°	< 1ms
FA1602M2	16mm	1.4-16	2/3"	30.3°×23° (2/3")	< 0.1%	0.1m、0.145X	M30.5×P0.5	C-Mount	RS232/TTL/ 脉冲	0-400RPM	±0.001°	< 1ms
FA2502M2	25mm	1.4-16	2/3"	20°×15° (2/3")	< 0.2%	0.1m、0.253X	M30.5×P0.5	C-Mount	RS232/TTL/ 脉冲	0-400RPM	±0.001°	< 1ms
FA3502M2	35mm	1.4-16	2/3"	13.9°×10.4° (2/3")	< -0.8%	0.15m、0.213X	M37×P0.5	C-Mount	RS232/TTL/ 脉冲	0-400RPM	±0.001°	< 1ms
FA5002M2	50mm	1.4-C	2/3"	10.46°×7.86° (2/3")	< -0.8%	0.3m、0.177X	M37×P0.5	C-Mount	RS232/TTL/ 脉冲	0-400RPM	±0.001°	< 1ms
FA1216M4	12mm	2.8-22	1.1"	57°×45°	< 1.5%	0.1m、0.103X	/	C-Mount	RS232/TTL/ 脉冲	0-400RPM	±0.001°	< 1ms
FA1616M2	16mm	2.8-22	1.1"	46.3°×36°	< 0.5%	0.1m、0.148X	M35.5×P0.5	C-Mount	RS232/TTL/ 脉冲	0-400RPM	±0.001°	< 1ms
FA2516M2	25mm	2.8-22	1.1"	30.4°×23°	< 0.1%	0.1m、0.221X	M35.5×P0.5	C-Mount	RS232/TTL/ 脉冲	0-400RPM	±0.001°	< 1ms
FA3516M2	35mm	2.8-22	1.1"	22.6°×17°	< 0.02%	0.2m、0.1805X	M35.5×P0.5	C-Mount	RS232/TTL/ 脉冲	0-400RPM	±0.001°	< 1ms
FA5016M3	50mm	2.8-22	1.1"	15.9°×11.9°	< 0.04%	0.3m、0.179X	M35.5×P0.5	C-Mount	RS232/TTL/ 脉冲	0-400RPM	±0.001°	< 1ms

## 4K7μ LINE SCAN LENS

型号 Model No	焦距 EFL	标准倍率 Standard Magnification	倍率范围 Magnification Range	最大像面尺寸 Image Size(Dia)	通光孔 径 F/NO	TV 畸变 Distortion (TV)	工作距离 WD	镜头接口 Mount	法兰距离 Flange Distance	滤镜螺纹 Filter Size
LS2003C	20mm	0.0358X	0.02X-0.1X	φ30	4.5-C	0.2%	557.4	M42×P1	12	M43×P0.75
LS2502B	25mm	0.121X	0.03X-0.2X	φ32	2.8-16	0.6%	200	M42×P1	12	M48.5×P0.75
LS2801A	29mm	0.1X	0.05X-0.3X	φ30	4.0-C	0.1%	299.7	V-Mount (φ42.5)	26	M35×P0.5
LS3508A	35mm	0.08X	0.04X-0.1X	φ30	4.5-16	< 0.01%	508.49	V-Mount (φ38)	37.42	M37×P0.75
LS4010A	40mm	0.1X	0.04X-0.33X	φ43.2	2.8-22	0.5%	429.9	V-Mount (φ38)	39.62	M37×P0.75

## 4K7μ LINE SCAN LENS NEW

型号 Model No	焦距 EFL	标准倍率 Standard Magnification	倍率范围 Magnification Range	最大像面尺寸 Image Size(Dia)	通光孔 径 F/NO	TV 畸变 Distortion (TV)	工作距离 WD	镜头接口 Mount	法兰距离 Flange Distance	滤镜螺纹 Filter Size
LS04020A	20mm	0.03X	0.04X-0.12X	φ30	3.5-16	< 0.5%	650	M42×P1	12	M67×P0.75
LS04028A	28mm	0.05X	0.012X-0.43X	φ30	2.8-16	< 0.3%	500	M42×P1	12	M49×P0.75
LS04035A	35mm	0.071	0.01X-0.18X	φ30	2.8-16	< 0.2%	500	M42×P1	12	M49×P0.75
LS04050A	50mm	0.11X	0.012X-0.43X	φ30	2.8-16	< 0.2%	500	M42×P1	12	M49×P0.75
LS04060A	60mm	0.131X	0.012X-0.38X	φ30	2.8-16	< 0.1%	500	M42×P1	12	/
LS04080A	80mm	0.177X	0.02X-0.46X	φ30	2.8-16	< 0.2%	500	M42×P1	12	M58×P0.75
LS04100A	100mm	0.22X	0.02X-0.57X	φ30	2.8-16	< 0.1%	500	M42×P1	12	/

