Industrial Lens

工业镜头

DZOPTICS

公众号/DZOPTICS   官网/Website

服 | 务 | 全 | 球

Serving The World

东正光学DZO

深圳市东正光学技术股份有限公司（DZO）是一家聚焦于光学及光电子技术研发的国家级高新技术企业、国家级专精特新"小巨人"企业。2013年成立于广东省深圳市，目前拥有近600名员工，业务遍及全球60多个国家和地区。

在十多年的发展历程中，DZO始终坚持投入光学、光电子技术的开发融合及光学镜头、光学模组、光学系统等产品的创新应用，致力服务于工业质量控制、影视工业、消费影像、半导体检测技术、医疗检测及生命科学等领域，创立并自主运营DZOPITCS、DZOFILM、Thypoch、全球化市场品牌。

在未来，DZO将不断挑战想象极限，秉承敬畏市场、尊重规律的核心价值观，为全球用户持续奉献更为极致的视觉体验。

Shenzhen Dongzheng Optical Technology Co., Ltd. (DZO) is a national high-tech enterprise and a national-level specialized and innovative "little giant" enterprise focusing on the research and development of optical and optoelectronic technologies. Founded in Shenzhen, Guangdong Province in 2013, it currently has nearly 600 employees and its business spans more than 60 countries and regions worldwide.

Over the past decade, DZO has consistently invested in the development and integration of optical and optoelectronic technologies, as well as the innovative application of products such as optical lenses, optical modules, and optical systems. It is committed to serving fields such as industrial quality control, film and television industry, consumer imaging, semiconductor testing technology, medical testing, and life sciences, and has established and independently operated the DZOPITCS, DZOFILM, Thypoch, and global market brands.

In the future, DZO will continue to push the limits of imagination, uphold the core values of respecting the market and respecting the rules, and continue to offer users around the world a more ultimate visual experience.

60+
国家地区
Country

7
创新研发中心
Innovation And R&D Center

5
加工制造基地
Processing And Manufacturing Base

11
销售服务站
Sales And Service Station

25000m^2
占地总面积
Total Area

600+
员工数量
Number Of Employees
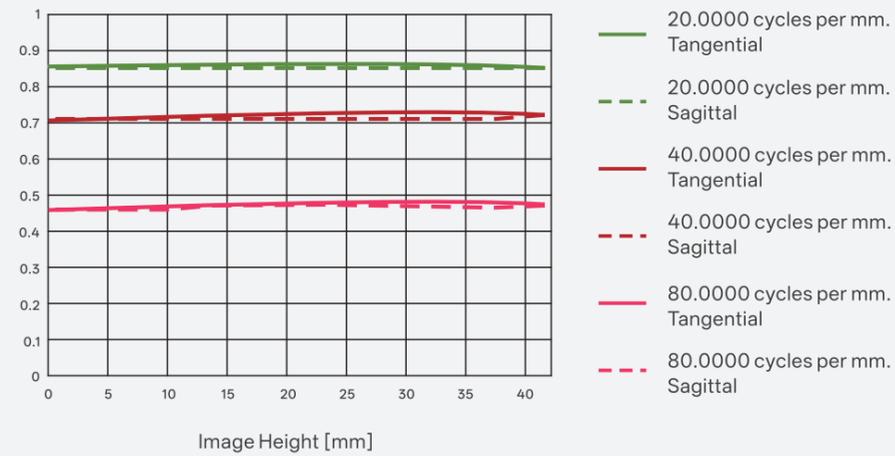
DZOPTICS

产品目录 ／Product Catalog

DZOPTICS

高还原度

High fidelity

16K5um 2.5x线扫镜头MTF
16K 5um 2.5x line scan lens MTF

设计值 Design value

High fidelity (16K 5um 2.5x line scan lens MTF)

- 20.0000 cycles per mm. Tangential
- 20.0000 cycles per mm. Sagittal
- 40.0000 cycles per mm. Tangential
- 40.0000 cycles per mm. Sagittal
- 80.0000 cycles per mm. Tangential
- 80.0000 cycles per mm. Sagittal

Image Height [mm]

测试 (实际) 值 Test (actual) value

High fidelity (16K 5um 2.5x line scan lens MTF)

- 20 lp/mm tangential
- 40 lp/mm tangential
- 80 lp/mm tangential
- 20 lp/mm saggital
- 40 lp/mm saggital
- 80 lp/mm saggital

Image Height [mm]
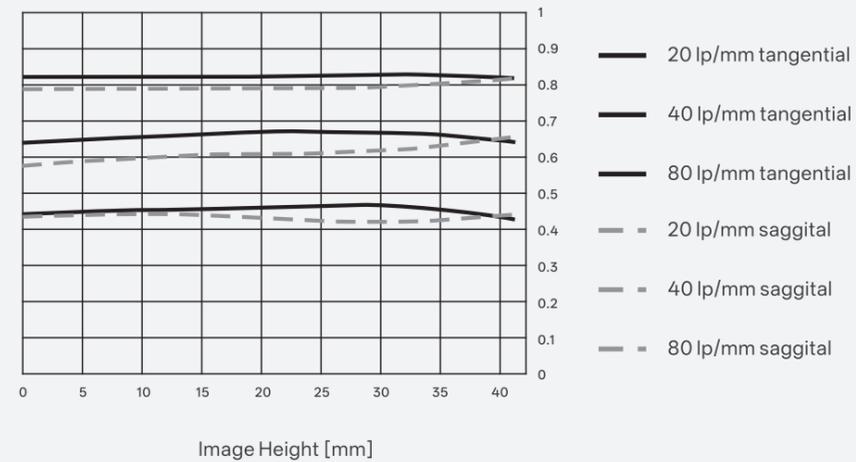
16K5um 3.3x线扫镜头MTF
16K 5um 3.3x line scan lens MTF

设计值 Design value

High fidelity (16K 5um 2.5x line scan lens MTF)

