厦门力鼎光电股份有限公司
Xiamen Leading Optics Co., Ltd.

EVETAR®

Sharper eyes for imaging

EVETAR®
Sharper eyes for imaging

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Professional Optical Solution Provider

光学解决方案供应商

Company Over View　公司概况

Xiamen Leading Optics Co., Ltd. is one of the leading designers and manufacturers of camera lenses and keeping providing innovative optical solutions and products to the market. Being stable in huge quantity supplying, Xiamen Leading Optics Co.,Ltd. implements ISO9000, ISO14001, OHSAS18001, IATF16949 quality management systerms and equips with advance production facilities, with an area of 30,000 square meters and more than 1000 employees in headquarter.

厦门力鼎光电股份有限公司成立于2002年，是一家行业领先的光学镜头研发和制造商， 致力于为客户提供完整的光学解决方案。 公司总部坐落于美丽的海上花园城市厦门，产品远销海外。公司引进了一系列国际先进的高精尖仪器设备用于研发、测试和生产，配备高度自动化的生产车间，严格按照ISO9001、ISO14001、OHSAS18001和IATF16949体系进行管理。

Wide Range of Optical Products　研发实力

With strong R&D ability, advanced production equipment and strict QC system, we extend our lens family into a wide range of industrial level Products, covering image formats from 1/9", 1/1.75", 1/4", 1/3", 1/2.8", 1/2.3", 1/1.8", 2/3", 1", 4/3" up to film size.

We Keep launching new lens models for high-definition cameras in many applications, including Day& Night security, IP surveillance, Panoramic security, Video conferencing, Motion capture, Recognition, Sports, Machine Vision / FA, Automotive, Medical, etc.

自成立以来，公司自主研发设计了超过1500种不同的光学镜头，是全球同类镜头厂商中品种规划最为齐全的厂商之一，对于市场的芯片，从 1/9", 1/1.75", 1/4", 1/3", 1/2.8", 1/2.3", 1/1.8", 2/3", 1"到4/3" 乃至更大相面，都有相应的方案予以支持。

公司产品应用领域涵盖安防、机器视觉、生物识别、医疗、动漫影像、智能交通、视讯会议、智能居以及运动相机等领域。

Customized and Technical Service　定制化服务与技术支持

As an innovative designer and dedicated manufacturer , we keep providing cost-effective and time-effective optical solutions with technical support to our customers in all aspects from design stage to finished products.

作为一家专业的光学解决方案供应商和光学镜头制造商，我们致力于为客户提供具有良好性价比的产品差异化服务；从最初的产品研发设计， 到最后的量产阶段， 我们始终坚持为客户提供最高效、最全面的技术支持。

Milestone 发展历程

2019 Class 1000 dust-free workshop available
建立千级无尘车间

2018 Established subsidiary in Shangrao, Jiangxi
Completed the shareholding system reform
建立江西上饶分公司 扩大光学冷加工生产基地
公司完成股份制改制，更名为厦门力鼎光电股份有限公司

2015 Introduced fully integrated automated assembly line
导入全自动组装生产线

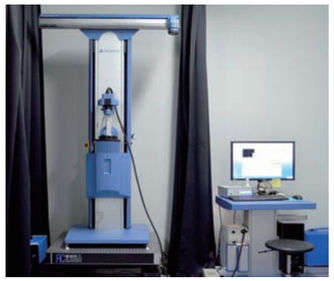
2011 Acquired certification of ISO9001-2008、TS16949-2009、ISO14001-2004、OHSAS18001-2007、IATF16949-2016
获得ISO9001-2008、TS16949-2009、ISO14001-2004、OHSAS18001-2007、IATF16949-2016等 体系认证

2010 Invested in aspherical Tech field and set up subsidiary:
Xiamen Freeform Optical Technology Co., Ltd
投资非球面技术并成立Freeform分公司

2002 EVETAR Founded in Xiamen
厦门力鼎光电技术有限公司在厦门成立

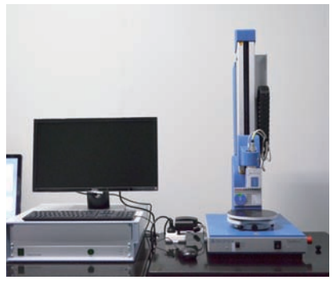
Precision Instruments 精密设备

Ultra-Precision Test Equipments 超精密测试设备



Trioptics image master HR
光学传递函数测量仪

Trioptics opticentric
双光路中心偏差测量仪



Trioptics optisurf instrument
镜面定位仪

Coordinate measuring machine
三坐标测量仪

UA3P
超高精度三维测量仪

VGI integrating sphere
积分球

Ultra-Precision Production Equipments 超精密生产设备

Fully-auto Polishing machine
全自动研磨设备

Fully-auto glass centering machine
全自动芯取设备

Fully-auto glass inking machine
全自动涂墨设备

Ultra-Precision Production Equipments 超精密生产设备

Optical thin film coater
光学薄膜镀膜设备

Automatic assembly machine
全自动镜头组装设备

Molding machine
镜片注塑设备

Reliability Test Equipments 信赖性测试设备

Walk-in temperature resistance test
步入式高低温湿热实验室

Humidity, temperature and vibration comprehensive environment test
温、湿、振三综合试验箱

Dust resistance test
防尘试验箱

IPX9K waterproof test
IPX9K高压防水试验箱

Mechanical shock test
全自动冲击试验台

Tensile testing
微机控制电子万能试验机

CONTENTS

Zoom Lenses
一体机镜头

- *Excellent and even MTF performance from center to corner*
- *IR correction for Day & Night surveillance*
- *Compact size with short TTL for mini dome*
- *Motor extended Life 500k cycles*
- *With aspherical glass*

- 高分辨设计，中心到边缘画质均一
- 红外共焦设计，支持日夜两用
- 尺寸精巧，适用于半球机
- 高达50万次驱动次数
- 含玻璃非球面

5MP
ASG

Model No.（型号）E5350A
1/2.8" f3-9mm F#1.6 3X

FHD
ASG
F1.4

Model No.（型号）E5281C
1/2.8" f3-9mm F#1.4 3X

*ASG: *Aspherical Glass*

5MP
ASG

Model No.	E5350A			
Image Size(inch)	1/2.8"	HFOV(°) (4:3)	1/2.5"	
Focal Length(mm)	3-9		1/2.8"	107-35
Aperture Ratio	1:1.6		1/2.9"	98.8-33
Back Focal Length(mm)	5.13-12.05		1/3"	95.6-32.1
Dimensions(ØxL)	38 x 43.1	Iris		DC-Iris / P-Iris
Mount	/	Weight(g)		

FHD
ASG
F1.4

Model No.	E5281C			
Image Size(inch)	1/2.8"	HFOV(°) (4:3)	1/2.5"	
Focal Length(mm)	3-9		1/2.8"	107-35
Aperture Ratio	1:1.4		1/2.9"	98.8-33
Back Focal Length(mm)	5.09-12.05		1/3"	95.6-32.1
Dimensions(ØxL)	38 x 43.1	Iris		DC Auto
Mount	/	Weight(g)		

5MP
ASG
F1.2

Model No.	E5229			
Image Size(inch)	1/1.7"	HFOV(°) (4:3)	1/1.7"	104-45.8
Focal Length(mm)	4.4-10		1/1.8"	96-43
Aperture Ratio	1:1.2		1/2"	84-38.5
Back Focal Length(mm)	6.28 - 11.64		1/2.3"	80.4-37
Dimensions(ØxL)	53 x 50.5	Iris		DC Auto
Mount	/	Weight(g)		

