

POMEAS[®]

Vision Technology



Automation Solutions



Microscope



Optical Lens



Machine Vision Illumination



Industry Camera

GuangDong Pomeas Vision Technology Co.,Ltd.

202007

OUR IDEAL

USE VISUAL TECHNOLOGY TO FREE PEOPLE FROM BORING INDUSTRIAL ACTIVITIES

POMEAS is a national high-tech enterprises with deep accumulation in optical design, structural design, electronic design, image processing, software algorithms, PLC control and other fields. And it offer services for product development, system integration, marketing and technical support. It rooted in machine vision and industrial automation for more than ten years.







The company also has a team of more than 70 members including optical engineers, software and hardware engineers. Key members are from global venture, national scientific research institutions and well-known universities with more than 10 years working experiences. In intellectual property aspect, until the end of year 2019, POMEAS has more than 10 pieces invention patents, over 30 pieces utility model patents, over 20 pieces appearance patents, 17 pieces software copyrights.

Over 10 years development, POMEAS is becoming a reputed and reliable vision system supplier in domestic and oversea market. At present, POMEAS helps more than 1000 customers in over 30 countries to improve their competitive power with its products and service.









COMPANY PROFILF

Zoom Lens

	PMS-K75 Series Support 1" sensor, new generation 4K big FOV .	5
	PMS-LZME Series Support 2/3" sensor, variable iris and working distance, macro zoom	10
	PMS-L125/L65 Series Support 2/3" sensor, with double linear guide structure	12
	PMS-TZ0220 Series Support 1" sensor, 10X magnification ratio, big FOV telecentric zoom lens	17
	PMS-Z65 Series Support 2/3" sensor, 0.7X-4.5X zoom lens	19
	PMS-Z125 Series Support 2/3" sensor, 0.58X-7.5X zoom lens	25

Telecentric Lens

	PMS-LHD Series Support 1.1" sensor, Bi-telecentric	31
	PMS-TF Series Support full frame, 29MP, F mount big FOV telecentric lens	33
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	PMS-ST Series Support 2/3", 1/2" sensor, standard telecentric lens	49
	PMS-CLNC Series Camera module with fixed magnification telecentric lens	55











PMS-ML Series Support 2/3" sensor, macro lens	58
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Fa Lens




	PMS-MC Series Support 1.5MP, 2/3" sensor, low distortion FA lens	62
	PMS-MC5M Series/ PMS-LC5M Series Support 5MP 2/3" sensor, low distortion FA lens Support 5MP 1" sensor, low distortion FA lens	62
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	PMS-LC8M Series Support 8MP 1" sensor, low distortion FA lens	67

Vision Illumination






	PMS-LTD Series Work with telecentric lens, parallel light supports diameter 35-265	70
	PMS-MSL Series OEM UV parallel light	72
	PMS-RL Series High brightness, no shadow, multiple colors optional for ring light	73
	PMS-PL Series Work with coaxial lens, high power, compact point light	74
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POMEAS
PROFESSIONAL MANUFACTURER
OF VISION SYSTEM


Industry Camera

	PMS-GE Series 1.3MP-29MP, CCD and CMOS gigabit camera	78
	PMS-HD Series 2MP HDMI industry camera	79
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Profile Projector Parts Series

	PMS-PLD300/400series Support D300, D400, 5x-50x Projection Objective Lens	83
	PMS-PA series Projection screen with uniform surface frosted density and low dispersion loss.	84
	PMS-PG series Stage glass with visible light transmittance> 95% and flatness <0.01mm.	84
	PMS-PM series Plane Reflector With High Reflectivity And High Surface Accuracy	85
	PMS-PGS series High Brightness, High Flatness, Good Uniformity Projection Led Light Source	85




Microscope Series

	PMS-MM Series High-precision and high-efficiency metallurgical microscope integrating software, light, mechanical and electric.	87
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	PMS-XHD-AF Series Auto-focus video microscope.	89
	PMS-VA/VH Series All in one video microscope	92
	PMS-SM Series Zooming stereo microscope	94
	PMS-VHL Series 360°real time high DOF 3D microscope	95
	PMS-DIC series High contract, uniform interference color DIC microscope system	96

Accessory Series

	Testing Board Series Resolution, contract, MTF, DOF, distortion testing	98
	High Glass Filter Series High light transmittance, high smoothness high class filters.	99
	Optical Polarizer Series Using multi-layer coating technology optical polarizer	100

ENTERPRISE HONOR

POMEAS
OPTICAL
TECHNOLOGY



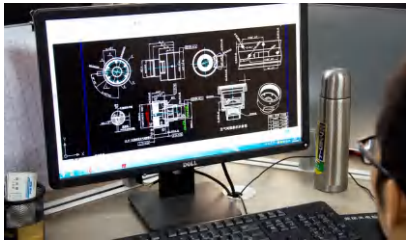
- National Hi-tech Venture
- Over 10 software Copyright
- ATC Certificated
- AIA member
- Guangdong Privated Technology Venture
- ISO 9001:2015 System Certificated
- 2014 Dongguan Innovation and Entrepreneurship Prize One
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- Over 50pcs Patent Technology
- Guangdong Trustworth Venture
- CMVU
- Global Trademark

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PROFESSIONAL MANUFACTURER
OF VISION SYSTEM

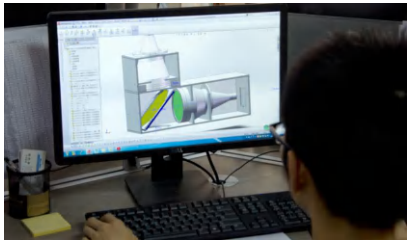
ENTERPRISE ENVIRONMENT

RESEARCH PRODUCTIVITY

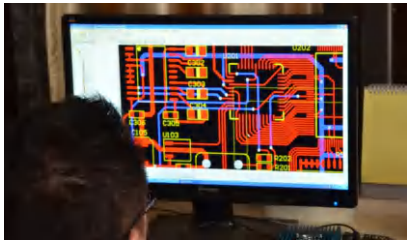
POMEAS have big manufacture center in Dongguan, consist of lens producing, machining, dust-free assembly, quality control, warehouse, and software/hardware development, integration and vision system department. There are optical lab, application lab for RD. It has one stop service for RD, manufacturer and customer support.



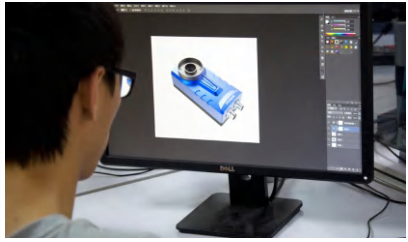
2D Structure Design



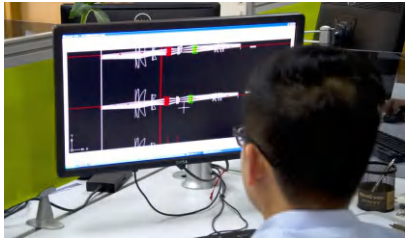
3D Structure Design



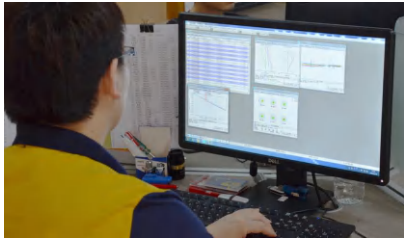
Electronic Design



Industry Design



Industry Control



Optical Design



Software Development



PLC Control Design



Vision System Integratio

ENTERPRISE ENVIRONMENT



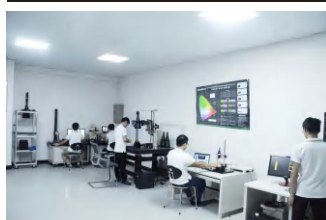
Panoramic View



Front Desk



Showroom



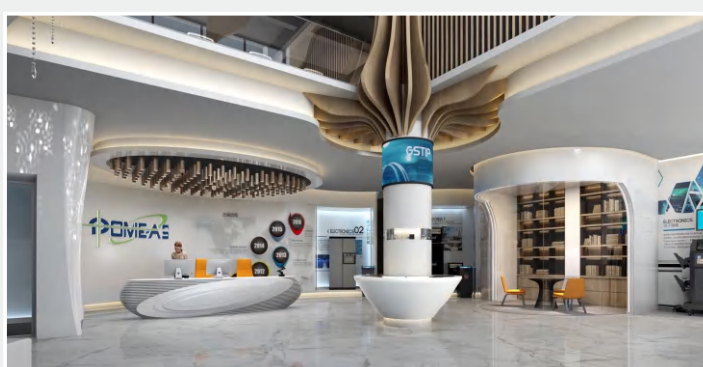
Vision System Lab



Office Center



Production Center



For future development, POMEAS bought "CIMC Industrial Park" office, which is more than 1,200 square meters, in the southern part of Songshan Lake, next to the Huawei Small Town, which is work as the company headquarter and RD center.

POMEAS HEADQUARTER AND RD CENTER

Group Development

ZOOM LENS SERIES

Based on years of experience in optical design and auto-control technology, POMEAS optical zoom lens auto-control system is developed to meet the requirements of quick accurate inspection.

Widely used in industry inspection, automation, electronic communication, semiconductor, scientific research, etc.

PRODUCT ADVANTAGES

- 1.Precise optical path design, high resolution, low distortion, excellent optical properties.
- 2.Super long working distance, wide FOV range.
- 3.Multi Codinedond, reduce the stray light and ghost, offer high quality image.
- 4.Anodized metal part, more durable.
- 5.Compact and reliable structure.

PRODUCT FEATURES



Coaxial Illumination

- 1.Infinity parallel incident light, achieve shadow-free lighting.
- 2.Coaxial illumination structure can make the incident light irradiation more uniform.



Motorized Zoom

- 1.High speed in zoom and focus and high accuracy in repetitive positioning; Imported DC servo motor, closed loop control.
- 2.Single or double motor control system via 9-PIN Rs232.
- 3.Stable quality performance even in the strong vibration environment.



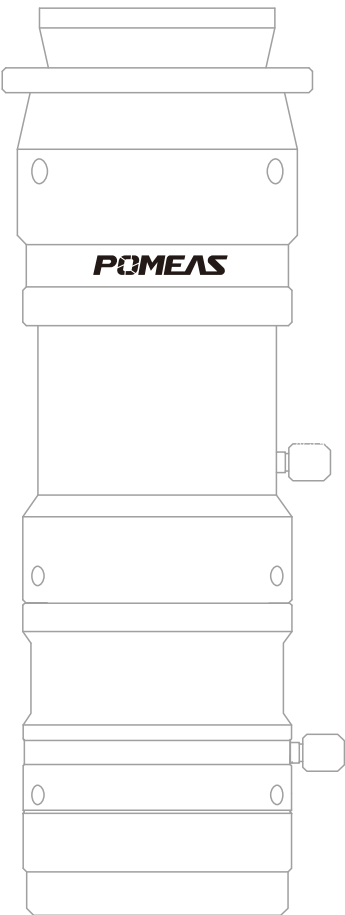
Detented Zoom Lens

- 1.Detented structure, high accuracy in zoom and repetitive positioning.
- 2.15-divided points for mechanical positioning.
- 3.High hardness alloy material , for a long lifespan; precision mechanical structure.



Fine-Focus Device

- 1.Used in narrow space, adjust fine-focus part for focusing on different height surface of parts, no need to change WD.
 - 2.Fine focus range: 3mm-12mm.
- Manual and electric control fine tuning is available



NEW

POMEAS
PROFESSIONAL MANUFACTURER
OF VISION SYSTEM



Support 1" sensor, 4k Big Fov Zoom Lens

The 4K big FOV high-resolution zoom lens not only has excellent performance in zooming, but also has big FOV and higher speed; it's an ideal choice for high speed detection and accurate application. Compared with the traditional zoom system, the field of vision is improved by more than 1.45X.

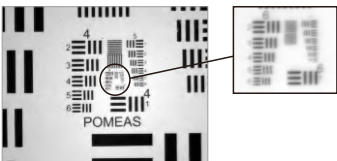
PRODUCT ADVANTAGES

- 1.Support 1" sensor camera, which expands the FOV by more than 1.45X compared with the traditional lens at the same magnification.
- 2.Designed with higher resolution requirements, the horizontal resolution with a 1 inch camera can reach 4K level.
- 3.The magnification is 0.68X-5X, which is suitable for most testing applications.
- 4.Modular design, multiple magnification TV tube and lens attachment are optional, modules with other functions are additionally provided for selection.

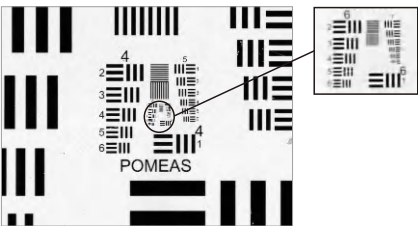
APPLICATION FIELDS

Widely used in biology, electronics, semiconductor, machine vision and other high-precision industries.

ACTUAL IMAGE

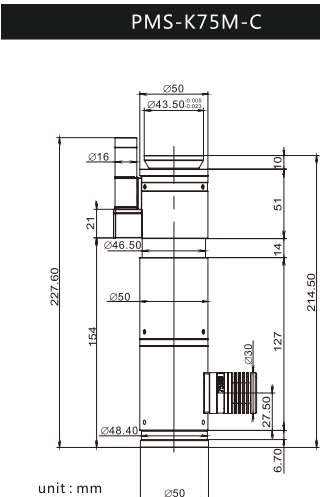
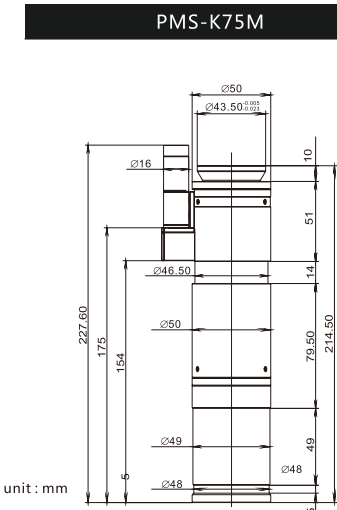
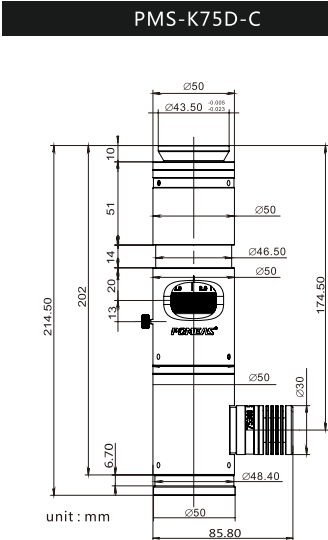
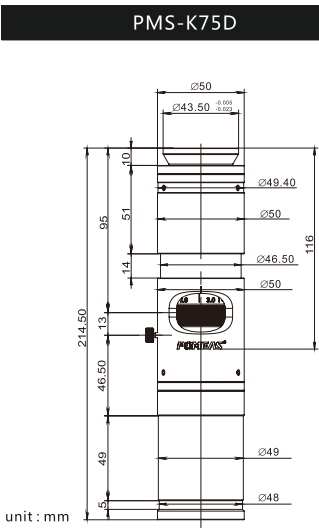


Ordinary zoom lens 5x resolution board

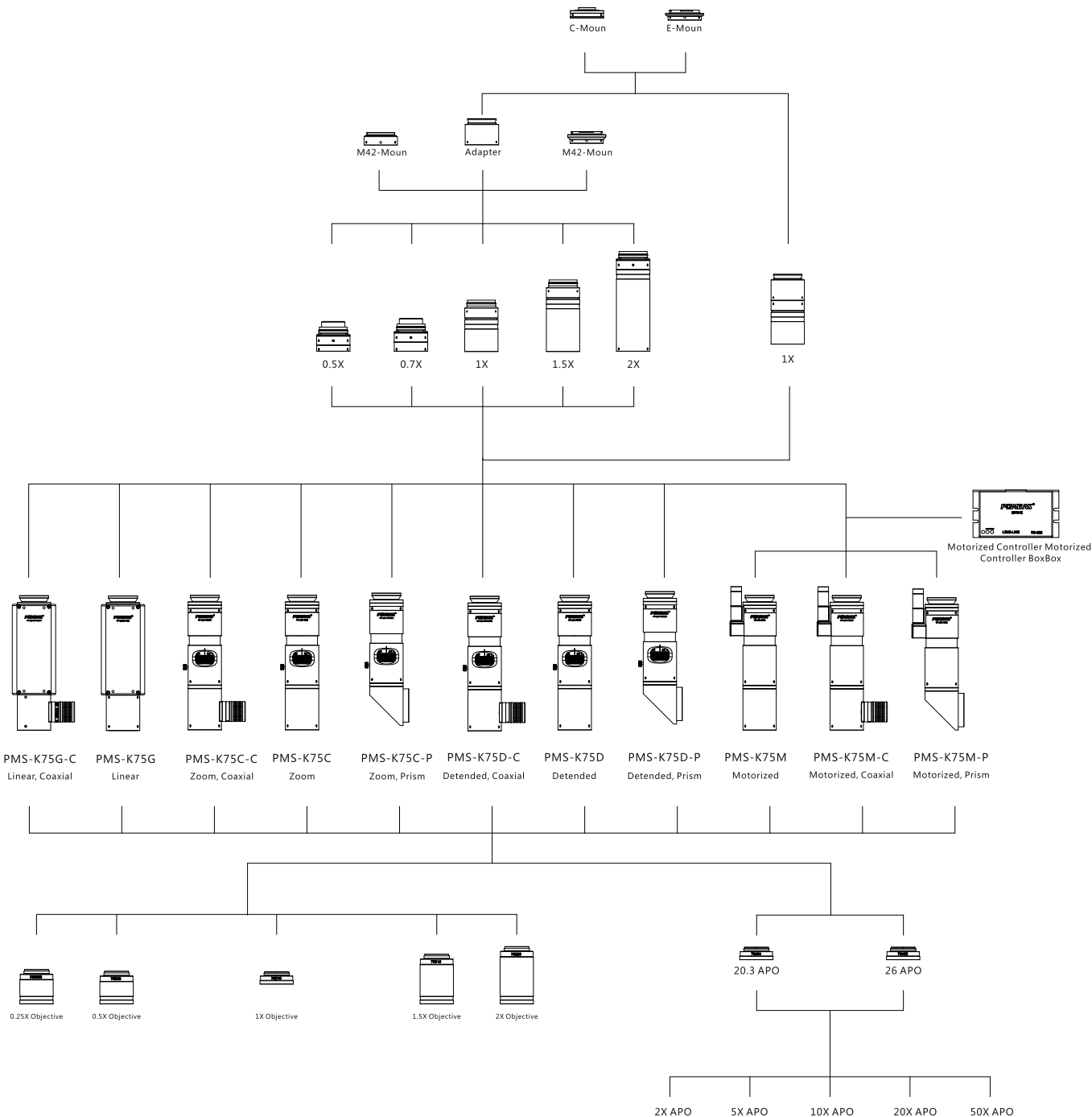


4K high resolution zoom lens 5X resolution board

Magnification Range		0.68X-5.0X					
Working Distance (mm)		80					
Magnification		0.68X	1.0X	2.0X	3.0X	4.0X	5.0X
DOF		1.78	0.89	0.25	0.12	0.08	0.07
N.A.		0.033	0.045	0.08	0.11	0.12	0.12
F.No.		10.3	11.0	12.4	13.5	16.5	20.6
Resolution (μm)		10.17	7.46	4.19	3.05	2.8	2.8
TV Distortion		<0.02%	<0.02%	<0.02%	<0.02%	<0.02%	<0.02%
FOV (mm)	1"	23.53×18.82×14.12	16.0×12.8×9.6	8.0×6.4×4.8	5.33×4.27×3.2	4.0×3.2×2.4	3.2×2.56×1.92
	2/3"	16.18×12.94×9.71	11.0×8.8×6.6	5.5×4.4×3.3	3.67×2.93×2.2	2.75×2.2×1.65	2.2×1.76×1.32
	1/2"	11.76×9.41×7.06	8.0×6.4×4.8	4.0×3.2×2.4	2.67×2.13×1.6	2.0×1.6×1.2	1.6×1.28×0.96
	1/3"	8.82×7.06×5.29	6.0×4.8×3.6	3.0×2.4×1.8	2.0×1.6×1.2	1.5×1.2×0.9	1.2×0.96×0.72
Max. Sensor Size		1"					
Total Length(mm)		328					
Zooming Method		Manual/Motorized					
Mount		C-Mount					



4k Zoom lens selection diagram



4K Zoom lens Fov Table

Lens Attachment		0.5X Tv Adapter(75105)		0.75X Tv Adapter(751075)		1.0X Tv Adapter(75110)		1.5X Tv Adapter(75115)		2.0X Tv Adapter(75120)	
		Low Magnification	High Magnification	Low Magnification	High Magnification	Low Magnification	High Magnification	Low Magnification	High Magnification	Low Magnification	High Magnification
0.25X 246mm	Magnification	0.09	0.63	0.12	0.88	0.17	1.25	0.26	1.88	0.34	2.50
	Camera Sensor	1/2"	94.1×75.3×56.5	12.8×10.2×7.7	67.2×53.8×40.3	9.1×7.3×5.5	47.1×37.6×28.2	6.4×5.1×3.8	31.4×25.1×18.8	4.3×3.4×2.6	23.5×18.8×14.1
		2/3"	-	-	92.4×73.9×55.5	12.6×10.1×7.5	64.7×51.8×38.8	8.8×7.0×5.3	43.1×34.5×25.9	5.9×4.7×3.5	32.4×25.9×19.4
		1"	-	-	-	-	94.1×75.3×56.5	12.8×10.2×7.7	62.7×50.2×37.6	8.5×6.8×5.1	47.1×37.6×28.2
		4/3"	-	-	-	-	-	-	86.3×69.0×51.8	11.7×9.4×7.0	64.7×51.8×38.8
		32mm	-	-	-	-	-	-	-	-	94.1×75.3×56.5
0.5X 135mm	Magnification	0.17	1.25	0.24	1.75	0.34	2.50	0.51	3.75	0.68	5.00
	Camera Sensor	1/2"	47.1×37.6×28.2	6.4×5.1×3.8	33.6×26.9×20.2	4.6×3.7×2.7	23.5×18.8×14.1	3.2×2.6×1.9	15.7×12.5×9.4	2.1×1.7×1.3	11.8×9.4×7.1
		2/3"	-	-	46.2×37.0×27.7	6.3×5.0×3.8	32.4×25.9×19.4	4.4×3.5×2.6	21.6×17.3×12.9	2.9×2.3×1.8	16.2×12.9×9.7
		1"	-	-	-	-	47.1×37.6×28.2	6.4×5.1×3.8	31.4×25.1×18.8	4.3×3.4×2.6	23.5×18.8×14.1
		4/3"	-	-	-	-	-	-	41.8×33.5×25.1	5.7×4.6×3.4	31.4×25.1×18.8
		32mm	-	-	-	-	-	-	-	-	47.1×37.6×28.2
1.0X 80mm	Magnification	0.34	2.50	0.48	3.50	0.68	5.00	1.02	7.50	1.36	10.0
	Camera Sensor	1/2"	23.5×18.8×14.1	3.2×2.6×1.9	16.8×13.4×10.1	2.3×1.8×1.4	11.8×9.4×7.1	1.6×1.3×1.0	7.8×6.3×4.7	1.1×0.9×0.6	5.9×4.7×3.5
		2/3"	-	-	23.1×18.5×13.9	3.1×2.5×1.9	16.2×12.9×9.7	2.2×1.8×1.3	10.8×8.6×6.5	1.5×1.2×0.9	8.1×6.5×4.9
		1"	-	-	-	-	23.5×18.8×14.1	3.2×2.6×1.9	15.7×12.5×9.4	2.1×1.7×1.3	11.8×9.4×7.1
		4/3"	-	-	-	-	-	-	21.6×17.3×12.9	2.9×2.3×1.8	16.2×12.9×9.7
		32mm	-	-	-	-	-	-	-	-	23.5×18.8×14.1
1.5X 45mm	Magnification	0.51	3.75	0.71	5.25	1.02	7.50	1.53	11.25	2.04	15.0
	Camera Sensor	1/2"	15.7×12.5×9.4	2.1×1.7×1.3	11.2×9.0×6.7	1.5×1.2×0.9	7.8×6.3×4.7	1.1×0.9×0.6	5.2×4.2×3.1	0.7×0.6×0.4	3.9×3.1×2.4
		2/3"	-	-	15.4×12.3×9.2	2.1×1.7×1.3	10.8×8.6×6.5	1.5×1.2×0.9	7.2×5.8×4.3	1.0×0.8×0.6	5.4×4.3×3.2
		1"	-	-	-	-	15.7×12.5×9.4	2.1×1.7×1.3	10.5×8.4×6.3	1.4×1.1×0.9	7.8×6.3×4.7
		4/3"	-	-	-	-	-	-	14.4×11.5×8.6	2.0×1.6×1.2	10.8×8.6×6.5
		32mm	-	-	-	-	-	-	-	-	15.7×12.5×9.4
2.0X 27mm	Magnification	0.68	5.00	0.95	7.00	1.36	10.0	2.04	15.0	2.72	20.0
	Camera Sensor	1/2"	11.8×9.4×7.1	1.6×1.3×1.0	8.4×6.7×5.0	1.1×0.9×0.7	5.9×4.7×3.5	0.8×0.6×0.5	3.9×3.1×2.4	0.5×0.4×0.3	2.9×2.4×1.8
		2/3"	-	-	11.6×9.2×6.9	1.6×1.3×0.9	8.1×6.5×4.9	1.1×0.9×0.7	5.4×4.3×3.2	0.7×0.6×0.4	4.0×3.2×2.4
		1"	-	-	-	-	11.8×9.4×7.1	1.6×1.3×1.0	7.8×6.3×4.7	1.1×0.9×0.6	5.9×4.7×3.5
		4/3"	-	-	-	-	-	-	10.8×8.6×6.5	1.5×1.2×0.9	8.1×6.5×4.9
		32mm	-	-	-	-	-	-	-	-	11.8×9.4×7.1

09.

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Support 2/3” Sensor, Variable Iris And Working Distance, Macro Zoom

The product has excellent imaging quality, not only has telecentric optical path design, ultra-low distortion imaging, but also is a high resolution telecentric lens with variable working distance, compact structure and flexible and convenient use.