- 20.0000 cycles per mm. Tangential
- 20.0000 cycles per mm. Sagittal
- 40.0000 cycles per mm. Tangential
- 40.0000 cycles per mm. Sagittal
- 80.0000 cycles per mm. Tangential
- 80.0000 cycles per mm. Sagittal

Image Height [mm]

测试 (实际) 值 Test (actual) value

High fidelity (16K 5um 2.5x line scan lens MTF)

- 20 lp/mm tangential
- 40 lp/mm tangential
- 80 lp/mm tangential
- 20 lp/mm saggital
- 40 lp/mm saggital
- 80 lp/mm saggital

Image Height [mm]
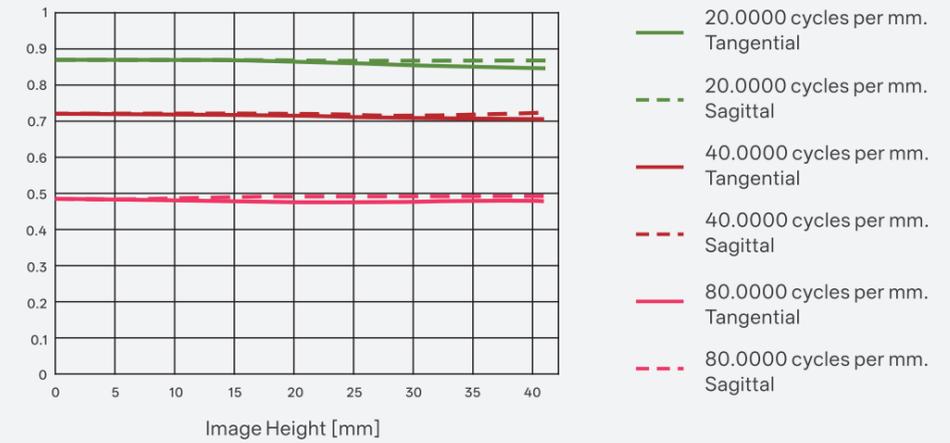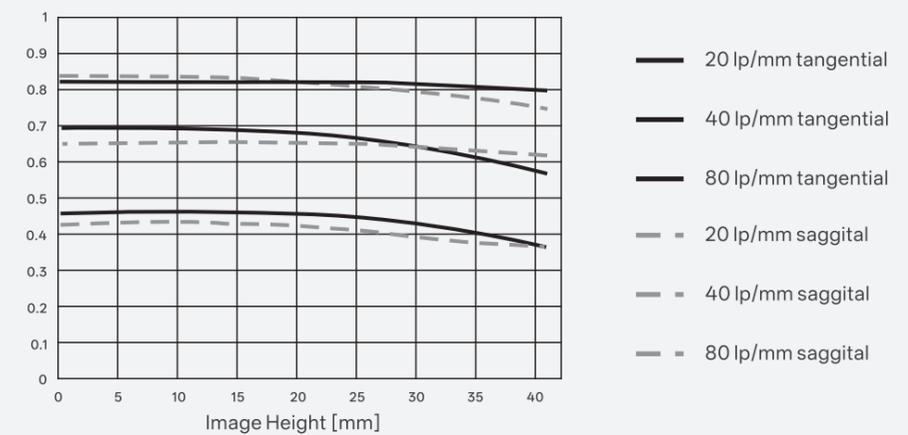
16K同轴/非同轴明暗场

16K coaxial/non-coaxial bright and dark fields
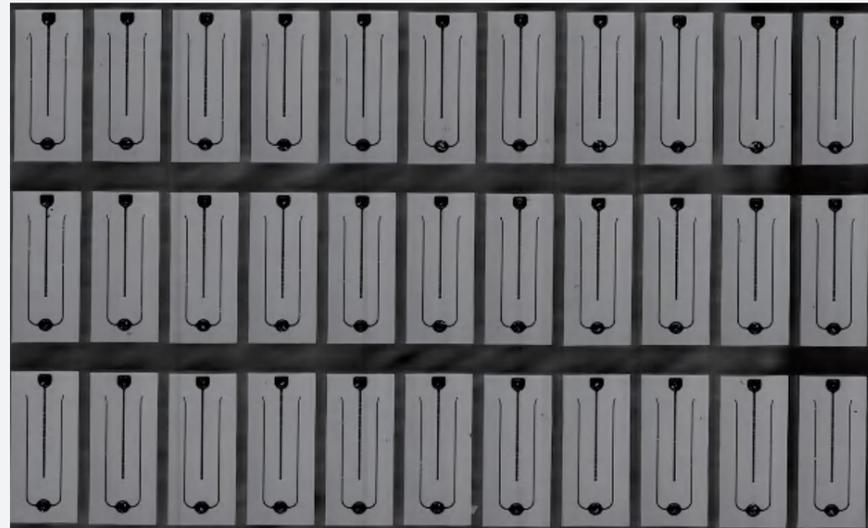
16K同轴明场 / 16K coaxial bright field

16K非同轴暗场 / 16K non-coaxial dark field

极致分辨率

Ultimate resolution

4u线宽，过渡像素1格以内
2u线宽也可清晰分辨

With a 4u linewidth, the transition pixel is within one pixel;
even with a 2u linewidth, it is clearly distinguishable.

