



Walan Optics

Machine Vision Lens

·FA ·LINE SCAN ·360°



Company Profile

Shangrao Walan Optics Technology Co., Ltd specialized in R&D, design and manufacturing of precision optical components and lens systems. By engaging in optical design, precision processing and coating technology for years, Walan Optics is committed to providing high-performance customized optical solutions for global clients.

With 19 years of operation, our factory occupies 10,000 square meters and features a 1,500 m² Class1000 clean room, with a monthly output of 35,000 lenses. We provide one-stop services from custom design to volume production of machine vision lenses for many world leading equipment companies. Standard and customized telecentric, line-scan, FA, and 360° internal-external wall inspection lenses are available for different sensor sizes and image-quality specifications.



Custom Lens Design

Customization is at the heart of what we do. Simply provide your target parameters, we will evaluate and deliver initial optical drawings within 15days. Transformation from concepts to mass production will be as little as 45 days.



Our Advantages

★ In-house designers

Walan has 33 optical designers including 10 senior engineers. We respond rapidly to custom lens requests and offer premium optical design solutions.

★ Advanced equipment

Walan is equipped with advanced automated facilities, enabling in-house glass grinding, coating, assembly and testing. It features a 1,500 square meters Class1000 clean room and one Class100 clean room.

★ Strict inspection

We conduct 100% full-inspection for each lens, covering optical performance, cosmetic appearance and mechanical assembly performance, to ensure zero outgoing defects.





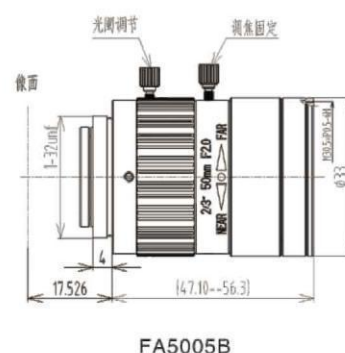
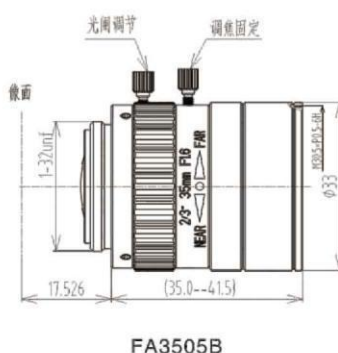
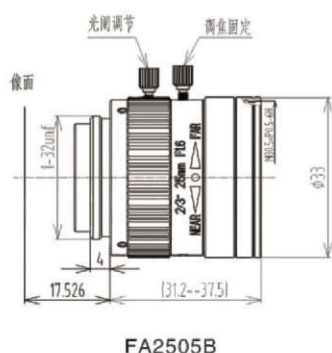
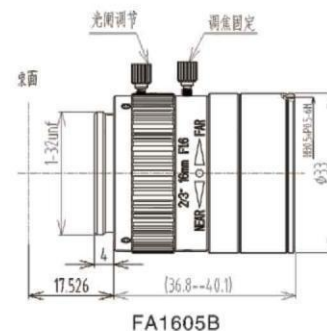
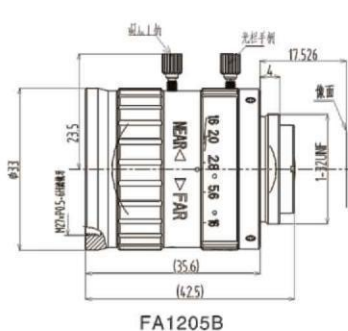
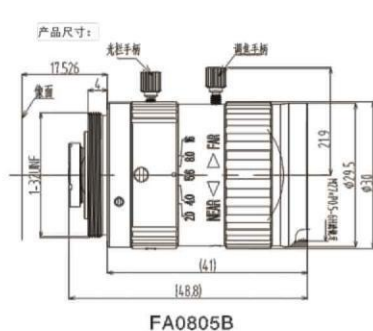
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2/3 Inch FA Lens



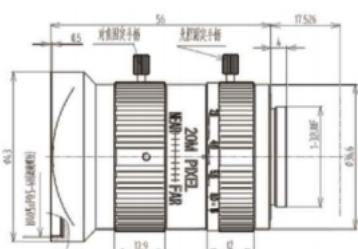
model	sensor	Aperture	Focus	Object Size HxV				Distor-tion	Min. distance	Filter thread	Mount
				2/3"	1/1.1"	1/2"	1/2.8"				
FA0805B	2/3"	F/NO2.0~16	8mm	128x95	105x78	93x69	69x52	<0.5%	100	M35.5*P0.5	C
FA1205B	2/3"	F/NO.1.6~16	12mm	84x63	69x51	61x46	46x34	<0.2%	100	M30.5*P0.5	C
FA1605B	2/3"	F/NO.1.6~16	16mm	64x48	52x39	46x35	35x26	<0.1%	100	M30.5*P0.5	C
FA2505B	2/3"	F/NO.1.6~16	25mm	35x26	29x22	25x19	19x14	<0.1%	100	M30.5*P0.5	C
FA3505B	2/3"	F/NO.1.6~16	35mm	46x34	37x28	33x25	25x19	<0.1%	150	M30.5*P0.5	C
FA5005B	2/3"	F/NO.2.0~16	50mm	51x38	42x31	37x28	28x21	<0.1%	300	M30.5*P0.5	C



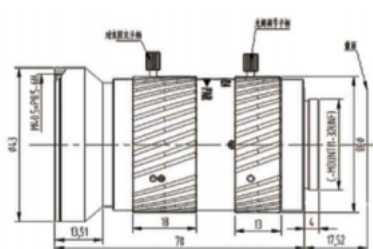
1.1 inch FA lens



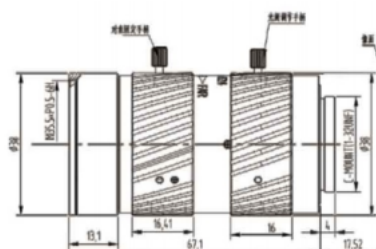
Model	Sensor	Aperture	Focus	Object size HxV			Distor- tion	Min. distance	Filter thread	Mount
				1.1"	2/3"	1/2"				
FA1220B	1.1"	F2.8-F16	12mm	154x116	96x72	72x53	<1%	100mm	N/A	C
FA1620B	1.1	F2.4-F16	16mm	105x79	66x49	48x36	<0.5%	100mm	M40.5*P0.5	C
FA2520B	1.1"	F2.4-F16	25mm	65x49	40x30	29x22	<0.2%	100mm	M35.5*P0.5	C
FA3520B	1.1"	F2.4-F16	35mm	74x55	46x34	33x25	<0.1%	200mm	M35.5*P0.5	C
FA5020B	1.1"	F2.4-F16	50mm	84x73	52x39	38x29	<0.1%	300mm	M40.5*P0.5	C
FA7520B	1.1"	F2.4-F16	75mm	128x96	80x60	58x44	<0.1%	600mm	M40.5*P0.5	C