## 8K7μ LINE SCAN LENS

型号 Model No	焦距 EFL	标准倍率 Standard Magnification	倍率范围 Magnification Range	最大像面尺寸 Image Size(Dia)	通光孔 径 F/NO	TV 畸变 Distortion (TV)	工作距离 WD	镜头接口 Mount	共轭距离 O/I	法兰距离 Flange Distance	滤镜螺纹 Filter Size
LS4005B	40mm	0.05X	0.02X-0.16X	φ60	4.0-22	< 0.2%	818.8	M72×P0.75	943.08	12	M72×P0.75
MS4505A	45mm	0.2X	0.03X-0.35X	φ62	4.0-16	< 0.5%	223.5	M62×P0.75	355.39	12	M62×P0.75
LS6016A	60mm	0.167X	0.04X-0.33X	φ64	4.0-32	0.19%	404.4	V-Mount (φ38)	496.32	63.31	M37×P0.75
LS8014A	80mm	0.146X	0.13X-0.167X	φ62	5.6-32	0.05%	591.1	V-Mount (φ38)	702.5	81.54	M39.6×P0.5
LS8020A	80mm	0.21X	0.194X-0.233X	φ62	5.6-32	0.05%	418.85	V-Mount (φ38)	533.67	85.54	M39.6×P0.5
LS8003A	80mm	0.3X	0.2X-0.4X	φ64	5.6-32	< 0.01%	320.26	V-Mount (φ38)	451.78	102.92	M37×P0.75
LS0802A	100mm	0.2X	0.15X-0.25X	φ66	4.5-22	0.005%	654.8	V-Mount (φ64)	827.8	123.5	M54×P0.75

## 12K5μ LINE SCAN LENS

型号 Model No	焦距 EFL	标准倍率 Standard Magnification	倍率范围 Magnification Range	最大像面尺寸 Image Size(Dia)	通光孔 径 F/NO	TV 畸变 Distortion (TV)	工作距 离 WD	镜头接口 Mount	共轭距离 O/I	法兰距离 Flange Distance	滤镜螺纹 Filter Size
LS1202A	116mm	0.2X	0.18X-0.24X	φ62	4.5-22	< 0.01%	652.4	V-Mount (φ56)	824.9	122.8	M52×P0.75
LS1203A	116mm	0.33X	0.29X-0.4X	φ62	4.5-22	< 0.005%	415.1	V-Mount (φ56)	599.7	134.9	M52×P0.75
LS1205A	116mm	0.5X	0.45X-0.6X	φ62	4.5-22	< 0.01%	291.7	V-Mount (φ56)	491	149.6	M52×P0.75
LS1207A	116mm	0.75X	0.7X-0.85X	φ62	4.5-22	< 0.005%	209.8	V-Mount (φ56)	429.85	170.3	M52×P0.75
LS1208A	116mm	0.806X	0.75X-0.85X	φ62	4.5-22	< 0.005%	203.8	V-Mount (φ56)	434.66	181.2	M52×P0.75
LS1210A	116mm	1X	0.9X-1.1X	φ62	4.5-22	< 0.05%	164.2	V-Mount (φ56)	400.56	186.7	M52×P0.75
LS1212A	116mm	1.24X	1.19X-1.29X	φ62	4.5-22	< 0.005%	149.9	V-Mount (φ56)	434.66	232.2	M52×P0.75

## 16K3.5μ LINE SCAN LENS

型号 Model No	焦距 EFL	标准倍率 Standard Magnification	倍率范围 Magnification Range	最大像面尺寸 Image Size(Dia)	通光孔 径 F/NO	TV 畸变 Distortion (TV)	工作距离 WD	镜头接口 Mount	共轭距离 O/I	法兰距离 Flange Distance	滤镜螺纹 Filter Size
LS9005A	95mm	0.05X	0.03X-0.08X	φ62	4.0-16	0.005%	1980.85	V-Mount (φ56)	2112.94	81.2	M58×P0.75
LS9001A	90mm	0.1X	0.08X-0.14X	φ64	4.0-16	0.01%	992.4	V-Mount (φ56)	1123.5	82.7	M58×P0.75
LS1626A	114mm	0.26X	0.23X-0.28X	φ66	3.8-16	0.01%	497.85	V-Mount (φ49)	672.16	128.3	M45×P0.5
LS1603A	116mm	0.33X	0.31X-0.36X	φ66	3.8-16	0.001%	412	V-Mount (φ49)	595	137	M45×P0.5
LS1642A	116mm	0.42X	0.38X-0.45X	φ66	3.8-16	0.007%	339.74	V-Mount (φ49)	530.1	144.5	M45×P0.5
LS1605A	116mm	0.5X	0.46X-0.54X	φ66	3.8-16	0.0008%	296.2	V-Mount (φ49)	496	153.3	M45×P0.5
LS1667A	116mm	0.67X	0.65X-0.7X	φ66	3.8-16	0.1%	237.4	V-Mount (φ49)	453.5	170.2	M45×P0.5
LS1607A	116mm	0.7X	0.66X-0.75X	φ66	3.8-16	0%	229.4	V-Mount (φ49)	447.2	174.4	M45×P0.5
LS1675A	100mm	0.75X	0.7X-0.8X	φ66	3.8-16	0.0008%	220.8	V-Mount (φ49)	444.8	180.5	M45×P0.5