DZOPTICS 线扫镜头靶面覆盖4K、8K、16K，倍率涵盖0.02x到5x，最小可支持3.5um像元，最高精度达亚微米级别，产品品类齐全且品质稳定性强，已广泛应用于半导体、PCB、显示面板、新能源 等检测领域。

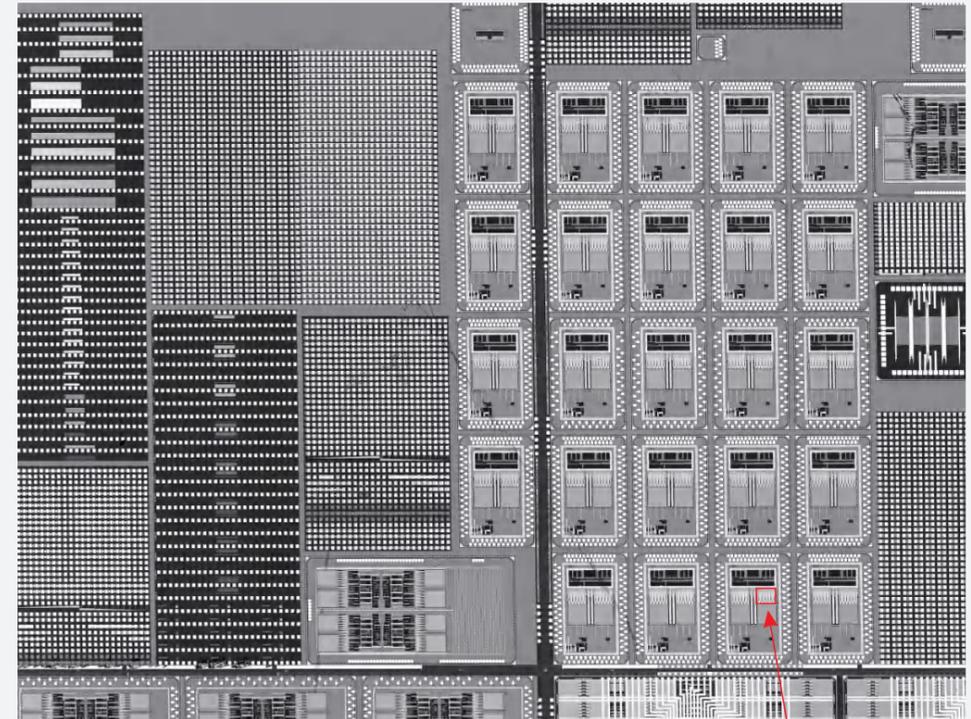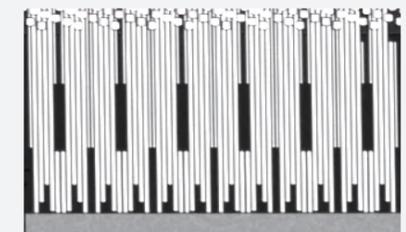DZOPTICS line scan lenses cover 4K, 8K, and 16K resolutions, with magnification ranging from 0.02x to 5x. They can support pixels as small as 3.5μm and achieve submicron level precision. With a complete product range and strong quality stability, they are widely used in the testing fields of semiconductors, PCBs, display panels, and new energy.

■ 4K

特点／Features

（1）支持4K 7um线扫描相机

（2）倍率范围0.04x-0.25x

（2）焦距低至25mm，实现短工作
距下更大检测视野，节省设备空间

（4）紧凑设计，体积更小

(1) Supports 4K 7um line scan camera

(2) Magnification range 0.04x-0.25x

(3) Focal length as low as 25mm, achieving a larger
field of view with a short working distance,
saving equipment space

(4) Compact design, smaller size

应用场景／Application

光伏、印刷、薄膜、布匹、纸张、钢材

Photovoltaics, printing, thin films, fabrics, paper, steel

参数／Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Mag.Range	工作距/mm Distortion	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
LS25008A	φ29	25	F4.5-22	0.2	0.04-0.15	585-161	0.1x @244@0.2%	M42
LS25020A	φ29	25	F4.5-22	0.2	0.15-0.25	161-95	0.2x @120@0.2%	M42
LS4045A	φ31.7	40	F4.5-16	0.05-0.03	0.04-0.2	1004-215	0.1x @413@0.01%	M42
LS5028A	φ30	50	F2.8-16	0.23-0.32	0.07-0.13	772-433	0.1x @567@0.18%	M42

8K

参数 / Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Mag.Range	工作距/mm Distortion	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
LS28002A	φ42	28	F4-16	0.239%	0.019	1527	0.019x @1527mm@0.239%	M72
LS28007A	φ42	28	F4-16	0.68-0.82%	0.059-0.083	466-324	0.074x @365mm@0.77%	M58/M72
LS4028A	φ44	40	F2.8-11	0.5-0.5%	0.04-0.33	1051-141	0.1x @417mm@0.2%	V38-M58/M72
LS4040A1	φ58	40	F4.0	0.1%	0.15-0.175	291-253	0.16x @273mm@0.1%	V49-M58/M72
LS4056A	φ60	40	F5.6-16	0.64-0.47%	0.04-0.33	1044-144	0.17x @265mm@0.55%	V38-M58/M72
LS6040A	φ64	60	F4-22	0.33-0.17%	0.04-0.33	1559-224	0.17x @397mm@0.01%	V38-M58/M72
LS8056A	φ64	80	F5.6-16	0.03-0.03%	0.2-0.4	455-255	0.3x @322mm@0.01%	V38-M58/M72
LS6056A	φ82	60	F5.6-16	0.64-0.37%	0.04-0.33	1549-214	0.17x @395mm@0.55%	V38-M58/M72/M90
LS9056A	φ86	90	F5.6-16	0.07-0.06%	0.15-0.3	669-367	0.2x @516mm@0.03%	V38-M58/M72/M90/M95
LS10056A	φ108	100	F5.6-16	0.57-0.02%	0.04-0.58	2647-249	0.17x @679mm@0.22%	V38-M58/M72/M90/M95
LS12056A	φ86	120	F5.6-16	0.09-0.03%	0.37-0.65	416-279	0.5x @335mm@0.06%	V38-M58/M72/M90/M95

特点 / Features

（1）支持8K 5u/7u线扫描相机

（2）倍率范围0.02x-0.65x

（3）焦距低至28mm，实现短工作距下更大检测视野，节省设备空间

（4）紧凑设计，体积更小

(1) Supports 8K 5u/7u line scan cameras

(2) Magnification range 0.02x-0.65x

(3) Focal length as low as 28mm, achieving a larger field of view with a short working distance, saving equipment space