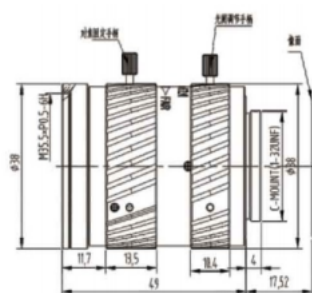
FA1220B



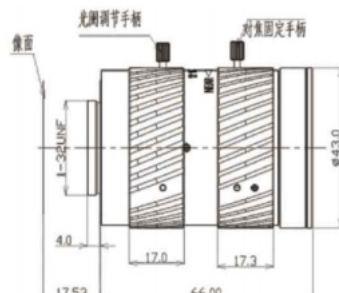
FA1620B



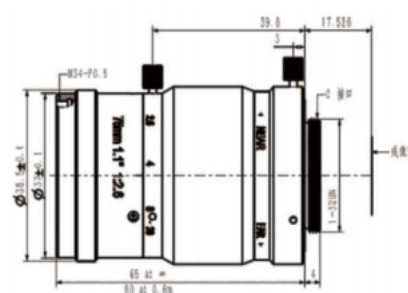
FA2520B



FA3520B



FA5020B

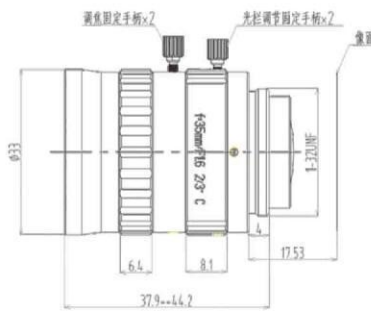


FA7520B

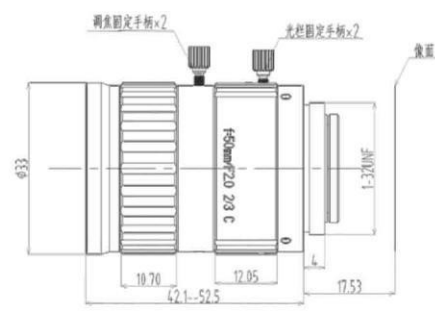
Macro lens

Model	Sensor	Aperture	Focus	Distortion	Min. distance	Filter Thread	Mount
FA3505W	2/3"	F/NO.1.6~16	35mm	<0.05%	80	M30.5*P0.5	C
FA5005W	2/3"	F/NO.1.6~16	50mm	<0.02%	100	M30.5*P0.5	C
FA2520W	1.1"	F/NO.2.8~16	25mm	<0.07%	65	M27*P0.5	C
FA3520W	1.1"	F/NO.2.8~16	35mm	<0.05%	59	M27*P0.5	C
FA5020W	1.1"	F/NO.2.8~16	50mm	<0.05%	95	M27*P0.5	C
FA7520W	1.1"	F/NO.3.8~16	75mm	<0.05%	257	M27.5*P0.5	C

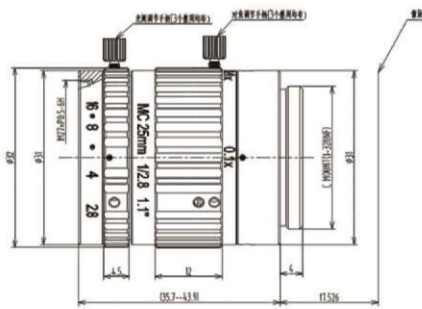
Specially designed for short working distance, compatible with 1.1" sensor, low distortion.



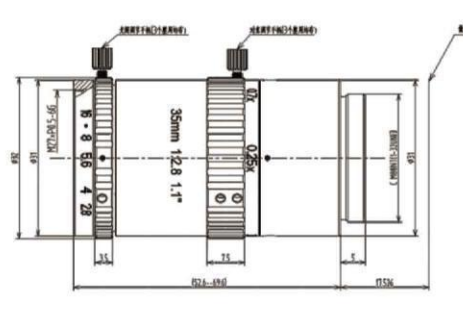
FA3505W



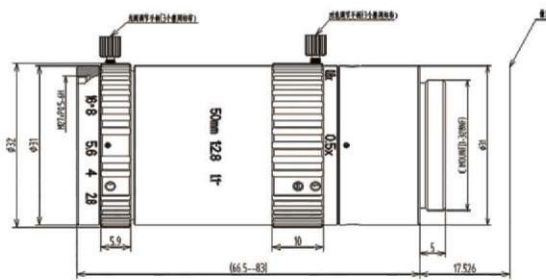
FA5005W



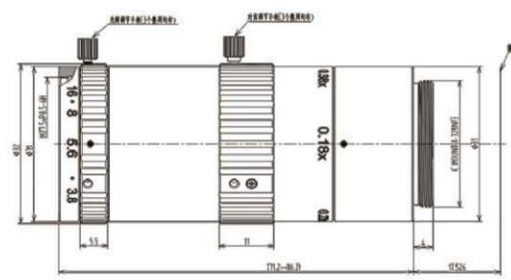
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FA3520W



FA5020W



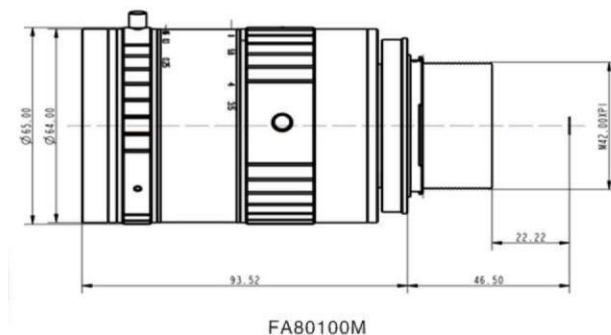
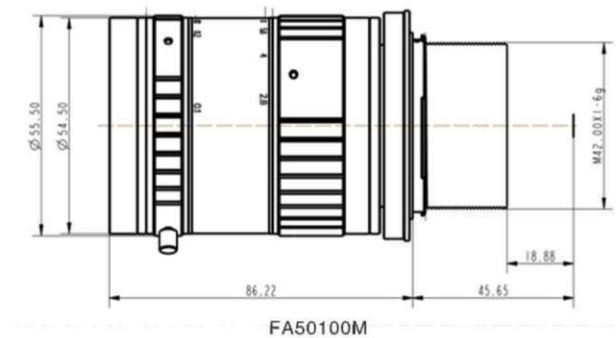
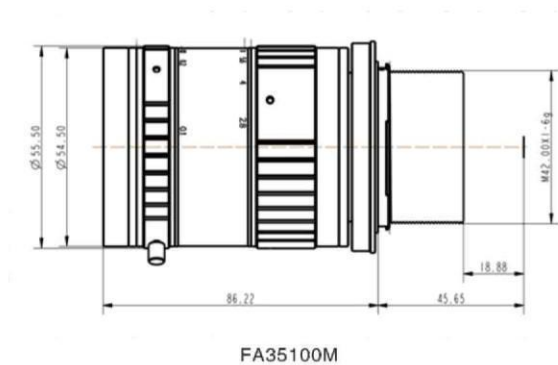
FA7520W



Large-format Lens

Model	Sensor	Aperture	Focus	Distor-tion	Min. Distance	Filter Thread	Mount
FA35100M	37mm*25mm	F/NO.2.8~22	35mm	<0.15%	300mm	M52*P0.75	F default, M42/M58/M72/V convertable
FA50100M	37mm*25mm	F/NO.2.8~22	50mm	<0.35%	500mm	M55*P0.75	
FA80100M	37mm*25mm	F/NO.3.5~22	80mm	<0.04%	500mm	M62*P0.75	