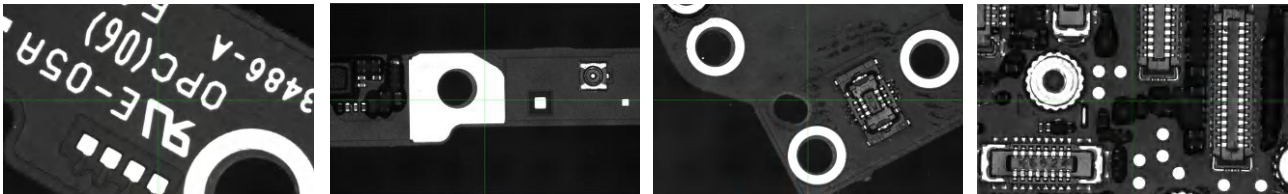
PRODUCT ADVANTAGES

1. Ultra-low distortion imaging based on telecentric optical path design;
2. High resolution, superior to other zoom lenses at the same magnification.
3. The aperture is adjustable, and the depth of field and resolution can be adjusted flexibly according to the requirements of use.
4. The working distance can be adjusted. The working distance can be adjusted according to the need when the visual field is allowed. It is flexible and convenient to use.
5. The front end of the lens is equipped with a universal filter interface to facilitate the installation of filters.
6. Compact structure .

APPLICATION FIELDS

It can be used in semiconductor, automation, electronic communication and other industries.

ACTUAL IMAGE



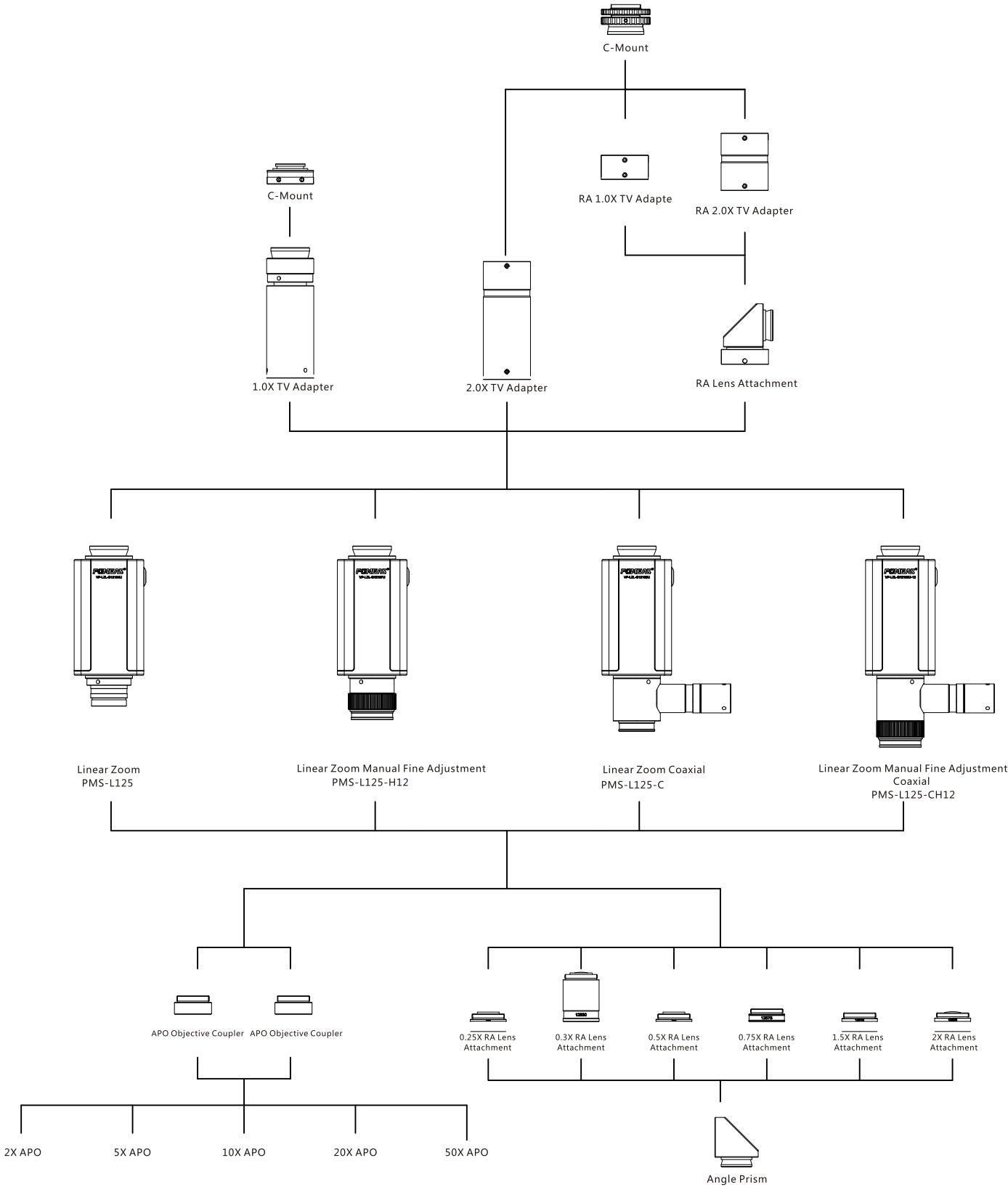
12.5X Linear Zoom Lens Parameter

Magnification Range		0.58X~7.5X														
Working Distance (mm)		77.4±2mm														
Magnification		0.58X	0.6X	1X	1.5X	2X	2.5X	3X	3.5X	4X	4.5X	5X	5.5X	6X	6.5X	7.5X
DOF		2.75	2.67	0.95	0.43	0.27	0.2	0.15	0.12	0.1	0.081	0.073	0.066	0.061	0.056	0.052
N.A.		0.025	0.025	0.043	0.063	0.074	0.082	0.09	0.097	0.1	0.11	0.11	0.11	0.11	0.11	0.11
F.No.		12.5	12.5	11.85	11.95	13.65	15.3	16.5	18.4	19.9	20.4	22.45	22.7	26.8	29.4	31.7
Resolution(μm)		13	13	7.8	5.3	4.53	4.09	3.73	3.46	3.36	3.05	3.05	3.05	3.05	3.05	3.05
TV Distortion		0.050%	0.050%	0.002%	0.010%	0.020%	0.003%	0.020%	0.020%	0.018%	0.020%	0.010%	0.010%	0.001%	0.010%	0.005%
2/3" FOV (mm)	Diagonal	18.97	18.33	11	7.33	5.5	4.4	3.67	3.14	2.75	2.44	2.2	2	1.83	1.69	1.57
	Horizontal	15.17	14.67	8.8	5.87	4.4	3.52	2.93	2.51	2.2	1.96	1.76	1.6	1.47	1.35	1.26
	Vertical	11.38	11	6.6	4.4	3.3	2.64	2.2	1.89	1.65	1.47	1.32	1.2	1.1	1.02	0.94
Max. Sensor Size		2/3"														
Mount		C-Mount														

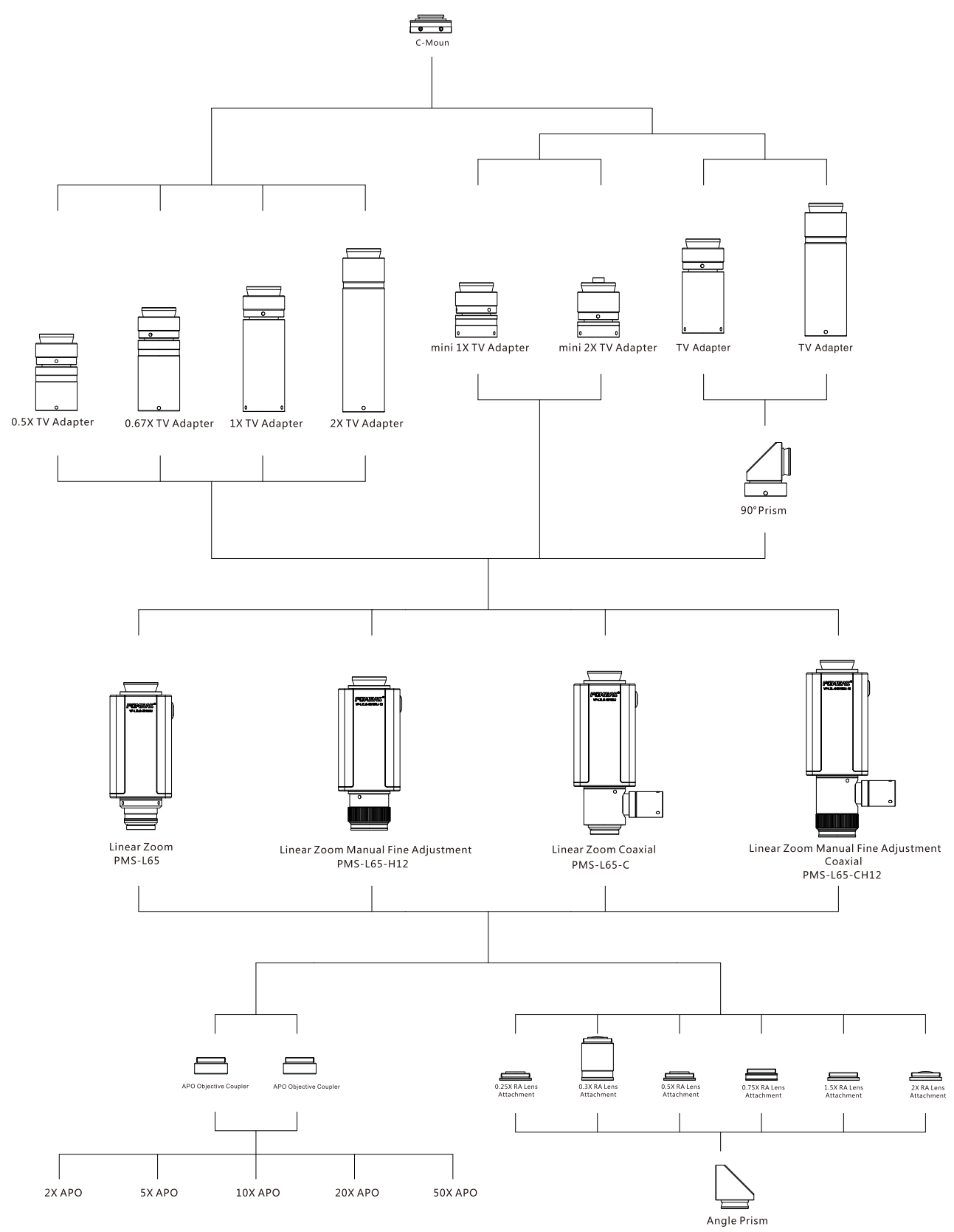
6.5X Linear Zoom Lens Parameter

Magnification Range		0.7X~4.5X									
Working Distance (mm)		87±2mm									
Magnification		0.7X	1.0X	1.5X	2.0X	2.5X	3.0X	3.5X	4.0X	4.5X	
DOF		1.9	0.952	0.44	0.29	0.23	0.16	0.13	0.12	0.1	
N.A.		0.03	0.042	0.06	0.07	0.07	0.085	0.085	0.085	0.085	
F.No.		11.6	12.1	12.5	14.2	17.8	17.6	20.5	23.5	26.5	
Resolution(μm)		11.18	7.99	5.59	4.79	4.79	3.95	3.95	3.95	3.95	
TV Distortion		0.019%	0.035%	0.002%	0.003%	0.004%	0.001%	0.001%	0.002%	0.002%	
FOV (mm)	2/3"	15.71x12.57x9.43	11.00x8.80x6.60	7.33x5.87x4.40	5.50x4.40x3.30	4.40x3.52x2.64	3.67x2.93x2.20	3.14x2.21x1.89	2.75x2.20x1.65	2.44x1.96x1.47	
	1/2"	11.43x9.14x6.86	8.00x6.40x4.80	5.33x4.27x3.20	4.00x3.20x2.40	3.20x2.56x1.92	2.67x2.13x1.60	2.29x1.83x1.37	2.00x1.60x1.20	1.78x1.42x1.07	
	1/3"	8.57x6.86x5.14	6.00x4.80x3.60	4.00x3.20x2.40	3.00x2.40x1.80	2.40x1.92x1.44	2.00x1.60x1.20	1.71x1.37x1.03	1.50x1.20x0.90	1.33x1.07x0.80	
Max. Sensor Size		2/3"									
Mount		C-Mount									

12.5X Linear Zoom Lens Selection Diagram

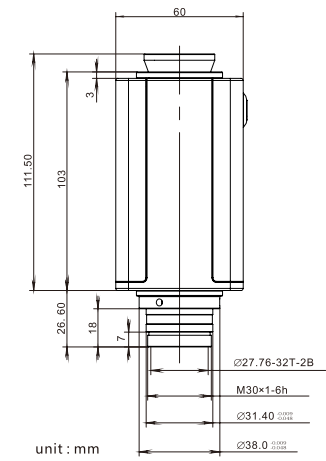


6.5x Linear Motorized Zoom Lens Selection Diagram

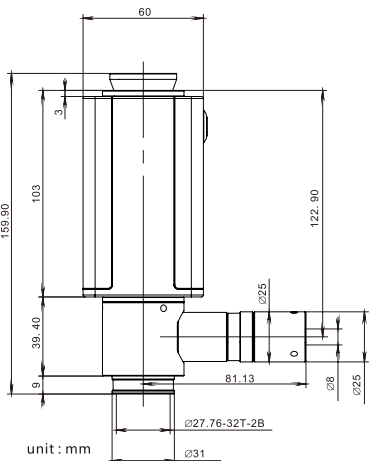


15. www.pomeas.cn

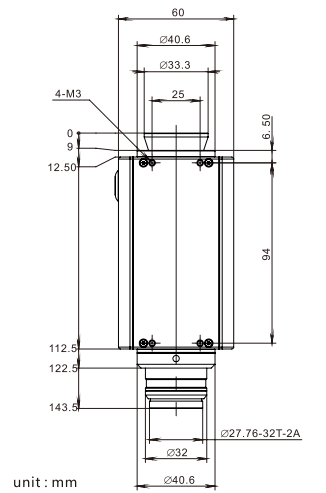
PMS-L125



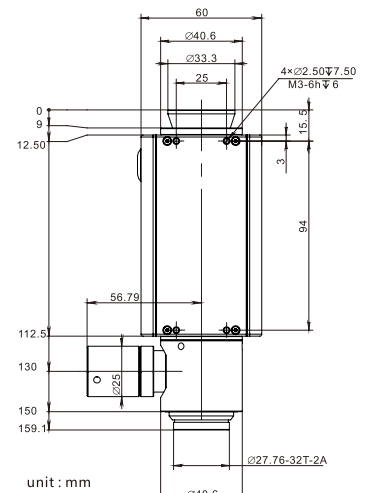
PMS-L125-C



PMS-L65



PMS-L65-C





Telecentric Zoom Lens

Telecentric zoom lens is the most advanced solution for image and measurement field, combined with the flexibility of zoom lens and high efficiency of high FOV lens.

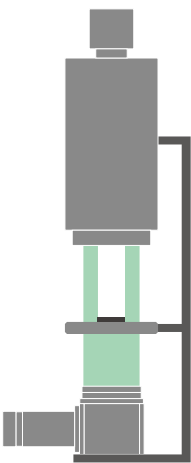
PRODUCT ADVANTAGES

- 1. Objective side telecentric design, no distortion within the DOF.
- 2. No need to change working distance when zooming.
- 3. High magnification ratio 10X.
- 4. Continuous zooming, meet different measurement requirements.
- 5. Support 10MP 1" camera, Max. FOV 60.6X45.5mm.

APPLICATION FIELDS

Quick measurement for big FOV.

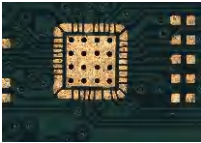
EXAMPLES OF APPLICATION



ACTUAL IMAGE



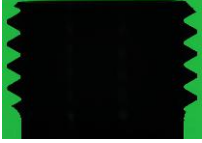
0.2X-PCB inspection



2X-PCB inspection



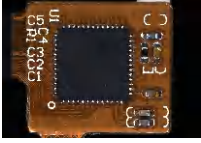
0.2X-Metal part profile



2X-Metal part profile



Mini PCB-0.2X



Mini PCB-1.4X

Note: When taking image, the lens can change the FOV according the the inspection requirements, while changing the magnification.

Telecentric Zoom Lens Parameter

Coed	PMS-TZ0220																			
Item	#610-220																			
Magnification	0.21X	0.3X	0.4X	0.5X	0.6X	0.7X	0.8X	0.9X	1.0X	1.1X	1.2X	1.3X	1.4X	1.5X	1.6X	1.7X	1.8X	1.9X	1.97X	
Working Distance	86±2mm																			
Resolution(μm)	26.91	18.35	12.89	10.64	8.86	7.29	6.25	5.56	5.21	4.89	4.85	4.63	4.64	4.57	4.53	4.46	4.41	4.32	4.30	
DOF(mm)	6.99	3.43	1.84	1.18	0.85	0.65	0.52	0.44	0.37	0.32	0.29	0.26	0.23	0.21	0.19	0.17	0.16	0.15	0.14	
N.A.	0.014	0.019	0.027	0.034	0.039	0.044	0.048	0.051	0.054	0.056	0.058	0.060	0.062	0.064	0.065	0.067	0.069	0.071	0.072	
F No.	7.81	7.71	7.35	7.40	7.64	7.96	8.35	8.82	9.34	9.92	10.42	10.86	11.33	11.83	12.23	12.69	13.06	13.43	13.69	
TV Distortion	-0.04%	0.05%	0.07%	0.06%	0.05%	0.03%	0.02%	0.01%	0.00%	-0.01%	-0.01%	-0.02%	-0.03%	-0.03%	-0.03%	-0.04%	-0.04%	-0.04%	-0.05%	
Object Size Telcentricity(°)	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.07	0.12	0.18	0.23	0.27	0.31	0.34	0.36	0.39	0.41	0.43	0.44	
Object Dimension (mm)	1/3"	22.7×17.0	16.0×12.0	12.0×9.0	9.6×7.2	8.0×6.0	6.9×5.1	6.0×4.5	5.3×4.0	4.8×3.6	4.4×3.3	4.0×3.0	3.7×2.8	3.4×2.6	3.2×2.4	3.0×2.3	2.8×2.1	2.7×2.0	2.5×1.9	2.4×1.8
	1/2"	30.3×22.7	21.4×16.0	16.0×12.0	12.8×9.6	10.7×8.0	9.1×6.9	8.0×6.0	7.1×5.3	6.4×4.8	5.8×4.4	5.3×4.0	4.9×3.7	4.6×3.4	4.3×3.2	4.0×3.0	3.8×2.8	3.6×2.7	3.4×2.5	3.3×2.4
	1/1.8"	33.8×25.4	23.9×17.9	17.9×13.4	14.3×10.7	11.9×8.9	10.2×7.7	8.9×6.7	7.9×6.0	7.1×5.4	6.5×4.9	6.0×4.5	5.5×4.1	5.1×3.8	4.8×3.6	4.5×3.4	4.2×3.2	4.0×3.0	3.8×2.8	3.6×2.7
	2/3"	41.7×31.3	29.4×22.0	22.0×16.5	17.6×13.2	14.7×11.0	12.6×9.4	11.0×8.3	9.8×7.3	8.8×6.6	8.0×6.0	7.3×5.5	6.8×5.1	6.3×4.7	5.9×4.4	5.5×4.1	5.2×3.9	4.9×3.7	4.6×3.5	4.5×3.4
	1"	60.6×45.5	42.7×32.1	32.0×24.0	25.6×19.2	21.3×16.0	18.3×13.7	16.0×12.0	14.2×10.7	12.8×9.6	11.6×8.7	10.7×8.0	9.8×7.4	9.1×6.9	8.5×6.4	8.0×6.0	7.5×5.6	7.1×5.3	6.7×5.1	6.5×4.9
Max. Sensor Size	1"																			
Illumination	-																			
Mount	C-Mount																			
Working Temperature	-10℃ ~ +50℃																			



0.7x-4.5x Zoom Lens

With the perfect combination of high resolution and big magnification ratio, the most universal zoom lens is widely used in various industry applications.

PRODUCT ADVANTAGES

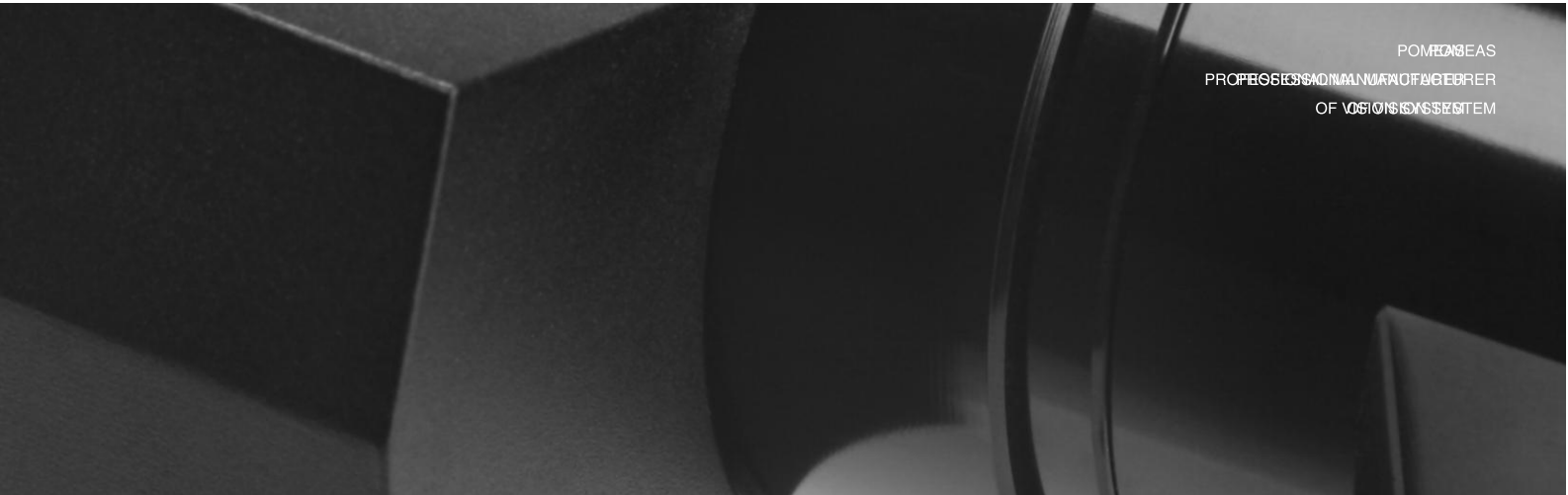
- 1. Professional optical design, optical magnification 0.7x-4.5x, magnification ratio 6.5:1.
- 2. Big FOV application, based on 2/3" camera.
- 3. Compact structure, easily for assembly and installation.

APPLICATION FIELDS

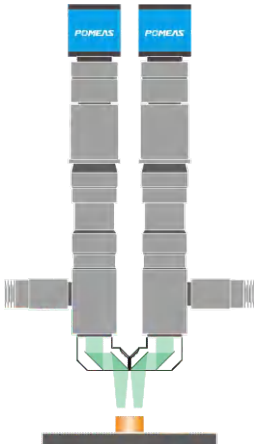
It can be used in semiconductor, automation, electronic communication and other industries.

CONTROLLER BOX

The integrated motorized control system is suitable for all the POMEAS zoom lenses. Motorized controlling system can control single or dual shafts via RS212 or USB. The underlying software code for the OEM platform will also be provided.