(4) Compact design, smaller size

应用场景 / Application

锂电、印刷、薄膜、玻璃、钢材、陶瓷

Lithium batteries, Printing, Thin films, Glass, Steel, Ceramics

16K

特点 / Features

（1）倍率范围0.06x-1x

（2）抗温漂设计，温度变化±5℃内性能不变；

（3）可见&850nm 共焦；

（4）极致解像力以及近乎零色差的表现

(1) Magnification range 0.06x-1x

(2) Anti-temperature drift design, performance remains unchanged within ±5℃ temperature variation;

(3) Visible & 850nm confocal;

(4) Extreme resolution and near-zero chromatic aberration performance

应用场景 / Application

PCB、显示面板、玻璃盖板

PCB, Display panel, Glass cover

参数 / Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Mag. Range	工作距/mm Distortion	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
LS16006APO	φ58	60	F4.5-16	0.16-0.11%	0.04-0.075	1517-831	0.06x @1058mm@0.14%	V38-M58/M72
LS16010APO	φ58	60	F4.5-16	0.17-0.011%	0.078-0.119	803-526	0.107x @582mm@0.13%	V38-M58/M72
LS80014APO	φ64	80	F5.6-16	0.1-0.1%	0.13-0.166	656-526	0.146x @590mm@0.05%	V38-M58/M72
LS80021APO	φ64	80	F5.6-16	0.1-0.1%	0.18-0.24	489-388	0.21x @431mm@0.05%	V38-M58/M72
LS9536A1	φ86	95	F3.6-22	0.24-0.33%	0.2-0.26	499-391	0.23x @438mm@0.15%	V62-M58/M72/M90/M95
LS160233APO	φ64	114	F4.2-22	0.043%	0.233	562	0.233x @562mm@0.043%	V49-M58/M72
LS160255APO	φ63	114	F4.2-22	0.04-0.04%	0.23-0.28	557-469	0.255x @509mm@0.01%	V56-M58/M72
LS16033APO	φ66	116	F4.2-16	0.04-0.04%	0.31-0.36	432-380	0.33x @409mm@0.035%	V49-M58/M72
LS16042APO	φ66	116	F4.0-22	0.04-0.03%	0.38-0.45	370-323	0.42x @341mm@0.01%	V56-M58/M72
LS160476APO	φ64	116	F3.8-22	0.002-0.019%	0.46-0.5	320-300	0.476x @315mm@0.008%	V49-M58/M72
PLS16033APO	φ82	136	F4.2-22	0.03-0.03%	0.33-0.39	494-431	0.36x @460mm@0.01%	V56-M72/M90/M95
PLS16040APO	φ82	136	F5.6-22	0.01-0.1%	0.34-0.45	480-384	0.4x @421mm@0.07%	V56-M72/M90/M95
PLS16050APO	φ82	141	F4.0-22	0.023-0.025%	0.472-0.54	380-342	0.5x @363mm@0.003%	V62-M72/M90/M95
PLS16060APO	φ82	130	F3.8-22	0.043-0.022%	0.556-0.647	307-274	0.61x @284mm@0.002%	V62-M72/M90/M95
PLS16070APO	φ82	130	F3.8-22	0.023-0.027%	0.647-0.735	275-251	0.71x @257mm@0.014%	V62-M72/M90/M95
PLS16083APO	φ82	113	F3.8-22	0.024-0.027%	0.799-0.88	205-192	0.83x @200mm@0.004%	V56-M72/M90/M95
PLS16100APO	φ82	116	F3.8-22	0.05-0.05%	0.95-1.05	190-178	1x @184mm@0.04%	V49-M72/M90/M95

DZOPTICS

高倍16K

High magnification 16K

特点／Features

（1）大NA设计，兼具高分辨率及大通光量
（2）倍率1.25x-5x，实现亚微米检测精度；
（3）采用调心工艺，保证全画面极致均匀性以及景深最大化；
（4）APO 设计；
（5）同轴棱镜版本，可实现明场照明效果；

(1) Large NA design, combining high resolution and high light throughput
(2) Magnification 1.25x-5x, achieving submicron detection accuracy
(3) Centering process ensures ultimate uniformity across the entire image and maximizes depth of field
(4) APO design
(5) Coaxial prism version, enabling bright field illumination effects

应用场景／Application

半导体晶圆、PCB、IC载板、显示面板、新型显示 Semiconductor wafers, PCBs, IC substrates, Display panels, New displays

参数／Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Mag. Range	工作距/mm Distortion	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
PLS16200APO	φ86	123	F2.9-F16	0.084%	2	100	2x @100mm@0.084%	V78-M90/M95
PLS16125APO	φ82	134.89	F3.2-F16	0.020%	1.25	150	1.25x @150mm@0.02%	M90/M95
PLS16143APO	φ82	120.75	F3-F16	0.020%	1.43	156.5	1.43x @156.5mm@0.02%	M90/M95
PLS16167APO	φ82	137.8	F2.8-F16	0.010%	1.67	140	1.67x @140mm@0.01%	M90/M95
PLS16250APO	φ82	115	F2.5-F16	0.010%	2.5	97.26	2.5x @97.26mm@0.01%	M90/M95
PLS16333APO	φ82	113	F1.6-F16	0.020%	3.33	75.5	3.33x @75.5mm@0.02%	M90/M95
PLS16500APO	φ82	97.8	F1.38-F16	0.020%	5	80	5x @80mm@0.02%	M90/M95

高倍同轴16K

High-magnification coaxial 16K

特点／Features

（1）大NA设计，兼具高分辨率及大通光量
（2）倍率1.67x-5x，实现亚微米检测精度；
（3）采用调心工艺，保证全画面极致均匀性以及景深最大化；
（4）APO 设计；
（5）同轴棱镜版本，可实现明场照明效果；