Ultra high resolution of 3.1 μ m, supporting 26mp-65mp sensor

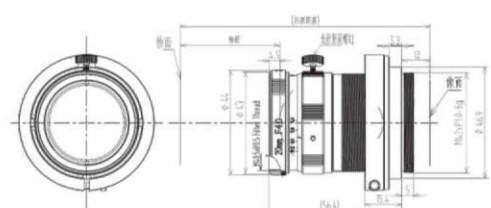


Line Scan Lens

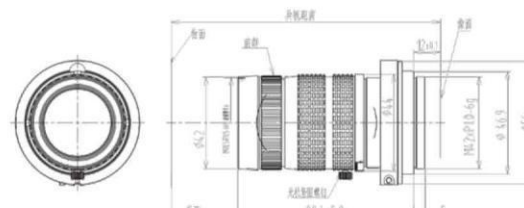


4k7μm Line Scan Lens

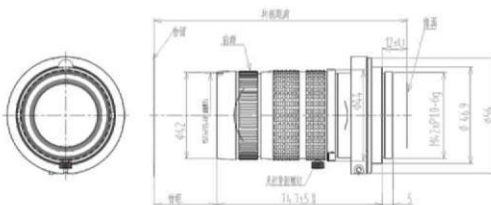
MODEL	Focus	Max. Sensor	Aper- ture	Central Mag.	Central Dis.	Central Conjugate	Mag. Range	Working Distance	Conjugate Distance	Mount
FK2040A-0.065	20	32	4.0-22	0.065	314	382	0.02-0.3	61-1035	134-1102	M42
FK2540A-0.15	25	32	4.0-16	0.15	160	248	0.125-0.175	130-187	223-179	M42
FK2540A-0.085	25	32	4.0-16	0.085	300	385	0.05-0.12	206-520	296-608	M42
FK2540A-0.03	25	32	4.0-16	0.03	870	952	0.015-0.05	520-1740	607-1826	M42
FK3528A-0.5	35	32	2.8-16	0.5	84	169	0.3-0.7	63-123	155-202	M42
FK3528A-0.2	35	32	2.8-16	0.2	190	264	0.15-0.25	152-245	229-318	M42
FK3528A-0.1	35	32	2.8-16	0.1	350	421	0.05-0.15	240-700	312-769	M42
FK3528A-0.05	35	32	2.8-16	0.05	700	772	0.02-0.12	298-1750	372-1821	M42



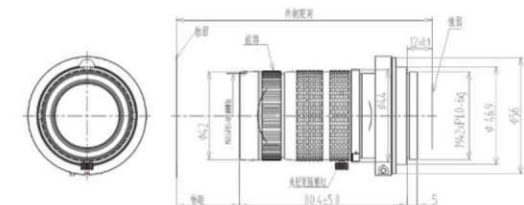
FK2040A-0.065X-M42



FK2540A-0.15X-M42



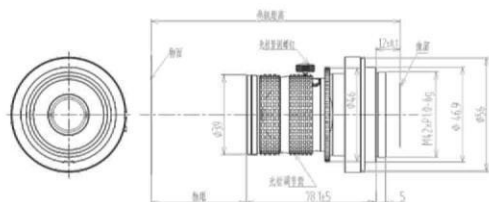
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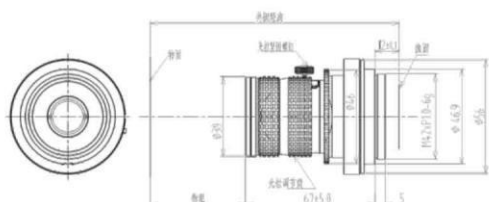
FK2540A-0.03X-M42



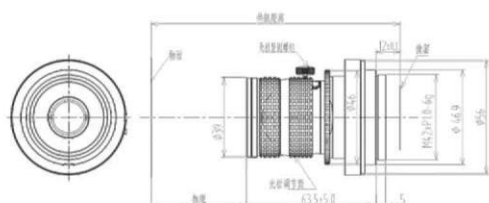
Line Scan Lens



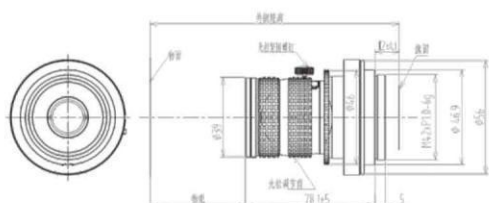
FK3528A-0.5X-M42



FK3528A-0.2X-M42



FK3528A-0.1X-M42



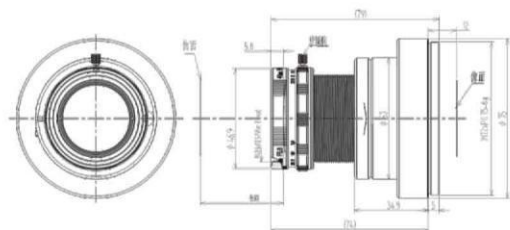
FK3528A-0.05X-M42



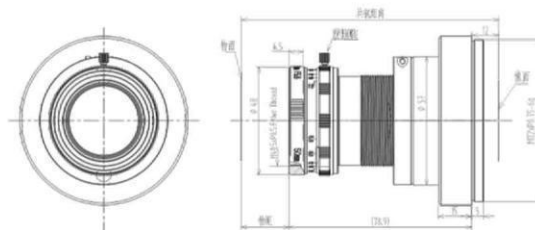
Line Scan Lens

8k7 μ m Line Scan Lens

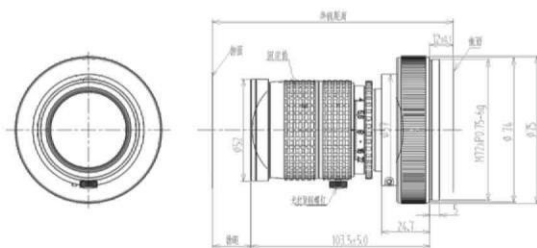
Model	FL	S	Aper- ture	Central Mag.	Central Dis.	Central Conjugate	Mag.Range	Working Distance	Conjugate Distance	Mount
EK4056A-0.16	40	62	5.6-22	0.16	270	357	0.04-0.3	155-1050	248-1132	M42;M58;M72;F
EK5056A-0.13	50	62	5.6-22	0.13	408	499	0.03-0.3	190-1685	289-1771	M42;M58;M72
EK5040A-0.05	50	62	4.0-22	0.05	1000	1103	0.025-0.07	735-2000	839-2102	M42;M58;M72
EK5040A-0.1	50	62	4.0-22	0.1	500	606	0.07-0.15	355-735	512-839	M42;M58;M72
EK5040A-0.15	50	62	4.0-22	0.15	350	463	0.1-0.2	270-500	380-606	M42;M58;M72
EK5040A-0.2	50	62	4.0-22	0.2	270	381	0.15-0.25	220-350	333-459	M42;M58;M72
EK6040A-0.1	60	62	4.0-22	0.1	635	723	0.03-0.18	370-2050	526-1330	M42;M58;M72
EK8040A-0.067	80	62	4.0-16	0.0067	1300	1442	0.03-0.1	880-2800	1024-2939	M42;M58;M72
EK8040A-0.13	80	62	4.0-16	0.13	690	736	0.1-0.18	520-880	645-1018	M42;M58;M72
EK8040A-0.25	80	62	4.0-16	0.25	385	533	0.2-0.375	276-460	451-614	M42;M58;M72
EK8040A-0.5	80	62	4.0-16	0.5	225	391	0.375-0.625	188-273	368-446	M42;M58;M72
EK8040A-0.75	80	62	4.0-16	0.75	170	354	0.625-0.9	147-185	349-365	M42;M58;M72
EK8040B-0.1	80	62	4.0-22	0.1	820	927	0.05-0.25	357-1600	476-1703	M42;M58;M72