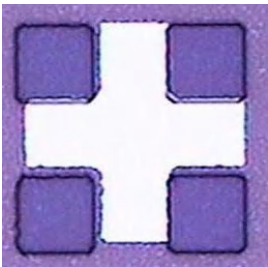


EXAMPLES OF APPLICATION

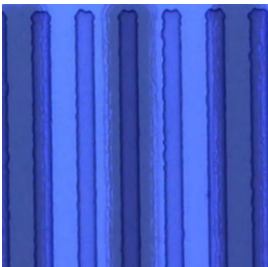


Bonding Machine

ACTUAL IMAGE



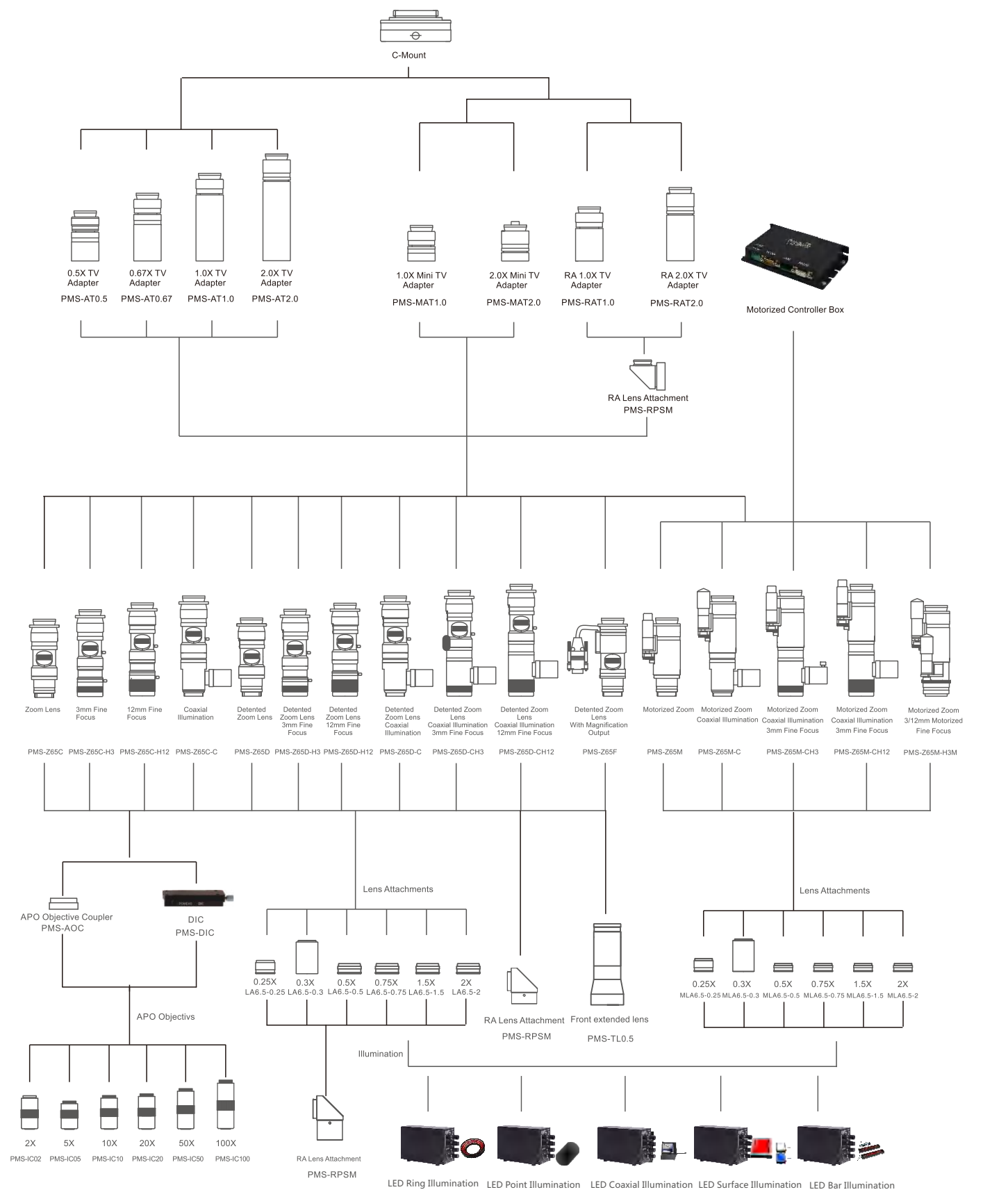
Silicone cover metal aligner



3um mask aligner silicone cover

Parameter

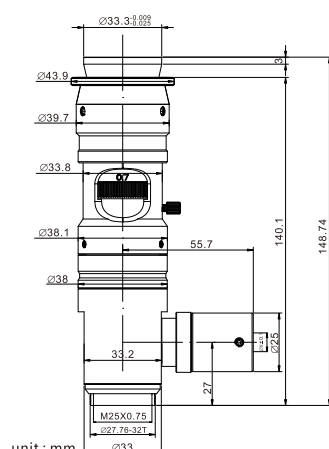
Optical Magnification Range		0.7X-4.5X								
Working Distance		87±2mm								
Optical Magnification		0.7X	1.0X	1.5X	2.0X	2.5X	3.0X	3.5X	4.0X	4.5X
DOF(mm)		1.9	0.952	0.44	0.29	0.23	0.16	0.13	0.12	0.1
N.A.		0.03	0.042	0.06	0.07	0.07	0.085	0.085	0.085	0.085
F.No.		11.6	12.1	12.5	14.2	17.8	17.6	20.5	23.5	26.5
Resolution(μm)		11.18	7.99	5.59	4.79	4.79	3.95	3.95	3.95	3.95
TV Distortion		0.019%	0.035%	0.002%	0.003%	0.004%	0.001%	0.001%	0.002%	0.002%
FOV (mm) DxHxV	2/3"	15.71x12.57x9.43	11.00x8.80x6.60	7.33x5.87x4.40	5.50x4.40x3.30	4.40x3.52x2.64	3.67x2.93x2.20	3.14x2.21x1.89	2.75x2.20x1.65	2.44x1.96x1.47
	1/2"	11.43x9.14x6.86	8.00x6.40x4.80	5.33x4.27x3.20	4.00x3.20x2.40	3.20x2.56x1.92	2.67x2.13x1.60	2.29x1.83x1.37	2.00x1.60x1.20	1.78x1.42x1.07
	1/3"	8.57x6.86x5.14	6.00x4.80x3.60	4.00x3.20x2.40	3.00x2.40x1.80	2.40x1.92x1.44	2.00x1.60x1.20	1.71x1.37x1.03	1.50x1.20x0.90	1.33x1.07x0.80
Max. Sensor Size		2/3"								
Mount		C型								



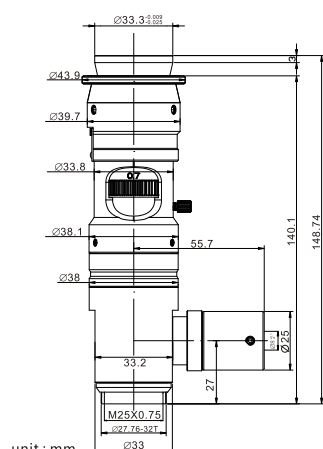
6.5X Zoom Lens Field of View Table

Lens Attachment			0.5X Adapter Tube(PMS-AT0.5)						1.0X Adapter Tube(PMS-AT1.0)						2.0X Adapter Tube(PMS-AT2.0)					
			Low Magnification			High Magnification			Low Magnification			High Magnification			Low Magnification			High Magnification		
			Length (mm)	Width (mm)	Diagonal (mm)	Length (mm)	Width (mm)	Diagonal (mm)	Length (mm)	Width (mm)	Diagonal (mm)	Length (mm)	Width (mm)	Diagonal (mm)	Length (mm)	Width (mm)	Diagonal (mm)	Length (mm)	Width (mm)	Diagonal (mm)
0.25X (PMS-Z65-LA025) WD:318mm	Magnification		0.09X-0.56X						0.18X-1.13X						0.35X-2.25X					
	Camera FOV	2/3"	100.6	75.4	(125.7)	15.6	11.7	19.6	50.3	37.7	62.9	7.8	5.9	9.8	25.1	18.9	(31.4)	3.9	2.9	4.9
		1/2"	73.1	54.9	(91.4)	11.4	8.5	14.2	36.6	27.4	45.7	5.7	4.3	7.1	18.3	13.7	22.9	2.8	2.1	3.6
		1/3"	54.9	41.1	68.6	8.5	6.4	10.7	27.4	20.6	34.3	4.3	3.2	5.3	13.7	10.3	17.1	2.1	1.6	2.7
0.3X (PMS-Z65-LA03) WD:126mm	Magnification		0.11X-0.68X						0.21X-1.35X						0.42X-2.70X					
	Camera FOV	2/3"	83.8	62.9	(104.8)	13.0	9.8	16.3	41.9	31.4	52.4	6.5	4.9	8.2	21.0	15.7	(26.2)	3.3	2.4	4.1
		1/2"	61.0	45.7	(76.2)	9.5	7.1	11.9	30.5	22.9	38.1	4.7	3.6	5.9	15.2	11.4	19.1	2.4	1.8	3.0
		1/3"	45.7	34.3	57.1	7.1	5.3	8.9	22.9	17.1	28.6	3.6	2.7	4.4	11.4	8.6	14.3	1.8	1.3	2.2
0.5X (PMS-Z65-LA05) WD:163mm	Magnification		0.18X-1.13X						0.35X-2.25X						0.70X-4.50X					
	Camera FOV	2/3"	50.3	37.7	(62.9)	7.8	5.9	9.8	25.1	18.9	31.4	3.9	2.9	4.9	12.6	9.4	(15.7)	2.0	1.5	2.4
		1/2"	36.6	27.4	(45.7)	5.7	4.3	7.1	18.3	13.7	22.9	2.8	2.1	3.6	9.1	6.9	11.4	1.4	1.1	1.8
		1/3"	27.4	20.6	34.3	4.3	3.2	5.3	13.7	10.3	17.1	2.1	1.6	2.7	6.9	5.1	8.6	1.1	0.8	1.3
0.75X (PMS-Z65-LA075) WD:104mm	Magnification		0.26X-1.69X						0.53X-3.38X						1.05X-6.75X					
	Camera FOV	2/3"	33.5	25.1	(41.9)	5.2	3.9	6.5	16.8	12.6	21.0	2.6	2.0	3.3	8.4	6.3	(10.5)	1.3	1.0	1.6
		1/2"	24.4	18.3	(30.5)	3.8	2.8	4.7	12.2	9.1	15.2	1.9	1.4	2.4	6.1	4.6	7.6	1.0	0.7	1.2
		1/3"	18.3	13.7	22.9	2.8	2.1	3.6	9.1	6.9	11.4	1.4	1.1	1.8	4.6	3.4	5.7	0.7	0.5	0.9
1.0X (PMS-Z65-LA1.0) WD:87mm	Magnification		0.35X-2.25X						0.70X-4.50X						1.40X-9.00X					
	Camera FOV	2/3"	25.1	18.9	31.4	3.9	2.9	4.9	12.6	9.4	15.7	2.0	1.5	2.4	6.3	4.7	(7.9)	1.0	0.7	1.2
		1/2"	18.3	13.7	22.9	2.8	2.1	3.6	9.1	6.9	11.4	1.4	1.1	1.8	4.6	3.4	5.7	0.7	0.5	0.9
		1/3"	13.7	10.3	17.1	2.1	1.6	2.7	6.9	5.1	8.6	1.1	0.8	1.3	3.4	2.6	4.3	0.5	0.4	0.7
1.5X (PMS-Z65-LA1.5) WD:50mm	Magnification		0.53X-3.38X						1.05X-6.75X						2.10X-13.50X					
	Camera FOV	2/3"	16.8	12.6	(21.0)	2.6	2.0	3.3	8.4	6.3	10.5	1.3	1.0	1.6	4.2	3.1	5.2	0.7	0.5	0.8
		1/2"	12.2	9.1	(15.2)	1.9	1.4	2.4	6.1	4.6	7.6	1.0	0.7	1.2	3.1	2.3	3.8	0.5	0.4	0.6
		1/3"	9.1	6.9	11.4	1.4	1.1	1.8	4.6	3.4	5.7	0.7	0.5	0.9	2.3	1.7	2.9	0.4	0.3	0.4
2.0X (PMS-Z65-LA2.0) WD:35mm	Magnification		0.70X-4.50X						1.40X-9.00X						2.80X-18.00X					
	Camera FOV	2/3"	12.6	9.4	(15.7)	2.0	1.5	2.4	6.3	4.7	7.9	1.0	0.7	1.2	3.1	2.4	(3.9)	0.5	0.4	0.6
		1/2"	9.1	6.9	(11.4)	1.4	1.1	1.8	4.6	3.4	5.7	0.7	0.5	0.9	2.3	1.7	2.9	0.4	0.3	0.4
		1/3"	6.9	5.1	8.6	1.1	0.8	1.3	3.4	2.6	4.3	0.5	0.4	0.7	1.7	1.3	2.1	0.3	0.2	0.3

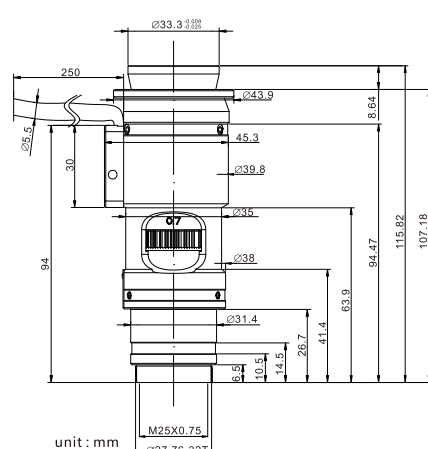
PMS-Z65C-C



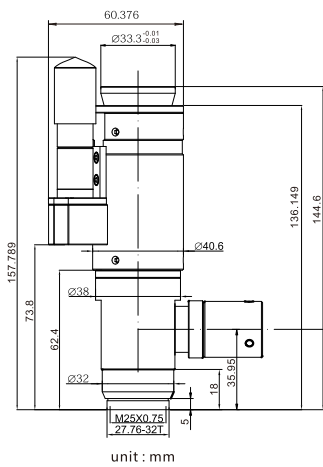
PMS-765D-C



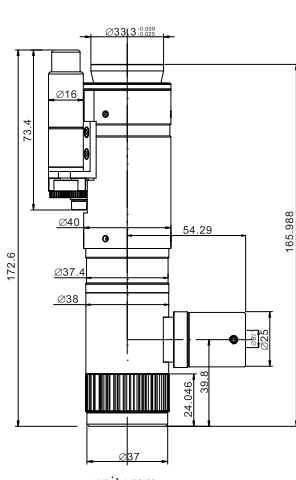
PMS-765E-RS



PMS-765M-C



PMS-765M-CH12

[illegible]



Zoom Lens Series 0.58x-7.5x Zoom Lens

Super high magnification ratio and excellent optical performance, suitable for inspecting various kinds of parts.

PRODUCT ADVANTAGES

1. Professional optical design, optical magnification 0.58X-7.5X, magnification ratio 12:5:1.
2. Excellent optical performance, high resolution, low distortion, super high N.A

APPLICATION FIELDS

Widely used in biology, electronics, semiconductor, machine vision and other high-precision industries.

CONTROLLER BOX

The integrated motorized control system is suitable for all the POMEAS zoom lenses. Motorized controlling system can control single or dual shafts via RS232 or USB. The underlying software code for the OEM platform will also be provided.



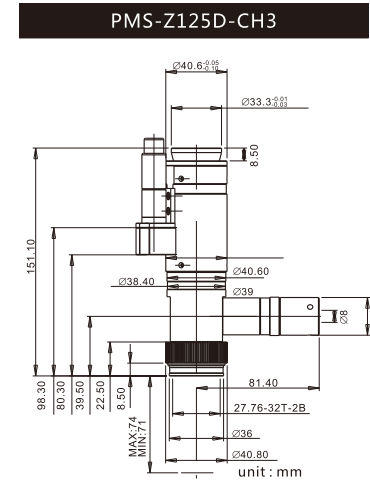
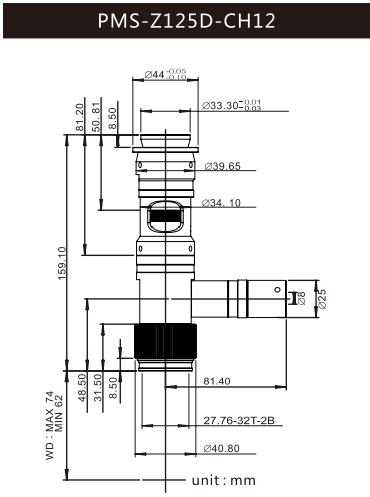
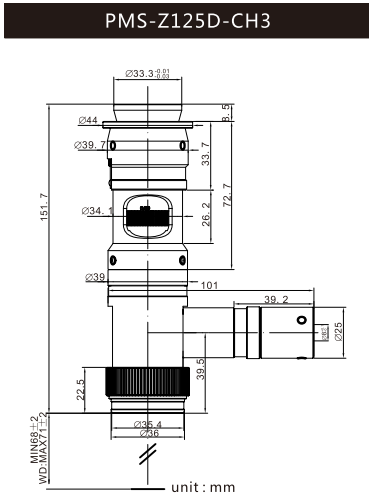
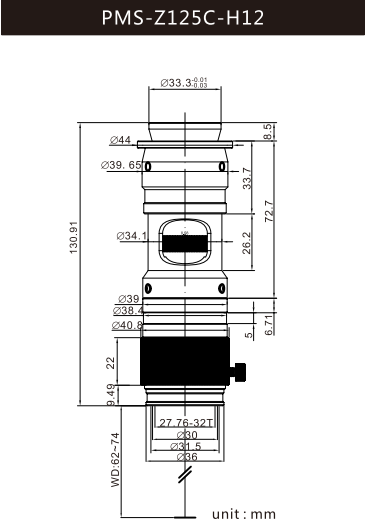
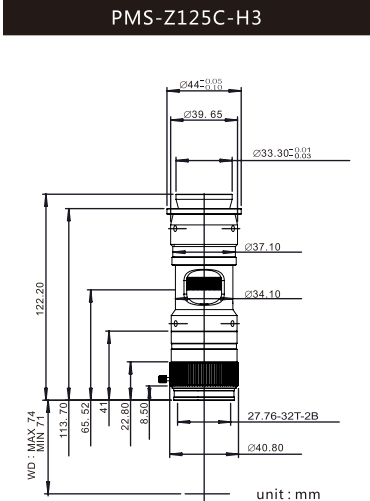
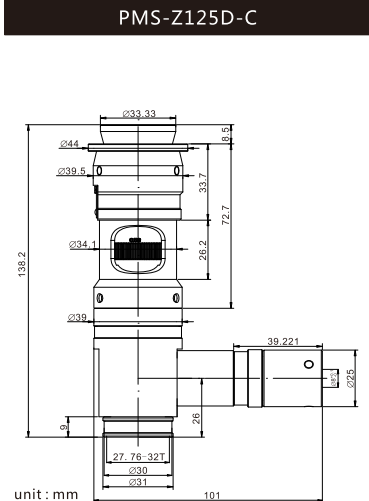
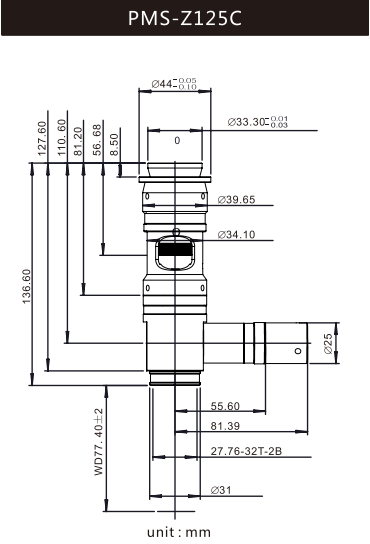
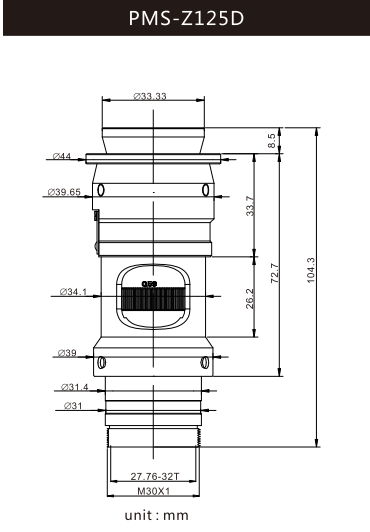
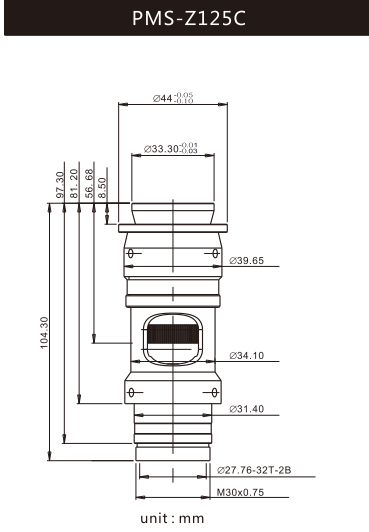
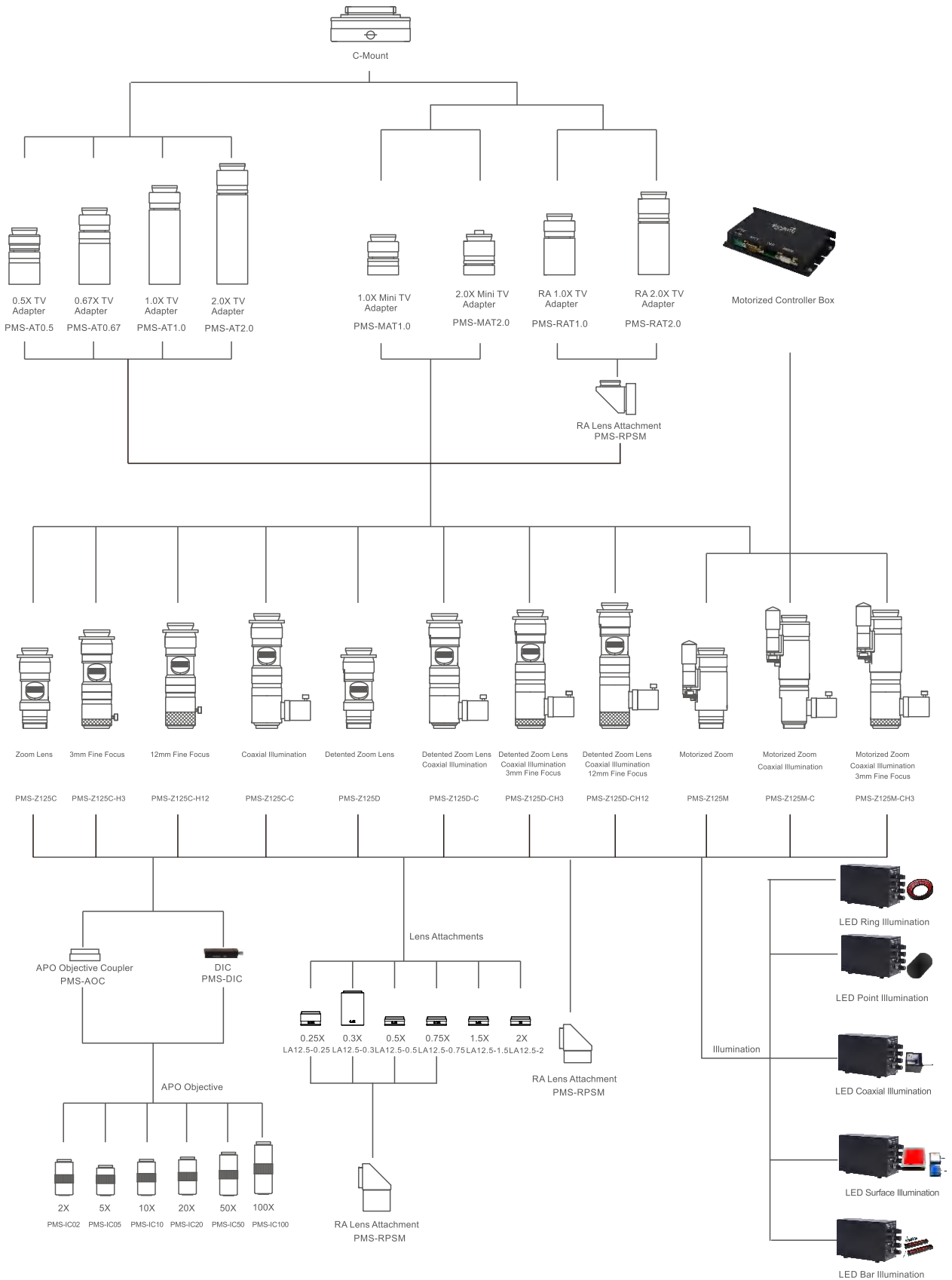
12.5X Zoom Lens Parameter

Optical Magnification Range		0.58X~7.5X															
Working Distance		77.4±2mm															
Optical Magnification		0.58X	0.6X	1X	1.5X	2X	2.5X	3X	3.5X	4X	4.5X	5X	5.5X	6X	6.5X	7X	7.5X
DOF(mm)		2.75	2.67	0.95	0.43	0.27	0.2	0.15	0.12	0.1	0.081	0.073	0.066	0.061	0.056	0.052	0.05
N.A.		0.025	0.025	0.043	0.063	0.074	0.082	0.09	0.097	0.1	0.11	0.11	0.11	0.11	0.11	0.11	0.11
F.No.		12.5	12.5	11.85	11.95	13.65	15.3	16.5	18.4	19.9	20.4	22.45	22.7	26.8	29.4	31.7	33.9
Resolution(μm)		13	13	7.8	5.3	4.53	4.09	3.73	3.46	3.36	3.05	3.05	3.05	3.05	3.05	3.05	3.05
TV Distortion		0.050%	0.050%	0.002%	0.010%	0.020%	0.003%	0.020%	0.020%	0.018%	0.020%	0.010%	0.010%	0.001%	0.010%	0.005%	0.005%
2/3" FOV (mm)	Diagonal	18.97	18.33	11	7.33	5.5	4.4	3.67	3.14	2.75	2.44	2.2	2	1.83	1.69	1.57	1.47
	Horizontal	15.17	14.67	8.8	5.87	4.4	3.52	2.93	2.51	2.2	1.96	1.76	1.6	1.47	1.35	1.26	1.17
	vertical	11.38	11	6.6	4.4	3.3	2.64	2.2	1.89	1.65	1.47	1.32	1.2	1.1	1.02	0.94	0.88
Max.Sensor Size		2/3"															
Mount		C-Mount															

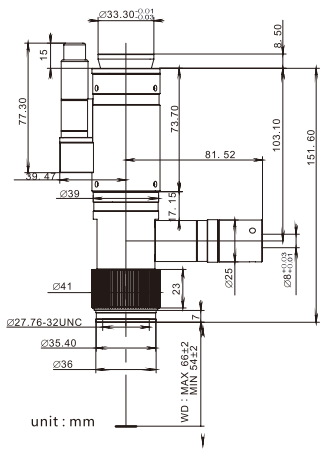
12.5X Zoom Lens Field of View Table

Lens Attachment			0.5X Adapter Tube(PMS-AT0.5)						1.0X Adapter Tube(PMS-AT1.0)						2.0X Adapter Tube(PMS-AT2.0)					
			Low Magnification			High Magnification			Low Magnification			High Magnification			Low Magnification			High Magnification		
			Length (mm)	Width (mm)	Diagonal (mm)	Length (mm)	Width (mm)	Diagonal (mm)	Length (mm)	Width (mm)	Diagonal (mm)	Length (mm)	Width (mm)	Diagonal (mm)	Length (mm)	Width (mm)	Diagonal (mm)	Length (mm)	Width (mm)	Diagonal (mm)
0.25X PMS-Z125-LA025 WD:297mm	Magnification		0.07X-0.94X						0.15X-1.87X						0.30X-3.75X					
	Camera FOV	2/3"	121.4	91.0	(151.7)	9.4	7.0	11.7	60.7	45.5	75.9	4.7	3.5	5.9	30.3	22.8	(37.9)	2.4	1.8	2.9
		1/2"	88.3	66.2	(110.3)	6.8	5.1	8.5	44.1	33.1	55.2	3.4	2.6	4.3	22.1	16.6	27.6	1.7	1.3	2.1
		1/3"	66.2	49.7	82.8	5.1	3.8	6.4	33.1	24.8	41.4	2.6	1.9	3.2	16.6	12.4	20.7	1.3	1.0	1.6
0.3X PMS-Z125-LA03 WD:120mm	Magnification		0.09X-1.12X						0.17X-2.25X						0.35X-4.50X					
	Camera FOV	2/3"	101.2	75.9	(126.4)	7.8	5.9	9.8	50.6	37.9	63.2	3.9	2.9	4.9	25.3	19.0	31.6	2.0	1.5	2.4
		1/2"	73.6	55.1	(92.0)	5.7	4.3	7.1	36.8	27.6	46.0	2.8	2.1	3.6	18.4	13.8	23.0	1.4	1.1	1.8
		1/3"	55.2	41.4	69.0	4.3	3.2	5.3	27.6	20.7	34.5	2.1	1.6	2.7	13.8	10.3	17.2	1.1	0.8	1.3
0.5X PMS-Z125-LA05 WD:155mm	Magnification		0.14X-1.87X						0.29X-3.75X						0.58X-7.50X					
	Camera FOV	2/3"	60.7	45.5	(75.9)	4.7	3.5	5.9	30.3	22.8	38.0	2.4	1.8	2.9	15.2	11.4	19.0	1.2	0.9	1.5
		1/2"	44.1	33.1	55.2	3.4	2.6	4.3	20.1	16.6	27.6	1.7	1.3	2.1	11.0	8.3	13.8	0.9	0.6	1.0
		1/3"	33.1	24.8	41.4	2.6	1.9	3.2	16.6	12.4	20.7	1.3	1.0	1.6	8.3	6.2	10.3	0.6	0.5	0.8
0.75X PMS-Z125-LA075 WD:93mm	Magnification		0.22X-2.81X						0.43X-5.62X						0.87X-11.25X					
	Camera FOV	2/3"	40.5	30.3	(50.6)	3.1	2.4	3.9	20.2	15.2	25.3	1.6	1.2	2.0	10.1	7.6	12.6	0.8	0.6	1.0
		1/2"	29.4	22.1	36.8	2.3	1.7	2.8	14.7	11.0	18.4	1.1	0.9	1.4	7.4	5.5	9.2	0.6	0.4	0.7
		1/3"	22.1	16.6	27.6	1.7	1.3	2.1	11.0	8.3	13.8	0.9	0.6	1.1	5.5	4.1	6.9	0.3	0.3	0.5
1.0X PMS-Z125-LA1.0 WD:77.4mm	Magnification		0.29X-3.75X						0.58X-7.50X						1.16X-15.00X					
	Camera FOV	2/3"	30.3	22.8	(37.9)	2.4	1.8	2.9	15.2	11.4	19.0	1.2	0.9	1.5	7.6	5.7	9.5	0.6	0.4	0.7
		1/2"	22.1	16.6	(27.6)	1.7	1.3	2.1	11.0	8.3	13.8	0.9	0.6	1.1	5.5	4.1	6.9	0.4	0.3	0.5
		1/3"	16.6	12.4	20.7	1.3	1.0	1.6	8.3	6.2	10.3	0.6	0.5	0.8	4.1	3.1	5.2	0.3	0.2	0.4
1.5X PMS-Z125-LA1.5 WD:48mm	Magnification		0.43X-5.62X						0.87X-11.25X						1.74X-22.50X					
	Camera FOV	2/3"	20.2	15.2	(25.3)	1.6	1.2	2.0	10.1	7.6	12.6	0.8	0.6	1.0	5.1	3.8	6.3	0.4	0.3	0.5
		1/2"	14.7	11.0	18.4	1.4	0.9	1.4	7.4	5.5	9.2	0.6	0.4	0.7	3.7	2.8	4.6	0.3	0.2	0.4
		1/3"	11.0	8.3	13.8	0.9	0.6	1.1	5.5	4.1	6.9	0.4	0.3	0.5	2.8	2.1	3.5	0.2	0.2	0.3
2.0X PMS-Z125-LA2.0 WD:34.5mm	Magnification		0.58X-7.50X						1.16X-15.00X						2.32X-30.00X					
	Camera FOV	2/3"	15.2	11.4	(19.0)	1.2	0.9	1.5	7.6	5.7	9.5	0.6	0.4	0.7	3.8	2.8	4.7	0.3	0.2	0.4
		1/2"	11.0	8.3	(13.8)	0.9	0.6	1.0	5.5	4.1	6.9	0.4	0.3	0.5	2.8	2.1	3.5	0.2	0.2	0.3
		1/3"	8.3	6.2	10.3	0.6	0.5	0.8	4.1	3.1	5.2	0.3	0.2	0.4	2.1	1.6	2.6	0.2	0.1	0.2

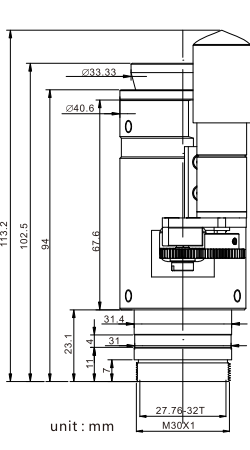
All the value is theoretical ones, the image will have dark color, if the value is in brackets.