8MP

Model No.	E5228			
Image Size(inch)	1/1.7"	HFOV(°) (4:3)	1/1.7"	100-45
Focal Length(mm)	4.5-10		1/1.8"	93.5-42.5
Aperture Ratio	1:1.6		1/2"	82--37.9
Back Focal Length(mm)	7.24 - 12.65		1/2.3"	78.6-36.4
Dimensions(ØxLxW)		Iris		DC Auto
Mount	/	Weight(g)		

*ASG: *Aspherical Glass*

Motorized Zoom and Focus Lenses
电动变焦镜头

- *High resolution supporting 3M-4K sensor*
- *Remote control of zoom and focus, precise iris*
- *Compact design popular for mini dome and bullet cameras*
- *IR-correction for day & night surveillance*
- *Iris Option: Fixed, DC Auto , P-iris*

- 高分辨率设计，支持 3M-4K 传感器
- 可远程控制变倍、聚焦及调整光圈
- 尺寸精巧适用于半球机和红外枪机
- 红外共焦设计，支持日夜两用
- 光圈模式多种选择：固定光圈、自动光圈、步进光圈

FHD

Model No.（型号）E5299D
1/2.7″ f2.8-6 mm F#2.0 TTL 27.4 (in air)

5MP
ASG

Model No.（型号）E5350C
1/2.8″ f3-9mm F#1.6

*ASG: *Aspherical Glass*

MFZ Lenses 电动变焦镜头

FHD
ASG
F1.4

Model No.	E5281H			
Image Size(inch)	1/2.8"	HFOV(°) (4:3)	1/2.7″	
Focal Length(mm)	3-9		1/2.8″	107-35
Aperture Ratio	1:1.4		1/2.9″	102-34
Back Focal Length(mm)	5.09-12.05		1/3″	96-32
Dimensions(ØxLxW)	28 x 33.7 x 48.5	Iris		P - iris
Mount	Ø14	Weight(g)		

5MP
ASG

Model No.	E5350C			
Image Size(inch)	1/2.8"	HFOV(°) (4:3)	1/2.7″	
Focal Length(mm)	3-9		1/2.8″	107-35
Aperture Ratio	1:1.6		1/2.9″	102-35
Back Focal Length(mm)	5.13-12.04		1/3″	96-32
Dimensions(ØxLxW)	28 x 30.1 x 48.5	Iris		DC Auto
Mount	Ø14	Weight(g)		

FHD

Model No.	E5299D			
Image Size(inch)	1/2.7"	HFOV(°) (4:3)	1/2.7″	102.9-54.3
Focal Length(mm)	2.8-6		1/2.8″	100-52.9
Aperture Ratio	1:2.0		1/2.9″	93.3-49.8
Back Focal Length(mm)	4.77-7.46		1/3″	90.5-48.4
Dimensions(ØxLxW)	20 x 29.55 x 36.46	Iris		Fixed
Mount	/	Weight(g)		

5MP

Model No.	E5201B			
Image Size(inch)	1/2.5″	HFOV(°) (4:3)	1/2.5″	31.2 - 15.6
Focal Length(mm)	10 - 22		1/2.7″	29 - 14.6
Aperture Ratio	1:2.1		1/2.8″	28.3- 14.5
Back Focal Length(mm)	7.64 - 14.1		1/3″	25.8- 13.2
Dimensions(ØxLxW)	29 × 39.59 × 48.5	Iris		P - iris
Mount	Ø14	Weight(g)		

*ASG: *Aspherical Glass*

MFZ Lenses 电动变焦镜头

4K

Model No.	E5246A			
Image Size(inch)	1/2.3"	HFOV(°) (4:3)	1/2.3"	105.3-37.1
Focal Length(mm)	3.5-10		1/2.5"	96.6-34.6
Aperture Ratio	1:1.6		1/2.7"	89-32.3
Back Focal Length(mm)	5.25-11.59		1/2.8"	82.6-31.5
Dimensions(ØxLxW)	28 × 34.7 × 48.5	Iris		DC Auto
Mount	Ø14	Weight(g)		37.2

5MP

Model No.	E5259B			
Image Size(inch)	1/1.8"	HFOV(°) (4:3)	1/1.8"	33.9-11.5
Focal Length(mm)	12-40		1/2"	30.1-10.3
Aperture Ratio	1:2.2		1/2.3"	28.9-9.9
Back Focal Length(mm)	7.29 - 9.08		1/2.5"	27-9.3
Dimensions(ØxLxW)	33 x 53 x 51	Iris		P - Iris
Mount	Ø19	Weight(g)		83.2

5MP

Model No.	E5229A			
Image Size(inch)	1/1.7"	HFOV(°) (4:3)	1/1.7"	104-45.8
Focal Length(mm)	4.4-10		1/1.8"	96-43
Aperture Ratio	1:1.2		1/2"	84-38.5
Back Focal Length(mm)	6.28-11.64		1/2.3"	80.4-37
Dimensions(ØxLxW)	30.2 x 40.2 x 62.33	Iris		P - iris
Mount	Ø19	Weight(g)		47.6

4K

Model No.	E5228A			
Image Size(inch)	1/1.7"	HFOV(°) (4:3)	1/1.7"	101-43
Focal Length(mm)	4.5-10		1/1.8"	93.5-42.5
Aperture Ratio	1:1.6		1/2"	82-37.8
Back Focal Length(mm)	7.24-12.65		1/2.3"	78.6-36.4
Dimensions(ØxLxW)	30.2 x 39.7 x 51	Iris		P - iris
Mount	Ø19	Weight(g)		43.6

Vari-Focal Lenses
手动变焦镜头

- *High resolution supproting 3MP-12MP sensors*
- *IR-correction for Day & Night surveillance*
- *Manual, DC Auto iris, P-Iris for option*
- *Industrial level reliability -30℃~+80℃*

- 高分辨设计, 支持3MP-12MP 的传感器
- 红外共焦设计，支持日夜两用
- 固定光圈、自动光圈、步进光圈可选择
- 适用于工作温度-30℃~+80℃

4K
F1.3
IR
WDR

Model No.（型号）E5369
1/1.7" f10-40mm

5MP
F1.5

Model No.（型号）E5394
1/2.8" f3-12mm

Vari-Focus Lenses 手动变焦镜头 - *Low Light* 低照

F1.5
5MP

Model No.	E5394A NEW			
Image Size(inch)	1/2.8″	HFOV(°) (4:3)	1/2.7″	
Focal Length(mm)	3-12		1/2.8″	99.5-27.7
Aperture Ratio	1:1.5		1/2.9″	94.6-26.7
Back Focal Length(mm)	7.29-15.79		1/3″	89-25.4
Dimensions(ØxL)	36.5 x 52.9	Iris		DC Auto
Mount	CS	Weight(g)		

F1.3
4K

Model No.	E5369B NEW			
Image Size(inch)	1/1.7"	HFOV(°) (4:3)	1/1.7″	42-11.4
Focal Length(mm)	10-40		1/1.8″	39.6-10.7
Aperture Ratio	1:1.3		1/2″	35.2-9.6
Back Focal Length(mm)	8.17-9.34		1/2.3″	33.9-9.3
Dimensions(ØxL)	54 x 95.62	Iris		DC Auto
Mount	C	Weight(g)		

F1.2
5MP
ASG

Model No.	E5229G			
Image Size(inch)	1/1.7"	HFOV(°) (4:3)	1/1.7″	104-45.8
Focal Length(mm)	4.4-10		1/1.8″	96-43
Aperture Ratio	1:1.2		1/2″	84-38.5
Back Focal Length(mm)	6.28-11.64		1/2.3″	80.4-37
Dimensions(ØxL)	33x41	Iris		DC Auto
Mount	CS	Weight(g)		84.4