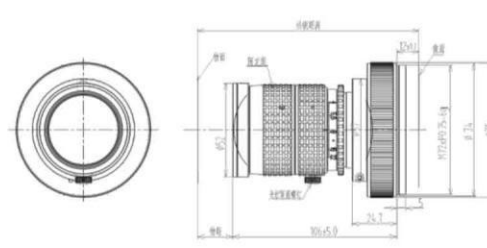
EK4056A-0.16X-M72



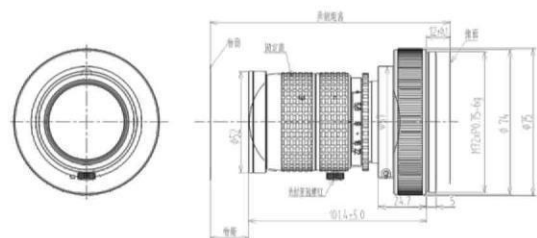
EK5056A-0.13X-M72



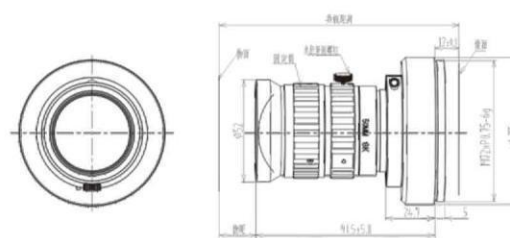
EK5040A-0.05X-M72



EK5040A-0.1X-M72

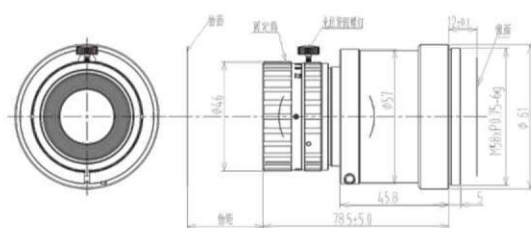


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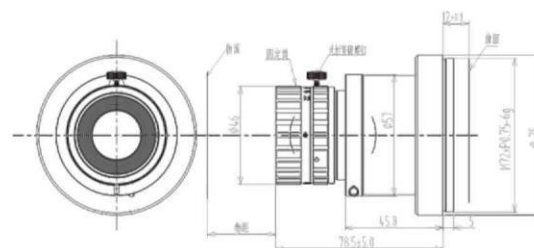


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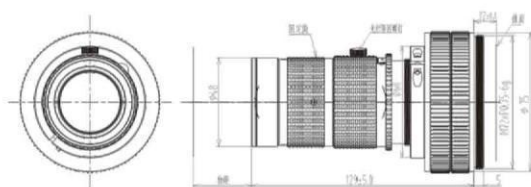
Line Scan Lens



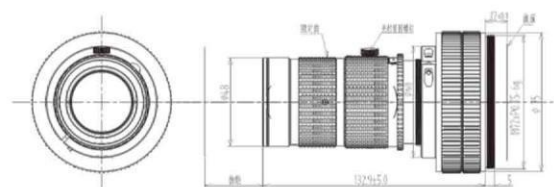
EK6040A-0.1X-M58



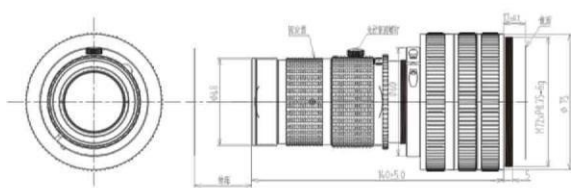
EK6040A-0.1X-M72



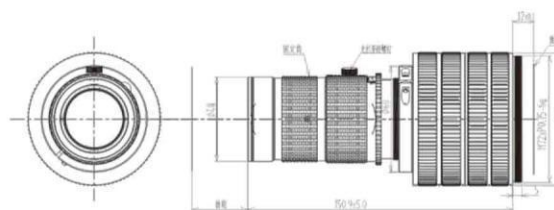
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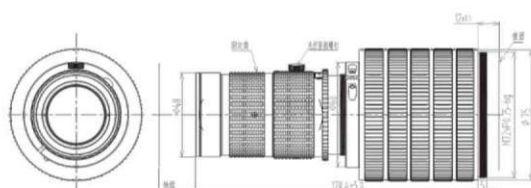
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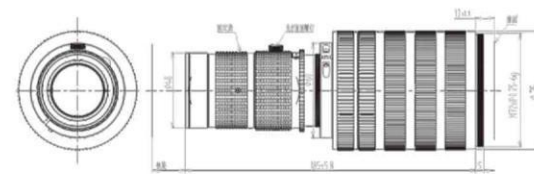
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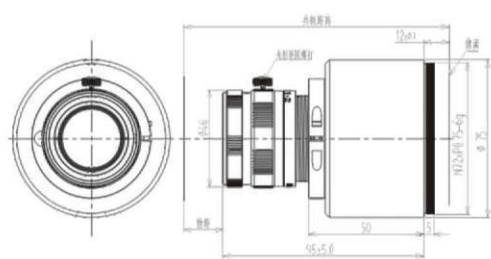
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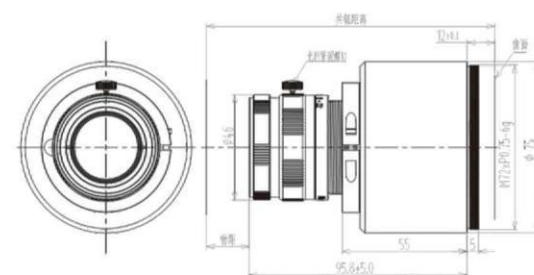
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EK8040A-1.0X-M72



EK8040B-0.1X-M72



EK8040B-M72-SPEC

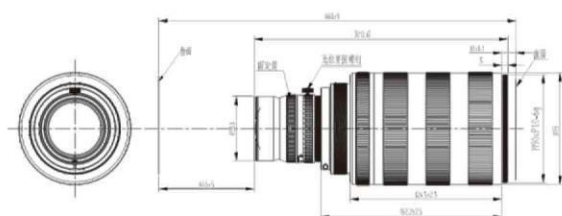


Line Scan Lens

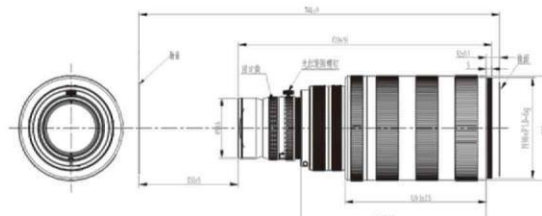
16K Line Scan Lens

model	FL	Sensor	Aperture	Central Mag.	Central Dis.	Central Conjugate	Mag.Range	WD	Conjugate Distance	Mount
SK1602A-0.26	146	82	4.0-16	0.26	645	865	0.22-0.3	571-752	799-966	M72;M90;M95
SK1603A-0.33	146	82	4.0-16	0.33	533	764	0.3-0.37	482-571	312-769	M72;M90;M95
SK1605A-0.5	146	82	4.0-16	0.5	384	632	0.46-0.54	357-417	613-589	M72;M90;M95
SK1607A-0.75	146	82	4.0-16	0.75	286	575	0.7-0.85	268-305	443-581	M72;M90;M95
SK1610A-1	116	82	4.0-16	1	188	442	0.92-1.08	180-198	442-443	M72;M90;M95
SK1613A-1.33	146	82	4.0-16	1.33	204	574	1.2-1.5	192-216	567-587	M72;M90;M95
SK1620A-2	146	82	4.0-16	2	169	632	1.75-2.5	154-179	606-690	M72;M90;M95
SK1630A-3	146	82	4.0-16	3	150	764	2.7-3.5	144-157	717-826	M72;M90;M95
SK1602B-0.26	116	82	3.8-2.2	0.26	509	680	0.22-0.3	450-589	626-756	M72;M90;M95
SK1603B-0.33	116	82	3.8-2.2	0.33	415	595	0.3-0.37	378-450	562-626	M72;M90;M95
SK1605B-0.5	116	82	3.2-16	0.5	298	497	0.46-0.54	281-318	484-512	M72;M90;M95
SK1607B-0.75	116	82	3.8-2.2	0.75	224	452	0.7-0.85	206-235	445-457	M72;M90;M95
SK1620B-2	116	82	3.8-2.2	2	131	499	1.75-2.5	120-139	478-544	M72;M90;M95
SK1630B-3	116	82	3.8-2.2	3	112	592	2.7-3.5	107-116	561-643	M72;M90;M95

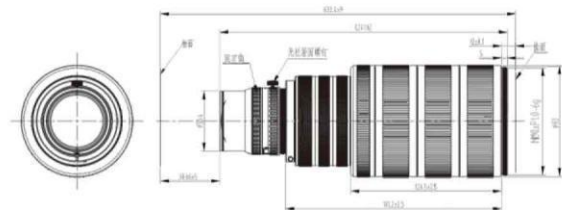
16k line scan lens supports 16k5μm and 16k3.5μm line cameras up to φ90mm sensor.