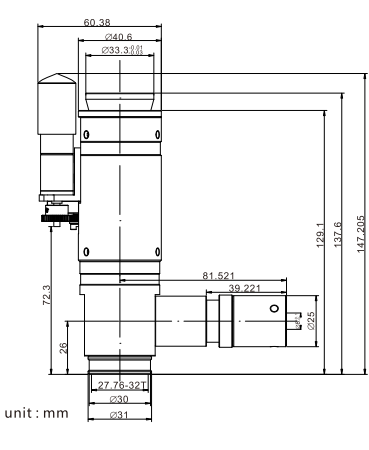
PMS-Z125M-CH12



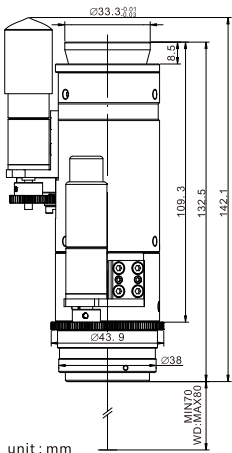
PMS-Z125M



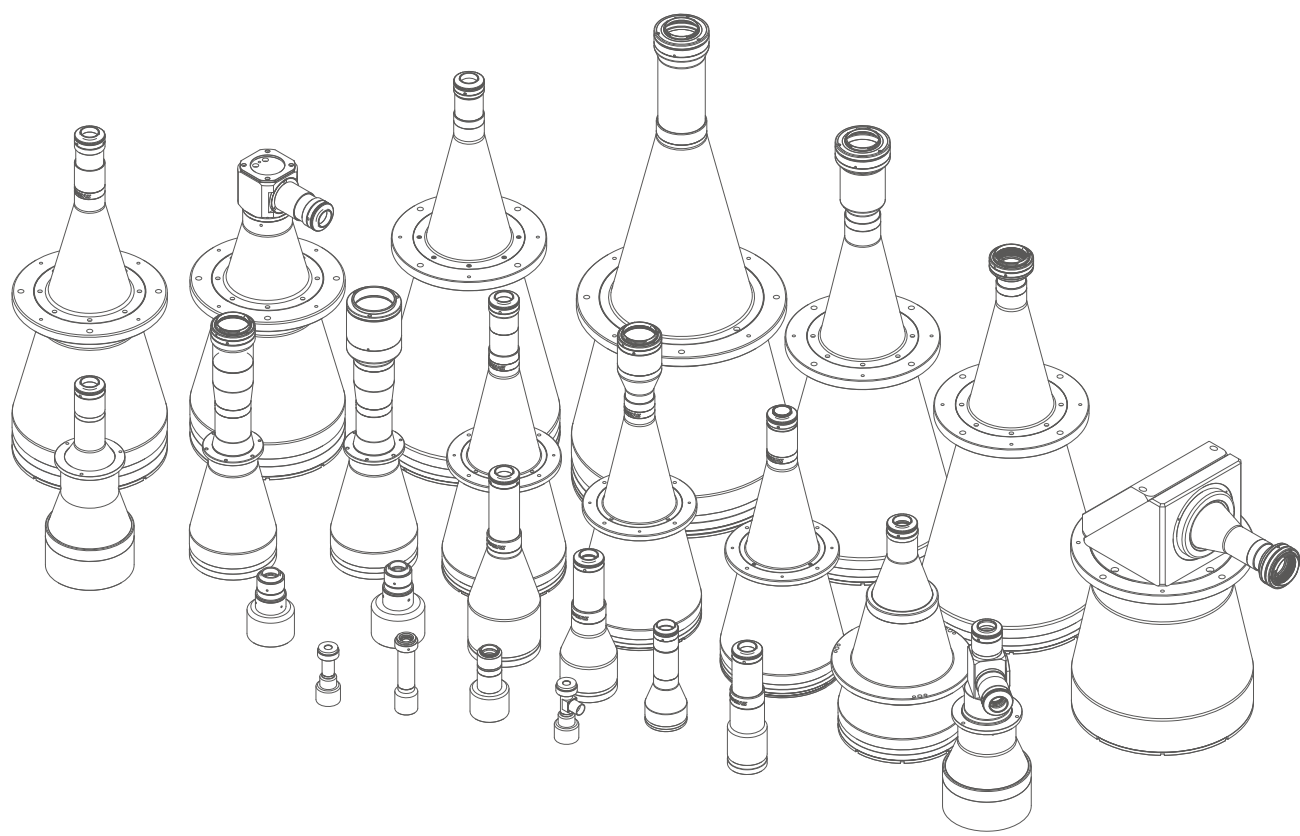
PMS-Z125M-C



PMS-Z125M-CH12M



TELECENTRIC LENS SERIES



- Full range products all use special optical material, and have excellent image quality.
- . FOV range up to 250mm, to meet different FOV requirement
- . Support C mount 1/3" -4/3" camera sensor, F or M mount 4/3" -35mm camera sensor
- . Full range telecentric lens, widely used for all application field
- .High resolution, low distortion image, good quality image, meet different system requirements
- .Accurate calibrated, and offer full testing report



Support 1.1" Sensor, High Resolution Telecentric Lens

Telecentric light design, low distortion, high telecentricity, high DOF, suitable for defects recognition, production auto inspection field.

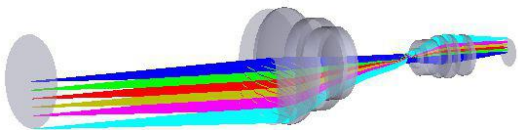
PRODUCT ADVANTAGES

- 1. Support Max. 1.1" sensor
- 2. DOF can be changed in certain range, max. DOF can be 3.6mm
- 3. Coaxial lighting is optional, even illumination. Within the DOF, the magnification and target image size is fixed.
- 4. The mechanical dimension is reasonable, variable shadowless ring light optional.

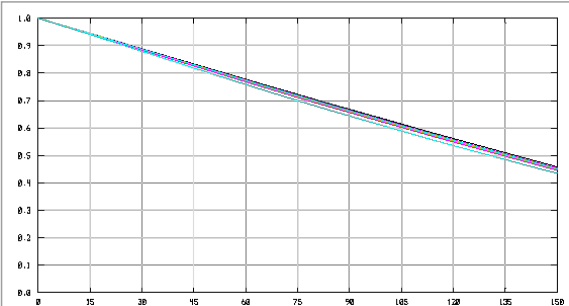
APPLICATION FIELDS

Widely used in factory automation and machine vision field

Light Path Design

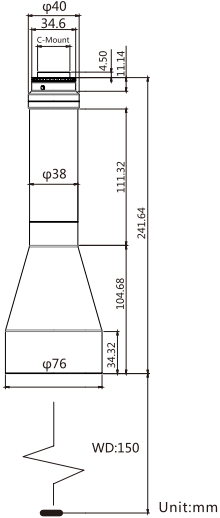


MTF Curve



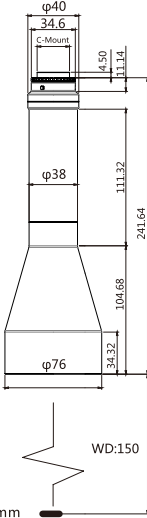
DIMENSIONS

PMS-037LHD150



Item : #720-190
Magnification : 0.37X
Working Distance : 150MM
F No. : 6
Tv Distortion: 0.02%
DOF : 3.6mm
N.A. : 0.03
Resolution (μm) : 11.18
Max. Sensor Size : 1.1"
Mount : C-Mount
Ligh : --
Working Distance : -10°C~+50°C
FOV (MM) (HxV)
1/2" 17.3 X 13.0
1/1.8" 19.3 X 14.5
2/3" 23.8 X 17.8
1" 34.6 X 25.6
1.1" 38.1 X 28.5

PMS-037LHD150-C



Item : #720-191
Magnification : 0.37X
Working Distance : 150MM
F No. : 6 (Adjustable)
Tv Distortion: 0.02%
DOF : 3.6mm (Adjustable)
N.A. : 0.03 (Adjustable)
Resolution (μm) : 11.18(Adjustable)
Max. Sensor Size : 1.1"
Mount : C-Mount
Ligh : Coaxial illumination
Working Distance : -10°C~+50°C
FOV (MM) (HxV)
1/2" 17.3 X 13.0
1/1.8" 19.3 X 14.5
2/3" 23.8 X 17.8
1" 34.6 X 25.6
1.1" 38.1 X 28.5

Code	Item	Magnification	FOV					Working Distance (mm)	F No.	Tv Distortion	DOF (mm)	N.A.	Resolution (μm)	Max. Sensor Size	Mount	Ligh	Working Distance
			1/2"	1/1.8"	2/3"	1"	1.1"										
PMS-037LHD150	#720-190	0.37X	17.3x13.0	19.3x14.5	23.8x17.8	34.6x25.6	38.1x28.5	150	6	0.02%	3.6	0.03	11.18	1.1"	C-Mount	—	-10°C~+50°C
PMS-037LHD150-C	#720-191	0.37X	17.3x13.0	19.3x14.5	23.8x17.8	34.6x25.6	38.1x28.5	150	6 (Adjustable)	0.02%	3.6 (Adjustable)	0.03 (Adjustable)	11.18 (Adjustable)	1.1"	C-Mount	Coaxial illumination	-10°C~+50°C



Support Full Frame Sensor, 29mp, F Mount Big Fov Telecentric Lens

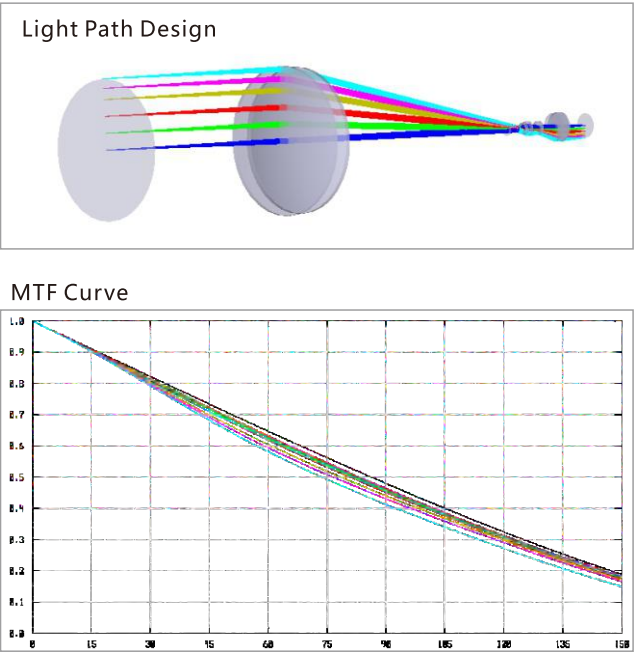
F mount telecentric lenses are specially design for 10MP grade resolution full frame sensor, perfectly suitable for 4K and 8K linear array camera.

PRODUCT ADVANTAGES

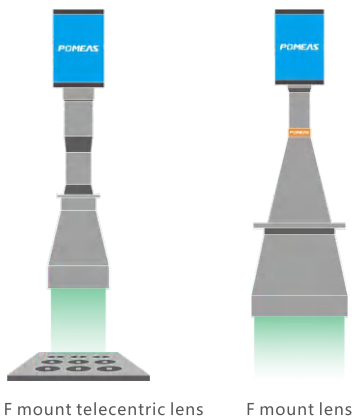
- 1. Super big inspection FOV, high resolution bi-telecentric design, specially design for accurate measurement of big FOV objectives.
- 2. High telecentricity calibration, test result will be the same within DOF.
- 3. Super low distortion design, the FOV tolerance is small (before calibration by software), after increase the FOV.
- 4. Simple and stable mechanical design, suitable for all kinds of industry environment.

APPLICATION FIELDS

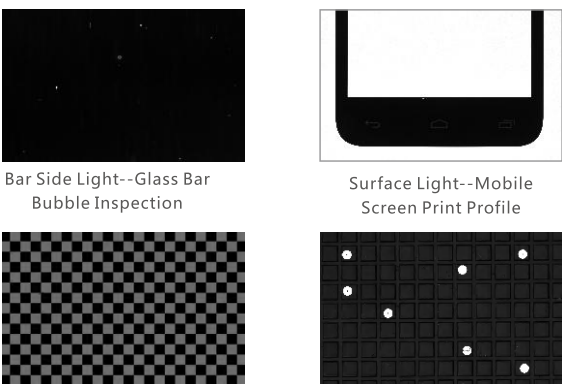
Widely used for all kind of big size objectives’ accurate measurement, such as big FOV mobile screen, PCB board, flat glass, engineer motor parts, compressor parts etc..



EXAMPLES OF APPLICATION



ACTUAL IMAGE

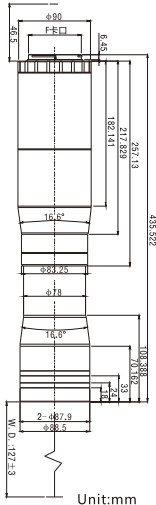


F-mount Telecentric Lens Parameter

Code	Item	Magnification	FOV (HxV)				Working Distance (mm)	F No.	Tv Distortion	DOF (mm)	MTF Central MTF@ 70lp/mm	Resolution (μm)	Max. Sensor Size	Objective Side Telecentricity	Length (mm)	Dia./Width (mm)	Mount
			Linear Array 2K (2kx10μm)	Linear Array 4K (4kx7μm)	Linear Array 8K (8kx5μm)	35mm											
PMS-0106TF468	#790-106	0.106X	193.4	/	/	/	468	5.5	0.02%	39.31	50lp/mm > 70%	34.95	4/3"	<0.02°	558	Ø238	F Mount
PMS-0177F416	#790-416	0.17X	120.6	168.8	241.2	211.8x141.2	416	8	0.01%	22.14	>60%	31.56	35mm Film	<0.02°	712.0	Ø288	F Mount
PMS-0206TF468	#790-468	0.206X	99.5	139.3	199.0	174.8x116.5	468	6.5	0.01%	12.24	>60%	21.16	35mm Film	<0.02°	632.2	Ø238	F Mount
PMS-024TF398	#790-398	0.24X	85.4	119.6	170.8	150.0x100.0	398	11	0.01%	15.28	>50%	30.76	35mm Film	<0.02°	586.7	Ø203	F Mount
PMS-0316TF261	#790-261	0.316X	64.9	90.8	129.7	113.9x75.9	261	8	0.02%	6.43	>60%	17.03	35mm Film	<0.02°	449.08	Ø162	F Mount
PMS-050TF179	#790-179	0.5X	41.0	57.4	82.0	72.0x48.0	179	13	0.01%	4.34	>40%	18.18	35mm Film	<0.02°	374.3	Ø114	F Mount
PMS-100TF127	#790-127	1.0X	20.0	28.0	40.0	36.0x24.0	127	16	0.01%	1.29	>40%	10.82	35mm Film	<0.02°	435.5	Ø88.5	F Mount
PMS-018TF281-M58	#790-280	0.18X	113.9	159.4	227.8	φ210	281	6.5	0.01%	16.10	>70%	24.31	35mm Film	<0.02°	390.35	Ø238	M58

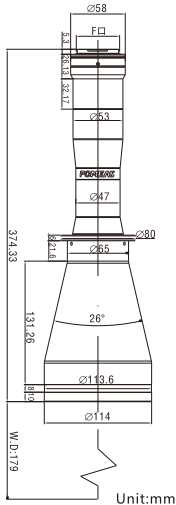
*1 : Theoretical value (Diffused diameter φ0.04mm). It is better that only use 1/2 of the theoretical range for better application.

PMS-1TF127



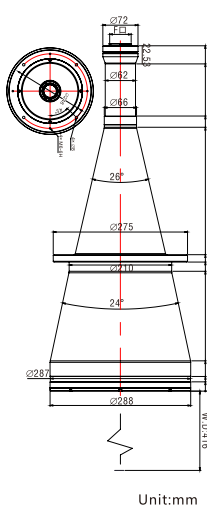
Item : #720-127
Magnification : 1.0X
Working Distance : 127
F No. : 16
Tv Distortion : 0.01%
DOF : 1.29mm
Central MTF @70lp/mm: > 40%
Resolution (μm) : 10.82
Max. Sensor Size : 35mm Film
Objective Side Telecentricity: < 0.02°
Length : 435.5
Dia./Width : 88.5mm
Mount : F-Mount
FOV (MM) (HxV)
Linear Array -2K(2KX10 μm) 20.0
Linear Array -4K(2KX10 μm) 28.0
Linear Array -8K(2KX10 μm) 40.0
35MM
36.0X24.0

PMS-05TF179



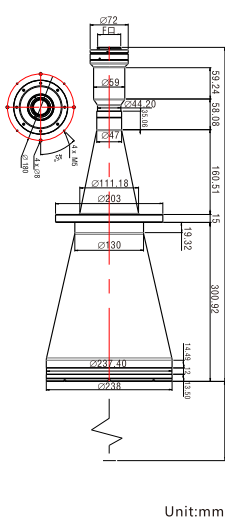
Item : #720-179
Magnification : 0.5X
Working Distance : 179
F No. : 13
Tv Distortion : 0.01%
DOF : 4.34 mm
Central MTF @70ip/mm: > 40%
Resolution (μ m) : 18.18
Max. Sensor Size : 35mm Film
Objective Side Telecentricity: < 0.02°
Length : 374.3MM
Dia./Width : 114 mm
Mount : F-Mount
FOV (MM) (HxV)
Linear Array -2K(2KX10 μ m) 41.0
Linear Array -4K(2KX10 μ m) 57.4
Linear Array -8K(2KX10 μ m) 82.0
35MM
72.0X48.0

PMS-017TF416



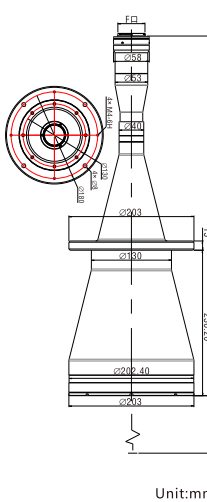
Item : #790-416
Magnification : 0.17X
Working Distance : 416
F No. : 8
Tv Distortion : 0.01%
DOF : 22.14 mm
Central MTF @70ip/mm: > 60%
Resolution (μ m) : 31.56
Max. Sensor Size : 35mm Film
Objective Side Telecentricity: < 0.02°
Length : 712.0
Dia./Width : 288mm
Mount : F-Mount
FOV (MM) (HxV)
Linear Array -2K(2KX10 μ m) 120.6
Linear Array -4K(2KX10 μ m) 168.8
Linear Array -8K(2KX10 μ m) 241.2
35MM 211.8X141.2

PMS-0206TF468



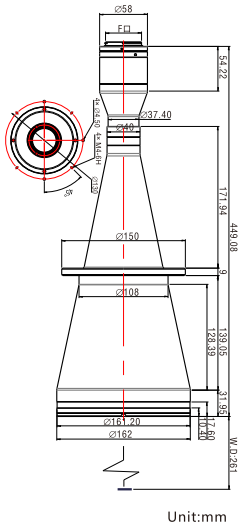
Item # :	#790-468
Magnification :	0.206X
Working Distance :	468
F No. :	6.5
Tv Distortion :	0.01%
DOF :	12.24 mm
Central MTF @70lp/mm:	> 60%
Resolution (μ m) :	21.16
Max. Sensor Size :	35mm Film
Objective Side Telecentricity:	< 0.02°
Length :	632.2
Dia./Width :	238mm
Mount :	F-Mount
FOV (MM) (HxV)	
Linear Array -2K(2KX10 μ m)	99.5
Linear Array -4K(2KX10 μ m)	139.3
Linear Array -8K(2KX10 μ m)	199.0
35MM	174.8 X 116.5

PMS-024TF398



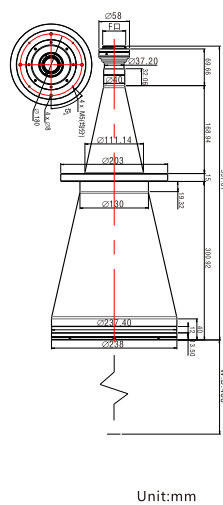
Item : #790-398
Magnification : 0.24X
Working Distance : 398
F No. : 11
Tv Distortion : 0.01%
DOF : 15.28 mm
Central MTF @70lp/mm: > 50%
Resolution (μm) : 30.76
Max. Sensor Size : 35mm Film
Objective Side Telecentricity: < 0.02°
Length : 586.7
Dia./Width : 203 mm
Mount : F-Mount
FOV (MM) (HxV)
Linear Array -2K(2KX10 μm) 85.4
Linear Array -4K(2KX10 μm) 119.6
Linear Array -8K(2KX10 μm) 170.8
35MM 150 X 100

PMS-0316TF261



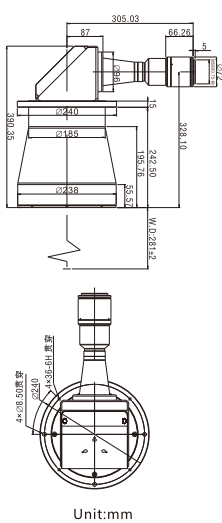
Item #	#790-261
Magnification	: 0.316X
Working Distance	: 261
F No.	: 8
Tv Distortion	: 0.02%
DOF	: 6.43 mm
Central MTF @70lp/mm	: > 60%
Resolution (μ m)	: 17.03
Max. Sensor Size	: 35mm Film
Objective Side Telecentricity	: < 0.02°
Length	: 449.08
Dia./Width	: 162 mm
Mount	: F-Mount
FOV (MM)	(HxV)
Linear Array	-2K(2KX10 μ m) 64.9
Linear Array	-4K(2KX10 μ m) 90.8
Linear Array	-8K(2KX10 μ m) 129.7
35MM	113.9 X 75.9

PMS-0106TF468



Item : #790-106
Magnification : 0.106X
Working Distance : 468
F No. : 5.5
Tv Distortion : 0.02%
DOF : 39.31 mm
Central MTF @50p/mm: > 70%
Resolution (μ m) : 34.95
Max. Sensor Size : 4/3 "
Objective Side Telecentricity: < 0.02°
Length : 558 MM
Dia./Width : 238 mm
Mount : F-Mount
HOV (MM) (HxV)
Linear Array -2K(2KX10 μ m) 193.4
Linear Array -4K(2KX10 μ m) _____
Linear Array -8K(2KX10 μ m) _____
35MM _____

PMS-018TF281-M58



Item : #790-280

Magnification : 0.18X

Working Distance : 281

F No. : 6.5

Tv Distortion : 0.01%

DOF : 16.10 mm

Central MTF @70lp/mm: > 70%

Resolution (μ m) : 24.31

Max. Sensor Size : 35MM Film

Objective Side Telecentricity: < 0.02°

Length : 390.35 MM

Dia./Width : 238 mm

Mount : M58

FOV (MM) (HxV)

Linear Array -2K(2KX10 μ m) 113.9

Linear Array -4K(2KX10 μ m) 159.4

Linear Array -8K(2KX10 μ m) 227.8

35MM φ210



Bi-Telecentric Lens

Double magnification bi-telecentric design, supports two camera working at the same time, two magnifications output to meet different measurement requirement, specially developed for measurement of large objects.

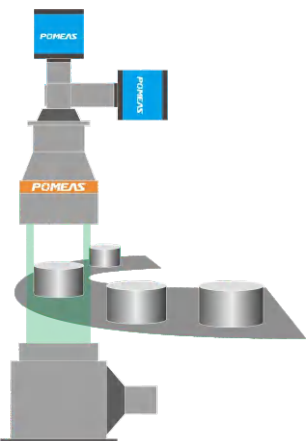
PRODUCT ADVANTAGES

- 1. Double ports, bi-telecentric, almost without deviation when used for measurement.
- 2. Big FOV and high resolution design, can achieve complete inspection at one time for large objects
- 3. Low distortion and deep DOF design.