F0.9
5MP
ASG

Model No.	E5262B			
Image Size(inch)	1/1.8"	HFOV(°) (4:3)	1/1.7″	
Focal Length(mm)	4-12		1/1.8″	104-38
Aperture Ratio	1:0.9		1/2″	90-34
Back Focal Length(mm)	8.56		1/2.3″	86-32.5
Dimensions(ØxL)	80 x120.8	Iris		DC Auto
Mount	CS	Weight(g)		

*ASG: *Aspherical Glass*

Vari-Focus Lenses 手动变焦镜头

4K

Model No.	E5260A			
Image Size(inch)	1/1.7"	HFOV(°) (4:3)	1/1.7″	13.8-3.7
Focal Length(mm)	30-120		1/1.8″	13-3.5
Aperture Ratio	1:2.2		1/2″	11.1-3.0
Back Focal Length(mm)	11.77-18.97		1/2.3″	10.4-2.8
Dimensions(ØxL)	70 x 141	Iris		P - Iris
Mount	C	Weight(g)		

5MP

Model No.	E5259D			
Image Size(inch)	1/1.8″	HFOV(°) (4:3)	1/1.8″	33.9-11.5
Focal Length(mm)	12-40		1/2″	30.1-10.3
Aperture Ratio	1:2.2		1/2.3″	29-9.9
Back Focal Length(mm)	7.29-9.08		1/2.5″	26.9-9.2
Dimensions(ØxL)	33x53	Iris		DC Auto
Mount	CS	Weight(g)		111.2

5MP

Model No.	E5174C			
Image Size(inch)	1/2.5″	HFOV(°) (4:3)	1/2.5″	37-15.6
Focal Length(mm)	9-22		1/2.7″	34.3-14.6
Aperture Ratio	1:1.8		1/2.8″	33.4-14.2
Back Focal Length(mm)	6.54-14.1		1/3″	30.5-13
Dimensions(ØxL)	32x38.1	Iris		DC Auto
Mount	CS	Weight(g)		72.6

FHD

Model No.	E5133B			
Image Size(inch)	1/3″	HFOV(°) (4:3)	1/2.5″	
Focal Length(mm)	5-50		1/2.7″	
Aperture Ratio	1:1.6		1/2.8″	
Back Focal Length(mm)	7.6-11.9		1/3″	49.7-5.7
Dimensions(ØxL)	45 x 65.5	Iris		DC Auto
Mount	CS	Weight(g)		168

Fixed-Focal Lenses
定焦镜头

- *High resolution supporting 2M-4K sensor*
- *Compact design for mini dome and bullet cameras*
- *IR-correction for day & night surveillance*
- *Mount option: CS / M12x0.5*

- 高分辨率设计，支持*2M-4K*的传感器
- 尺寸精巧适用于迷你半球机和红外枪机
- 红外共焦设计，可支持日夜两用
- 接口选择：CS / M12x0.5

Model No.（型号）*E3335*
φ5.6 f1.96mm F#2.2

Model No.（型号）*E3292N*
1/2.8" f2.8mm F#2.0

M12 AF Module

5MP-4K Fixed-Focal Lenses 5MP-4K 定焦镜头

4K

Model No.	E3400A			
Image Size(inch)	1/2.5"	HFOV(°) (4:3)	1/2.5″	123.3
Focal Length(mm)	2.8		1/3″	101.1
Aperture Ratio	1:2.2		1/3.2″	95.3
Back Focal Length(mm)	5.66		1/4″	74.8
Dimensions(ØxL)	17 x 19.5	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		

4K

Model No.	E3337A			
Image Size(inch)	1/2.5"	HFOV(°) (4:3)	1/2.5″	91.6
Focal Length(mm)	3.76		1/3″	75.2
Aperture Ratio	1:2.0		1/3.2″	70.9
Back Focal Length(mm)	5.77		1/4″	55.7
Dimensions(ØxL)	14 x 17.61	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		

4K

Model No.	E3368A			
Image Size(inch)	1/1.8"	HFOV(°) (4:3)	1/1.8″	143
Focal Length(mm)	2.95		1/2″	127
Aperture Ratio	1:2.8		1/2.3″	122
Back Focal Length(mm)	7.09		1/2.5″	113.8
Dimensions(ØxL)	25 x 28.14	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		

4K

Model No.	E3336B			
Image Size(inch)	1/1.8"	HFOV(°) (4:3)	1/1.8″	151
Focal Length(mm)	3.1		1/2″	122.6
Aperture Ratio	1:1.8		1/2.3″	117.5
Back Focal Length(mm)	4.52		1/2.5″	109.3
Dimensions(ØxL)	23 x 24	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		

5MP-4K Fixed-Focal Lenses 5MP-4K 定焦镜头

4K

Model No.	E3360A			
Image Size(inch)	1/1.8"	HFOV(°) (4:3)	1/1.8″	103
Focal Length(mm)	4		1/2″	92
Aperture Ratio	1:2.0		1/2.3″	88.5
Back Focal Length(mm)	6.5		1/2.5″	82.8
Dimensions(ØxL)	20 x 26.28	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		

4K

Model No.	E3390A			
Image Size(inch)	1/1.8"	HFOV(°) (4:3)	1/1.8″	114.2
Focal Length(mm)	4		1/2″	98.8
Aperture Ratio	1:2.2		1/2.3″	94.4
Back Focal Length(mm)	6.28		1/2.5″	87.3
Dimensions(ØxL)	18 x 20.3	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		

4K

Model No.	E3388B			
Image Size(inch)	1/1.8"	HFOV(°) (4:3)	1/1.8″	50.2
Focal Length(mm)	8		1/2″	45.2
Aperture Ratio	1:2.6		1/2.3″	43.6
Back Focal Length(mm)	7.8		1/2.5″	40.9
Dimensions(ØxL)	22x27.1	Iris		Fixed
Mount	M12x0.5	Weight(g)		

5MP

Model No.	E3196B			
Image Size(inch)	1/1.8"	HFOV(°) (4:3)	1/1.8″	33.6
Focal Length(mm)	12		1/2″	30
Aperture Ratio	1:2.0		1/2.5″	27
Back Focal Length(mm)	6.74		1/3″	22.7
Dimensions(ØxL)	15 x19.2	Iris		Fixed
Mount	M12x0.5	Weight(g)		

5MP-4K Fixed-Focal Lenses 5MP-4K 定焦镜头

5MP

Model No.	E3401A			
Image Size(inch)	1/1.8"	HFOV(°) (4:3)	1/1.8″	25
Focal Length(mm)	16		1/2″	22.3
Aperture Ratio	1:1.8		1/2.5″	20.1
Back Focal Length(mm)	7.2		1/3″	16.8
Dimensions(ØxL)	15 x17.94	Iris		Fixed
Mount	M12x0.5	Weight(g)		

5MP

Model No.	E3137B			
Image Size(inch)	1/2"	HFOV(°) (4:3)	1/1.8″	15.9
Focal Length(mm)	25		1/2″	14.3
Aperture Ratio	1:2.4		1/2.5″	13
Back Focal Length(mm)	10.26		1/3″	10.26
Dimensions(ØxL)	15 x18.72	Iris		Fixed
Mount	M12x0.5	Weight(g)		