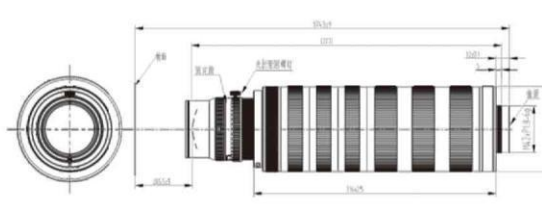
SK1602A-0.26



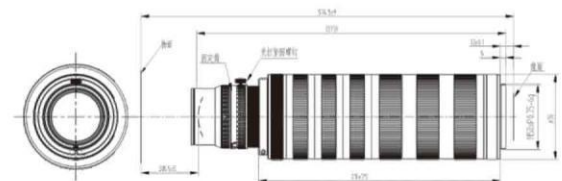
SK1603A-0.33



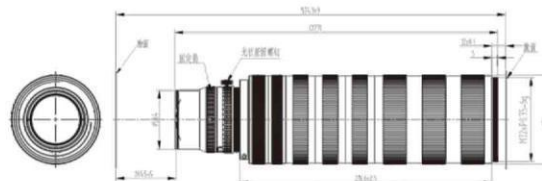
SK1605A-0.5



SK1607A-0.75X-M42

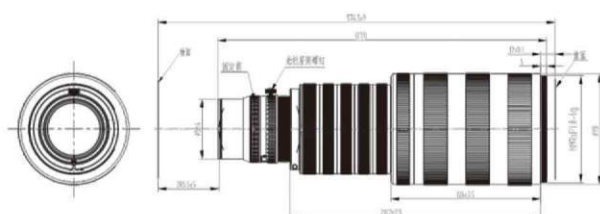


SK1607A-0.75X-M58

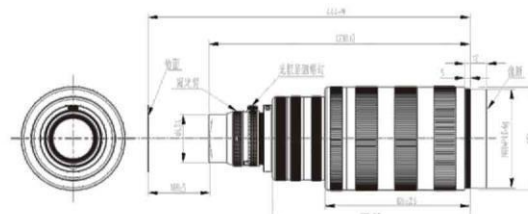


SK1607A-0.75X-M72

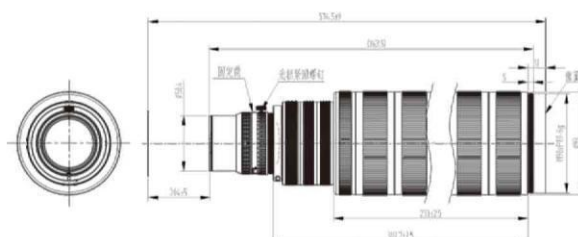
Line Scan Lens



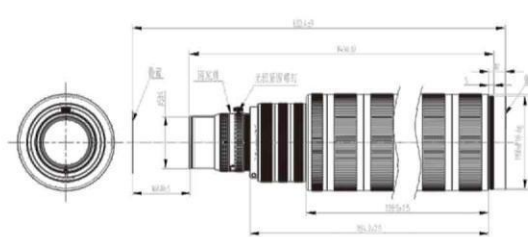
SK1607A-0.75X-M90



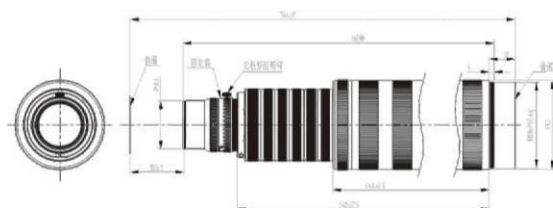
SK1610A-1.0X-M90



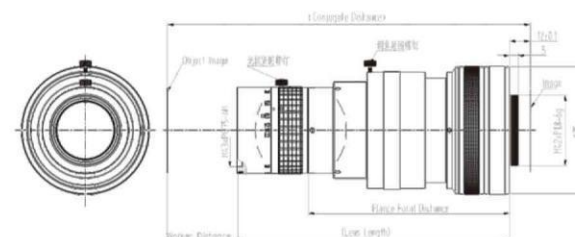
SK1613A-1.33X-M90



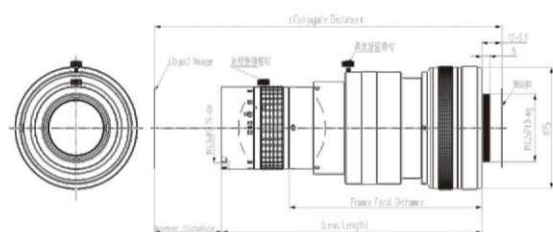
SK1620A-2.0X-M90



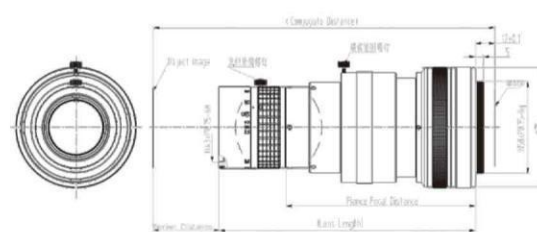
SK1630A-3.0X-M90



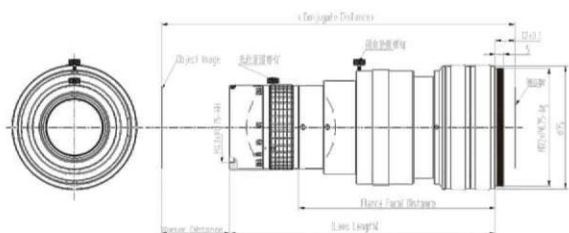
SK1602B-0.26X-M42



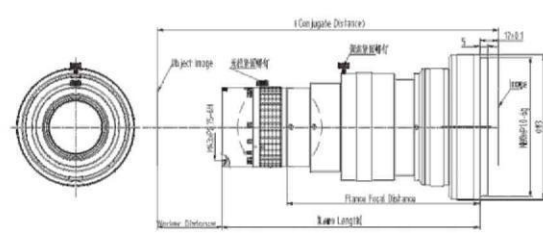
SK1603B-0.33X-M42



SK1602B-0.26-M58



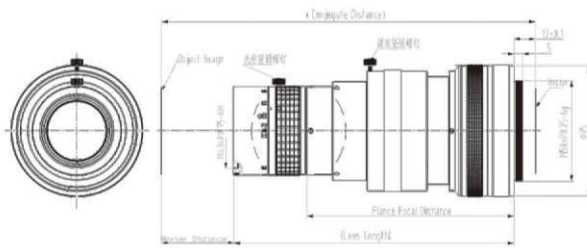
SK1602B-0.26-M72



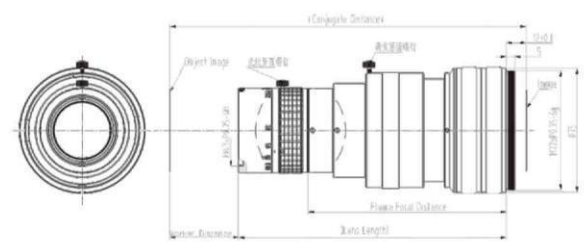
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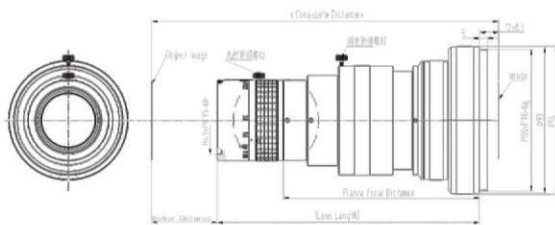
Line Scan Lens