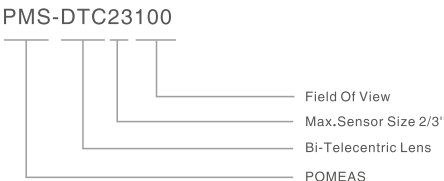
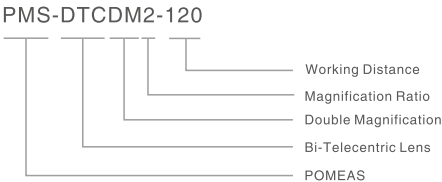
APPLICATION FIELDS

Can be applied in high precision measurement of large objects and machine vision industry.

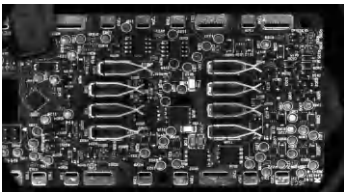
EXAMPLES OF APPLICATION



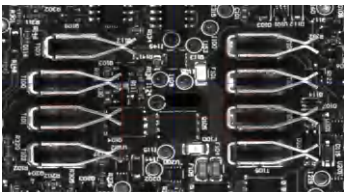
NAMING RULES



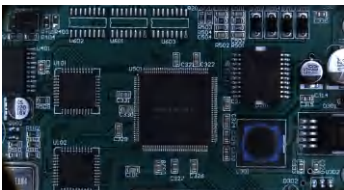
ACTUAL IMAGE



0.088X—Width measuring for PCB



0.176X—big PCB



0.088X—Width measuring for PCB



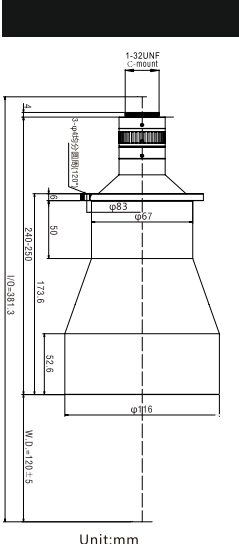
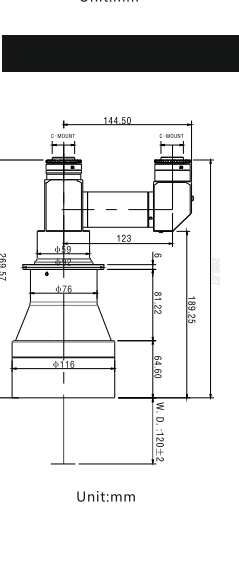
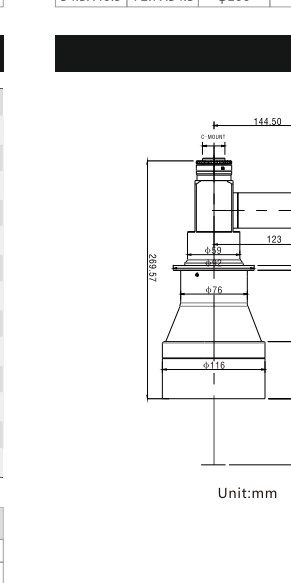
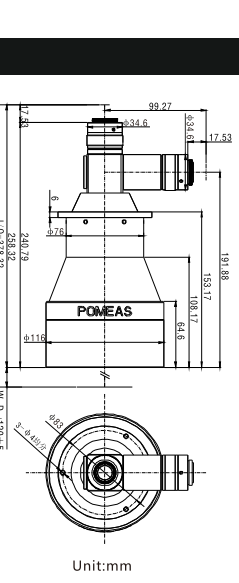
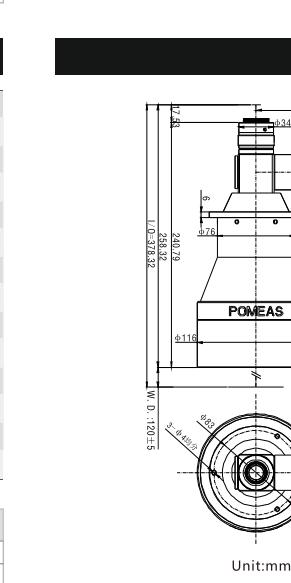
0.176X—big PCB

Explanation : Two ports with different magnifications output for two camera, which to meet different measurement requirement.

Parameter Of Double Magnification Bi-Telecentric Lens

Code	PMS-DTC23100-A	PMS-DTC23100-B	PMS-DTC23100-C	PMS-DTC23100-D	PMS-DTCDM2-120	PMS-DTC23180		PMS-LDTC-016/07-120	
Item	#770-121	#770-122	#770-123	#770-124	#750-180	#750-160		#750-125	
Magnification	0.088X	0.088X	0.088X	0.088X	0.061X	0.088X	0.176X	0.16X	0.7X
Field Of View (HxV) (mm)	1/3"	54.5x40.9	54.5x40.9	54.5x40.9	78.7x59.0	54.5x40.9	27.3x20.5	30.0x22.5	6.9x5.1
	1/2"	72.7x54.5	72.7x54.5	72.7x54.5	104.9x78.7	72.7x54.5	36.4x27.3	40.0x30.0	9.1x6.9
	2/3"	Ø 100	Ø 100	Ø 100	144.3x108.2	Ø 100	50x37.5	55.0x41.3	12.6x9.4
	1"	—	—	—	—	—	—	80.0x60.0	18.3x13.7
W.D.(mm)	120	120	120	238	398	120	120	120	120
F.No.	5.6	11.5	17.5	5.6	8	4.46	8	6	8
TV Distortion	-0.022%	-0.022%	-0.022%	-0.022%	0.01%	0.050%	0.050%	0.020%	0.020%
DOF(mm)	20	26	45	16	171.97	16	7.2	19.23	1.30
Central MTF@70lp/mm	>85%	>60%	>39%	MTF@50lp/mm >75%	>50%	>76%	>57%	>60%	>50%
Resolution(μm)	45.8	61	134.2	30.5	87.99	30.5	30.5	25.81	7.63
Max.Sensor Size	2/3"	2/3"	2/3"	2/3"	2/3"	1/1.8"	2/3"	1"	1"
Object Side Telecentricity	< 0.04°	< 0.04°	< 0.04°	< 0.04°	<0.02°	< 0.02°	< 0.02°	< 0.02°	< 0.02°
Image Side Telecentricity	<0.1°	<0.1°	<0.1°	<0.1°	<0.06°	< 0.3°	—	< 0.5°	< 0.5°
Length(mm)	240	240	240	232	479.22	—	—	—	—
Diameter/Width(mm)	Ø 116	Ø 116	Ø 116	Ø 116	Ø 203	—	—	—	—
Mount	C-Mount	C-Mount	C-Mount	C-Mount	C-Mount	C-Mount	C-Mount	C-Mount	C-Mount

*1 : Theoretical value (Diffused diameter φ0.04mm). It is better that only use 1/2 of the theoretical range for better application.

	<div>PMS-DT23100-A</div> <div> <div>Item : #770-121</div> <div>Magnification : 0.088X</div> <div>Working Distance : 120</div> <div>F No. : 5.6</div> <div>Tv Distortion : -0.022%</div> <div>DOF : 20 mm</div> <div>Central MTF @70lp/mm: > 85%</div> <div>Resolution (μm) : 45.8</div> <div>Max. Sensor Size : 2/3"</div> <div>Objective Side Telecentricity: < 0.04°</div> <div>Image Side Telecentricity: <0.1°</div> <div>Length : 240</div> <div>Dia./Width : 116 mm</div> <div>Mount : C-Mount</div> </div> <div> <div>FOV (MM) (HxV)</div> <table> <tr> <th>1/3"</th><th>1/2"</th><th>2/3"</th><th>1"</th></tr> <tr> <td>54.5X40.9</td><td>72.7X54.5</td><td>φ100</td><td>----</td></tr> </table> </div>	1/3"	1/2"	2/3"	1"	54.5X40.9	72.7X54.5	φ100	----	<div>PMS-DT23100-B</div> <div> <div>Item : #770-122</div> <div>Magnification : 0.088X</div> <div>Working Distance : 120</div> <div>F No. : 11.5</div> <div>Tv Distortion : -0.022%</div> <div>DOF : 26 mm</div> <div>Central MTF @70lp/mm: > 60%</div> <div>Resolution (μm) : 61</div> <div>Max. Sensor Size : 2/3"</div> <div>Objective Side Telecentricity: < 0.04°</div> <div>Image Side Telecentricity: <0.1°</div> <div>Length : 240</div> <div>Dia./Width : 116 mm</div> <div>Mount : C-Mount</div> </div> <div> <div>FOV (MM) (HxV)</div> <table> <tr> <th>1/3"</th><th>1/2"</th><th>2/3"</th><th>1"</th></tr> <tr> <td>54.5X40.9</td><td>72.7X54.5</td><td>φ100</td><td>----</td></tr> </table> </div>	1/3"	1/2"	2/3"	1"	54.5X40.9	72.7X54.5	φ100	----	<div>PMS-DT23100-C</div> <div> <div>Item : #770-123</div> <div>Magnification : 0.088X</div> <div>Working Distance : 120</div> <div>F No. : 17.5</div> <div>Tv Distortion : -0.022%</div> <div>DOF : 45 mm</div> <div>Central MTF @70lp/mm: > 39%</div> <div>Resolution (μm) : 134.2</div> <div>Max. Sensor Size : 2/3"</div> <div>Objective Side Telecentricity: < 0.04°</div> <div>Image Side Telecentricity: <0.1°</div> <div>Length : 240</div> <div>Dia./Width : 116 mm</div> <div>Mount : C-Mount</div> </div> <div> <div>FOV (MM) (HxV)</div> <table> <tr> <th>1/3"</th><th>1/2"</th><th>2/3"</th><th>1"</th></tr> <tr> <td>54.5X40.9</td><td>72.7X54.5</td><td>φ100</td><td>----</td></tr> </table> </div>	1/3"	1/2"	2/3"	1"	54.5X40.9	72.7X54.5	φ100	----
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1/3"	1/2"	2/3"	1"																								
54.5X40.9	72.7X54.5	φ100	----																								
	<div>PMS-DTCDM4-120</div> <div> <div>Item : #750-125</div> <div>Magnification : 0.16X</div> <div>Working Distance : 120</div> <div>F No. : 6</div> <div>Tv Distortion : 0.020%</div> <div>DOF : 19.23 mm</div> <div>Central MTF @70lp/mm: > 60%</div> <div>Resolution (μm) : 25.81</div> <div>Max. Sensor Size : 1"</div> <div>Objective Side Telecentricity: < 0.02°</div> <div>Image Side Telecentricity: <0.5°</div> <div>Length : ----</div> <div>Dia./Width : ----</div> <div>Mount : C-Mount</div> </div> <div> <div>FOV (MM) (HxV)</div> <table> <tr> <th>1/3"</th><th>1/2"</th><th>2/3"</th><th>1"</th></tr> <tr> <td>30.0X22.5</td><td>40.0X30.0</td><td>55.0x41.3</td><td>80.0x60.0</td></tr> </table> </div>	1/3"	1/2"	2/3"	1"	30.0X22.5	40.0X30.0	55.0x41.3	80.0x60.0		<div>PMS-DTCDM4-120</div> <div> <div>Item : #750-125</div> <div>Magnification : 0.7X</div> <div>Working Distance : 120</div> <div>F No. : 8</div> <div>Tv Distortion : 0.020%</div> <div>DOF : 1.30 mm</div> <div>Central MTF @50lp/mm: > 50%</div> <div>Resolution (μm) : 7.63</div> <div>Max. Sensor Size : 1"</div> <div>Objective Side Telecentricity: < 0.02°</div> <div>Image Side Telecentricity: <0.5°</div> <div>Length : ----</div> <div>Dia./Width : ----</div> <div>Mount : C-Mount</div> </div> <div> <div>FOV (MM) (HxV)</div> <table> <tr> <th>1/3"</th><th>1/2"</th><th>2/3"</th><th>1"</th></tr> <tr> <td>6.9X5.1</td><td>9.1X6.9</td><td>12.6x9.4</td><td>18.3x13.7</td></tr> </table> </div>	1/3"	1/2"	2/3"	1"	6.9X5.1	9.1X6.9	12.6x9.4	18.3x13.7								
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	<div>PMS-DTCDM2-120</div> <div> <div>Item : #750-160</div> <div>Magnification : 0.088X</div> <div>Working Distance : 120</div> <div>F No. : 4.46</div> <div>Tv Distortion : 0.050%</div> <div>DOF : 16 mm</div> <div>Central MTF @50lp/mm: > 76%</div> <div>Resolution (μm) : 30.5</div> <div>Max. Sensor Size : 1"/1.8"</div> <div>Objective Side Telecentricity: < 0.02°</div> <div>Image Side Telecentricity: < 0.3°</div> <div>Length : ----</div> <div>Dia./Width : ----</div> <div>Mount : C-Mount</div> </div> <div> <div>FOV (MM) (HxV)</div> <table> <tr> <th>1/3"</th><th>1/2"</th><th>2/3"</th><th>1"</th></tr> <tr> <td>54.5X40.9</td><td>72.7X54.5</td><td>φ100</td><td>----</td></tr> </table> </div>	1/3"	1/2"	2/3"	1"	54.5X40.9	72.7X54.5	φ100	----		<div>PMS-DTCDM2-120</div> <div> <div>Item : #750-160</div> <div>Magnification : 0.176X</div> <div>Working Distance : 120</div> <div>F No. : 8</div> <div>Tv Distortion : 0.050%</div> <div>DOF : 7.2 mm</div> <div>Central MTF @50lp/mm: > 57%</div> <div>Resolution (μm) : 30.5</div> <div>Max. Sensor Size : 2/3"</div> <div>Objective Side Telecentricity: < 0.02°</div> <div>Image Side Telecentricity: ----</div> <div>Length : ----</div> <div>Dia./Width : ----</div> <div>Mount : C-Mount</div> </div> <div> <div>FOV (MM) (HxV)</div> <table> <tr> <th>1/3"</th><th>1/2"</th><th>2/3"</th><th>1"</th></tr> <tr> <td>27.3X20.5</td><td>36.4X27.3</td><td>50x37.5</td><td>----</td></tr> </table> </div>	1/3"	1/2"	2/3"	1"	27.3X20.5	36.4X27.3	50x37.5	----								
1/3"	1/2"	2/3"	1"																								
54.5X40.9	72.7X54.5	φ100	----																								
1/3"	1/2"	2/3"	1"																								
27.3X20.5	36.4X27.3	50x37.5	----																								



High Resolution Telecentric Lens

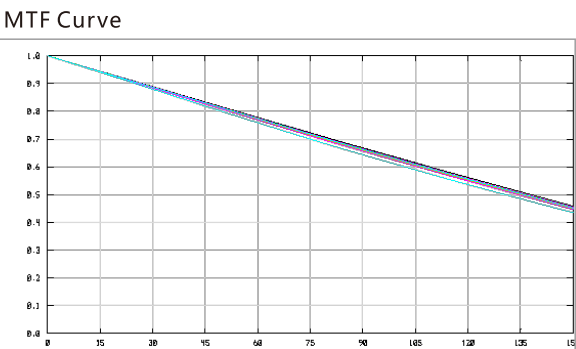
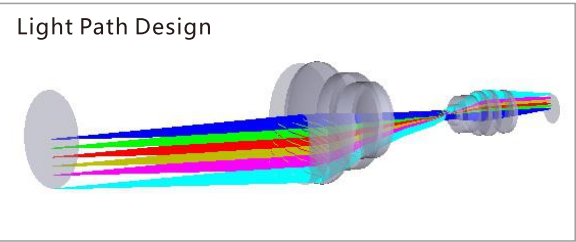
Telecentric optical design, super low distortion, high telecentricity and deep DOF, which is suitable for defection inspection and auto inspection in-line.

PRODUCT ADVANTAGES

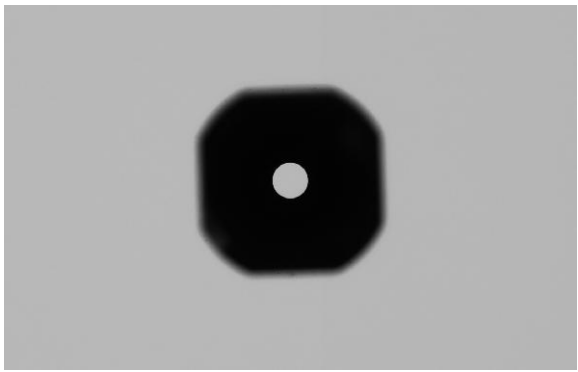
- 1.Supports 5MP camera with 2/3" sensor;
- 2.DOF can be expanded properly according to customer' s requirement,the maximum DOF can be up to 10mm;
- 3. Coaxial function is optional, coaxial light is even. During the DOF,magnification and objective dimension keep same;
- 4. Reasonable design of connector dimension, many options of ring shadowless light for different environment.

APPLICATION FIELDS

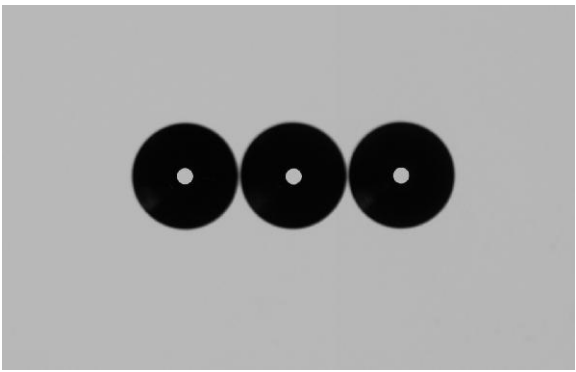
can be used in automation industry and machine vision industry.



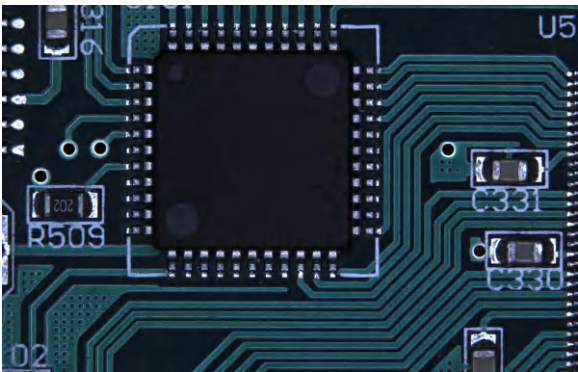
ACTUAL IMAGE



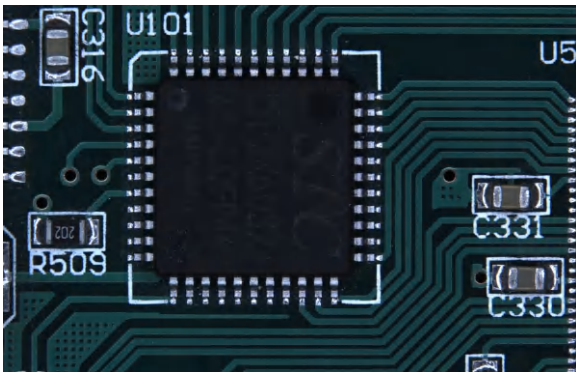
Φ30 Parallel bottom light—large bore inspection



Φ30 parallel bottom light---multiple small bore inspection

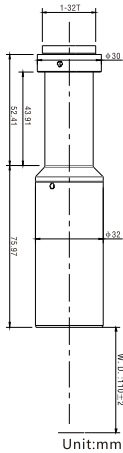


Ring light with high angle---- PCB assembly



Ring shadowless light—PCB assembly

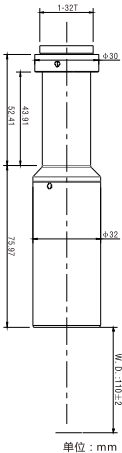
PMS-1.5HT110



Item : #720-657
Magnification : 1.5X
Working Distance : 110
F No. : 12.5
Tv Distortion : 0.01%
DOF : 0.44 mm
N.A. : 0.06
Resolution (μ m) : 5.59
Max. Sensor Size : 2/3"
Mount : C-Mount
Lighting :Coaxial
Working Temperature: -10°C~+50°C

FOV (MM) (HxV)				
1/2"	1/1.8"	2/3"	1"	
4.3X3.2	4.8X3.6	5.9X4.4	----	

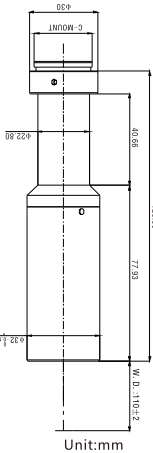
PMS-1.5HT110-C



Item : #720-957
Magnification : 1.5X
Working Distance : 110
F No. : 12.5
Tv Distortion : 0.01%
DOF : 0.44 mm
N.A. : 0.06
Resolution (μ m) : 5.59
Max. Sensor Size : 2/3"
Mount : C-Mount
Lighting :Coaxial
Working Temperature: -10°C~+50°C

FOV (MM) (HxV)				
1/2"	1/1.8"	2/3"	1"	
4.3X3.2	4.8X3.6	5.9X4.4	----	

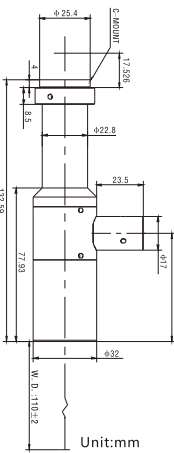
PMS-2HT110



Item : #720-210
Magnification : 2.0X
Working Distance : 110
F No. : 13.5
Tv Distortion : 0.03%
DOF : 0.27 mm
N.A. : 0.0074
Resolution (μ m) : 4.53
Max. Sensor Size : 2/3"
Mount : C-Mount
Lighting :Coaxial
Working Temperature: -10°C~+50°C

FOV (MM) (HxV)				
1/2"	1/1.8"	2/3"	1"	
3.2X2.4	3.6X2.7	4.4X3.3	----	

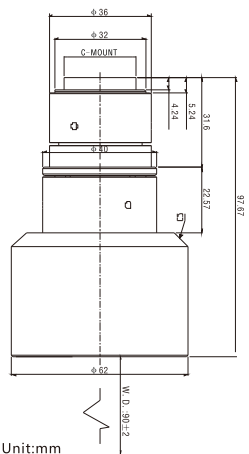
PMS-2HT110-C



Item : #720-211
Magnification : 2.0X
Working Distance : 110
F No. : 13.5
Tv Distortion : 0.03%
DOF : 0.27 mm
N.A. : 0.0074
Resolution (μ m) : 4.53
Max. Sensor Size : 2/3"
Mount : C-Mount
Lighting :Coaxial
Working Temperature: -10°C~+50°C

FOV (MM) (HxV)				
1/2"	1/1.8"	2/3"	1"	
3.2X2.4	3.6X2.7	4.4X3.3	----	

PMS-023HT90



Item : #720-652
Magnification : 0.23X
Working Distance : 90
F No. : 4.79
Tv Distortion : 0.02%
DOF : 7.25 mm
N.A. : 0.024
Resolution (μ m) : 13.98
Max. Sensor Size : 2/3"
Mount : C-Mount
Lighting :Coaxial
Working Temperature: -10°C~+50°C

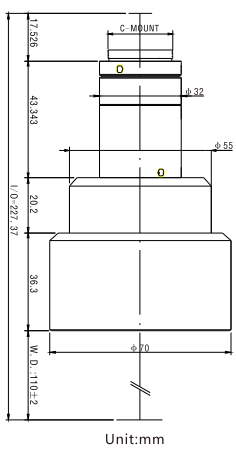
FOV (MM) (HxV)				
1/2"	1/1.8"	2/3"	1"	
27.8X20.9	31.1X23.3	38.3X28.7	----	

Specification

	Code	Item	Magni- fication	Field Of View(HxV) (mm)					W.D. (mm)	F.No.	TV Distortion	DOF (mm)	N.A.	Resolution (μm)	Max Sensor Size	Mount	Illumination	Working Temperature
				1/2"	1/1.8"	2/3"	1"	4/3"										
	PMS-017HT110	#720-651	0.17X	37.6x28.2	42.0x31.5	----	----	----	110	4.048	0.01%	11.2	0.021	16.00	1/1.8"	C-Mount	----	-10°C~+50°C
NEW	PMS-0132HT188	#720-132	0.132X	48.5x36.4	54.5x40.9	----	----	----	188	8.0	0.02%	36.95	0.0082	40.91	1/1.8"	C-Mount	----	-10°C~+50°C
NEW	PMS-02HT180	#720-180	0.20X	32.0x24.0	35.7x26.8	44.0x33.0	64.0x48.0	----	180	6.0	0.01%	12.0	0.017	20.14	1"	C-Mount	----	-10°C~+50°C
NEW	PMS-02HT180-S	#720-181	0.20X	32.0x24.0	35.7x26.8	44.0x33.0	64.0x48.0	----	180	(Adjustable)	0.01%	(Adjustable)	(Adjustable)	(Adjustable)	1"	C-Mount	----	-10°C~+50°C
NEW	PMS-0063HT416	#720-416	0.063X	101.6x76.2	113.4x85.1	139.7x104.8	203.2x152.4	----	416	6.0	0.01%	120.73	0.005	63.80	1"	C-Mount	----	-10°C~+50°C
NEW	PMS-0088HT398	#720-398	0.088X	72.7x54.5	81.2x60.9	100.0x75.0	145.5x109.1	----	398	6.0	0.01%	61.43	0.007	45.34	1"	C-Mount	----	-10°C~+50°C
NEW	PMS-0118HT261	#720-557	0.118X	54.2x40.7	60.6x45.4	74.6x55.9	108.5x81.4	----	261	5.6	0.01%	32.18	0.011	31.85	1"	C-Mount	----	-10°C~+50°C
NEW	PMS-016HT189	#720-189	0.16X	40.0x30.0	44.7x33.5	55.0x41.3	80.0x60.0	----	189	6.0	0.01%	18.75	0.013	25.17	1"	C-Mount	----	-10°C~+50°C
NEW	PMS-0108HT129	#720-129	0.108X	59.3x44.4	66.2x49.6	81.5x61.1	118.5x88.9	----	129	5.0	0.02%	34.29	0.0108	31.06	1"	C-Mount	----	-10°C~+50°C
NEW	PMS-0076HT468	#720-160	0.076X	84.2x63.2	94.0x70.5	115.8x86.8	168.4x126.3	----	468	3.5	0.02%	48.37	0.011	57.16	1"	C-Mount	----	-10°C~+50°C

*1 : Theoretical value (Diffused diameter φ0.04mm). It is better that only use 1/2 of the theoretical range for better application.