## 16K5μ LINE SCAN LENS

型号 Model No	焦距 EFL	标准倍率 Standard Magnification	倍率范围 Magnification Range	最大像面尺寸 Image Size(Dia)	通光孔径 F/NO	TV 畸变 Distortion (TV)	工作距离 WD	镜头接口 Mount	共轭距离 O/I	法兰距离 Flange Distance	滤镜螺纹 Filter Size
LS1626B	116mm	0.26X	0.22X-0.3X	φ82	3.8-16	0.001%	663.34	V-Mount (φ49)	874.3	160.95	M50×P0.5
LS1603B	120mm	0.33X	0.29X-0.38X	φ82	4.0-16	0.005%	534.64	V-Mount (φ56)	757.63	169.37	M52×P0.75
LS1605B	120mm	0.5X	0.43X-0.57X	φ82	4.0-16	0.002%	390.66	V-Mount (φ56)	636.99	192.71	M52×P0.75
LS1662C	116mm	0.625X	0.59X-0.67X	φ82	3.8-16	0.001%	249.7	V-Mount (φ49)	458.9	166.9	M45×P0.5
LS1667B	147.6mm	0.667X	0.6X-0.72X	φ82	4.5-16	0.01%	321.2	V-Mount (φ56)	590.5	215.3	M52×P0.75
LS1683A	116mm	0.8387X	0.75X-0.86X	φ82	3.8-16	0.008%	204.1	V-Mount (φ49)	437.1	189.5	M45×P0.5
LS1687A	116mm	0.875X	0.8X-0.92X	φ82	3.8-16	0.005%	199	V-Mount (φ49)	435.5	193.1	M45×P0.5
LS1610A	116mm	1X	0.93X-1.07X	φ82	3.8-16	0.0005%	184.16	V-Mount (φ49)	439.45	209.47	M45×P0.5
LS1613A	116mm	1.33X	1.25X-1.47X	φ84	3.8-16	0.0003%	156.3	V-Mount (φ49)	444.5	243.7	M45×P0.5
LS1615A	116mm	1.5X	1.3X-1.6X	φ84	3.8-16	0.08%	143.9	V-Mount (φ49)	453.7	263.8	M45×P0.5
LS1617A	116mm	1.7X	1.65X-1.73X	φ84	3.8-16	0.05%	137.8	V-Mount (φ49)	470	286.1	M45×P0.5
LS1620A	116mm	2X	1.75X-2.25X	φ84	3.8-16	0.0008%	127.2	V-Mount (φ49)	496	322.8	M45×P0.5
LS1620B	120mm	2X	1.7X-2.4X	φ82	4.0-16	0.002%	166.35	V-Mount (φ56)	636.99	424.31	M52×P0.75
LS1630A	116mm	3X	2.5X-4.5X	φ84	3.8-16	0.001%	111.4	V-Mount (φ49)	591.3	433.9	M45×P0.5
LS1630B	120mm	3X	2.4X-3.8X	φ82	4.0-16	0.001%	143.02	V-Mount (φ56)	757.63	568.28	M52×P0.75

## COAXIAL ILLUMINATION LINE SCAN LENS

型号 Model No	焦距 EFL	标准倍率 Standard Magnification	倍率范围 Magnification Range	最大像面尺寸 Image Size(Dia)	通光孔径 F/NO	TV 畸变 Distortion (TV)	工作距离 WD	镜头接口 Mount	共轭距离 O/I	法兰距离 Flange Distance
LS1610L-P02	116mm	1X	0.9X-1.2X	φ82	3.8-16	0.0005%	157.39	V-Mount (φ49)	449.53	212.09
LS1613L-P01	116mm	1.33X	1.2X-1.43X	φ82	4.3-16	0.001%	71.54	V-Mount (φ56)	579.35	327.28
LS1615L-P01	145mm	1.5X	1.4X-1.6X	φ82	4.3-16	0.001%	27.3	V-Mount (φ56)	592.1	351.96
LS1617L-P01	116mm	1.7X	1.45X-2X	φ82	4.0-16	0.001%	48.83	V-Mount (φ56)	611.85	381.66
LS1620L-P01	120mm	2X	1.7X-2.4X	φ82	4.0-16	0.0005%	135.95	V-Mount (φ56)	641.94	424.66
LS1630L-P01	120mm	3X	2.5X-3.5X	φ82	4.0-16	0.005%	112.6	V-Mount (φ56)	759.5	565.5

## 120MP/151MP LARGE FORMAT LENS

型号 Model No	焦距 EFL	标准倍率 Standard Magnification	倍率范围 Magnification Range	通光孔径 F/NO	TV 畸变 Distortion (TV)	工作距离 WD	镜头接口 Mount	最大像面尺寸 Image Size(Dia)	法兰距离 Flange Distance	滤镜螺纹 Filter Size
MF5013A	50mm	0.1X	0.01X-0.5X	3.3-22	< 0.02%	517.8	F-Mount	φ48	46.5	M58×P0.75
MS5515A	55mm	0.2X	0.01X-0.5X	4.5-22	< 0.05%	280.6	M72×P0.75	φ67	19.55	/
MS9015A	90mm	0.2X	0.07X-0.42X	4.8-22	< 0.1%	505.7	M72×P0.75	φ67	19.55	M62×P0.75