5MP

Model No.	E3162B			
Image Size(inch)	1/2"	HFOV(°) (4:3)	1/1.8″	11.7
Focal Length(mm)	35		1/2″	10.5
Aperture Ratio	1:2.5		1/2.5″	9.4
Back Focal Length(mm)	14.3		1/3″	7.8
Dimensions(ØxL)	20 x 33.4	Iris		Fixed
Mount	M12x0.5	Weight(g)		

8MP

Model No.	E3163B			
Image Size(inch)	1/2"	HFOV(°) (4:3)	1/1.8″	8.2
Focal Length(mm)	50		1/2″	7.3
Aperture Ratio	1:2.5		1/2.5″	6.6
Back Focal Length(mm)	18.38		1/3″	5.5
Dimensions(ØxL)	25 x 48.8	Iris		Fixed
Mount	M12x0.5	Weight(g)		

2MP-4MP Fixed-Focal Lenses 定焦镜头

Model No.	E3375B NEW			
Image Size(inch)	1/2.9"	HFOV(°) (4:3)	1/2.9″	105
Focal Length(mm)	2.15		1/3″	101.4
Aperture Ratio	1:2.3		1/3.2″	97.3
Back Focal Length(mm)	3.35		1/4″	81.3
Dimensions(ØxL)	14 x13.9	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		

Model No.	E3346C			
Image Size(inch)	1/2.8"	HFOV(°) (4:3)	1/2.8″	130.3
Focal Length(mm)	2.53		1/3″	119.8
Aperture Ratio	1:2.0		1/3.2″	111.8
Back Focal Length(mm)	3.63		1/4″	85.5
Dimensions(ØxL)	15x17.92	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		

Model No.	E3255A			
Image Size(inch)	1/2.8"	HFOV(°) (4:3)	1/2.8″	132
Focal Length(mm)	2.3		1/3″	120.2
Aperture Ratio	1:2.2		1/3.2″	113.2
Back Focal Length(mm)	4.24		1/4″	88.5
Dimensions(ØxL)	19.5 x 21.15	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		10.3

Model No.	E3292A			
Image Size(inch)	1/2.8"	HFOV(°) (4:3)	1/2.8″	109.4
Focal Length(mm)	2.8		1/3″	99.5
Aperture Ratio	1:2.0		1/3.2″	93.7
Back Focal Length(mm)	5.55		1/4″	73.5
Dimensions(ØxL)	14 x16.8	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		5.9

2MP-4MP Fixed-Focal Lenses 定焦镜头

Model No.	E3308A			
Image Size(inch)	1/4"	HFOV(°) (4:3)	1/2.7″	
Focal Length(mm)	1.93		1/3″	
Aperture Ratio	1:2.4		1/3.2″	
Back Focal Length(mm)	3		1/4″	110.2
Dimensions(ØxL)	16x12.24	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		4.6

Model No.	E3164A			
Image Size(inch)	1/3"	HFOV(°) (4:3)	1/2.8″	
Focal Length(mm)	2.1		1/3″	130
Aperture Ratio	1:2.2		1/3.2″	122.3
Back Focal Length(mm)	6.28		1/4″	95.7
Dimensions(ØxL)	16 x 17.11	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		6.7

Model No.	E3155A			
Image Size(inch)	1/2.8"	HFOV(°) (4:3)	1/2.8″	88.8
Focal Length(mm)	3.7		1/3″	79.1
Aperture Ratio	1:2.5		1/3.2″	73.8
Back Focal Length(mm)	5.66		1/4″	56.3
Dimensions(ØxL)	M12X10.1	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		2.4

Model No.	E3273A			
Image Size(inch)	1/2.7"	HFOV(°) (4:3)	1/2.7″	123.5
Focal Length(mm)	2.7		1/3″	107.9
Aperture Ratio	1:2.2		1/3.2″	101.2
Back Focal Length(mm)	5.53		1/4″	78.5
Dimensions(ØxL)	14 x 9.74	Iris		Fixed
Mount	M12 x 0.5	Weight(g)		3.6

Panorama Lenses
鱼眼镜头

- *Super-wide angel 180°~ 250° for panorama*
- *High resolution supporting 2M-4K sensor*
- *Full lineup for various image frame*
- *IR-correction for day & night surveillance*

- 超广角鱼眼镜头，角度范围180°~ 250° ，适用于全景安防监控
- 高分辨率设计，支持2M-4K的传感器
- 多种像高设计，适用于不同相面尺寸的传感器
- 红外共焦设计，支持日夜两用

12MP
ASG

Model No.（型号）E3279A
φ5.4mm f1.29 mm FOV190°
F-theta distortion:+25.5%

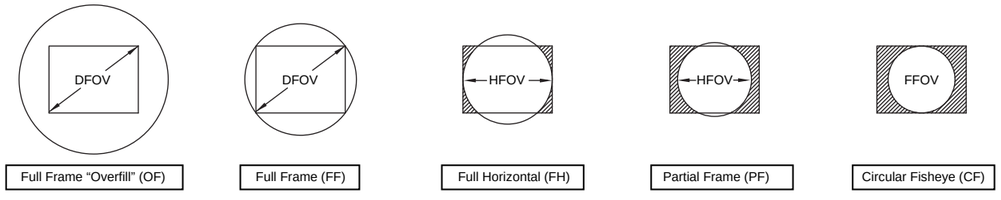
12MP
ASG

Model No.（型号）E3267B
φ4.47mm f1.1 mm FOV250°
F-theta distortion: -9.2%

*ASG: *Aspherical Glass*

Fisheye Lenses 鱼眼镜头

Model No.	Image Circle (mm)	Focal Length (mm)	F-theta Distortion	F No.	Mount	Dimensions (ØxL)	Back Focal Length (mm)	DFOV@ Image Circle(°)	FOV (H x V) (4:3)						Resolution
									1/4″	1/3″	1/2.5″	1/2.3″	1/2″	1/1.8″	
E3285A	2.9	0.9	<-7%	2.0	M12	20x8.84	2.01	200	200x180	200x200	200x200	200x200	200x200	200x200	4MP
E3330B	3	0.83	<-9.7%	2.3	M12	32x26.78	3.51	230	230x220	230x230	230x230	230x230	230x230	230x230	5MP
E3171A	3.2	1.19	<-5.19%	2.0	M12	25x29.83	5.79	180	180x148	180x181	180x182	180x183	180x184	180x185	5MP
E3247K	3.5	1.08	<-7.71%	2.4	M12	26x21.94	3.02	200	200x149	200x200	200x200	200x200	200x200	200x200	4K
E3272B	3.93	1.25	<-6%	2.0	M12	14x9.77	2.75	190	172x125	190x172	190x190	190x190	190x190	190x190	5MP
E3239B	4.05	1.4	<-8%	2.3	M12	14x9.6	2.89	180	156x113	180x156	180x180	180x180	180x180	180x180	2MP
E3197C	4.1	1.58	<-18.2%	2.8	M12	22x24.67	5.92	180	145x102	180x145	180x180	180x180	180x180	180x193	5MP
E3267B	4.47	1.1	<-9.2%	2.4	M12	46x28	2.67	250	191x141	250x191	250x236	250x250	250x250	250x250	4K
E3378A	4.5	1.6	<-10%	2.0	M12	23.5x28.52	4.88	180	137x100	180x137	180x168	180x180	180x180	180x180	4K
E3338B	4.53	1.5	<-9.8%	2.8	M12	20.6x16.26	2.12	190	142x104	190x142	190x175	190x190	190x190	190x190	4K
E3382A	5.2	2.13	<-24.7%	2.0	M12	17.5x20.85	3.9	185	105x76	157x105	185x131	185x148	185x157	185x185	5MP
E3279A	5.4	1.29	<25.5%	2.4	M12	32x26.5	3.9	190	139x110	174x139	190x158	190x168	190x174	190x189	4K
E3335C	5.6	1.96	<-9%	2.2	M12	18x12.5	3.07	180	108x77	147x108	180x129	180x141	180x147	180x171	5MP
E3286E	6.2	2.2	<-17%	2.3	M12	16.2x14.87	4.6	195	97x72	134x97	171x117	193x129	195x134	195x155	5MP
E3307G	6.2	2.2	<-13.3%	2.3	M12	19X14.3	3.79	190	70x93	93x126.7	111x160	121x183	126x195	146x195	4K
E3372B	6.6	2	<-4%	2.3	M12	33.1x27.02	6.11	195	103x77	139x103	167x122	180x132	187x139	195x156	4K
E3402A	7.3	2.3	<-2.3%	2.2	M12	40.5x25.99	6.07	190	91x67	122x91	148x109	158x117	165x122	187x137	4K
E3417A	7.6	2.53	<-9.5%	2.4	M12	25x25.84	5.03	190	82x61	111x82	135x99	146x107	152x111	175x125	4K
E3351A	4.6	1.4	<-1%	1.44	CS	44.5x47.84	6.43	182	142x107	182x142	182x170	182x182	182x182	182x182	5MP
E3153A	7.2	2.29	<-3.4%	1.4	CS	66x64.13	7.78	185	91x68	122x91	146x108	157x116	165x122	183x137	4K