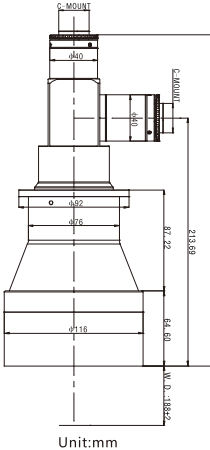
PMS-017HT110



Item : #720-651
Magnification : 0.17X
Working Distance : 110
F No. : 4.048
Tv Distortion : 0.01%
DOF : 11.2 mm
N.A. : 0.021
Resolution (μ m) : 16.00
Max. Sensor Size : 1/1.8"
Mount : C-Mount
Lighting :Coaxial
Working Temperature: -10°C~+50°C

FOV (MM) (HxV)				
1/2"	1/1.8"	2/3"	1"	
37.6X28.2	42.0X31.5	----	----	

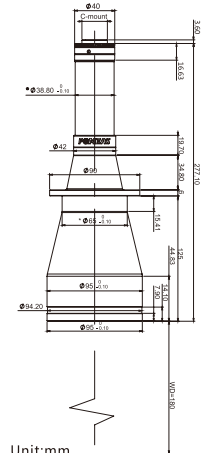
PMS-0132HT188



Item : #720-132
Magnification : 0.132X
Working Distance : 188
F No. : 8.0
Tv Distortion : 0.02%
DOF : 36.95 mm
N.A. : 0.0082
Resolution (μ m) : 40.91
Max. Sensor Size : 1/1.8"
Mount : C-Mount
Lighting :Coaxial
Working Temperature: -10°C~+50°C

FOV (MM) (HxV)				
1/2"	1/1.8"	2/3"	1"	
48.5X36.4	54.5X40.9	----	----	

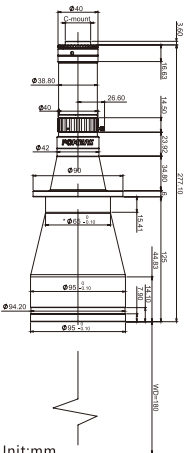
PMS-02HT180



Item : #720-180
Magnification : 0.2X
Working Distance : 180
F No. : 6.0(Adjustable)
Tv Distortion : 0.01%
DOF : 12.0 mm(Adjustable)
N.A. : 0.017(Adjustable)
Resolution (μ m) : 20.14(Adjustable)
Max. Sensor Size : 1"
Mount : C-Mount
Lighting :Coaxial
Working Temperature: -10°C~+50°C

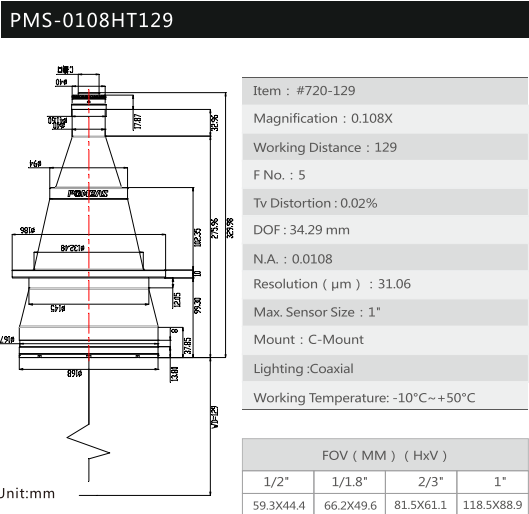
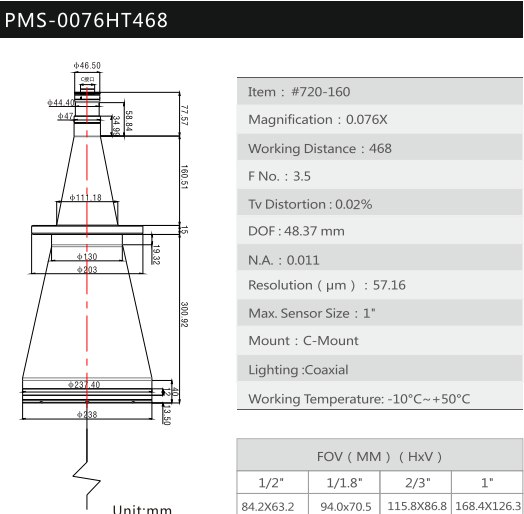
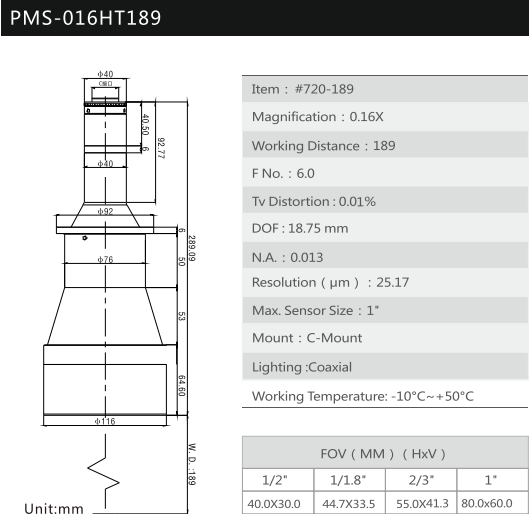
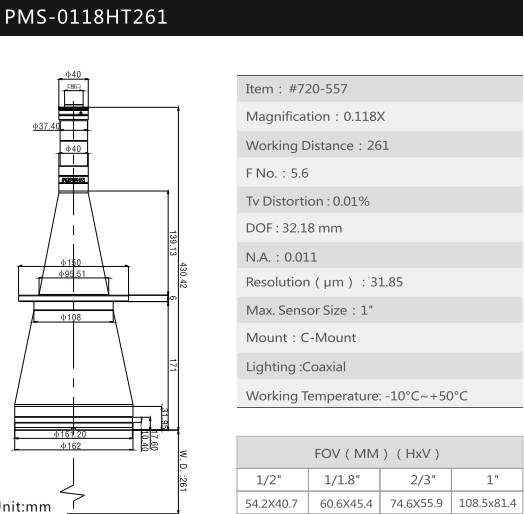
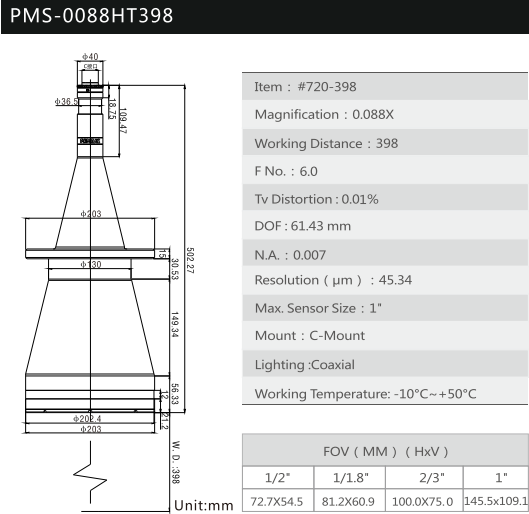
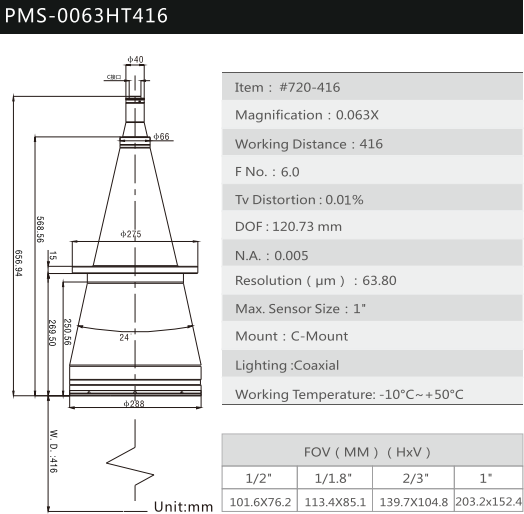
FOV (MM) (HxV)				
1/2"	1/1.8"	2/3"	1"	
32.0X24.0	35.7X26.8	44.0x33.0	64.0x48.0	

PMS-02HT180-S



Item : #720-181
Magnification : 0.2X
Working Distance : 180
F No. : 6.0(Adjustable)
Tv Distortion : 0.01%
DOF : 12.0 mm(Adjustable)
N.A. : 0.017(Adjustable)
Resolution (μ m) : 20.14(Adjustable)
Max. Sensor Size : 1"
Mount : C-Mount
Lighting :Coaxial
Working Temperature: -10°C~+50°C

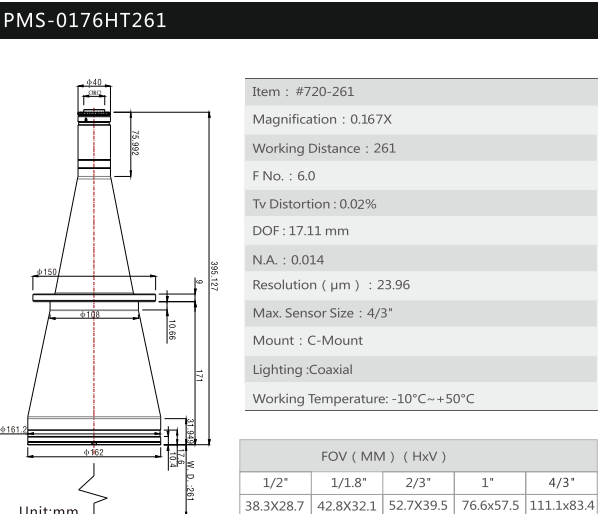
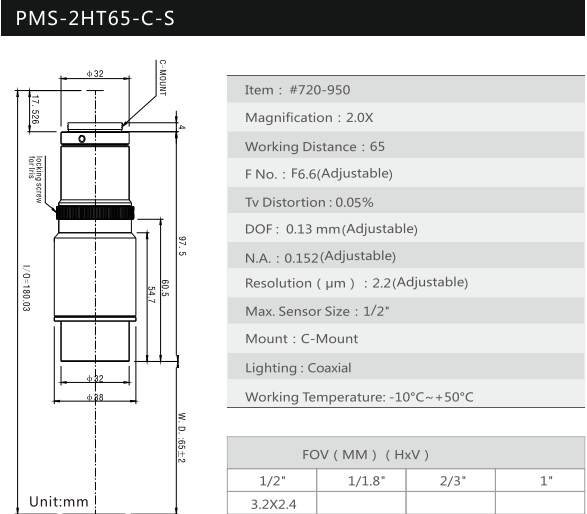
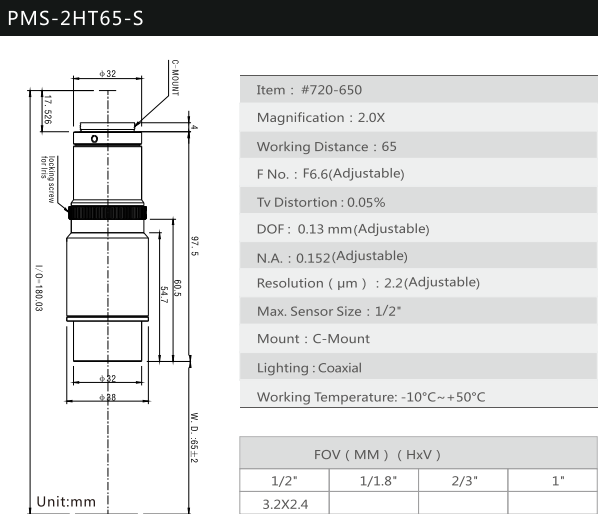
FOV (MM) (HxV)				
1/2"	1/1.8"	2/3"	1"	
32.0X24.0	35.7X26.8	44.0x33.0	64.0x48.0	



Specification

Code	Item	Magni- fication	Field Of View(HxV) (mm)					W.D. (mm)	F.No.	TV Distortion	DOF (mm)	N.A.	Resolution (μm)	Max Sensor Size	Mount	Illumination	Working Temperature
			1/2"	1/1.8"	2/3"	1"	4/3"										
PMS-2HT65-S PMS-2HT65-C-S	#720-650/ #720-950	2.0X	3.2x2.4	—	—	—	—	65	F6.6 (Adjustable)	0.05%	0.13 (Adjustable)	0.152 (Adjustable)	2.2 (Adjustable)	1/2"	C-Mount	—/Coaxial	-10°C~+50°C
NEW PMS-0167HT261	#720-261	0.167X	38.3X28.7	42.8X32.1	52.7X39.5	76.6X57.5	111.1X83.4	261	6.0	0.02%	17.11	0.014	23.96	4/3"	C-Mount	—	-10°C~+50°C

*1 : Theoretical value (Diffused diameter φ0.04mm). It is better that only use 1/2 of the theoretical range for better application.





Standard Telecentric Lens

The Lenses from this series have certain magnification and working distance. Tailored service is available, which makes this series lens has super good cost effective.

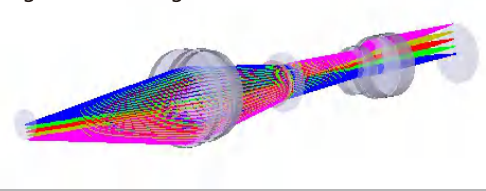
PRODUCT ADVANTAGES

- 1.This series telecentric lens adopts objective telecentric design, which have features of high DOF, high resolution and low distortion;
- 2.Support C-mount camera with max sensor size as 2/3" ;
- 3.Coaxial function is optional, coaxial light is even;
- 4.Standard C-mount;
- 5.Can work with prism;

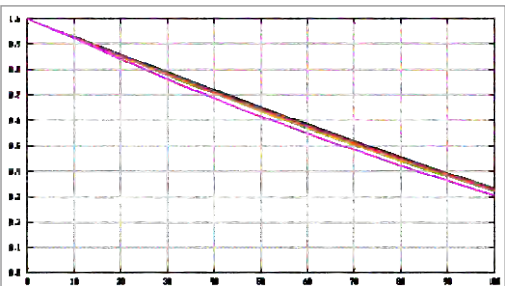
APPLICATION FIELDS

Positioning inspection of mobile screen and PCB printing industry.

Light Path Design



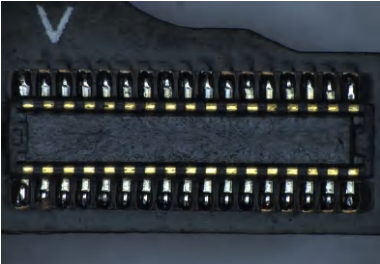
MTF Curve



ACTUAL IMAGE



External coaxial light —HDMI cable



External coaxial light-LCD top connector.



External coaxial light-LCD top connector.

Parameter Table Of Standard Telecentric Lens:

Code	Item	Magni- fication	Field Of View(HxV) (mm)					W.D. (mm)	F.No.	TV Distortion	DOF (mm)	N.A.	Resolution (μm)	Max Sensor Size	Mount	Illumin- ation	Working Temperature
			1/4"	1/3"	1/2"	1/1.8"	2/3"										
PMS-0.5ST40	#710-540	0.5X	6.4x4.8	9.6x7.2	12.8x9.6	—	—	40	5	0.07%	1.6	0.05	6.7	1/2"	C	—	-10℃~+50℃
PMS-0.5TTC1422	#710-545	0.5X	6.8x5.1	10.2x7.7	13.6x10.2	15.2x11.4	18.7x14.0	14-22	5	0.10%	1.81	0.047	7.14	2/3"	C	—	-10℃~+50℃
PMS-0.8ST90	#710-546	0.8X	4.0x3.0	6.0x4.5	8.0x6.0	—	—	90.5	10.67	0.02%	1.33	0.0375	8.947	1/2"	C	—	-10℃~+50℃
PMS-8GX9.5	#710-547	8.0X	0.4x0.3	0.6x0.5	—	—	—	9.5	13.33	0.07%	0.017	0.3	1.1	1/3"	M12	—	-10℃~+50℃
PMS-10GX9.4	#710-548	10X	0.32x0.24	—	—	—	—	9.4	17.768	0.06%	0.014	0.28	1.20	1/4"	M12	—	-10℃~+50℃
PMS-1ST85	#710-549	1.0X	3.2x2.4	4.8x3.6	6.4x4.8	7.1x5.4	8.8x6.6	85	12.4	0.00%	1.0	0.04	8.39	2/3"	C	—	-10℃~+50℃
PMS-1ST65/ PMS-1ST65-C	#710-550/ #710-850	1.0X	3.2x2.4	4.8x3.6	6.4x4.8	—	—	65	14.29	0.01%	1.1	0.04	10	1/2"	C	--/Coaxial	-10℃~+50℃
PMS-1ST110/ PMS-1ST110-C	#710-551/ #710-851	1.0X	3.2x2.4	4.8x3.6	6.4x4.8	—	—	110	19.94	0.02%	1.6	0.025	13.42	1/2"	C	--/Coaxial	-10℃~+50℃
PMS-1ST200/ PMS-1ST200-C	#710-552/ #710-852	1.0X	3.2x2.4	4.8x3.6	6.4x4.8	7.1x5.4	—	200	33.18	0.02%	2.67	0.015	22.37	1/1.8"	C	--/Coaxial	-10℃~+50℃
PMS-1.5ST110/ PMS-1.5ST110-C	#710-553/ #710-853	1.5X	2.1x1.6	3.2x2.4	4.3x3.2	4.8x3.6	5.9x4.4	110	27.8	0.02%	0.99	0.027	12.43	2/3"	C	--/Coaxial	-10℃~+50℃
PMS-1.5ST230/ PMS-1.5ST-230-C	#710-554/ #710-854	1.5X	2.1x1.6	3.2x2.4	4.3x3.2	4.8x3.6	—	230	37.5	0.02%	1.33	0.02	16.78	1/1.8"	C	--/Coaxial	-10℃~+50℃
PMS-2ST110/ PMS-2ST110-C	#710-555/ #710-855	2.0X	1.6x1.2	2.4x1.8	3.2x2.4	3.6x2.7	4.4x3.3	110	25	0.01%	0.5	0.04	8	2/3"	C	--/Coaxial	-10℃~+50℃
PMS-2ST40/ PMS-2ST40-C	#710-556/ #710-856	2.0X	1.6x1.2	2.4x1.8	3.2x2.4	—	—	40.4	10	0.04%	0.2	0.1	3	1/2"	C	--/Coaxial	-10℃~+50℃
PMS-2ST150/ PMS-2ST150-C	#710-557/ #710-857	2.0X	1.6x1.2	2.4x1.8	3.2x2.4	—	—	150	10	0.03%	0.8	0.1	13.42	1/2"	C	--/Coaxial	-10℃~+50℃

*1 : Theoretical value (Diffused diameter φ0.04mm). It is better that only use 1/2 of the theoretical range for better application.



PRISM ADVANTAGE

- 1、Change optical path, to achieve meeting different requirements from different environments.
- 2、Brief structure design, which can save assembly space effectively.
- 3、High precision assembly, to make sure the imaging quality utmost close to the design.

Parameter Of Prism:

Code	PMS-P25.7	PMS-P31-L	PMA-P31-R
Item	#902-259	#902-260	#902-611
Corner Type	L Type	ZL type-L	ZL type-R
Inner Optical Lenth	25.7mm	31mm	31mm
The distance from axial of lens to surface A	8.85mm	9.75mm	9.75mm
Compatible lens	TC series of outer diameter of lens φ16mm	TC series of outer diameter of lens φ16mm	TC series of outer diameter of lens φ16mm

PMS-1ST200

Item : #710-552

Magnification : 1.0 X

Working Distance : 200

F No. : 33.18

Tv Distortion : 0.02%

DOF : 2.67 mm

N.A. : 0.015

Resolution (μm) : 22.37

Max. Sensor Size : 1/1.8"

Mount : C-Mount

Lighting :--/Coaxial

Working Temperature: -10°C~+50°C

FOV (MM) (HxV)

1/4"	1/3"	1/2"	1/1.8"	2/3"
3.2X2.4	4.8X3.6	6.4X4.8	7.1X5.4	

PMS-1ST200-C

Item : #710-852

Magnification : 1.0 X

Working Distance : 200

F No. : 33.18

Tv Distortion : 0.02%

DOF : 2.67 mm

N.A. : 0.015

Resolution (μm) : 22.37

Max. Sensor Size : 1/1.8"

Mount : C-Mount

Lighting :--/Coaxial

Working Temperature: -10°C~+50°C

FOV (MM) (HxV)

1/4"	1/3"	1/2"	1/1.8"	2/3"
3.2X2.4	4.8X3.6	6.4X4.8	7.1X5.4	

PMS-1.5ST110

Item : #710-553

Magnification : 1.5 X

Working Distance : 110

F No. : 27.8

Tv Distortion : 0.02%

DOF : 0.99 mm

N.A. : 0.027

Resolution (μm) : 12.43

Max. Sensor Size : 2/3"

Mount : C-Mount

Lighting :--/Coaxial

Working Temperature: -10°C~+50°C

FOV (MM) (HxV)

1/4"	1/3"	1/2"	1/1.8"	2/3"
2.1X1.6	3.2X2.4	4.3X3.2	4.8X3.6	5.9X4.4

PMS-1.5ST110-C

Item : #710-853

Magnification : 1.5 X

Working Distance : 110

F No. : 27.8

Tv Distortion : 0.02%

DOF : 0.99 mm

N.A. : 0.027

Resolution (μm) : 12.43

Max. Sensor Size : 2/3"

Mount : C-Mount

Lighting :--/Coaxial

Working Temperature: -10°C~+50°C

FOV (MM) (HxV)

1/4"	1/3"	1/2"	1/1.8"	2/3"
2.1X1.6	3.2X2.4	4.3X3.2	4.8X3.6	5.9X4.4

PMS-1.5ST230

Item : #710-554

Magnification : 1.5 X

Working Distance : 230

F No. : 37.5

Tv Distortion : 0.02%

DOF : 1.33 mm

N.A. : 0.02

Resolution (μm) : 16.78

Max. Sensor Size : 1/1.8"

Mount : C-Mount

Lighting :--/Coaxial

Working Temperature: -10°C~+50°C

FOV (MM) (HxV)

1/4"	1/3"	1/2"	1/1.8"	2/3"
2.1X1.6	3.2X2.4	4.3X3.2	4.8X3.6	

PMS-1.5ST230-C

Item : #710-854

Magnification : 1.5 X

Working Distance : 230

F No. : 37.5

Tv Distortion : 0.02%

DOF : 1.33 mm

N.A. : 0.02

Resolution (μm) : 16.78

Max. Sensor Size : 1/1.8"

Mount : C-Mount

Lighting :--/Coaxial

Working Temperature: -10°C~+50°C

FOV (MM) (HxV)

1/4"	1/3"	1/2"	1/1.8"	2/3"
2.1X1.6	3.2X2.4	4.3X3.2	4.8X3.6	

PMS-2ST110

Item : #710-555

Magnification : 2.0 X

Working Distance : 110

F No. : 25

Tv Distortion : 0.01%

DOF : 0.5 mm

N.A. : 0.04

Resolution (μm) : 8

Max. Sensor Size : 2/3"

Mount : C-Mount

Lighting :--/Coaxial

Working Temperature: -10°C~+50°C

FOV (MM) (HxV)

1/4"	1/3"	1/2"	1/1.8"	2/3"
1.6X1.2	2.4X1.8	3.2X2.4	3.6X2.7	4.4X3.3

PMS-2ST110-C

Item : #710-855

Magnification : 2.0 X

Working Distance : 110

F No. : 25

Tv Distortion : 0.01%

DOF : 0.5 mm

N.A. : 0.04

Resolution (μm) : 8

Max. Sensor Size : 2/3"

Mount : C-Mount

Lighting :--/Coaxial

Working Temperature: -10°C~+50°C

FOV (MM) (HxV)

1/4"	1/3"	1/2"	1/1.8"	2/3"
1.6X1.2	2.4X1.8	3.2X2.4	3.6X2.7	4.4X3.3

PMS-2ST40

Item : #710-556

Magnification : 2.0 X

Working Distance : 40.4

F No. : 10

Tv Distortion : 0.04%

DOF : 0.2 mm

N.A. : 0.1

Resolution (μm) : 3

Max. Sensor Size : 1/2"

Mount : C-Mount

Lighting :--/Coaxial

Working Temperature: -10°C~+50°C

FOV (MM) (HxV)

1/4"	1/3"	1/2"	1/1.8"	2/3"
1.6X1.2	2.4X1.8	3.2X2.4		

PMS-2ST40-C

Item : #710-856

Magnification : 2.0 X

Working Distance : 40.4

F No. : 10

Tv Distortion : 0.04%

DOF : 0.2 mm

N.A. : 0.1

Resolution (μm) : 3

Max. Sensor Size : 1/2"

Mount : C-Mount

Lighting :--/Coaxial

Working Temperature: -10°C~+50°C

FOV (MM) (HxV)

1/4"	1/3"	1/2"	1/1.8"	2/3"
1.6X1.2	2.4X1.8	3.2X2.4		

PMS-2ST150

Item : #710-557

Magnification : 2.0 X

Working Distance : 150

F No. : 10

Tv Distortion : 0.03%

DOF : 0.8 mm

N.A. : 0.1

Resolution (μm) : 13.42

Max. Sensor Size : 1/2"

Mount : C-Mount

Lighting :--/Coaxial

Working Temperature: -10°C~+50°C

FOV (MM) (HxV)

1/4"	1/3"	1/2"	1/1.8"	2/3"
1.6X1.2	2.4X1.8	3.2X2.4		

PMS-2ST150-C

Item : #710-857

Magnification : 2.0 X

Working Distance : 150

F No. : 10

Tv Distortion : 0.03%

DOF : 0.8 mm

N.A. : 0.1

Resolution (μm) : 13.42

Max. Sensor Size : 1/2"

Mount : C-Mount

Lighting :--/Coaxial

Working Temperature: -10°C~+50°C

FOV (MM) (HxV)

1/4"	1/3"	1/2"	1/1.8"	2/3"
1.6X1.2	2.4X1.8	3.2X2.4		



Camera Module With Fixed Magnification Telecentric Lens

Consist of fixed magnification telecentric lens and industry analog camera, connect display via BNV connector to get imag.

PRODUCT ADVANTAGES

- 1. Good Image
- 2. Low Cost
- 3. Convenient to use

APPLICATION FIELDS

Widely used for image inspection, positioning field etc..

Code	PMS-CLNC-2065CB	PMS-CLNC-20150CB	PMS-CLNC-1065CB	PMS-CLNC-0690-OP	PMS-CLNC-05110	PMS-CLNC-05110CB	PMS-CLNC-20110-OP	PMS-CLNC-20110CB
Magnification	2.0X	2.0X	1.0X	0.6X	0.5X		2.0X	
Working Distance (MM)	65	150	65	90	110		110	
Resolution	640*480	640*480	640*480	640*480	640*480		640*480	
Pixel Size(μm)	5.16	13.42	10.0	12.5	15.0		8.0	
DOF(MM)	0.31	0.80	1.10	2.47	2.96		0.50	
Tv Distortion	0.02%	0.03%	0.01%	0.01%	0.01%		0.01%	
FOV	2.4*1.8	2.4*1.8	4.8*3.6	8.0*6.0	9.6*7.2		2.4*1.8	
Sensor Size	1/3"	1/3"	1/3"	1/3"	1/3"		1/3"	
Lighting	Coaxial (Blue)	Coaxial (Blue)	Coaxial (Blue)	Coaxial (Blue)	Non-coaxial	Coaxial (Blue)	Non-coaxial	Coaxial (Blue)
VIDEO Connector	BNC	BNC	BNC	BNC	BNC		BNC	
Input Voltage	12V	12V	12V	12V	12V		12V	
Working Temperature	-10°C~+50°C	-10°C~+50°C	-10°C~+50°C	-10°C~+50°C	-10°C~+50°C		-10°C~+50°C	

*1 : Theoretical value (Diffused diameter φ0.04mm). It is better that only use 1/2 of the theoretical range for better application.