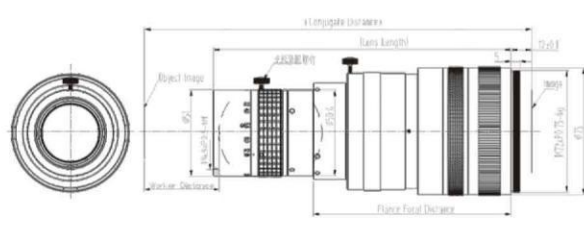
SK1603B-0.33X-M58



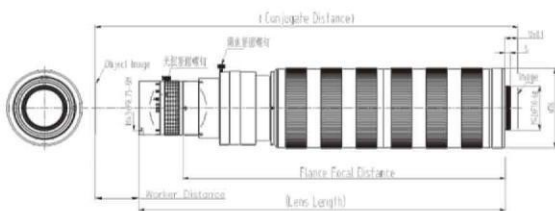
SK1603B-0.33X-M72



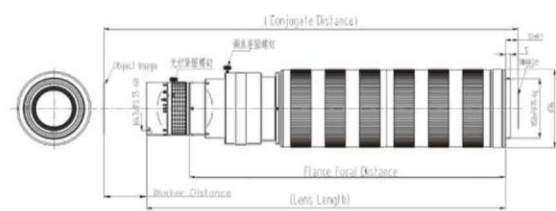
SK1603B-0.33X-M90



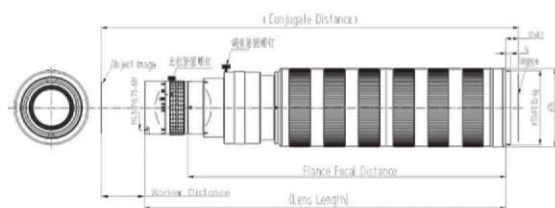
SK1605B-0.5X-M72



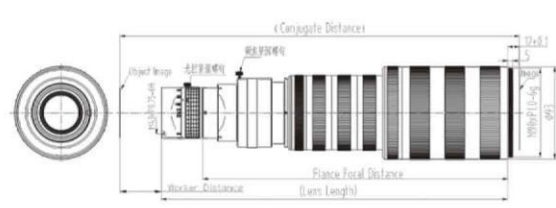
SK1620B-2.0X-M42



SK1620B-2.0X-M58



SK1620B-2.0X-M72



SK1620B-2.0X-M90

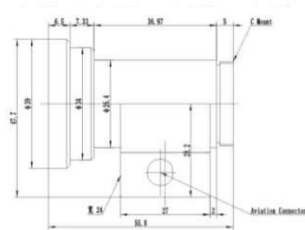
Liquid Lens



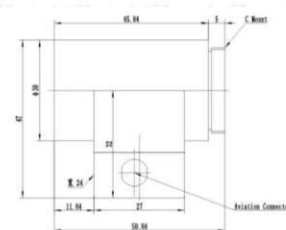
Liquid FA lens

Model	Focus	Sensor	Pixel	Max. IC	Aperture	Mount	Length mm.	Diameter mm.
YTFA-5M164.2Y01	16	2/3"	5MP	11	4.2	C	55.8	26.4
YTFA-5M254.4Y01	25	2/3"	5MP	11	4.4	C	50.84	30
YTFA-5M259.0Y01	25	2/3"	5MP	11	9	C	42.5	43
YTFA-10M165.2Y01	16	1.1"	10MP	18.5	5.2	C	62.07	30
YTFA-10M355.6Y01	35	1.1"	10MP	18.5	5.6	C	48.9	30
YTFA-10M357.1Y01	35	1.1"	10MP	18.5	7.1	C	51.6	27

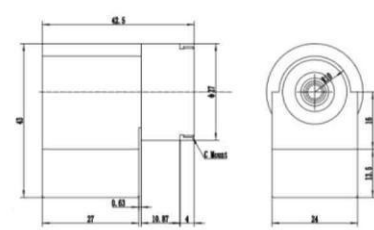
Millisecond level focusing response. No movement of optical components. Coaxiality issues are eliminated. It can work in combination with algorithms, rangefinders or gear-position settings.



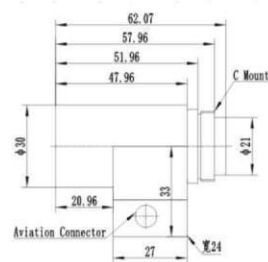
YTFA-5M164.2Y01



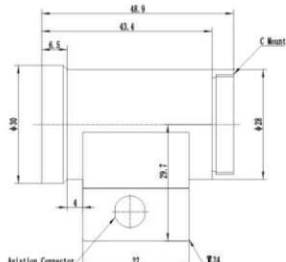
YTFA-5M254.4Y01



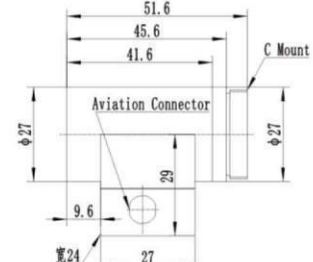
YTFA-5M259.0Y01



YTFA-10M165.2Y01



YTFA-10M355.6Y01



YTFA-10M357.1Y01

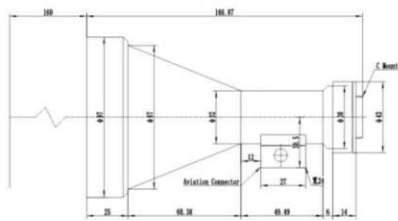


Liquid Lens

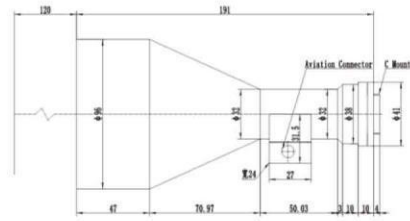
Liquid telecentric lens

Model	Mag.	Sensor	Pixel	Max. IC	Aperture	WD	Focus turning range	Mount	Length	Diameter
YTD-101-0.217X160Y01	0.217	1.1"	10MP	18.5	6.5	160	130-190	C	166.87	97
YTD-101-0.24X120Y01	0.24	1.1"	12MP	18.5	7.5	120	80-210	C	191	96
YTD-101-0.24X120Y02	0.24	1.1"	12MP	18.5	5.5	120	80-200	C	189.5	96
YTD-101-0.38X110Y01	0.38x	1.1"	10MP	18.5	8	110	20-180	C	149.81	58
YTD-101-0.4X110Y01	0.4	1.1"	10MP	18.5	8	110	20-180	C	149.81	58
YTD-101-0.5X110Y01	0.5	1.1"	10MP	18.5	8	110	70-140	C	117.33	46
YTD-101-0.8X110Y01	0.8	1.1"	10MP	18.5	12	110	90-125	C	138.2	33
YTD-101-1X110Y02	1	1.1"	10MP	18.5	10.6	110	80-120	C	110.18	25

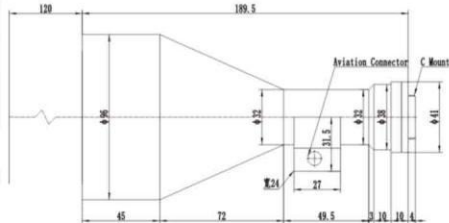
Millisecond level focusing response. No movement of optical components. Coaxiality issues are eliminated. It can work in combination with algorithms, rangefinders or gear-position settings.