## AUTO-FOCUS LARGE FORMAT LENS

型号 Model No	焦距 EFL	最大像面尺寸 Image Size(Dia)	通光孔径 F/NO	TV 畸变 Distortion (TV)	倍率范围 Magnification Range	镜头接口 Mount	法兰距离 Flange Distance	滤镜螺纹 Filter Size	通讯方式 Communi- cation method	转速范围 Range of rotation	运动精度 Move- ment accuracy	响应时间 Corre- spond- ing time
MS5515M10	55mm	φ67	4.5-22	< 0.05%	0.01X-0.5X	M72×P0.75	19.55	/	RS232/TTL	0-250RPM	±0.01°	< 1ms
MS9015M	90mm	φ67	4.8-22	< 0.1%	0.07X-0.42X	M72×P0.75	19.55	M62×P0.75	RS232/TTL	0-250RPM	±0.01°	< 1ms
MC5001M	50mm	φ46	3.6-22	< 0.2%	0.02X-0.5X	M72×P0.75	11.48	M62×P0.75	RS232/TTL	0-250RPM	±0.01°	< 1ms

## 29MP LARGE FORMAT LENS

型号 Model No	焦距 EFL	标准倍率 Standard Magnifi- cation	最大像面尺寸 Image Size(Dia)	通光孔径 F/NO	TV 畸变 Distortion (TV)	倍率范围 Magnifica- tion Range	工作距离 WD	镜头接口 Mount	共轭距离 O/I	法兰距离 Flange Distance	滤镜螺纹 Filter Size
MF3502A	35mm	0.1X	φ45	2.8-16	< 0.4%	0.05X-0.25X	350.9	F-Mount	474.5	46.5	M58×P0.75
MF3503A	35mm	0.03X	φ45.3	2.8-16	< 0.5%	0.01X-0.1X	1158.7	F-Mount	1268.1	46.5	M67×P0.75
MF4010A	40mm	0.1X	φ43.2	2.8-22	< 0.2%	0.01X-0.25X	409	F-Mount	498.48	46.5	M62×P0.75
MF5001C	50mm	0.06X	φ43	2.8-22	0.2%	0.02X-0.1X	862.1	F-Mount	942.2	46.5	M62×P0.75
MF5015A	50mm	0.062X	φ44	2.8-22	< 0.3%	0.014X-0.24X	833.4	F-Mount	948.9	46.5	M50×P0.5
MF6016A	60mm	0.167X	φ64	4.0-32	0.19%	0.04X-0.33X	384.9	F-Mount	496.32	46.5	M65×P0.75
MF8003A	80mm	0.3X	φ58	5.6-32	< 0.01%	0.2X-0.4X	306.2	F-Mount	451.78	46.5	M52×P0.75
MF9005A	90mm	0.05X	φ43.2	4.0-16	< 0.01%	0.01X-0.1X	1985	F-Mount	2112	46.5	M62×P0.75

## 8K5μ LARGE FORMAT LENS

型号 Model No	焦距 EFL	标准倍率 Standard Magnifica- tion	最大像面尺寸 Image Size(Dia)	通光孔径 F/NO	TV 畸变 Distortion (TV)	倍率范围 Magnification Range	工作距离 WD	镜头接口 Mount	共轭距离 O/I	法兰距离 Flange Distance	滤镜螺纹 Filter Size
MF9001A	90mm	0.1X	φ64	4.0-16	0.01%	0.08X-0.14X	985.9	F-Mount	1123.5	46.5	M67×P0.75
MF9015A	90mm	0.155X	φ64	4.0-16	0.05%	0.118X-0.192X	651.1	F-Mount	792.6	46.5	M67×P0.75
MC2501A	25mm	0.1X	φ46	4.0-22	< 0.2%	0.001X-0.2X	220	M58×P0.75	371.09	12	M95×P1.0
MC3501A	35mm	0.067X	φ42	4.0-22	< 0.7%	0.001X-0.2X	500	M58×P0.75	642.56	12	M67×P0.75
MC5001A	50mm	0.16X	φ46	3.6-22	< 0.2%	0.02X-0.5X	300	M58×P0.75	444	12	M62×P0.75
MC8001A	80mm	0.172X	φ46	3.6-22	< 0.2%	0.041X-0.39X	500	M58×P0.75	630.6	12	M62×P0.75

MC 系列 B 款镜头接口 M58×P0.75, 法兰距离 11.48; C 款镜头接口 M72×P0.75, 法兰距离 12  
MC series B lens mount M58×P0.75, flange distance 11.48; Type C lens mount M72×P0.75, flange distance 12