PMS-CLNC-2065CB

Magnification : 2.0x

Working distance : 65

Resolution : 640*480

Pixel size (μm) : 5.16

Dof: 0.31

Tv distortion: 0.02%

Fov: 2.4*1.8

Sensor size : 1/3"

Lighting : coaxial (blue)

Video connector : bnc

Input voltage : 12v

Working temperature : -10°c~+50°

PMS-CLNC-20150CB

Magnification : 2.0x

Working distance : 150

Resolution : 640*480

Pixel size (μm) : 13.42

Dof: 0.80

Tv distortion: 0.03%

Fov: 2.4*1.8

Sensor size : 1/3"

Lighting : coaxial (blue)

Video connector : bnc

Input voltage : 12v

Working temperature : -10°c~+50°

PMS-CLNC-1065CB

Magnification : 1.0x

Working distance : 65

Resolution : 640*480

Pixel size (μm) : 10.0

Dof: 1.10

Tv distortion: 0.01%

Fov: 4.8*3.6

Sensor size : 1/3"

Lighting : coaxial (blue)

Video connector : bnc

Input voltage : 12v

Working temperature : -10°c~+50°

PMS-CLNC-0690-OP

Magnification : 0.6x

Working distance : 90

Resolution : 640*480

Pixel size (μm) : 12.5

Dof: 2.47

Tv distortion: 0.01%

Fov: 8.0*6.0

Sensor size : 1/3"

Lighting : coaxial (blue)

Video connector : bnc

Input voltage : 12v

Working temperature : -10°c~+50°

PMS-CLNC-05110

Magnification : 0.5x

Working distance : 110

Resolution : 640*480

Pixel size (μm) : 15.0

Dof: 2.96

Tv distortion: 0.01%

Fov: 9.6*7.2

Sensor size : 1/3"

Lighting : ---/

Video connector : bnc

Input voltage : 12v

Working temperature : -10°c~+50°

PMS-CLNC-05110CB

Magnification : 0.5x

Working distance : 110

Resolution : 640*480

Pixel size (μm) : 15.0

Dof: 2.96

Tv distortion: 0.01%

Fov: 9.6*7.2

Sensor size : 1/3"

Lighting : coaxial (blue)

Video connector : bnc

Input voltage : 12v

Working temperature : -10°c~+50°

PMS-CLNC-20110-OP

Magnification : 2.0x

Working distance : 110

Resolution : 640*480

Pixel size (μm) : 8.0

Dof: 0.50

Tv distortion: 0.01%

Fov: 2.4*1.8

Sensor size : 1/3"

Lighting : ---/

Video connector : bnc

Input voltage : 12v

Working temperature : -10°c~+50°

PMS-CLNC-20110CB

Magnification : 2.0x

Working distance : 110

Resolution : 640*480

Pixel size (μm) : 8.0

Dof: 0.50

Tv distortion: 0.01%

Fov: 2.4*1.8

Sensor size : 1/3"

Lighting : coaxial (blue)

Video connector : bnc

Input voltage : 12v

Working temperature : -10°c~+50°

Telecentric Lens With 55mm Focal Length

55mm Telecentric lens has excellent imaging quality, it has not just telecentric optical design to make sure low distortion, but long working distance as machine vision lens.

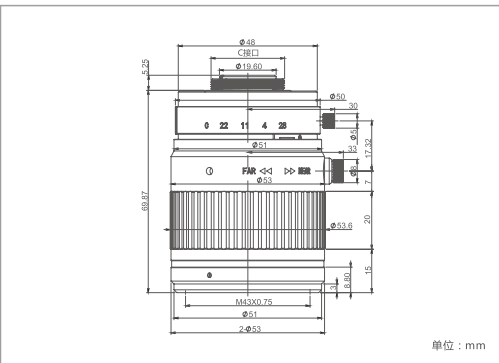


PRODUCT ADVANTAGES

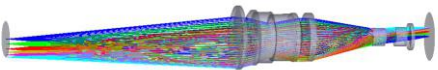
- 1.Supports 5MP camera with 2/3” sensor;
- 2.Manual iris, iris range is F2.8-C, max focal length is 55mm;
- 3.Deep depth of field, low distortion, high resolution;
- 4.Telecentric optical design, suitable in machine vision industry and automation industry;

Specification

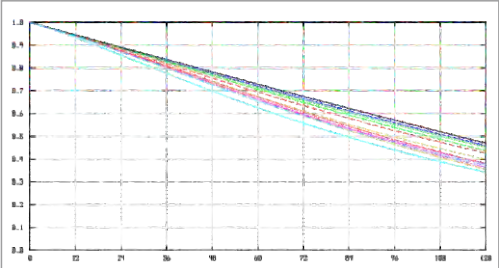
Code		PMS-TC55MC5M
Item		#730-528
Magnification		0.5X - inf.
Resolution		3.45μm@2/3” CCD
Focal Length		55mm
Iris Length		F2.8-C
Max.Sensor Size		2/3”
Field Of View(DxHxV)	2/3”	11° x 9.2° x 6.9°
	1/2”	8.4° x 6.7° x 5.0°
	1/3”	6.3° x 5.0° x 3.8°
Focus Range		0.13m - ∞
Object Dimensions (at the nearest focusing distance) (DXHXV)	2/3”	21.4mmx17.1mmx12.8mm
	1/2”	15.6mmx12.4mmx9.3mm
	1/3”	11.3mmx9.3mmx7.0mm
Control	Focus	Manual
	Iris	Manual
Distortion(at 0.5X)	2/3”	0.43%@y=5.5mm
	1/2”	0.26%@y=4.0mm
	1/3”	0.16%@y=3.0mm
Optical Back Focal Length(in air)		13.3mm
Filter Thread		M43x0.75mm
Mount		C-Mount
Illumination		——
Working Temperature		-10℃~+50℃



Light Path Design



MTF Curve



Macro Lens

High resolution, low distortion, even brightness, suitable for high precision inspection and measurement.

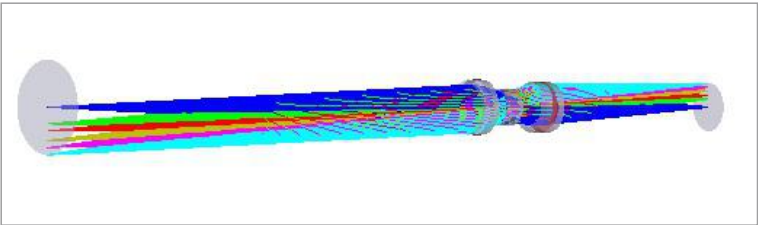
PRODUCT ADVANTAGES

- 1. Supports MP camera with 2/3” sensor;
- 2. Standard C-mount;
- 3. Super high cost-efficient;
- 4. Many magnifications is optional;

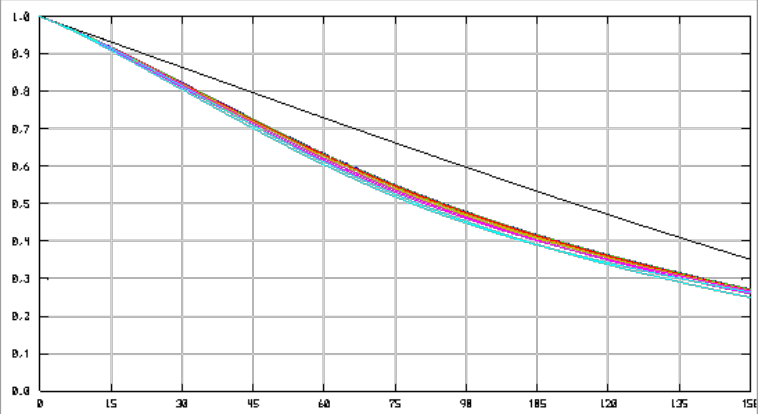
APPLICATION FIELDS

Can be applied in high precision measurement of large objects and machine vision industry.

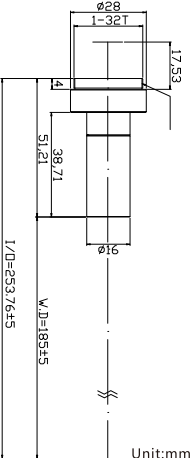
Light Path Design



MTF Curve



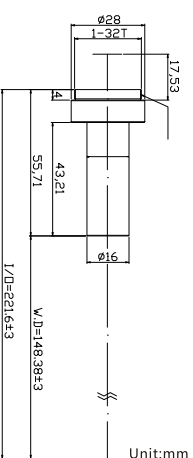
PMS-03ML185



Item : #780-185
Magnification : 0.3X
Working Distance : 185
F No. : 6.26
Tv Distortion : 0.02%
DOF : 5.56 mm
N.A. : 0.024
Resolution (μm) : 13.98
Max. Sensor Size : 2/3"
Mount : C-Mount
Lighting :----
Working Temperature: -10°C~+50°C

FOV (MM) (HxV)			
1/4"	1/3"	1/2"	1/1.8"
16.0X12.0	21.3X16.0	23.8X17.9	29.3X22.0

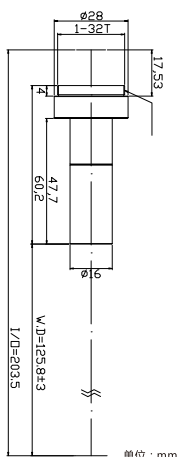
PMS-04ML150



Item : #780-150
Magnification : 0.4 X
Working Distance : 150
F No. : 6.2
Tv Distortion : 0.02%
DOF : 3.03 mm
N.A. : 0.033
Resolution (μm) : 10.17
Max. Sensor Size : 2/3"
Mount : C-Mount
Lighting :----
Working Temperature: -10°C~+50°C

FOV (MM) (HxV)			
1/4"	1/3"	1/2"	1/1.8"
12.0X9.0	16.0X12.0	17.9X13.4	22.0X16.5

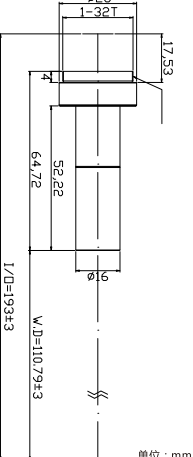
PMS-05ML130



Item : #780-130
Magnification : 0.5X
Working Distance : 130
F No. : 6.2
Tv Distortion : 0.02%
DOF : 1.95 mm
N.A. : 0.041
Resolution (μm) : 8.18
Max. Sensor Size : 2/3"
Mount : C-Mount
Lighting :----
Working Temperature: -10°C~+50°C

FOV (MM) (HxV)			
1/4"	1/3"	1/2"	1/1.8"
9.6X7.2	12.8X9.6	14.3X10.7	17.6X13.2

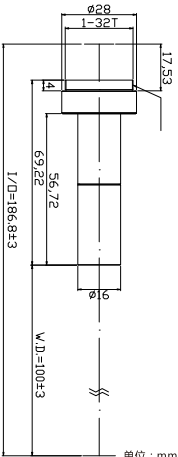
PMS-06ML110



Item : #780-110
Magnification : 0.6X
Working Distance : 110
F No. : 6.67
Tv Distortion : 0.02%
DOF : 1.45 mm
N.A. : 0.046
Resolution (μm) : 7.29
Max. Sensor Size : 2/3"
Mount : C-Mount
Lighting :----
Working Temperature: -10°C~+50°C

FOV (MM) (HxV)			
1/4"	1/3"	1/2"	1/1.8"
8.0X6.0	10.7X8.0	11.9X8.9	14.7X11.0

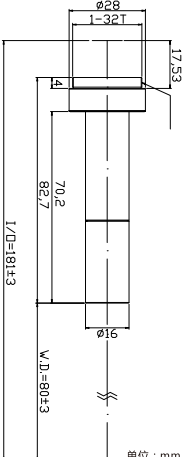
PMS-07ML100



Item : #780-100
Magnification : 0.7X
Working Distance : 100
F No. : 7.1
Tv Distortion : 0.02%
DOF : 1.14 mm
N.A. : 0.05
Resolution (μm) : 6.71
Max. Sensor Size : 2/3"
Mount : C-Mount
Lighting :----
Working Temperature: -10°C~+50°C

FOV (MM) (HxV)			
1/4"	1/3"	1/2"	1/1.8"
6.9X5.1	9.1X6.9	10.2X7.7	12.6X9.4

PMS-1ML80



Item : #780-080
Magnification : 1.0 X
Working Distance : 80
F No. : 10.4
Tv Distortion : 0.02%
DOF : 0.83 mm
N.A. : 0.048
Resolution (μm) : 6.99
Max. Sensor Size : 2/3"
Mount : C-Mount
Lighting :----
Working Temperature: -10°C~+50°C

FOV (MM) (HxV)			
1/4"	1/3"	1/2"	1/1.8"
4.8X3.6	6.4X4.8	7.1X5.4	8.8X6.6

Specification

Code	Item	Magni- fication	Field Of View(HxV) (mm)				W.D. (mm)	F.No.	TV Distortion	DOF (mm)	N.A.	Resolution (μm)	Max Sensor Size	Mount	Illumination	Working Temperature
			1/2"	1/1.8"	2/3"	1"										
PMS-03ML185	#780-185	0.3X	16.0x12.0	21.3x16.0	23.8x17.9	29.3x22.0	185	6.26	0.02%	5.56	0.024	13.98	2/3"	C-Mount	——	-10°C ~ +50°C
PMS-04ML150	#780-150	0.4X	12.0x9.0	16.0x12.0	17.9x13.4	22.0x16.5	150	6.2	0.02%	3.03	0.033	10.17	2/3"	C-Mount	——	-10°C ~ +50°C
PMS-05ML130	#780-130	0.5X	9.6x7.2	12.8x9.6	14.3x10.7	17.6x13.2	130	6.2	0.02%	1.95	0.041	8.18	2/3"	C-Mount	——	-10°C ~ +50°C
PMS-06ML110	#780-110	0.6X	8.0x6.0	10.7x8.0	11.9x8.9	14.7x11.0	110	6.67	0.02%	1.45	0.046	7.29	2/3"	C-Mount	——	-10°C ~ +50°C
PMS-07ML100	#780-100	0.7X	6.9x5.1	9.1x6.9	10.2x7.7	12.6x9.4	100	7.1	0.02%	1.14	0.05	6.71	2/3"	C-Mount	——	-10°C ~ +50°C
PMS-1ML80	#780-080	1.0X	4.8x3.6	6.4x4.8	7.1x5.4	8.8x6.6	80	10.4	0.02%	0.83	0.048	6.99	2/3"	C-Mount	——	-10°C ~ +50°C

*1 : Theoretical value (Diffused diameter φ0.04mm). It is better that only use 1/2 of the theoretical range for better application.

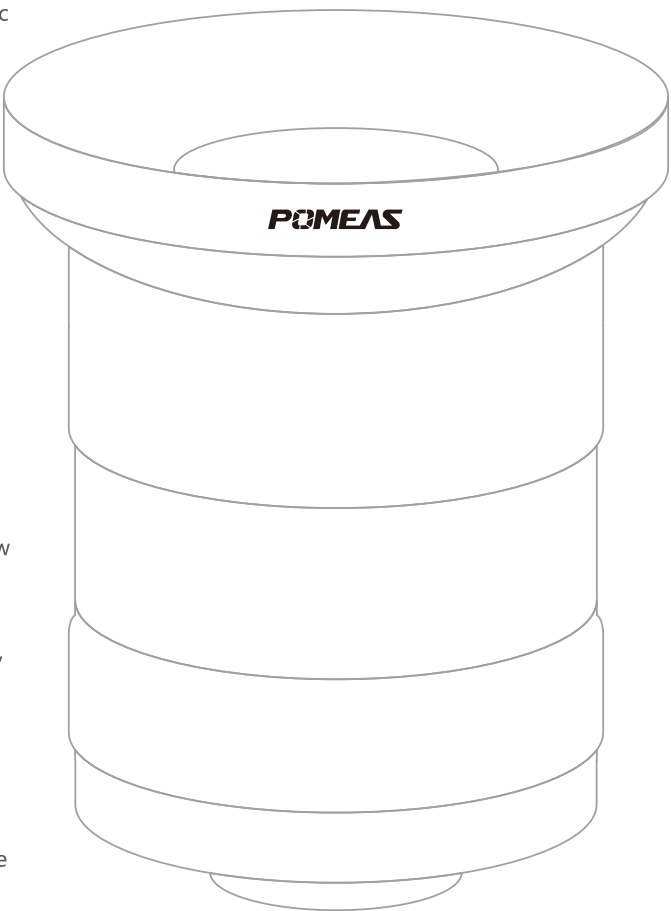
FA/MACHINE VISION LENS SERIES

To fully meet customers requirements, Pomeas develops full range FA lenses,including 1.5MP 2/3" series, 5MP 2/3" series, 8MP 1" series and 10MP 4/3" series. OEM business is welcomed also.

Widely used in machine vision, security, automatic production, electronic communication.

Main Advantage:

- 1. Professional optical design, high resolution, low distortion, low chromatic abberation.
- 2. Uniform distribution of light, even illumination, no image vignetting
- 3. Advanced coating technology, at the utmost extent, to decrease the stray light and ghost.
- 4. Metal cover, anodized surface finishing, reliable quality.



POMEAS
PROFESSIONAL MANUFACTURER
OF VISION SYSTEM

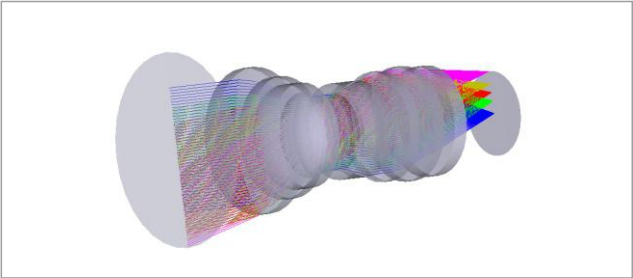
Low Distortion Machine Vision Lens

Professional optical path design, low distortion imaging, uniform distribution of center and edge light.

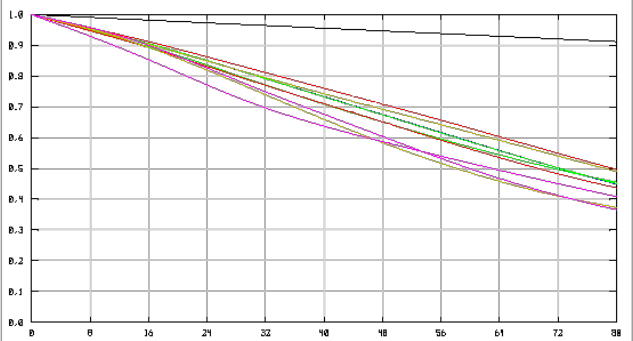
PRODUCT ADVANTAGES

- 1.Support MP/5MP/10MP 2/3" 1" 4/3" camera.
- 2.Focus and iris locking screw to ensure stable focusing.
- 3.Low distortion, sharp image.
- 4.Compact structure, excellent optical performance.

Optical pathway diagram



MTF Curve



APPLICATION FIELDS

Application: widely used in machine vision, automatic production and electronic communication field.

Machine Vision Lens Parameter

Code	Resolution	Max. Sensor Size	Item	Focal Length (MM)	Iris Range	Focusing Range	Field of View(DxHxV)			Distortion	Back Focal Length	Mount	Filter Thread
							4/3"	1"	2/3"				
PMS-12MC	1.5MP Lens Series	2/3" 8.8mmx6.6mm Ø11mm	#810-120	12.3	F1.4 - C	0.15m -∞	-	-	40.0° x30.2°	-1.80%@y=5.5mm	12.70mm	C-Mount	M30.5x0.5mm
PMS-16MC			#810-160	16.33	F1.4 - C	0.30m -∞	-	-	30.4° x22.9°	-1.00%@y=5.5mm	12.67mm	C-Mount	M30.5x0.5mm
PMS-25MC			#810-250	25	F1.4 - C	0.25m -∞	-	-	19.9° x15.0°	-0.32%@y=5.5mm	13.60mm	C-Mount	M30.5x0.5mm
PMS-35MC			#810-350	35	F1.4 - C	0.30m -∞	-	-	13.8° x10.4°	-0.33%@y=5.5mm	14.7mm	C-Mount	M30.5x0.5mm
PMS-50MC			#810-500	50	F1.8 - C	0.50m -∞	-	-	9.2° x7.6°	-0.11%@y=5.5mm	12.94mm	C-Mount	M30.5x0.5mm
PMS-75MC			#810-750	75	F2.8-C	1.10m -∞	-	-	6.7° x5.0°	0.34%@y=5.5mm	14.35mm	C-Mount	M30.5x0.5mm
PMS-1236MC			#810-123	12-36	F2.8-C	0.15m-∞(wide) 0.5m-∞(tele)	-	-	49.1°x40.2°x30.7°(wide) 17.2°x13.9°x10.5°(tele)	3.5%@y=5.5mm(wide) 2.3%@y=5.5mm(tele)	12.6mm(wide) 15.2mm(tele)	C-Mount	M35.5x0.5mm
PMS-08MC5M	5.0MP Lens Series	2/3" 8.8mmx6.6mm Ø11mm	#820-080	8	F1.6 - F22	0.1m - ∞	-	-	55.8° x43.3°	-0.73%@y=5.5mm	12.44mm	C-Mount	M40.5x0.5mm
PMS-12MC5M			#820-120	12	F1.6 - F22	0.1m -∞	-	-	39.8° x30.4°	-0.53%@y=5.5mm	12.42mm	C-Mount	M37.5x0.5mm
PMS-16MC5M			#820-160	16	F1.6 - F22	0.2m -∞	-	-	38.0° x30.8° x23.4°	-0.07%@y=5.5mm	12.36mm	C-Mount	M37.5x0.5mm
PMS-25MC5M			#820-250	25	F1.4 - F22	0.2m -∞	-	-	24.8° x20.0° x15.0°	-0.19%@y=5.5mm	12.78mm	C-Mount	M37.5x0.5mm
PMS-35MC5M			#820-350	35	F1.4 - F22	0.3m -∞	-	-	17.9° x14.3° x10.8°	-0.07%@y=5.5mm	12.82mm	C-Mount	M37.5x0.5mm
PMS-50MC5M			#820-500	50	F1.8 - F22	0.4m -∞	-	-	12.5° x10.1° x7.6°	0.03%@y=5.5mm	13.63mm	C-Mount	M37.5x0.5mm
PMS-75MC5M			#820-750	75	F2.0 - F22	0.9m -∞	-	-	8.4° x6.7°x5.0°	0.04%@y=5.5mm	13.76mm	C-Mount	M40.5x0.5mm
PMS-1236MC5M			#820-123	12-36	F2.8 - F16	0.15m -∞(wide) 0.45m -∞(tele)	-	-	50.8° x41.2° x31.2°(wide) 17.2° x13.8° x10.4°(tele)	-3.4%@y=5.5mm(wide) 1.4%@y=5.5mm(tele)	18.93mm(wide) 18.87mm(tele)	C-Mount	M40.5x0.5mm
PMS-12LC5M	5.0MP Lens Series	1" 12.8mmx9.6mm Ø16mm	#830-112	12	F1.6 - F22	1m - ∞	-	68.8° x57.1°x44.1°	50.0° x40.6°x30.9°	-2.88%@y=8.0mm	13.54mm	C-Mount	M52.0x0.72mm
PMS-16LC5M			#830-116	16	F1.6 - F22	1m -∞	-	54.3° x44.2°x33.5°	38.3° x30.8°x23.2°	-3.73%@y=8.0mm	12.17mm	C-Mount	M37.5x0.5mm
PMS-20LC5M			#830-120	16	F1.6 - F22	1m -∞	-	44.4° x35.8°x27.2°	31.0° x25.0°x18.8°	-1.82%@y=8.0mm	13.08mm	C-Mount	M37.5x0.5mm
PMS-25LC5M			#830-125	25	F1.6 - F22	1m -∞	-	36.2° x29.0°x21.8°	25.0° x20.0°x15.0°	-2.06%@y=8.0mm	12.69mm	C-Mount	M33.7x0.5mm
PMS-35LC5M			#830-135	35	F1.4 - F22	1m -∞	-	22.7° x18.2°x14.1°	16.1° x12.9°x9.6°	-0.27%@y=8.0mm	12.83mm	C-Mount	M39.0x0.5mm
PMS-25XC10M	10.0MP Lens Series	4/3" 17.6mmx13.2mm Ø22mm	#850-432	25	F2.0 - F22	0.15m - ∞	40.6° x31.0°	28.8° x21.8°	20.0° x15.1°	-0.66%@y=11.0mm	22.43mm	C-Mount	M46.0x0.75mm
PMS-35XC10M			#850-433	35	F2.0 - F22	0.15m - ∞	36.6° x29.6° x22.4°	25.9° x20.8° x15.7°	17.9° x14.4° x10.8°	-0.56%@y=11.0mm	18.65mm	C-Mount	M40.5x0.5mm
PMS-50XC10M			#850-435	50	F2.0 - F22	0.3m - ∞	20.9° x15.7°	14.6° x11.0°	10.1° x7.6°	-0.14%@y=11.0mm	20.29mm	C-Mount	M40.5x0.5mm

PMS-12MC

1.5MP Lens Series

Unit : mm

Max.Sensor Size		
2/3"	8.8mm X 6.6mm	φ11mm
Focal Length (MM). : 12.3mm		
Iris Range : F1.4-C		
Focusing Range : 0.15m-∞		
Distortion : -1.80%@y = 5.5mm		
Back Focal Length :12.70mm		
Mount : C-Mount		
Filter Thread : M30.5X0.5mm		

Field of View(DxHxV)		
4/3"	1"	2/3"
		40°X30.2°

PMS-16MC

1.5MP Lens Series

Unit : mm

Max.Sensor Size		
2/3"	8.8mm X 6.6mm	φ11mm
Focal Length (MM). : 16.33mm		
Iris Range : F1.4-C		
Focusing Range : 0.30m-∞		
Distortion : -1.00%@y = 5.5mm		
Back Focal Length :12.67mm		
Mount : C-Mount		
Filter Thread : M30.5X0.5mm		

Field of View(DxHxV)		
4/3"	1"	2/3"
		30.4°X22.9°

PMS-25MC

1.5MP Lens Series

Unit : mm

Max.Sensor Size		
2/3"	8.8mm X 6.6mm	φ11mm
Focal Length (MM). : 25 mm		
Iris Range : F1.4-C		
Focusing Range : 0.25m-∞		
Distortion : -0.32%@y = 5.5mm		
Back Focal Length :13.60mm		
Mount : C-Mount		
Filter Thread : M30.5X0.5mm		