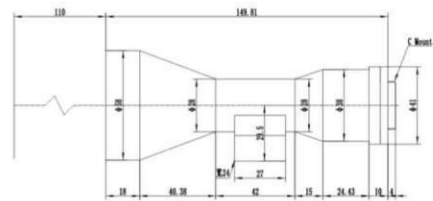
YTD-101-0.217X160Y01



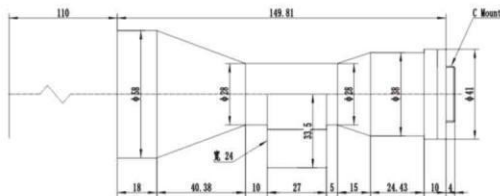
YTD-101-0.24X120Y01



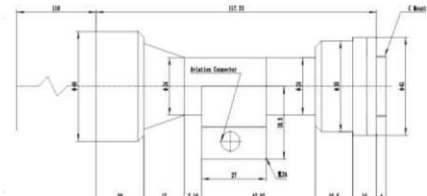
YTD-101-0.24X120Y02



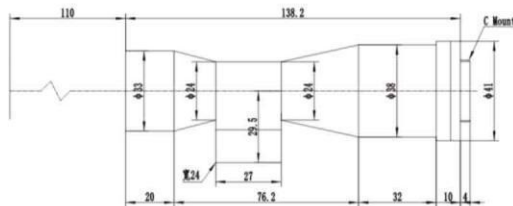
YTD-101-0.38X110Y01



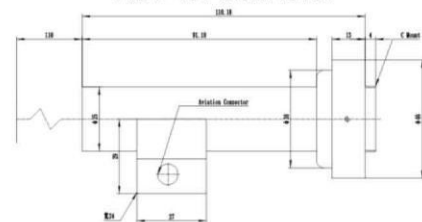
YTD-101-0.4X110Y01



YTD-101-0.5X110Y01



YTD-101-0.8X110Y01



YTD-101-1X110Y02

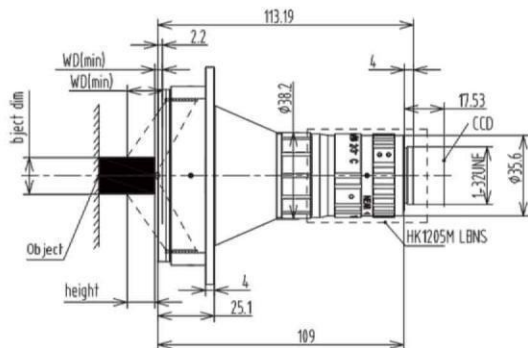
360° Lens



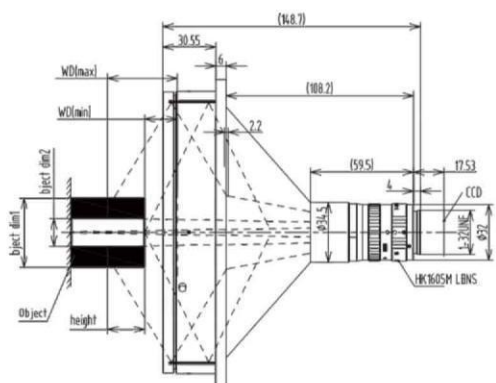
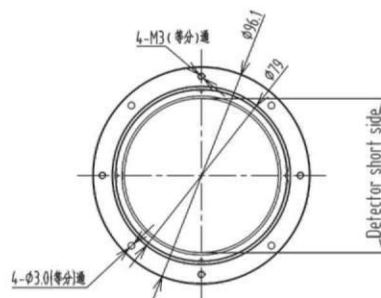
Octagonal Lens

Model	Sensor	Object ϕ	Object Height	WD	Mount
STE3602308A	2/3"	0.8-30mm	2-5mm	2-5mm	C
STE3602308B	2/3"	50-70mm	26.6-7.1mm	12.6mm	C

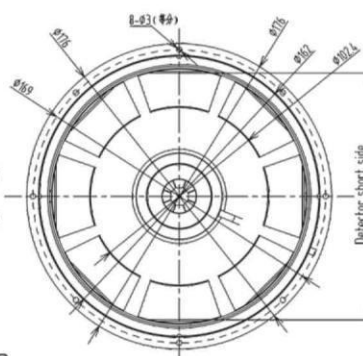
One camera can capture images from eight different viewing angles, suitable for inspecting products such as screws and sealing rings.



STE3602308A



STE3602308B



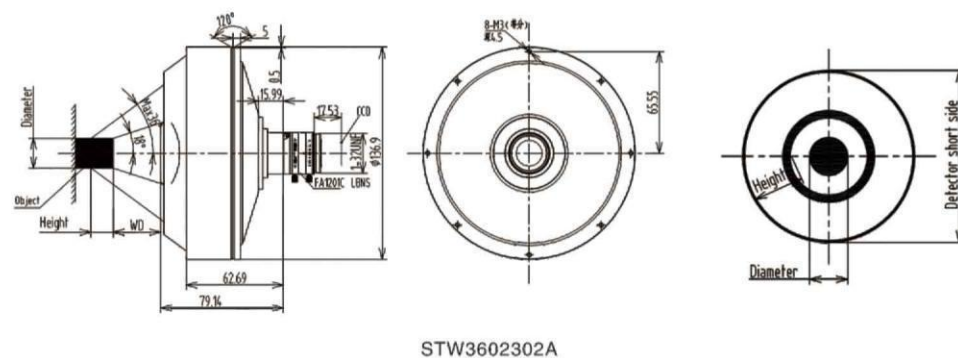
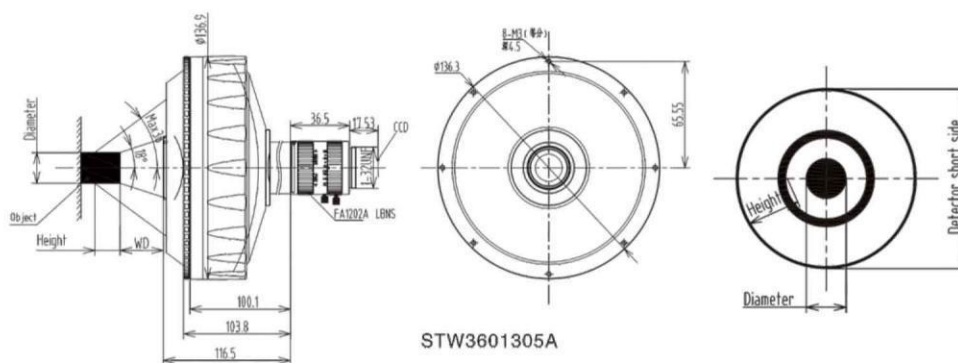
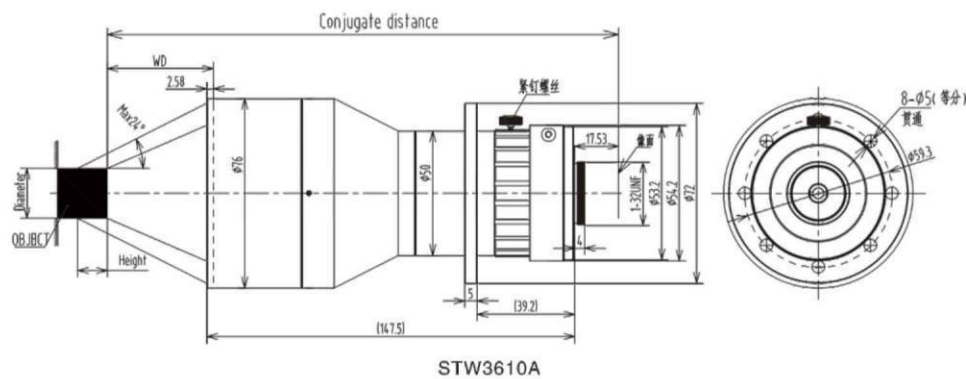