(1) Large NA design, combining high resolution and high light throughput
(2) Magnification 1.67x-5x, achieving submicron detection accuracy
(3) Centering process ensures ultimate uniformity across the entire image and maximizes depth of field
(4) APO design
(5) Coaxial prism version, enabling bright field illumination effects

应用场景／Application

半导体晶圆、PCB、IC载板、显示面板、新型显示 Semiconductor wafers, PCBs, IC substrates, Display panels, New displays

参数／Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Mag. Range	工作距/mm Distortion	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
PLSC16167APO	φ82	126	F2.8-F16	0.1%	1.67	80	1.67x @80mm@0.1%	V56-M90/M95
PLSC16250APO	φ82	116	F2.83-10.38	0.05%	2.5	60	2.5x @60mm@0.05%	V78-M90/M95
PLSC16333APO	φ82	116	F2.26-9	0.05%	3.33	51	3.33x @51mm@0.05%	V78-M90/M95
PLSC16500APO	φ84	112.3	F1.6-16	0.1%	5	40	5x @40mm@0.1%	V78-M90/M95

DZOPTICS 微距镜头适用于2/3"-1.2"成像面，焦距范围25mm-75mm，工作距56mm-500mm。微距镜头具有可媲美远心镜头的超低畸变，同时更加适合近距离高精度检测，可有效弥补FA 加C口 延长环引起的像质劣化。

DZOPTICS macro lenses are suitable for 2/3"-1.2" imaging planes, with a focal length range of 25mm-75mm and a working distance of 56mm-500mm. These macro lenses feature ultra-low distortion comparable to telecentric lenses, while being more suitable for close-range, high-precision inspection, effectively compensating for image quality degradation caused by FA with C-mount extension rings.

2/3"

特点 / Features

（1）2/3''靶面，50mm 焦距

（2）浮动对焦，保证全倍率范围内解像力一致性

(1) 2/3'' target surface, 50mm focal length

(2) Floating focus to ensure consistent resolution across the entire magnification range

应用场景 / Application

3C、2D AOI

参数 / Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Mag.Range	工作距/mm Distortion	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
MC5028C	φ11	50	F2.8-16	0.012~0.05%	0.1-0.3	179.7-487.4	0.2x@264.7mm@0.05%	C

1.1"

特点／Features

（1）焦段25~75mm,4款可选
（2）倍率范围0.1x-0.82x
（3）1200万高清像素，拥有高对比度和低失真
（4）适合近距离高精度检测，有效弥补FA加C口
　　延长环引起的像质劣化

(1) Focal length 25~75mm, 4 models available
(2) Magnification range 0.1x-0.82x
(3) 12 million high-definition pixels, with high contrast and low distortion
(4) Suitable for close-range high-precision inspection, effectively compensating for image quality degradation caused by FA plus C mount extension ring

应用场景／Application

3C、SPI、2D AOI

参数／Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Mag. Range	工作距/mm Distortion	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
MC2535B	φ17.6	25	F3.5-16	0.81~0.74%	0.1-0.4	251~62	0.2x@122mm@0.05%	C
MC3530B	φ17.6	35	F3.0-16	0.4~0.34%	0.25-0.7	130-56	0.4x@83mm@0.03%	C
MC5028B	φ17.6	50	F2.8-16	0.17-0.08%	0.46-0.82	127-97	0.59x@110mm@0.04%	C
MC5028D	φ17.6	50	F2.8-16	0.026-0.009%	0.1-0.3	520-193	0.2x@271mm@0.005%	C
MC7528B	φ17.6	75	F2.8-16	0.04-0.06%	0.24-0.48	344-203	0.37x@242mm@0.03%	C

1.2"

特点／Features

（1）焦距：25mm、35mm；
（2）倍率范围0.1x-0.55x
（3）2000万高清像素，拥有高对比度和低失真
（4）浮动对焦设计，保证全倍率范围内超高解
　　像力和超低畸变

(1) Focal length: 25mm, 35mm;
(2) Magnification range: 0.1x-0.55x
(3) 20 million high-definition pixels, with high contrast and low distortion
(4) Floating focus design, ensuring ultra-high resolution and ultra-low distortion across the entire magnification range

应用场景／Application

3C、2D AOI

参数／Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Mag. Range	工作距/mm Distortion	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
MC2538F1_20C	φ19.2	25	F3.8-16	0.047~0.011%	0.1-0.4	287~82	0.25x@118mm@0.039%	C
MC3530F1_20C	φ19.2	35	F3.0-16	0.061-0.061	0.2-0.55	196-92	0.35x@123mm@0.068%	C

DZOPTICS 微距镜头适用于2/3"-1.2"成像面，焦距范围25mm-75mm，工作距56mm-500mm。微距镜头具有可媲美远心镜头的超低畸变，同时更加适合近距离高精度检测，可有效弥补FA 加C口 延长环引起的像质劣化。

DZOPTICS macro lenses are suitable for 2/3"-1.2" imaging planes, with a focal length range of 25mm-75mm and a working distance of 56mm-500mm. These macro lenses feature ultra-low distortion comparable to telecentric lenses, while being more suitable for close-range, high-precision inspection, effectively compensating for image quality degradation caused by FA with C-mount extension rings.