Zoom Lenses
MFZ Lenses
Vari- Focal Lenses
Fixed-Focal Lenses
Panorama Lenses
Low Distortion Lenses
TOF Lenses
ITS Lenses
Terminology

Low Distortion Lenses
低畸变镜头

- *High definition, low distortion (<-3%)*
- *High resolution supporting 2-10 Mega-pixel cameras, designed for 1/7.5”-1/1.8” sensors*
- *Broad band confocal design suitable for complex lighting*
- *Compact design for integration flexibility*
- *Widely used in face/ iris recognition, barcode scanner, 3D. Tracking, TOF, sorting , robot guidance applications*

- 高锐利度，低畸变设计(<-3%)
- 高分辨率可支持2MP到10MP 摄像机，支持像面尺寸1/7.5”-1/1.8”传感器
- 宽光谱共焦设计，适用于混合光源
- 尺寸精巧 便于集成
- 广泛应用于人脸识别、虹膜识别、条码扫描、3D追踪、TOF、分类、机器人导航等

Model No.	E3305A			
Image Size(inch)	1/7.5"	HFOV(°) (4:3)	1/2.5”	
Focal Length(mm)	1.7		1/2.7”	
Aperture Ratio	1:2.4		1/7.5”	61.5
Optical Distortion	<-6.2%	Back Focal Length(mm)		7.55
Dimensions(ØxLxW)	11.5 X 16.28	Iris		Fixed
Mount	M7 x 0.35	Wavelength		850nm

Model No.	E3253B			
Image Size(inch)	1/4"	HFOV(°) (4:3)	1/2.5”	
Focal Length(mm)	2		1/2.7”	
Aperture Ratio	1:2.8		1/4”	82.7
Optical Distortion	<-4.3%	Back Focal Length(mm)		3.98
Dimensions(ØxLxW)	12X10.84	Iris		Fixed
Mount	D9	Wavelength		850nm & 940nm

Model No.	E3306A			
Image Size(inch)	1/4"	HFOV(°) (4:3)	1/2.8”	
Focal Length(mm)	14.5		1/3”	
Aperture Ratio	1:4.9		1/4”	12
Optical Distortion	1%	Back Focal Length(mm)		9
Dimensions(ØxLxW)	9 x 9.73	Iris		Fixed
Mount	M7 x 0.35	Wavelength		850nm

Model No.	E3097C			
Image Size(inch)	1/3"	HFOV(°) (4:3)	1/3”	68
Focal Length(mm)	3.5		1/3.2”	60.2
Aperture Ratio	1:1.9		1/4”	53.5
Optical Distortion	<-2.7%	Back Focal Length(mm)		5.75
Dimensions(ØxLxW)	22 x 21.87	Iris		Fixed
Mount	M12 x 0.5	Wavelength		VIS & 850nm

Low Distortion Lenses 低畸变镜头

Model No.	E3084B			
Image Size(inch)	1/3"	HFOV(°) (4:3)	1/3″	58
Focal Length(mm)	4.5		1/3.2″	55.1
Aperture Ratio	1:1.6		1/4″	44.8
Optical Distortion	<-1.8%	Back Focal Length(mm)		5.8
Dimensions(ØxLxW)	22 x 22.2	Iris		Fixed
Mount	M12 x 0.5	Wavelength		VIS & 850nm

Model No.	E3149B			
Image Size(inch)	1/3"	HFOV(°) (4:3)	1/3″	49.5
Focal Length(mm)	6		1/3.2″	47
Aperture Ratio	1:2.0		1/4″	37.8
Optical Distortion	<-2.8%	Back Focal Length(mm)		6.27
Dimensions(ØxLxW)	15 x 17.03	Iris		Fixed
Mount	M12 x 0.5	Wavelength		VIS & 850nm

Model No.	E3230A			
Image Size(inch)	1/3"	HFOV(°) (4:3)	1/3″	27.8
Focal Length(mm)	9		1/3.2″	26.4
Aperture Ratio	1:5.0		1/4″	21.1
Optical Distortion	<-1%	Back Focal Length(mm)		8
Dimensions(ØxLxW)	14 X 13	Iris		Fixed
Mount	M12 x 0.5	Wavelength		VIS & 850nm

Model No.	E3409A NEW			
Image Size(inch)	1/2.7"	HFOV(°) (4:3)	1/2.7″	18.8
Focal Length(mm)	15		1/2.8″	18.4
Aperture Ratio	1:2.8		1/3″	17
Optical Distortion)	<+3.5%	Back Focal Length(mm)		5.31
Dimensions(ØxLxW)	9 x 9.93	Iris		Fixed
Mount	M8 x 0.35	Wavelength		850nm&940nm

Low Distortion Lenses 低畸变镜头

Model No.	E3098B			
Image Size(inch)	1/2.5"	HFOV(°) (4:3)	1/2.5″	78
Focal Length(mm)	3.5		1/2.8″	72.8
Aperture Ratio	1:1.8		1/3″	68.1
Optical Distortion	<-2.7%	Back Focal Length(mm)		5.74
Dimensions(ØxLxW)	24 x 21.47	Iris		Fixed
Mount	M12 x 0.5	Wavelength		VIS & 850nm

Model No.	E3096B			
Image Size(inch)	1/2.5"	HFOV(°) (4:3)	1/2.5″	65
Focal Length(mm)	4.5		1/2.8″	62.1
Aperture Ratio	1:1.8		1/3″	57.8
Optical Distortion)	<-1.7%	Back Focal Length(mm)		6.03
Dimensions(ØxLxW)	24 x 23.16	Iris		Fixed
Mount	M12 x 0.5	Wavelength		VIS & 850nm

10MP

Model No.	E3297B			
Image Size(inch)	1/2.3"	HFOV(°) (4:3)	1/2.3″	96
Focal Length(mm)	2.7		1/2.5″	91.9
Aperture Ratio	1:2.3		1/3″	81.5
Optical Distortion	<-6.4%	Back Focal Length(mm)		3.98
Dimensions(ØxLxW)	18 x 24.2	Iris		Fixed
Mount	M12 x 0.5	Wavelength		VIS