## STANDARD TELECENTRIC LENS

型号 Model No	倍率 Reduction Ratio	最大像面尺寸 Image Size(Dia)	通光孔径 F/NO	物方数值孔径 Object NAWD	工作距离 WD	视野范围 FOV(D°H°V) 2/3"	TV 畸变 Distortion (TV)	远心度 Telecen- tricity	物方分辨率 Resolution	镜头接口 Mount	照明类型 Lighting type
MV65021A	0.2	2/3"	6.5	0.015	65mm	55×44×33	<0.1%	<0.1°	23.25um	C-Mount	同轴
MV65021B	0.2	2/3"	6.5	0.015	65mm	55×44×33	<0.1%	<0.1°	23.25um	C-Mount	非同轴
MV65031A	0.3	2/3"	6.7	0.022	65mm	36.7×29.3×22	<0.05%	<0.1°	15.5um	C-Mount	同轴
MV65031B	0.3	2/3"	6.7	0.022	65mm	36.7×29.3×22	<0.05%	<0.1°	15.5um	C-Mount	非同轴
MV65051A	0.5	2/3"	9.5	0.026	65mm	22×17.6×13.2	<0.05%	<0.1°	12.8um	C-Mount	同轴
MV65051B	0.5	2/3"	9.5	0.026	65mm	22×17.6×13.2	<0.05%	<0.1°	12.8um	C-Mount	非同轴
MV65075A	0.75	2/3"	9.5	0.04	65mm	14.6×11.7×8.8	<0.1%	<0.1°	7um	C-Mount	同轴
MV65075B	0.75	2/3"	9.5	0.04	65mm	14.6×11.7×8.8	<0.1%	<0.1°	7um	C-Mount	非同轴
MV65081A	0.8	2/3"	9.5	0.04	65mm	13.7×11×8.2	<0.05%	<0.1°	8.4um	C-Mount	同轴
MV65081B	0.8	2/3"	9.5	0.04	65mm	13.7×11×8.2	<0.05%	<0.1°	8.4um	C-Mount	非同轴
MV65101A	1	2/3"	11	0.045	65mm	11×8.8×6.6	<0.1%	<0.1°	7.5um	C-Mount	同轴
MV65101B	1	2/3"	11	0.045	65mm	11×8.8×6.6	<0.1%	<0.1°	7.5um	C-Mount	非同轴
MV65151A	1.5	2/3"	12	0.063	65mm	7.3×5.8×4.4	<0.1%	<0.1°	5.4um	C-Mount	同轴
MV65151B	1.5	2/3"	12	0.063	65mm	7.3×5.8×4.4	<0.1%	<0.1°	5.4um	C-Mount	非同轴
MV65201A	2	2/3"	13.5	0.074	65mm	5.5×4.4×3.3	<0.1%	<0.05°	4.5um	C-Mount	同轴
MV65201B	2	2/3"	13.5	0.074	65mm	5.5×4.4×3.3	<0.1%	<0.05°	4.5um	C-Mount	非同轴
MV65301A	3	2/3"	16	0.092	65mm	3.7×2.9×2.2	<0.1%	<0.1°	3.5um	C-Mount	同轴
MV65301B	3	2/3"	16	0.092	65mm	3.7×2.9×2.2	<0.1%	<0.1°	3.5um	C-Mount	非同轴
MV65401A	4	2/3"	18	0.112	65mm	2.75×2.5×1.65	<0.03%	<0.05°	3um	C-Mount	同轴
MV65401B	4	2/3"	18	0.112	65mm	2.75×2.5×1.65	<0.03%	<0.05°	3um	C-Mount	非同轴
MV65601A	6	2/3"	27	0.112	65mm	1.8×1.5×1.1	<0.05%	<0.5°	2.8um	C-Mount	同轴
MV65601B	6	2/3"	27	0.112	65mm	1.8×1.5×1.1	<0.05%	<0.5°	2.8um	C-Mount	非同轴
MV11021A	0.2	2/3"	7.8	0.012	110mm	55×44×33	<0.05%	<0.1°	23.25um	C-Mount	同轴
MV11021B	0.2	2/3"	7.8	0.012	110mm	55×44×33	<0.05%	<0.1°	23.25um	C-Mount	非同轴
MV11031A	0.3	2/3"	7.9	0.019	110mm	36.6×29.2×22	<0.05%	<0.1°	15.5um	C-Mount	同轴
MV11031B	0.3	2/3"	7.9	0.019	110mm	36.7×29.3×22	<0.05%	<0.1°	15.5um	C-Mount	非同轴
MV11051A	0.5	2/3"	9.3	0.027	110mm	22×17.6×13.2	<0.05%	<0.1°	12um	C-Mount	同轴
MV11051B	0.5	2/3"	9.3	0.027	110mm	22×17.6×13.2	<0.05%	<0.1°	12um	C-Mount	非同轴
MV11081A	0.8	2/3"	8.9	0.045	110mm	13.8×11×8.2	<0.05%	<0.15°	6.25um	C-Mount	同轴
MV11081B	0.8	2/3"	8.9	0.045	110mm	13.8×11×8.2	<0.05%	<0.2°	6.25um	C-Mount	非同轴
MV11101A	1	2/3"	11	0.045	110mm	11×8.8×6.6	0%	<0.1°	7.4um	C-Mount	同轴
MV11101B	1	2/3"	11	0.045	110mm	11×8.8×6.6	0%	<0.1°	7.4um	C-Mount	非同轴
MV11151A	1.5	2/3"	12	0.06	110mm	7.3×5.9×4.4	<0.05%	<0.1°	4.8um	C-Mount	同轴
MV11151B	1.5	2/3"	12	0.06	110mm	7.3×5.9×4.4	<0.05%	<0.1°	4.8um	C-Mount	非同轴
MV11201A	2	2/3"	13.6	0.074	110mm	5.5×4.4×3.3	<0.05%	<0.1°	4.5um	C-Mount	同轴
MV11201B	2	2/3"	13.6	0.074	110mm	5.5×4.4×3.3	<0.05%	<0.1°	4.5um	C-Mount	非同轴
MV11301A	3	2/3"	17.6	0.085	110mm	3.7×2.9×2.2	<0.1%	<0.1°	3.5um	C-Mount	同轴
MV11301B	3	2/3"	17.6	0.085	110mm	3.7×2.9×2.2	<0.1%	<0.1°	3.5um	C-Mount	非同轴
MV11401A	4	2/3"	22	0.09	110mm	2.75×2.2×1.65	<0.05%	<0.1°	3.7um	C-Mount	同轴
MV11401B	4	2/3"	22	0.09	110mm	2.75×2.2×1.65	<0.05%	<0.1°	3.7um	C-Mount	非同轴
MV11601A	6	2/3"	35	0.085	110mm	1.83×1.46×1.1	<0.02%	<0.1°	4um	C-Mount	同轴
MV11601B	6	2/3"	35	0.085	110mm	1.83×1.46×1.1	<0.02%	<0.1°	4um	C-Mount	非同轴