全画幅

Full-frame lens

特点 / Features

（1）支持像元5.5um/7um

（2）焦距28mm、35mm、50mm 可选

(1) Supports pixel size of 5.5um/7um

(2) Focal lengths of 28mm, 35mm, and 50mm are selectable

应用场景 / Application

印刷、薄膜、玻璃、布匹、印钞

Printing, Film, Glass, Fabric, Banknote printing

参数 / Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Mag. Range	工作距/mm Distortion	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
LM2828B	φ44	28	F2.8-22	2.24-2.78%	0.01-0.1	2797-257	0.05x@547mm@2.49%	F /M58/M42/M72
LM2828B2	φ44	28	F2.8-22	2.38-2.4%	∞-0.06	∞-454	0.033x@833mm@2.39%	F /M58/M42/M72
LM3528A	φ44	35	F2.8-22	1.23-0.63%	∞-0.177	∞-310	0.05x@696mm@0.95%	F /M58/M42/M72
LM3528B	φ44	35	F2.8-22	0.67-0.92%	∞-0.13	∞-245	0.05x@685mm@0.79%	F /M58/M42/M72
LM5022A	φ44	50	F2.2-22	0.61-0.67%	0.05-0.167	1048-330	0.1x@536mm@0.04%	F /M58/M42/M72

151M

特点 / Features

（1）倍率范围0.02x-0.5x

（2）RGB共焦，确保屏幕不同色光下焦点一致性；

（3）联动对焦，确保全倍率范围内成像一致性

（4）调焦、光圈双电控，并带位置记忆功能*电控版

（5）RS485总线，最多支持1托16，减少施工布线*电控版

（6）手动设置镜头设备通讯地址，调试灵活*电控版

(1) Magnification range 0.02x-0.5x

(2) RGB confocal focusing ensures consistent focus under different screen colors;

(3) Linked focusing ensures consistent imaging across the entire magnification range;

(4) Dual electronic control for focus and aperture, with position memory function *electronic control version

(5) RS485 bus, supporting up to 16 lenses per frame, reducing wiring costs *electronic control version

(6) Manual setting of lens device communication address for flexible adjustment *electronic control version

应用场景 / Application

显示面板、OLED、LCD   Display panel, OLED, LCD

参数 / Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Mag. Range	工作距/mm Distortion	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
LM9045A3	φ67	90	F4.5-22	0.032-0.17%	0.02-0.5	4584.7-290.3	0.25x@449mm@0.14%	M72/M90/M95
LM9056APO	φ67	90	F5.6-22	0.114-0.131%	0.2-0.3	515-362	0.25x@424mm@0.023%	M72/M90/M95/V49-

电控151M

151M electronically controlled lens

特点 / Features

（1）倍率范围0.02x-0.5x

（2）RGB共焦，确保屏幕不同色光下焦点一致性；

（3）联动对焦，确保全倍率范围内成像一致性

（4）调焦、光圈双电控，并带位置记忆功能*电控版

（5）RS485总线，最多支持1托16，减少施工布线*电控版

（6）手动设置镜头设备通讯地址，调试灵活*电控版

(1) Magnification range 0.02x-0.5x

(2) RGB confocal focusing ensures consistent focus under different screen colors;

(3) Linked focusing ensures consistent imaging across the entire magnification range;

(4) Dual electronic control for focus and aperture, with position memory function *electronic control version

(5) RS485 bus, supporting up to 16 lenses per frame, reducing wiring costs *electronic control version

(6) Manual setting of lens device communication address for flexible adjustment *electronic control version

应用场景 / Application

显示面板、OLED、LCD   Display panel, OLED, LCD

参数 / Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Mag. Range	工作距/mm Distortion	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
LM9045A3_EF3	φ67	90	F4.5-22	0.032-0.17%	0.02-0.5	4584.7-290.3	0.25x@449mm@0.14%	M72/M90/M95

■ 65M

特点 / Features

（1）为65MP相机而设计

（2）倍率范围0.36x-0.69x

（3）浮动对焦，保证全倍率范围解像力一致性；

（4）大光圈F4.0

(1) Designed for 65MP cameras

(2) Magnification range 0.36x-0.69x

(3) Floating focus to ensure consistent resolution across the entire magnification range

(4) Large aperture F4.0

应用场景 / Application

印刷、薄膜、玻璃、布匹、印钞

Printing, Film, Glass, Fabric, Banknote printing

参数 / Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Mag. Range	工作距/mm Distortion	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
LM8540A	φ38	85	F4-16	0.03-0.01%	0.364-0.687	202-135	0.453x@169mm@0.06%	F/M58/M42/M72

■ 变倍151M

151M Zoom lens

特点 / Features

（1）极宽倍率范围1-3x、5-10x，兼容多种检测精度

（2）大 NA 设计，兼具高分辨率及大通光量

（3）一体化设计，使用过程无需更换接圈

(1) Extremely wide magnification range of 1-3x and 5-10x, compatible with various detection accuracie

(2) Large NA design, combining high resolution and high light throughput

(3) Integrated design, no need to replace the adapter ring during use

应用场景 / Application

微显示、AR/VR

Micro display, AR/VR

参数 / Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Mag. Range	工作距/mm Distortion	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
LM8540A	φ67	/	F2.0-22	0.04-0.08%	1-3.5	71-65	/	M72
LM1X-3XA1_67M72	φ67	/	F2.7-22	0.02-0.05%	1-3	93.17-172.66	/	M72
LM5X-10XA1_67M72	φ67	/	F1.8-22	0.04-0.17%	5-10	20.9-27.2	/	M72

DZOPTICS FA镜头支持1/1.8"-1.1″成像面，焦距范围6mm-75mm，工作距范围200mm-inf。产品性能强悍，在大光圈下依然保持极高解像力，最小支持pixel size 2.74um。同时，部分型号推出电控版本，具备位置记忆功能，可实现远程高效操控。

The DZOPTICS FA lens supports an image sensor size of 1/1.8"-1.1" with a focal length range of 6mm-75mm and a working distance range of 200mm-inf. It boasts powerful performance, maintaining extremely high resolution even at large apertures, and supports a minimum pixel size of 2.74um. Additionally, some models are available with electronic control and position memory function, enabling efficient remote operation.