10MP

Model No.	E3413A			
Image Size(inch)	1/2.3"	HFOV(°) (4:3)	1/2.3″	60
Focal Length(mm)	5.4		1/2.5″	56.7
Aperture Ratio	1:2.5		1/2.7″	53.4
Optical Distortion	<-1.64%	Back Focal Length(mm)		6.41
Dimensions(ØxLxW)	14 x 18.74	Iris		Fixed
Mount	M12 x 0.5	Wavelength		VIS & 850nm

Low Distortion Lenses 低畸变镜头

10MP

Model No.	E3183B			
Image Size(inch)	1/2.3"	HFOV(°) (4:3)	1/2.3″	47.3
Focal Length(mm)	7.2		1/2.5″	44.5
Aperture Ratio	1:2.4		1/2.7″	41.7
Optical Distortion	<-2%	Back Focal Length(mm)		6.97
Dimensions(ØxLxW)	19 x 26.14	Iris		Fixed
Mount	M12 x 0.5	Wavelength		VIS & 850nm

Model No.	E3189B			
Image Size(inch)	1/2"	HFOV(°) (4:3)	1/2″	84.2
Focal Length(mm)	3.5		1/2.5	78.2
Aperture Ratio	1:2.4		1/3″	68
Optical Distortion	<-3.1%	Back Focal Length(mm)		6.09
Dimensions(ØxLxW)	30 x 29.5	Iris		Fixed
Mount	M12 x 0.5	Wavelength		VIS & 850nm

Model No.	E3348A			
Image Size(inch)	1/1.8"	HFOV(°) (4:3)	1/1.8″	78.7
Focal Length(mm)	4.5		1/2″	72.3
Aperture Ratio	1: 2.2		1/2.5″	66.4
Optical Distortion	<-4.1%	Back Focal Length(mm)		7.18
Dimensions(ØxLxW)	29 x 30.09	Iris		Fixed
Mount	M12 x 0.5	Wavelength		VIS & 850nm

Model No.	E3102B			
Image Size(inch)	1/1.8"	HFOV(°) (4:3)	1/1.8″	65.1
Focal Length(mm)	5.5		1/2″	59.3
Aperture Ratio	1:1.8		1/2.3″	57.4
Optical Distortion)	<-2%	Back Focal Length(mm)		6.86
Dimensions(ØxLxW)	24 x 23.2	Iris		Fixed
Mount	M12 x 0.5	Wavelength		VIS & 850nm

TOF Lenses
TOF 镜头

- *1/2″ f2.95mm, f3.7mm, f5.3mm, f11.3mm for option*
- *Covering 1/2″, 1/2.7″, 1/3″, 1/4″… different TOF sensors*
- *Optimized for 800-1000nm, supporting 850nm & 940nm application*
- *Big aperture, anti-flare, high resolution for NIR*

- 多焦距供选择：1/2″ f2.95mm，f3.7mm，f5.3mm，f11.3mm
- 支持1/2″，1/2.7″，1/3″，1/4″ 等不同像面尺寸传感器
- 优化 800-1000nm光谱，支持850nm & 940nm应用
- 大通光、杂光管理，高分辨率 的红外设计

TOF Lenses TOF 镜头

F1.1
ASG

Model No.	A320			
Image Size(inch)	1/2"	HFOV(°) (4:3)	1/2″	125
Focal Length(mm)	2.95		1/2.3″	120.3
Aperture Ratio	1:1.1		1/2.5″	112
Optical Distortion	1.6%	Back Focal Length(mm)		4.88
Dimensions(ØxLxW)	8 x 8	Iris		Fixed
Mount	M16	Wavelength		800-1000nm

F1.4
ASG

Model No.	E3325A			
Image Size(inch)	1/2"	HFOV(°) (4:3)	1/2″	108
Focal Length(mm)	3.7		1/2.3″	102.8
Aperture Ratio	1:1.3		1/2.5″	94.7
Optical Distortion	<-69.3%	Back Focal Length(mm)		7.01
Dimensions(ØxLxW)	17 x 12.43	Iris		Fixed
Mount	M12 x 0.5	Wavelength		800-1000nm

F1.2
ASG

Model No.	E3397A			
Image Size(inch)	1/2"	HFOV(°) (4:3)	1/2″	67.3
Focal Length(mm)	5.3		1/2.3″	65
Aperture Ratio	1:1.2		1/2.5″	60.8
Optical Distortion	-14%	Back Focal Length(mm)		3.83
Dimensions(ØxLxW)	20 x 22.88	Iris		Fixed
Mount	M14	Wavelength		800-1000nm

F1.4

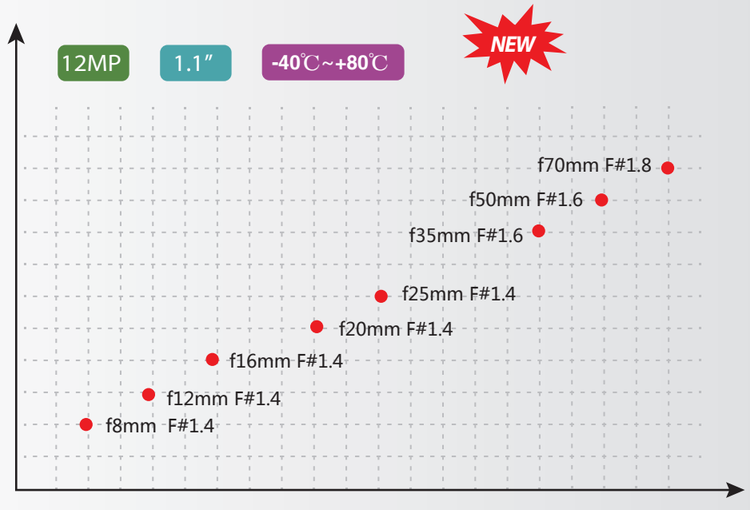
Model No.	E3343A			
Image Size(inch)	1/2"	HFOV(°) (4:3)	1/2″	31.2
Focal Length(mm)	11.3		1/2.5″	28.2
Aperture Ratio	1:1.4		1/3″	23.7
Optical Distortion	<2.1%	Back Focal Length(mm)		5.96
Dimensions(ØxLxW)	22x 13.65	Iris		Fixed
Mount	M12 x 0.5	Wavelength		800-1000nm

*ASG: *Aspherical Glass*

ITS Lenses
智能交通镜头

- *Ultra-high resolution up to 12 Mega-pixel*
- *Low distortion image quality with good corner brightness*
- *Large image format for ITS and standard surveillance applications*
- *Precise iris scales for aperture adjustment*
- *Popular for ANPR (LPR) applications*
- *Motorized & Manual option for focus and iris*

- 超高分辨率设计，高达12MP
- 低畸变设计，中心到边缘画质均匀
- 为智能交通及安防监控等应用领域提供大像面尺寸的光学解决方案
- 高精度结构设计，光圈调节刻度精准
- 广泛应用于自动车牌识别
- 自聚焦和手调款可供选择