## 360° IMAGING SYSTEM (OUTER SURFACE)

型号 Model No	芯片 Detectc Type	最大像面尺寸 Image Size(Dia)	工作距离 WD	通光孔径 F/NO	工作距离 WD	测量物直径 Diame- ter(mm)	测量高度 Height(mm)	通光孔径 F/NO	镜头接口 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	
					19	25	19.54	6	
RF3602A	1/1.8"	φ5.32	9-45.4	8.0-16	45.4	7.5	5.3	16	C-Mount
					33.8	15	11.86	12	
					9	30	25	8	
RF3603A	2/3"	φ6.6	14-48.2	8.0-16	48.2	7.5	4	16	C-Mount
					36.8	15	10.6	12	
					14	30	23.4	8	
RF3604A	1/1.8"	φ5.32	9-50	8.0-16	50	4.5	2.7	16	C-Mount
					33.8	15	11.86	12	
					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	
					9.7	30	25.6	6	

## 360° IMAGING SYSTEM (INNER SURFACE)

型号 Model No	芯片 Detectc Type	最大像面尺寸 Image Size(Dia)	工作距离 WD	通光孔径 F/NO	工作距离 WD	测量物直径 Diame- ter(mm)	测量高度 Height(mm)	光源 Illumina- tion(mm)	镜头接口 Mount
RF3651B	1/3"	φ3.6	12.5-50	14		25	12.4	内置光源 Embedded Illumination	C-Mount
						65	36.8		
						100	58.2		
RF3652B	2/3"	φ6.6	2.7-70	8	2.7	5	5	外接光源 External Illumination	C-Mount
					35	60	61.4		
					70	120	123		

## 360° IMAGING SYSTEM NEW

型号 Model No	芯片 Detectc Type	最大像面尺寸 Image Size(Dia)	工作距离 WD	通光孔径 F/NO	工作距离 WD	测量物直径 Diame- ter(mm)	测量高度 Height(mm)	工作距离 WD	镜头接口 Mount	
RF24001A	2/3"	φ6.6	12.5-50	6.0-16	16.9-58.86	内外壁检测	5-70	< 39	16.9-58.86	C-Mount
							8	5	12-40	
							40	31	63	
RF27021A	全画幅	φ17.6	2.7-70	6.8	10-78	内壁检测	65	21	78	M58×P0.75 FBL:12mm
							12	33	45	
							45	33	27	
							70	10	10	

## SCHEIMPFLUG LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面尺寸 Image Size(Dia)	视场角 Field of View Angle			TV 畸变 Distortion(TV)	最近工作距离 MOD	滤镜螺纹 Filter Size	镜头接口 Mount
				1.1"	1"	2/3"				
FA1225SM	12mm	2.8-22	1.1"	60.66°×46.5°	50°×50°	38.6°×33°	<0.3%	0.1m、0.1055x	M46×P0.75	C-Mount (φ27.9)
FA1616SM	16mm	2.8-22	1.1"	46.3°×36°	43.6°×33.4°	30.8°×23.3°	<0.5%	0.1m、0.148X	M35.5×P0.5	C-Mount (φ27.9)
FA2516SM	25mm	2.8-22	1.1"	30.4°×23°	27.6°×20.9°	19.2°×14.5°	<0.1%	0.1m、0.221X	M35.5×P0.5	C-Mount (φ27.9)
FA3516SM	35mm	2.8-22	1.1"	22.6°×17°	20.6°×15.45°	14.3°×10.7°	<0.02%	0.2m、0.1805X	M35.5×P0.5	C-Mount (φ27.9)

沙姆镜头接口为套入式，匹配外径 φ27.9mm 的相机接口，镜头接口大小可定制修改  
The scheimpflug lens mount is a casing, matching outer diameter φ27.9mm camera mount, lens mount size can be customized