1/1.7"

特点 / Features

（1）支持1/1.7'' 12MP相机
（2）全视场、全倍率MTF>=100lp/mm
（3）通光F#2.8
（4）无热化设计，温度范围-10℃-60℃

(1) Supports 1/1.7'' 12MP camera
(2) Full field of view, full magnification MTF>=100lp/mm
(3) Light transmission F#2.8
(4) Heat-free design, temperature range -10℃-60℃

应用场景 / Application

汽车制造、物流、食品分类、医药、机器人视觉

Automobile manufacturing, logistics, food sorting, pharmaceuticals, robot vision

参数 / Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	工作距/mm Distortion	接口 Mount
LA0628A_1712	φ9.5	6	F2.8-16	-2.7@y=4.5	100-inf	C
LA0828A_1712	φ9.5	8	F2.8-16	-0.04@y=4.5	100-inf	C
LA1228A_1712	φ9.5	12	F2.8-16	-0.01@y=4.5	100-inf	C
LA1628A_1712	φ9.5	16	F2.8-16	-0.04@y=4.5	100-inf	C
LA2528A_1712	φ9.5	25	F2.8-16	-0.06@y=4.5	100-inf	C
LA3528A_1712	φ9.5	35	F2.8-16	-0.03@y=4.5	200-inf	C
LA5028A_1712	φ9.5	50	F2.8-16	-0.18@y=4.5	250-inf	C

2/3"

特点 / Features

（1）2/3'' 标准版
（2）最大光圈F2.0
（3）无热化设计，温度范围-10℃-60℃

(1) 2/3'' standard version
(2) Maximum aperture F2.0
(3) Thermally neutral design, temperature range -10℃ to 60℃

应用场景 / Application

汽车制造、物流、食品分类、医药、机器人视觉

Automobile manufacturing, logistics, food sorting, pharmaceuticals, robot vision

参数 / Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	工作距/mm Distortion	接口 Mount
LA0820A	φ11	8	F2.0-16	-3.27@y=5.5	100-Inf	C
LA1220A	φ11	12	F2.0-16	-1.47@y=5.5	150-Inf	C
LA1620A	φ11	16	F2.0-16	-0.17@y=5.5	150-Inf	C
LA2520A	φ11	25	F2.0-16	-1.22@y=5.5	150-Inf	C
LA3520A	φ11	35	F2.0-16	-1.02@y=5.5	200-Inf	C
LA5020A	φ11	50	F2.0-16	-0.53@y=5.5	300-Inf	C
LA7524A	φ11	75	F2.4-16	-0.25@y=5.5	500-Inf	C

2/3"PRO

特点 / Features

（1）2/3'' 高配版，更大光圈F1.8
（2）高达150lp/mm 极致分辨率，且极具竞争力的畸变表现；
（3）无热化设计，温度范围-10℃-60℃

(1) 2/3'' high-end version with a larger aperture of F1.8
(2) Extreme resolution of up to 150 lp/mm, and highly competitive distortion performance;
(3) Thermally neutral design, temperature range -10℃ to 60℃

应用场景 / Application

汽车制造、物流、食品分类、医药、机器人视觉

Automobile manufacturing, logistics, food sorting, pharmaceuticals, robot vision

参数 / Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	工作距/mm Distortion	接口 Mount
LA0818A_2310	φ11	8	F1.8-16	-2.80@y=5.5	100-Inf	C
LA1218A_2310	φ11	12	F1.8-16	-1.30@y=5.5	100-Inf	C
LA1618A_2310	φ11	16	F1.8-16	-0.18@y=5.5	150-Inf	C
LA2518A_2310	φ11	25	F1.8-16	-0.24@y=5.5	150-Inf	C
LA3518A_2310	φ11	35	F1.8-16	-0.09@y=5.5	200-Inf	C
LA5024A_2310	φ11	50	F2.4-16	-0.00@y=5.5	300-Inf	C

1.1"

特点／Features

（1）支持1.1" 25MP相机
（2）全视场、全倍率MTF>=100lp/mm
（3）最大光圈F2.4
（4）支持像元2.5-5.0um
（5）无热化设计，温度范围-10℃-60℃

(1) Supports 1.1" 25MP cameras
(2) Full field of view, full magnification MTF >= 100lp/mm
(3) Maximum aperture F2.4
(4) Supports pixel size 2.5-5.0um
(5) Heat-free design, temperature range -10℃ to 60℃

应用场景／Application

汽车制造、物流、食品分类、医药、机器人视觉

Automobile manufacturing, logistics, food sorting, pharmaceuticals, robot vision

参数／Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	工作距/mm Distortion	接口 Mount
LA1224A_1120	φ17.6	12	F2.4-16	-3.96@y=8.8	100-Inf	C
LA1624A_1120	φ17.6	16	F2.4-16	-2.65@y=8.8	100-Inf	C
LA2524A_1120	φ17.6	25	F2.4-16	-0.69@y=8.8	150-Inf	C
LA3524A_1120	φ17.6	35	F2.4-16	-0.28@y=8.8	150-Inf	C
LA5024A_1120	φ17.6	50	F2.4-16	-0.02@y=8.8	250-Inf	C
LA7524A_1120	φ17.6	75	F2.4-16	-0.10@y=8.8	500-Inf	C

标准版-电控2/3"

Standard version - 2/3" electronically controlled

特点／Features

（1）电控对焦，远程操控
（2）支持正反转，同时具备位置记忆功能
（3）断电位置信息不丢失
（4）RS485总线，最多支持1托16，减少施工布线

(1) Electronically controlled focusing, remote operation
(2) Supports forward and reverse rotation, and has position memory function
(3) Position information is not lost when power is off
(4) RS485 bus, supports up to 16 units per rack, reducing construction wiring

应用场景／Application

3C、汽车制造、机器人视觉

3C,Automobile manufacturing, robot vision

参数／Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	工作距/mm Distortion	接口 Mount
LA0820A2_EF2	φ11	8	F2.0-16	-3.27@y=5.5	100-Inf	C
LA1620A2_EF1	φ11	16	F2.0-16	-0.17@y=5.5	150-Inf	C
LA2520A2_EF1	φ11	25	F2.0-16	-1.22@y=5.5	100-Inf	C

标准版-电控1.1"

Standard version - 1.1" electronically controlled

定制业务是DZOPTICS重要组成部分，
我们技术团队具有丰富的行业应用经验以及极高的专业素养，
这保证了不少定制案例的成功交付，
通过定制，我们同客户也建立了良好的关系，并延伸为长久的信任合作。

Customization is an important part of DZOPTICS. Our technical team has extensive industry application experience and high professional competence, which has ensured the successful delivery of many customized cases. Through customization, we have also established good relationships with our clients and extended them into long-term trust and cooperation.