ITS Lenses 智能交通镜头

Model No.		E3410A	E3334A	E3385A	E3420A	E3257C
Format(inch)		1/1.8"	2/3"	1"	1.1"	4/3"
Focal Length (mm)		8mm	75mm	75mm	12mm	35mm
Aperture Ratio		1:1.4	1:2.4	1:2.8	1:1.4	1:2.0
Mount		C	C	C	C	C
M.O.D.		0.5m	1.0m	1.0m	0.5m	0.8m
Operation	Focus	Manual	Motor	Motor	Manual	Motor
	Iris	Manual	Motor	Motor	Manual	Manual
FOV (HxV) (4:3)	4/3"					29.2 x 22.0
	1.1"				61.6 x 47.5	22.8 x 17.1
	1"			9.7 x 7.3	56.6 x 43.5	20.7 x 15.6
	2/3"		6.7 x 5.0	6.7 x 5.0	40.0 x 30.3	14.3 x 10.7
	1/1.8"	46.4 x 35.5	5.5 x 4.1	5.5 x 4.1	32.9 x 24.8	11.7 x 8.7
	1/2"	41.8 x 31.9	4.9 x 3.7	4.9 x 3.7	29.4 x 22.2	10.4 x 7.8
Back Focal Length (mm)		9.75mm	17.9mm	16.5mm	11.4mm	22.3mm
Filter Thread Size		27 x 0.5	No	34 x 0.5	No	M43 x 0.75
Dimensions (ΦxL)mm		35 x 38.49	38.4 x 64.06	36 x 60.56	58 x 79.36	52.5 x 99.94
IR Correction		No	Yes	No	No	Yes

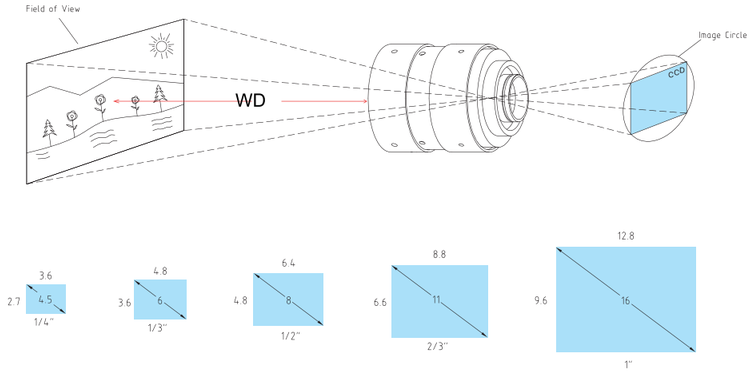
※ 1.1" 16mm、20mm、25mm、35mm、50mm、70mm are coming soon.

Terminology 常用术语

Image Sizes 像面尺寸

There are several types of imaging sensors with different image sizes for CCTV cameras, the aspect ratio of CCTV camera is normally 4:3 (H:V). The size of camera's imaging sensor affects the angle of view, with the smaller sensors creating narrower angles of view when used on the same lens. The format of the lens, however is not related to the angle of view, it merely needs to project an image which will cover the sensor, i.e., the same format of the camera or large. This also means that 1/3" cameras can use the entire range of lenses from 1/3" to 1", for example, a 1/3" 12mm lens gives the same angle of view as a 2/3" 12mm lens does. The latter combination also provides increased resolution and picture quality as only the centre of the lens is being used, where the optics can be ground more accurately.

闭路监控摄像机有多种不同尺寸规格的传感器，屏幕高宽比通常是4：3（水平宽度：垂直高度）。传感器的尺寸规格对视场角有影响，使用相同的镜头在较小的传感器上的视场角更窄。镜头的规格与视场角无关，它仅仅需要使图像覆盖整个传感器，也就是说，同样大小或者更大规格的摄像机。这也表示，1/3″的摄像机可以用1/3″ - 1″的所有镜头，例如，1/3″ 12mm镜头与2/3″ 12mm镜头的视场角是一样的。后者的图像像素和成像质量提升，因为只取得镜头中心部分的图像，而这部分范围的图像通常更加锐利。



Focal Length 焦距

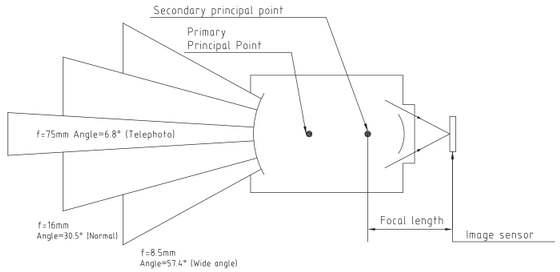
Rays from infinite distance objects are condensed internally in the lens at a common point on the optical axis. The point at which the image sensor of the CCTV camera is positioned, is called a focal point. By virtue of design, lenses have 2 principal points, a primary principal point & a secondary principal point, the distance between the secondary principal point and the focal point (image sensor) determines the focal length of the lens.

Terminology 常用术语

The focal length of a lens is measured in mm and directly relates to the angle of view that will be achieved. Short focal length provides wide angle of view and long focal length becomes telephoto, with narrow angle of view.

来自无穷远物距的光线在镜头内部汇聚在光轴上的一个共同的点上。闭路监控摄像机的传感器聚焦的那个点，叫做焦点。在光学设计中，镜头有2个主点，一个主要主点和一个次要主点，次要主点和焦点之间的距离决定了镜头的焦距。

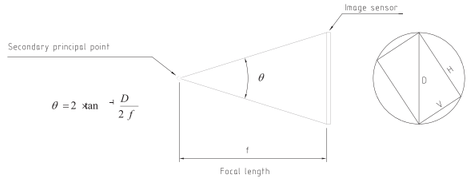
镜头的焦距是以毫米为单位来测量的，它与将要达到的视场角大小直接相关。焦距变短视场角变大，焦距变长，视场角变窄。



Angle of View 视场角

The angle formed by the 2 lines from the secondary principal point to the edges or corners of image sensor is called the angle of view. Theoretically, the focal length of a lens is fixed regardless of the image size of the CCTV camera. Conversely, the angle of view varies according to the change of image size. For a certain image size, the angle of view will increase when the focal length becomes shorter. The focal lengths in the catalog are nominal and the angles of view calculated by the formula referring to the focal lengths are approximate.

视场角是指镜头到图像传感器边缘连线的夹角。从理论上讲，在不考虑摄像机像面大小时，一个镜头的焦距是固定的，视场角则固定。 但实际上视场角的大小也会随着相面尺寸的变化而变化。当相面尺寸大小固定时，如果焦距变短，视场角会相应的变大。目录中的焦距是额定焦距，因此根据公式算出来的视场角是估算值。



Terminology 常用术语

Aperture (F No.) 光圈

Aperture is an index for the amount of light that passes through a lens. The value of the aperture is represented by the F No., the smaller the number, the greater the amount of light, and the brighter the image generated by the lens. The F No. is inversely proportional to the entrance pupil diameter of the lens and directly proportional to the focal length. Its formula is as follows:

F No. = f / D (f: focal length, D = Entrance pupil diameter)

光圈是衡量镜头通光量的指数。光圈值由F值表示，F值越小，通光量越大，镜头所形成的图像越明亮。F值与镜头孔径成反比，与焦距成正比。比值公式如下：

F值= f / D（f: 焦距，D=镜头孔径）

Auto Iris and Manual Iris 自动光圈与手动光圈

There are three types of operation for lens iris, that is, (1) DC drive auto iris; (2) Video drive auto iris and, (3) Manual iris. For DC drive type, the iris is controlled by the circuit inside the camera; for Video drive type, the iris is equipped with an amplifier inside and is operated by the Video signal and DC power supply from the camera; for Manual type, the iris is manually adjusted over the adjusting ring on the lens.

镜头大致分为直流驱动光圈，视频驱动光圈，手动光圈三种。 直流驱动光圈是由镜头内部线路来控制的，视频驱动光圈内部有装一个放大器，是由视频信号及摄像机提供的直流电来控制的。手动光圈是通过由镜头外部调节环来手动调节实现光圈变化的。

M.O.D. 最近物距

The M.O.D. (minimum object distance) is the closest distance from the vertex of the front lens to the nearest object at which an image can be focused.