360° Lens

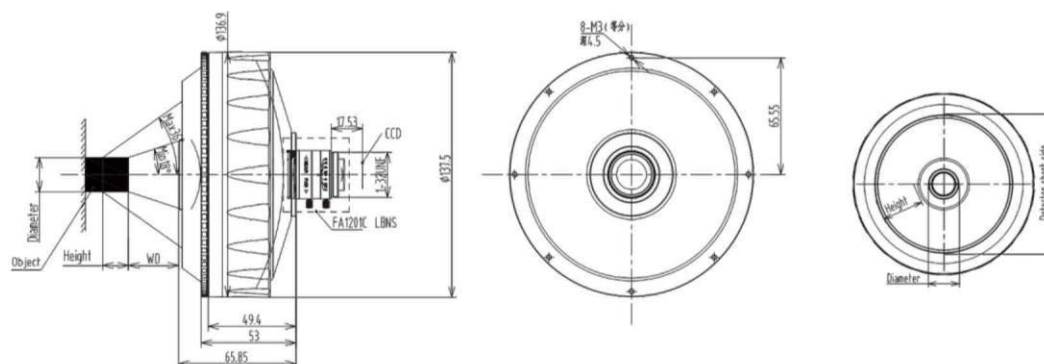
360° external inspection lens

Model	Sensor	Object ϕ	Object Height	WD	Mount
STW3610A	1/2"	5-40mm	5-30mm	12-66mm	C
STW3601305A	1/3"	7.5-30mm	6.5-25.6mm	9-46.5mm	C
STW3602302A	1/1.8"	7.5-30mm	5.3-25mm	9-45.4mm	C
STW3602303A	2/3"	7.5-30mm	4.2-23.5mm	15-49mm	C
STW3602304	1/2"	7-35mm	5-28mm	8-44mm	C
STW3602307	1/2"	30-80mm	26.5-46.6mm	10-43mm	C

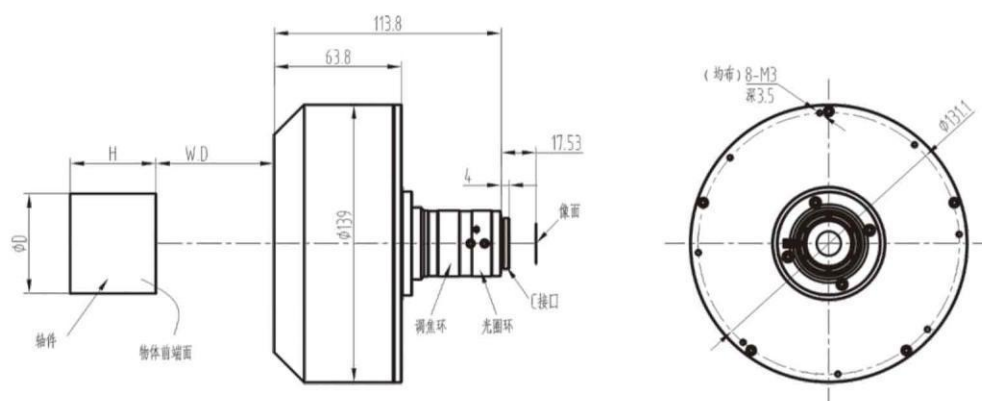
Suitable for 360° degree imaging of the outer wall of cylindrical objects, such as bottle caps, medicine bottles and screws.



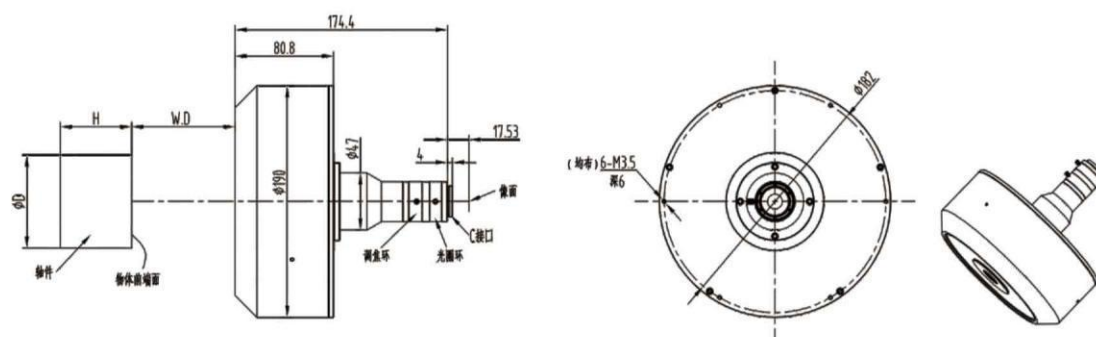
360° Lens



STW3602303A



STW3602304



STW3602307

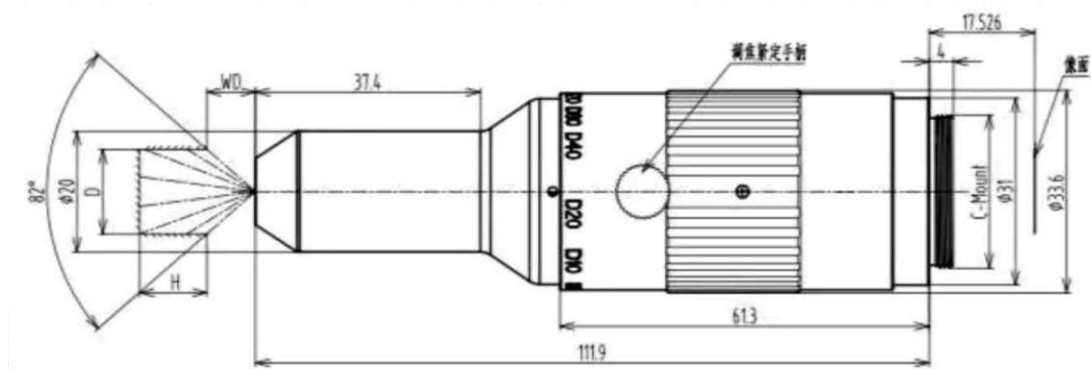


360° Lens

360° internal inspection lens

Model	Sensor	Object ϕ	Object Height	WD	Mount
STN3602306A	2/3"	5-120mm	5-123mm	2.7-70mm	C

360° imaging for inner walls of holes, suitable for appearance inspection of tubular inner surfaces.



STN3602306A



Walan Optics

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