特点 / Features

(1) 电控对焦，远程操控
(2) 支持正反转，同时具备位置记忆功能
(3) 断电位置信息不丢失
(4) RS485总线，最多支持1托16，
　　减少施工布线

(1) Electronically controlled focusing, remote operation
(2) Supports forward and reverse rotation, and has position memory function
(3) Position information is not lost when power is off
(4) RS485 bus, supports up to 16 units per rack, reducing construction wiring

应用场景 / Application

3C．汽车制造、机器人视觉

3C,Automobile manufacturing, robot vision

参数 / Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	工作距/mm Distortion	接口 Mount
LA1224A2_1120_EF2	φ17.6	12	F2.4-16	-3.96@y=8.8	100-Inf	C
LA1624A2_1120_EF2	φ17.6	16	F2.4-16	-2.65@y=8.8	100-Inf	C
LA2524A2_1120_EF2	φ17.6	25	F2.4-16	-0.69@y=8.8	150-Inf	C

萨姆

Scheimpflug

特点／Features

（1）倾斜光路设计
（2）大光圈，助力高速检测

(1) Tilted optical path designengths
(2)Large aperture to facilitate high-speed detection

应用场景／Application

3D 相机

3D camera

参数／Parameter

产品型号 Model	靶面/mm Img.Circle	倍率 Mag.	光圈/F# F#	畸变/% Distortion	工作距/mm Distortion	共轭距/mm Conjugate DistanCe	接口 Mount
SM2535A	φ19	0.73-1.04	F3.5-16	1.37-1.23%	42-40	101-98	C
SM3530A	φ19	0.73-1.18	F3.0-16	0.4-0.34%	64-61	132-129	C
SM5028A	φ19	0.79-1.15	F2.8-16	0.17-0.08%	121-119	194-192	C
SM7528A	φ19	0.46-0.69	F2.8-16	0.04-0.06%	236-196	339-299	C

VR

特点／Features

（1）商业相机级别的VR镜头
　　（适配Z-Cam Pro系列相机）
（2）超广角镜头，FOV最大220°
（3）超低F-Theta畸变<0.3%，
　　全视野画质更均匀

(1) Commercial camera-grade VR lens (compatible with
　　Z-Cam Pro series cameras)
(2) Ultra-wide-angle lens with a maximum FOV of 220°
(3) Ultra-low F-Theta distortion <0.3%, resulting in more
　　uniform image quality across the entire field of view

应用场景／Application

全景相机、运动相机

Panoramic camera, action camera

参数／Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	接口 Mount
VR_190A	φ14	4.37	F2.8-11	0.3%	C / M4/3
VR_220A	φ10	3.54	F2.8-11	-26.0%	C / M4/3
VR_220B	φ24.08	6.32	F3.5-16	0.6%	C / E

■ 连续变倍镜头

Continuous zoom lens

DZOPTICS 红外镜头，针对700nm-2000nm波段优化设计，
短焦大通光，节省设备空间，提升检测效率。

DZOPTICS infrared lenses are optimized for the 700 nm-2000 nm wavelength band,
featuring a short focal length and large light transmission, save equipment space and
improving detection efficiency.

特点／Features

（1）支持1/2'' 靶面

（2）主体0.7x-4.5x，可搭配筒镜实现倍率自由组合

（3）齐焦设计，变倍过程中，焦点位置始终保持一致

(1) Supports 1/2'' target surface

(2) Main body 0.7x-4.5x, can be combined with tube
lenses to achieve free magnification combination

(3) Parfocal design, the focal position remains
consistent during magnification.

应用场景／Application

探针台、固晶机

Probe station, Die bonder

参数／Parameter

产品型号 Model	靶面/mm Img.Circle	倍率 Mag.	光圈/F# F#	畸变/% Distortion	工作距/mm Distortion	共轭距/mm Conjugate DistanCe	接口 Mount
ZLC0745A1_8C	φ8	0.7-4.5	0.022-0.09	0.001	86	310.77	C

1"

特点／Features

（1）支持4k 7u 相机

（2）12mm、25mm 焦段可选

（3）极具竞争力的畸变表现

(1) Supports 4K 7U cameras

(2) 12mm and 25mm focal lengths are available

(3) Highly competitive distortion performance

应用场景／Application

光伏　　　　Photovoltaics

参数／Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Distortion	工作距/mm Distortion	NIR 波段范围/nm MHz.Range	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
IR1214A	φ16	12	F1.4-16	0.54-0.27%	0.029-0.012	400~1000	750-1400	0.0172x@700mm@0.35%	C
IR2514A	φ16	25	F1.4-16	0.72-0.62%	0.0839-∞	290-Inf	700-1700	0.05x@492mm@0.68%	C

4K

特点／Features

（1）φ30mm 靶面，支持4k 7u 、2k 12.5u相机

（2）35mm 焦段，超大光圈F1.5

(1) φ30mm target surface, supports 4K 7u and 2K 12.5u cameras

(2)35mm focal length, ultra-large aperture F1.5

应用场景／Application

光伏　　　　Photovoltaics

参数／Parameter

产品型号 Model	靶面/mm Img.Circle	焦距/mm EFL	光圈/F# F#	畸变/% Distortion	倍率范围 Distortion	工作距/mm Distortion	NIR 波段范围/nm MHz.Range	中心倍率@工作距@畸变 Center Mag.@WD@Distortion	接口 Mount
IR3520A	φ30	35	F2.0-22	0.06%	0.2-∞	159-Inf	800-2000	0.12x@278mm@0.6%	M42
IR3515A1	φ30	35	F1.5-16	1.1%	0.17-∞	220-Inf	750-1500	0.125x@300mm@1.1%	M42