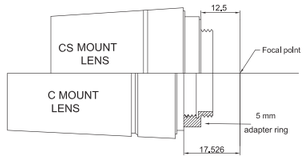
最近物距是指镜头最前端镜片中心点到最近的可以清晰成像的物体的距离。

Terminology 常用术语

CS and C Mount CS和C接口

The CS-mount lens has the flange back distance of 12.5mm. The C-mount lens has the flange distance of 17.5mm. The CS mount lens is only applicable to the CS mount camera, but the C mount lens is fit for both C mount and CS mount cameras as long as a 5mm Adapter Ring is used to match the CS mount camera.

CS 接口的镜头后法兰距为12.5mm，C接口的后法兰距为17.5mm。 CS接口的镜头只能匹配CS接口的摄像机，但是C接口的镜头除了可以匹配C接口的镜头外还可通过加一个5mm的C转CS接圈来匹配CS接口的摄像机。



	C Mount Lens	CS Mount Lens
C Mount Camera	○	×
CS Mount Camera	Needs 5mm adapter ring	○

Depth of Field 景深

The depth of field refers to the area within the field of view which is in focus. A large depth of field means that a large percentage of the field of view is in focus. A small depth of field means only a small section of the field of view is in focus. The depth of field is of following properties.
1)The larger the F No. is, the wider the depth of field becomes.
2)The shorter the focal length is, the wider the depth of field becomes.
3)The longer the distance to the object is, the wider the depth of field becomes.
4)The backward depth of field is wider than the forward depth of field.

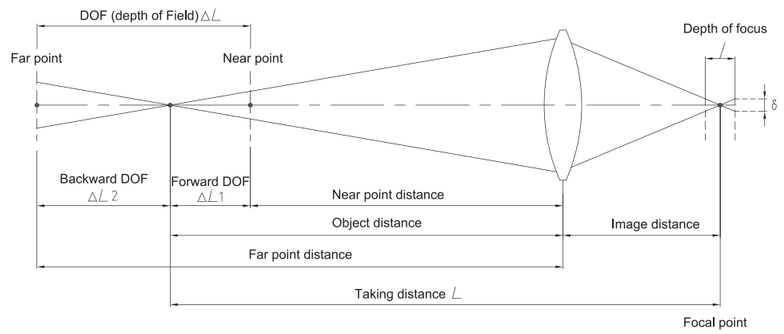
景深是指在摄影机镜头聚焦完成后，在焦点前后的范围内都能形成清晰的像，这一前一后的距离范围，便叫做景深。光圈、镜头、及拍摄物的距离是影响景深的重要因素：

1.光圈越大景深越小，光圈越小景深越大。

2.镜头焦距越长景深越小、反之景深越大。

3.主体越近，景深越小，主体越远，景深越大。

4.近景深比远景深大。



Terminology 常用术语

Megapixel 百万像素

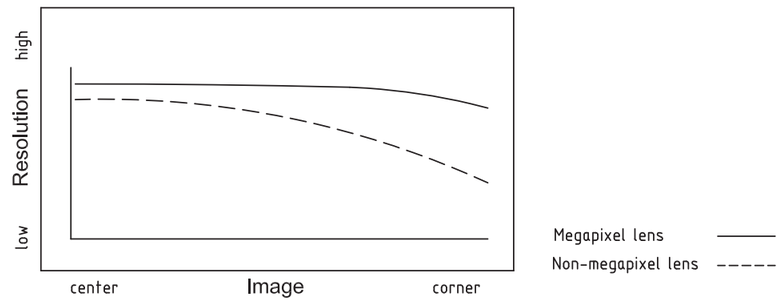
CCD and CMOS image sensors use a series of pixels arranged on a 2 dimensional grid. These pixels convert an optical image to an electronic signal. The number of pixels in an image usually defines the resolution, more pixels means higher resolutions. A megapixel is defined as one million pixels, while camera with a megapixel sensor is called a megapixel camera.

CCD和CMOS图像传感器利用的是按二维网格排列的像素。这些像素把光学图像转换成电子信号。一个图像上像素的多少通常决定了图像的分辨率,更多的像素意味着更高的分辨率。百万像素就是有一百万个像素。而百万像素摄像机就是使用百万像素传感器的摄像机。

Megapixel lens for megapixel camera 匹配百万像素摄像机的百万像素镜头

To achieve the full resolution of a megapixel camera, it is essential to use a high quality megapixel lens. Overall image quality is greatly affected by the quality of the optical image shot onto the image sensor. Megapixel lenses provide high contrast, brightness and sharpness across the entire image plane. Non-megapixel lenses will not fully display the resolution of megapixel sensor, especially in the corner area of the image.

为了使百万像素摄像机能够得到最好的表现那么使用一个高品质的百万像素的镜头将显得非常重要，因此光学图像的质量是影整体图像质量的一个关键因素。百万像素镜头可以为整个图像提供高对比度，锐度和明锐度。 而非百万像素镜头就无法完全展现百万像素传感器的高分辨率，特别是在图片的边缘



Terminology 常用术语

Flange Back Distance, Back Focal Length, Mechanical Back Focal Length

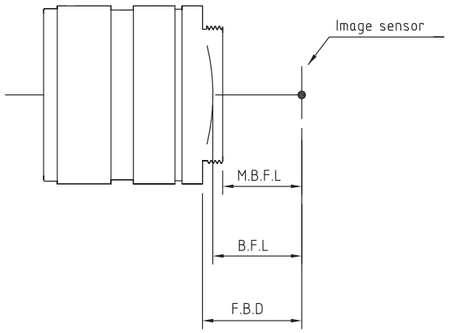
后法兰距离，后焦距，机械后焦距

Flange back distance is the distance between the lens flange and the sensor focal plane.
Back focal length is the distance between the vertex of the rear lens element and the sensor focal plane.
Mechanical Back Focal Length is the distance between the surface of the lens frame and the sensor focal plane.

后法兰距是指从镜头接口处到摄像机传感器之间的距离。

后焦距是指从镜头最后一片镜片中心点到摄像机传感器之间的距离。

机械后焦距是指镜头接口最前端到摄像机传感器之间的距离。

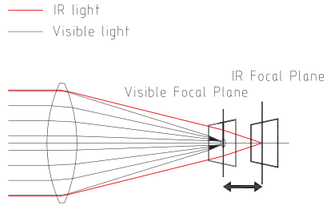


Non IR Lens vs IR Lens 非IR镜头与IR镜头的对比

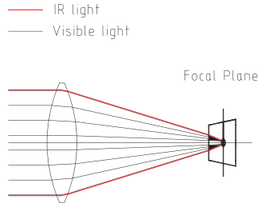
Day & Night cameras are normally used in near-infrared (NIR) or infrared (IR) at night. If we use a Non IR lens with a day & night camera, the image will be out of focus (shifting) at night. Our special optical designs with broad band co-focusing technology based on special glass material minimize light dispersion. As a result, refocusing is not required when the camera is used under NIR or IR. The special design makes the lens to deliver perfect focusing either under visible light or under IR illumination circumstances.

日夜两用摄像机一般用在夜间近红外或者红外环境。 如果用不带IR矫正功能的镜头匹配日夜两用摄像机，那么摄像机在夜间使用时将无法清晰聚焦。 EVETAR镜头采用玻璃镜片辅以特殊的光学设计以及多层镀膜来减少光的折射以达到日夜共焦。这样一来，摄像机在夜间使用的时候就不需要再重新聚焦。

■ Non IR Lens



■ IR Lens



Model Name Coding Rule 编码规则