## SWIR LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面尺寸 Image Size(Dia)	倍率范围 MagnificationRange	法兰距离 FlangeDistance	工作波长	TV 畸变 Distortion(TV)	最近工作距离 MOD	镜头接口 Mount
IR2502A	25mm	0.9-16	φ12.6	0.05X-0.141X	17.526	800nm-1700nm	< 0.1%	0.2m	C-Mount
IR2516A	25mm	2.8-22	1.1"	0.005X-0.221X	17.526	800nm-1700nm	< 0.1%	0.1m	C-Mount

## VISIBLE INFRARED LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面尺寸 Image Size(Dia)	滤镜螺纹 Filter Size	法兰距离 FlangeDis- tance	工作波长	TV 畸变 Distortion(TV)	最近工作距离 MOD	镜头接口 Mount
VI1202A	12mm	1.8-16	1/2"	M25.5×P0.5	17.526	400nm-1700nm	< 0.4%	0.1m-inf	C-Mount
VI1602A	16mm	1.8-16	1/2"	M25.5×P0.5	17.526	400nm-1700nm	< 0.4%	0.1m-inf	C-Mount
VI2505A	25mm	1.8-16	1/2"	M28.5×P0.5	17.526	400nm-1700nm	< 0.4%	0.1m-inf	C-Mount
VI3502A	35mm	1.8-16	1/2"	M25.5×P0.5	17.526	400nm-1700nm	< 0.2%	0.1m-inf	C-Mount

## ULTRA HIGH RESOLUTION LINE SCAN LENS

型号 Model No	焦距 EFL	标准倍率 Standard Magnification	最大像面 尺寸 Image Size(Dia)	倍率范围 Magnification- Range	通光孔径 F/NO	TV 畸变 Distor- tion(TV)	工作距离 WD	镜头接口 Mount	共轭距离 O/I	法兰距离 FlangeDis- tance	滤镜螺纹
LH1635A	100mm	3.5X	φ82	3.35X-3.65X	1.6-22	< 0.01%	48.4	V-Mount (φ64)	551.79	394.8	M58×P0.75

## VARI-MAGNIFICATION TELECENTRIC LENS

型号 Model No	倍率 ReductionRatio	最大像面尺寸 Image Size(Dia)	对焦方式 Focus Mode	物方数值孔径 Object NAWD	工作距离 WD	TV 畸变 Distortion(TV)	远心度 Telecentricity	物方分辨率 Resolution	镜头接口 Mount	照明类型 Lighting type
TC6552A	0.5-2	2/3"	手动	0.04	65mm	0.05%	0.05°	8um	C-Mount	同轴
TC6552B	0.5-2	2/3"	电动	0.04	65mm	0.05%	0.05°	8um	C-Mount	同轴

## 3CCD LENS

型号 Model No	焦距 EFL	最大像面尺寸 Image Size(Dia)	倍率范围 Magnification Range	通光孔径 F/NO	TV 畸变 Distortion(TV)	工作距离 WD	镜头接口 Mount	法兰距离 Flange Distance	滤镜螺纹 Filter Size
TD2803A	28mm	φ30	0.01X-0.14X	2.8-16	< 0.2%	0.4m-2m	F-Mount	46.5	M62×P0.75

## 5MP S-MOUNT LOW DISTORTION BOARD LENS

型号 Model No	焦距 EFL	通光孔径 F/NO	最大像面尺寸 Image Size(Dia)	视场角 Field of View Angle		TV 畸变 Distortion(TV)	最近工作距离 MOD	相对照度 Relative illumination	镜头接口 Mount
				1/1.8"	1/3"				
FS0305A	3.37mm	2.8	1/2"	86°×70° (1/2")	70°×50°	< 1%	0.1m、0.032X	78%	M12×P0.5
FS0605A	6mm	2.8	1/1.8"	60.6°×46.6°	42.4°×32.4°	< 0.5%	0.1m、0.058X	60%	M12×P0.5
FS0805A	8mm	2.8	1/1.8"	47°×35.6°	32.3°×24.6°	< 0.3%	0.12m、0.067X	60%	M12×P0.5
FS1205A	12mm	2.8	1/1.8"	32.8°×24.5°	22.2°×16.7°	< 0.2%	0.1m、0.12X	68%	M12×P0.5
FS1605A	16mm	2.8	1/1.8"	24.4°×18.4°	17.1°×12.3°	< 0.1%	0.1m、0.184X	80%	M12×P0.5
FS2505A	25mm	2.8	1/1.8"	15.6°×11.5°	10.5°×7.8°	< 0.05%	0.2m、0.14X	75%	M12×P0.5

## 5MP S-MOUNT LOW DISTORTION BOARD LENS FIELD OF VIEW

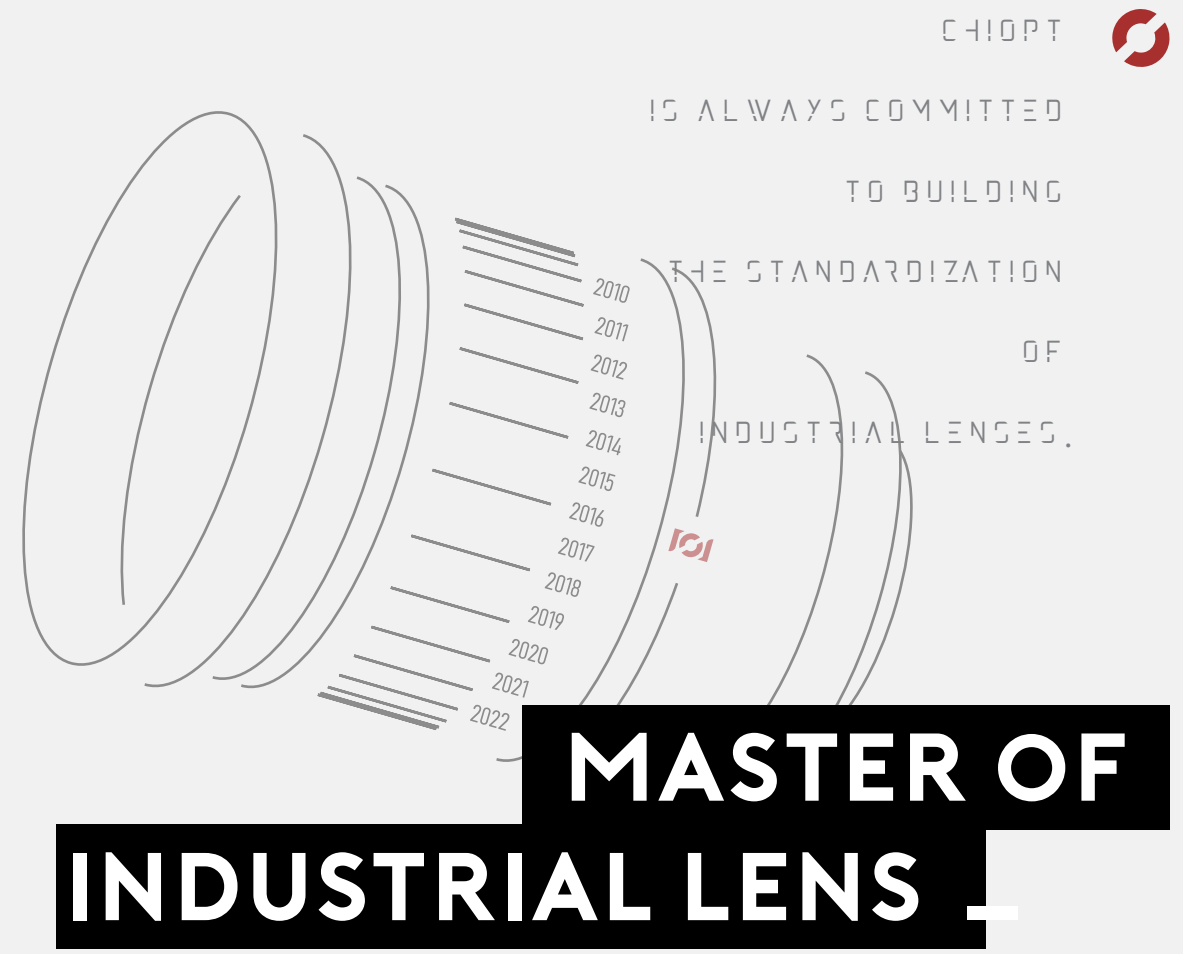
WD(mm)\型号	FS0305A	FS0605A	FS0805A	FS1205A	FS1605A	FS2505A
100	200×150	125.8×94.3	/	60.2×45.2	39.3×29.5	/
120	237.4×178.1	147.6×109.1	108.8×81.6	72×53.2	49.5×36.6	/
150	290.9×218.2	184.5×138.4	135×99.8	90.3×67.7	61.8×46.3	/
200	400×300	243.2×182.4	178.9×134.2	120.3×90.2	84.2×63.2	51.6×38.7
250	492.3×369.2	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	1709.2×1281.9	1080×798	792.2×594.1	540×399	405×299.3	253.4×190.1
950	1804.2×1353.1	1140×842.3	855×631.8	570×421.2	427.5×315.9	267.8×200.9
1000	1899.1×1424.3	1200×886.7	900×665	600×443.3	450×332.5	288×212.8

## MAGNIFYING LENS

型号 Model No	倍率范围 Magnification	芯片尺寸 Sensor size	镜头接口 Mount
BA1501A	1.5X	2/3"	C-Mount
BA2001A	2.0X	2/3"	C-Mount
BA2501A	2.5X	2/3"	C-Mount
BA3001A	3.0X	2/3"	C-Mount
BA4001A	4.0X	2/3"	C-Mount

## EXTENSION RING

型号 Model No	长度 Length	镜头接口 Mount
MR-0005	0.5mm	C-Mount
MR-0010	1mm	C-Mount
MR-0020	2mm	C-Mount
MR-0500	5mm	C-Mount
MR-1000	10mm	C-Mount
MR-2000	20mm	C-Mount
MR-4000	40mm	C-Mount



由于产品的迭代更新，本手册中的技术参数如有修改，恕不另行通知。如阁下对本产品有其他疑问或者看法而本说明书内容未尽其详，请及时提出咨询，我们将很乐意回答阁下提出的问题、建议和批评。再次感谢贵公司的选择和阁下的信任！

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Thank you again for your choice and your trust!