Field of View(DxHxV)		
4/3"	1"	2/3"
		19.9°X15.0°

PMS-35MC

1.5MP Lens Series

Unit : mm

Max.Sensor Size		
2/3"	8.8mm X 6.6mm	φ11mm
Focal Length (MM). : 35 mm		
Iris Range : F1.4-C		
Focusing Range : 0.30m-∞		
Distortion : -0.33%@y = 5.5mm		
Back Focal Length :14.7mm		
Mount : C-Mount		
Filter Thread : M30.5X0.5mm		

Field of View(DxHxV)		
4/3"	1"	2/3"
		13.8°X10.4°

PMS-50MC

1.5MP Lens Series

Unit : mm

Max.Sensor Size		
2/3"	8.8mm X 6.6mm	φ11mm
Focal Length (MM). : 50 mm		
Iris Range : F1.8-C		
Focusing Range : 0.5m-∞		
Distortion : -0.11%@y = 5.5mm		
Back Focal Length :12.94mm		
Mount : C-Mount		
Filter Thread : M30.5X0.5mm		

Field of View(DxHxV)		
4/3"	1"	2/3"
		9.2°X7.6°

PMS-75MC

1.5MP Lens Series

Unit : mm

Max.Sensor Size		
2/3"	8.8mm X 6.6mm	φ11mm
Focal Length (MM). : 75 mm		
Iris Range : F2.8-C		
Focusing Range : 1.10m-∞		
Distortion : 0.34%@y = 5.5mm		
Back Focal Length:14.35mm		
Mount : C-Mount		
Filter Thread : M30.5X0.5mm		

Field of View(DxHxV)		
4/3"	1"	2/3"
		6.7°X5.0°

PMS-1236MC

1.5MP Lens Series

Unit : mm

Max.Sensor Size		
2/3"	8.8mm X 6.6mm	φ11mm
Focal Length (MM). :12-36mm		
Iris Range : F2.8-C		
Focusing Range : 0.15m-∞(wide) 0.5m-∞ (tele)		
Distortion : 3.5%@y = 5.5mm(wide) 2.3%@y = 5.5mm(tele)		
Back Focal Length :12.6mm(wide) 15.2mm(tele)		
Mount : C-Mount		
Filter Thread : M35.5X0.5mm		

Field of View(DxHxV)		
2/3"		
49.1°X40.2°X30.7°(wide) 17.2°X13.9°X10.5°(tele)		

PMS-3.5MC

1.5MP Lens Series

Unit : mm

Max.Sensor Size		
2/3"	8.8mm X 6.6mm	φ11mm
Focal Length (MM). : 3.5 mm		
Iris Range : F2.4-C		
Focusing Range : 0.15m-∞		
Distortion : -1.23%@y = 4.5mm -4.0%@y = 4.0mm -5.8%@y = 3.0mm		
Back Focal Length :8.57mm		
Mount : C-Mount		
Filter Thread : M40.5X0.5mm		

Field of View(DxHxV)		
1/1.8"	1/2"	1/3"
104.6°X94.4°X78.0°	99.6°X87.8°X71.2°	84.2°X71.2°X55.6°

PMS-08MC5M

5.0 MP Lens Series

Unit : mm

PMS-16MC5M

5.0 MP Lens Series

Unit : mm

PMS-35MC5M

5.0 MP Lens Series

Unit : mm

PMS-75MC5M

5.0 MP Lens Series

Unit : mm

PMS-12MC5M

5.0 MP Lens Series

Unit : mm

PMS-25MC5M

5.0 MP Lens Series

Unit : mm

PMS-50MC5M

5.0 MP Lens Series

Unit : mm

PMS-1236MC5M

5.0 MP Lens Series

Unit : mm

PMS-12LC5M

5.0 MP Lens Series

Unit : mm

PMS-20LC5M

5.0 MP Lens Series

Unit : mm

PMS-35LC5M

5.0 MP Lens Series

Unit : mm

PMS-35XC10M

10.0 MP Lens Series

Unit : mm

PMS-16LC5M

5.0 MP Lens Series

Unit : mm

PMS-25LC5M

5.0 MP Lens Series

Unit : mm

PMS-25XC10M

10.0 MP Lens Series

Unit : mm

PMS-50XC10M

10.0 MP Lens Series

Unit : mm



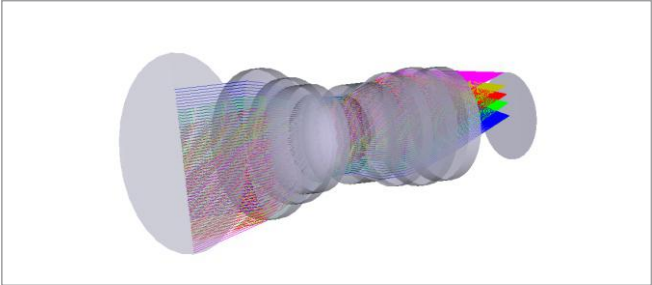
Fa Lens Series / 8mp 1” Low Distortion Machine Vision Lens

Professional optical path design, low distortion imaging, uniform distribution of center and edge light.

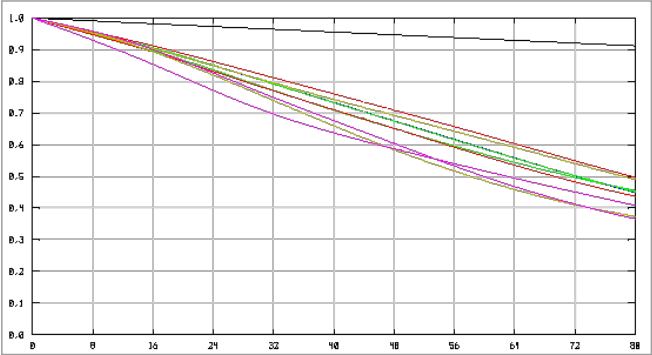
PRODUCT ADVANTAGES

- 1.Support 8MP 1” camera.
- 2.Focus and iris locking screw to ensure stable focusing.
- 3.Low distortion imaging.
- 4.Compact structure, excellent optical performance.

Optical pathway diagram



MTF Curve



APPLICATION FIELDS

Application: widely used in machine vision, automatic production and electronic communication field.

Machine Vision Lens Parameter

Code	Resolution	FOV	Item	Focal Length (MM)	Iris Range	Focusing Range	Field of Angle(DxHxV)			Distortion	Back Focal Length	Mount	Filter Thread
							1"						
NEW PMS-12LC8M	1"		8MP	16	F20-close	1"(16mm)	5394"x 43.92"x 33.45"	28.23"x 22.62"x 16.97"	2124" x 16.98" x 12.94"	-2.02%@y = 8.0mm	11.20mm	C型	M34X0.5mm
	1/2"	55.09×43.96×32.82								-0.68%@y = 4.0mm			
	1/3"	41.19×33.32×24.58								-0.39%@y = 3.0mm			
NEW PMS-25LC8M	1"	92.4×73.3×54.6mm		25	F20-close	1"(16mm)	36.21"×29.08"×21.86"	18.45"×14.72"×11.08"	13.81"×11.08"×8.34"	-1.41%@y=8mm	12.68mm	C型	M30.5X0.5mm
	1/2"	45.5×36.4×27.2mm								-0.32%@y=4.0mm			
	1/3"	34.2×27.3×20.5mm								-0.18%@y=3.0mm			
NEW PMS-35LC8M	1"	81.10×64.88×48.66mm		35	F20-close	1"(16mm)	26.10"×20.83"×15.72"	13.28"×10.65"×7.94"	9.92"×7.92"×6.00"	0.28%@y = 8.0mm	12.96mm	C型	M30.5X0.5mm
	1/2"	40.52×32.42×24.31mm								0.07%@y = 4.0mm			
	1/3"	30.42×24.34×18.25mm								0.04%@y = 3.0mm			
NEW PMS-50LC8M	1"	72.50×57.94×43.34		50	F20-close	1"(16mm)	18.38"×14.70"×10.98"	9.34"×7.42"×5.5"	6.96"×5.53×4.16"	-0.013%@y=8.0mm	21.35mm	C型	M37.0X0.5mm
	1/2"	36.18×28.76×21.66								0.010%@y=4.0mm			
	1/3"	27.26×21.74×16.34								0.008%@y=3.0mm			

PMS-12LC8M

8.0 MP Lens Series

Code:PMS-12LC8M

Image Size: 1"(16mm)

Wavelength:420~1000nm

Focal Length (MM). : 16 mm

Iris Range : F2.0-close

Focusing Range : 0.1m-∞

Back Focal Length :11.20mm

Mount : C-Mount

Filter Thread : M34X0.5mm

Field of View(DxHxV)			
1"	1/2"	1/3"	
53.94"×43.92"×33.45"	28.23"×22.62"×16.97"	21.24"×16.98"×12.94"	

Image Size			
1"	1/2"	1/3"	
112.75×89.28×66.33	55.09×43.96×32.82	41.19×33.32×24.58	

Distortion			
1"	1/2"	1/3"	
-2.02%@y = 8.0mm	-0.68%@y = 4.0mm	-0.39%@y = 3.0mm	

PMS-35LC8M

8.0 MP Lens Series

Code:PMS-35LC8M

Image Size: 1"(16mm)

Wavelength:420~1000nm

Focal Length (MM). : 35 mm

Iris Range : F2.0-close

Focusing Range : 0.2m-∞

Back Focal Length :12.96mm

Mount : C-Mount

Filter Thread : M30.5X0.5mm

Field of View(DxHxV)			
1"	1/2"	1/3"	
26.10"×20.83"×15.72"	13.28"×10.65"×7.94"	9.92"×7.92"×6.00"	

Image Size			
1"	1/2"	1/3"	
81.10×64.88×48.66mm	40.52×32.42×24.31mm	30.42×24.34×18.25mm	

Distortion			
1"	1/2"	1/3"	
0.28%@y = 8.0mm	0.07%@y = 4.0mm	0.04%@y = 3.0mm	

PMS-25LC8M

8.0 MP Lens Series

Code:PMS-25LC8M

Image Size: 1"(16mm)

Wavelength:420~1000nm

Focal Length (MM). : 25 mm

Iris Range : F1.8-close

Focusing Range : 0.15m-∞

Back Focal Length :12.68mm

Mount : C-Mount

Filter Thread : M30.5 X0.5mm

Field of View(DxHxV)			
1"	1/2"	1/3"	
36.21"×29.08"×21.86"	18.45"×14.72"×11.08"	13.81"×11.08"×8.34"	

Image Size			
1"	1/2"	1/3"	
92.4×73.3×54.6mm	45.5×36.4×27.2mm	34.2×27.3×20.5mm	

Distortion			
1"	1/2"	1/3"	
-1.41%@y = 8mm	-0.32%@y = 4.0mm	-0.18%@y = 3.0mm	

PMS-50LC8M

8.0 MP Lens Series

Code:PMS-50LC8M

Image Size: 1"(16mm)

Wavelength:420~1000nm

Focal Length (MM). : 50 mm

Iris Range : F2.0-close

Focusing Range : 0.25m-∞

Back Focal Length :21.35mm

Mount : C-Mount

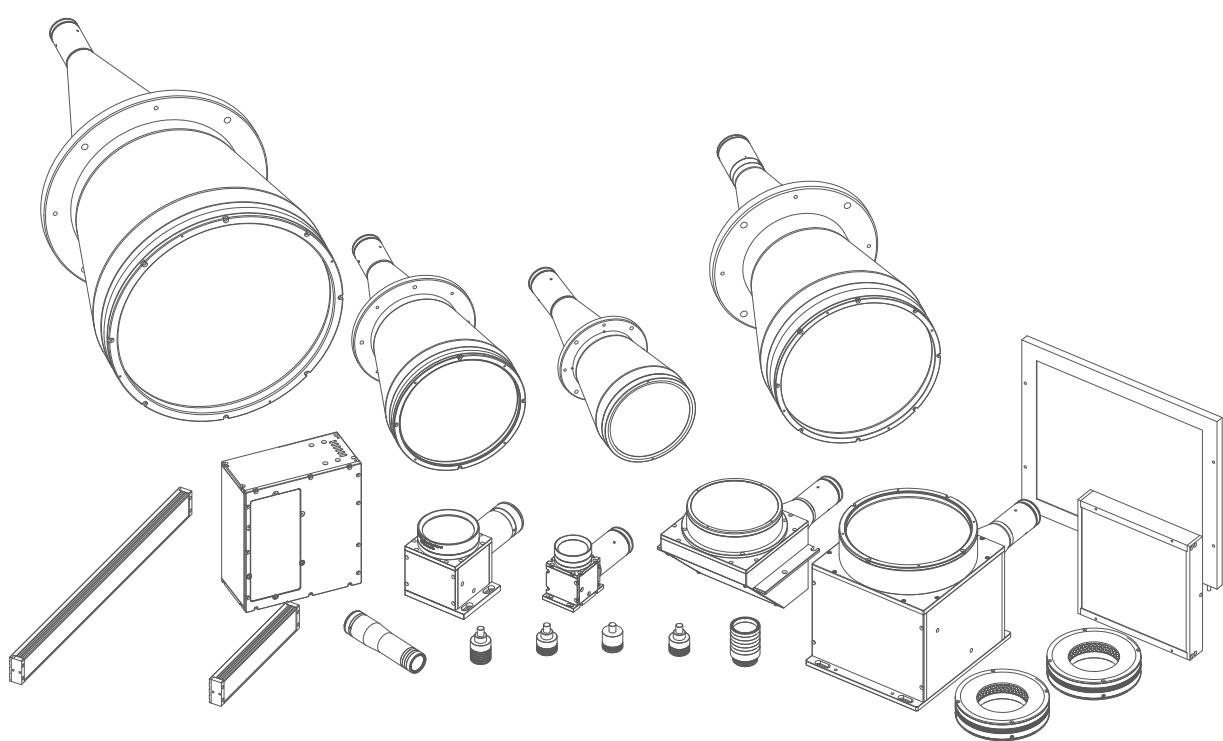
Filter Thread : M37.0X0.5mm

Field of View(DxHxV)			
1"	1/2"	1/3"	
18.38"×14.70"×10.98"	9.34"×7.42"×5.5"	6.96"×5.53×4.16"	

Image Size			
1"	1/2"	1/3"	
72.50×57.94×43.34mm	36.18×28.76×21.66mm	27.26×21.74×16.34mm	

Distortion			
1"	1/2"	1/3"	
-0.013%@y = 8.0mm	0.010%@y = 4.0mm	0.008%@y = 3.0mm	

ILLUMINATION SERIES



- Feature:
- ◆ All sizes of parallel light, point light, ring light, surface light, coaxial light and bar light available.
 - ◆ Specially design for machine vision and inspection field, more use friendly.
 - ◆ Imported LED chips, more reliable performance.
 - ◆ Can offer custom service based on customer' requirements.

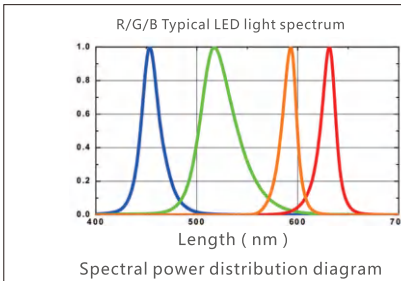
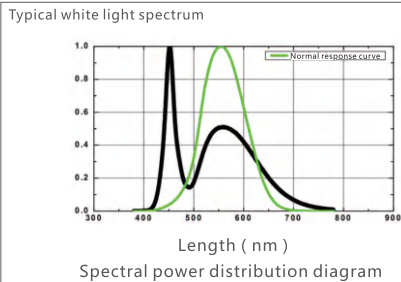


Parallel Illumination(straight)

PRODUCT ADVANTAGES

- 1.Telecentric parallel LED light, specially design for backlight;
- 2.Improve the profile image contrast of the tested objective of the machine vision system;
- 3.Maximum show the telecentric lens DOF and telecentrity.

SKETCH MAP





Parallel Illumination Parameter

Code	PMS-LTD-30R/G/B/W	PMS-LTD-60R/G/B/W	PMS-LTD-100R/G/B/W	PMS-LTD-189R/G/B/W	PMS-LTD-265R/G/B/W	PMS-LTD-145R/G/B/W
Item	#901-030	#901-060	#901-100	#901-189	#901-265	#901-145
Beam Diameter(mm)	35	60	100	189	265	145
W.D.(mm)	45-90	90-180	150-300	250-500	150-500	100-300
Dimension Size	Outer diameter (mm)	43.5	72	174	203	275
	Length(mm)	121.16	180	276	472.6	609
Forward Voltage(V)		3.5	3.5	3.5	3.5	3.5
Forward Current(mA)		350	350	350	350	350
Available colors		<div><div></div><div></div><div></div><div></div></div>				

Square Parallel Light Parameter

Code	PMS-LTD-30LR/G/B/W	PMS-LTD-60LR/G/B/W	PMS-LTD-100LR/G/B/W	PMS-LTD-190LR/G/B/W	PMS-LTD-145LR/G/B/W
Item	#902-030	#902-060	#902-100	#902-190	#902-145
Beam Diameter(mm)	35	60	100	190	145
W.D.(mm)	45-90	90-180	150-300	250-500	100-300
Dimension Size	Outer diameter (mm)	121.16	171.5	235.5	356
	Length(mm)	43.5	73	116	214
	Height(mm)	62.39	92	147.5	252
Forward Voltage(V)		3.5V	3.5V	3.5V	3.5V
Forward Current(mA)		350mA	350mA	350mA	350mA
Available colors		<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>

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POMEAS
PROFESSIONAL MANUFACTURER
OF VISION SYSTEM

3D UV Exposure (parallel Light)



Advantages of exposure technology:

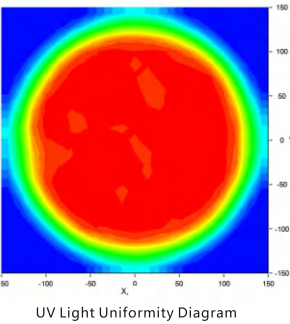
- 1.Solve the 3D curved glass printing problems(including four-sided bending).
- 2.High accuracy of Graphic printing, including single-layer and multiple-layers.
- 3.Gastric spraying ensures the uniformity of thickness, improves the compactness, and reduces the thickness of the tanker.
- 4.Adopt graphic transfer technology, high yield.
- 5.Single manufacturing process of 4-6 inch cover plate, obvious productivity advantage.
- 6.Thinner ink is conducive to bonding, improving the overall yield of the process, the thinnest ink can be up to 2um and is not opaque.

PRODUCT USE

- 1.For mobile phone 3D glass ink exposure.
- 2.For high-precision PCB line printing exposure.
- 3.Replace laser direct imaging (LDI).

PRODUCT ADVANTAGES

- 1.High uniformity, effectively ensure the exposure accuracy.
- 2.Energy saving and environmental-friendly.
- 3.The same effect as the mobile phone touch screen printing process.
- 4.Comparable to LDI technology, but the cost is much lower.



Technical Parameter Sheet

Item	Customized UV Parallel Illumination	
External Dimension (Noumenon)	Straight	Square
395nm Energy Intensity	≤330mw/cm2	
365 Energy Intensity	≤100mw/cm2	
Optical Angle	±1.2°	
Uniformity	> 95%	
Exposure Effective Area (mm)	180mmx200mm	
Working Distance (mm)	80-160	
Control System	PMS Control System	
Working Power Supply	220VAC±10% ; 50HZ	
Power	1KW	
Cooling Method	Water-cooling	
After-sales Service	One Year (Except the consumables)	

Ring Illumination



PRODUCT ADVANTAGE

- 1. Color is optional, to meet different requirements
- 2. Offering different irradiation angle, different size for light
- 3. Optimized LED array structure, high brightness, compact size
- 4. No shadow, proving high quality image

APPLICATION FIELDS

PCB inspection and measurement, crack inspection, surface inspection, defect detection

Ring Light Parameter

Code	Item	Diameter (mm)	Angle(°)	Color	Voltage/Power Red	Voltage/Power white/green/blue
PMS-RL32-75R/G/B/W	#910-375	32	75	●●●○	24V/0.8W	24V/1.5W
PMS-RL42-65R/G/B/W	#910-465	42	65	●●●○	24V/1.04W	24V/1.7W
PMS-RL50-60R/G/B/W	#910-560	50	60	●●●○	24V/1.3W	24V/2W
PMS-RL60-60R/G/B/W	#910-660	60	60	●●●○	24V/0.8W	24V/2W
PMS-RL70-90R/G/B/W	#910-709	70	90	●●●○	24V/2.34W	24V/3.6W
PMS-RL90-70R/G/B/W	#910-907	90	70	●●●○	24V/4.03W	24V/7.2W
PMS-PI90-80R/G/B/W	#910-980	90	80	●●●○	24V/3.5W	24V/7.2W
PMS-RL120-60R/G/B/W	#910-120	120	60	●●●○	24V/9.1W	24V/14W
PMS-RL146-0R/G/B/W	#910-146	146	0	●●●○	24V/1.82W	24V/2.9W
PMS-RL170-20R/G/B/W	#910-170	170	20	●●●○	24V/9.1W	24V/11W
PMS-RL180-30R/G/B/W	#910-180	180	30	●●●○	24V/9.62W	24V/14.9W
PMS-RL208-20R/G/B/W	#910-208	208	20	●●●○	24V/7.54W	24V/11.5W
PMS-RL213-0R/G/B/W	#910-213	213	0	●●●○	24V/3.38W	24V/5.3W
PMS-RL350-30R/G/B/W	#910-350	350	30	●●●○	24V/16.8W	24V/27.84W

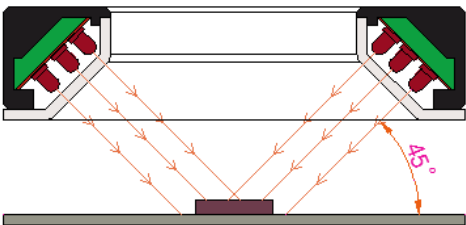


PCB inspection



Metal defect inspection

Example

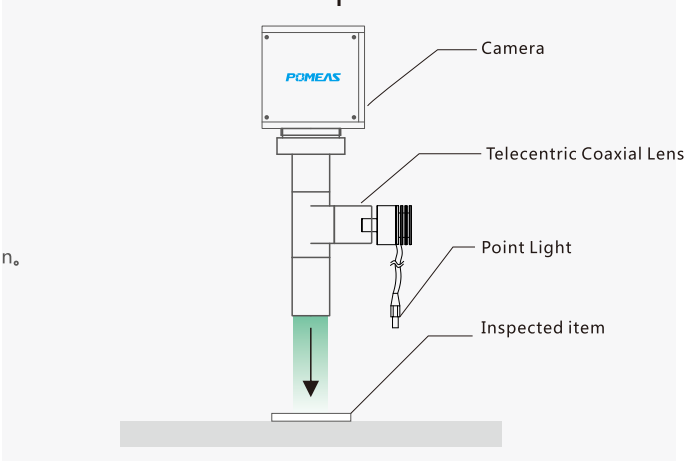


Point Illumination

PRODUCT ADVANTAGES

- 1.Large Power LED, small size, high bright light;
- 2.High efficiency heat dissipation device, improved light lifetime;
- 3.Compact size, easily for assembly;
- 4.Halogen's replacement, especially suitable for lenses'coaxial light.

Example



APPLICATION FIELDS

- 1.Suitable for coaxial light ;
- 2.Used to measure high reflective or mirror surface ;
- 3.For LED circuit board, scratched line, surface crack inspection.

Point Light Parameter

Code	Item	Diameter (mm)	Current (mA)	Power (W)	Color Temperature	Environment	Life time	Color
PMS-PL350-6-R/G/B/Y/W	#915-350	6	350	1	5700-6300K	Temperature: 0°C~40°C Humidity: 20~85% non-Condensing	50000h (Not guaranteed value)	●●●○
PMS-PL350-8-R/G/B/Y/W	#915-351	8	350	1	5700-6300K			
PMS-PL350-10-R/G/B/Y/W	#915-352	10	350	1	5700-6300K			
PMS-PL850-6-R/G/B/Y/W	#915-353	6	850	1	5700-6300K			
PMS-PL850-8-R/G/B/Y/W	#915-354	8	850	1	5700-6300K			
PMS-PL850-10-R/G/B/Y/W	#915-355	10	850	1	5700-6300K			

Illumination Controller



Light Controller(white)



Light Controller(black)

PRODUCT DESCRIPTION

POMEAS digital light controller provides 256 steps (0-255) light intensity, via front panel or serial communication (remote control).

PRODUCT ADVANTAGES

- 1.Panel or remote control is optional, the brightness of each channel independently controllable
- 2.256 digital modulation can accurately control the load of software source brightness
- 3.Automatic overload protection function
- 4.External trigger level optional, flexible selection
- 5.External trigger high-speed optocoupler isolation, high response speed, high stability.

Light Controller Parameter

Code	Item	RS232 control	Channel	Output volts	Output Current	Trigger function	Recommended load
PMS-PI0508-4-RS232-T	#905-508	Yes	4	5V	800mA	Yes	1 pcs of LED in group
PMS-PI0501-4-RS232-T	#905-501	Yes	4	5V	400mA	Yes	1 pcs of LED in group
PMS-PI2404-4-RS232-T	#905-404	Yes	4	24V	400mA	Yes	2-3 LED in series or in group
PMS-PI2408-2-RS232-T	#905-408	Yes	2	24V	800mA	Yes	4-6 LED in series or in group
PMS-PI1208-4-RS232-T	#905-406	Yes	4	12V	800mA	Yes	4-6 LED in series or in group

Illumination Series/Coaxial Illumination Series



PRODUCT ADVANTAGES

- 1. High density LED arrangement, no reflective light or flash light, suitable for mirror reflective objective
- 2. Lighting range size from 14x14mm to 80x80mm, custom is welcomed.
- 3. Advanced coating technology, reducing light loss
- 4. Special cooling structure, improve stability and extent the work life.
- 5. Using aluminum PCB, dramatically reducing the heat and LED arrays.

Coaxial Illumination Parameter

Code	Item	Color	Working Area(mm)	Voltage Power/Red	Voltage Power white/green/blue
PMS-COL-14R/G/B/W	#920-145	● ● ● ●	14	24V/0.78W	24V/1.2W
PMS-COL-30R/G/B/W	#920-130	● ● ● ●	30	24V/1.17W	24V/1.8W
PMS-COL-40R/G/B/W	#920-140	● ● ● ●	40	24V/1.95W	24V/3W
PMS-COL-60R/G/B/W	#920-160	● ● ● ●	60	24V/3.9W	24V/5.8W
PMS-COL-80R/G/B/W	#920-180	● ● ● ●	80	24V/6.5W	24V/10W

Bar Illumination



PRODUCT ADVANTAGES

- 1. Light irradiation angle can be adjusted, multiple light source can be combined
- 2. Illumination range can from 10 mm to a few meter, and other size can be custom
- 3. LED high density arrangement, high brightness, color is optional

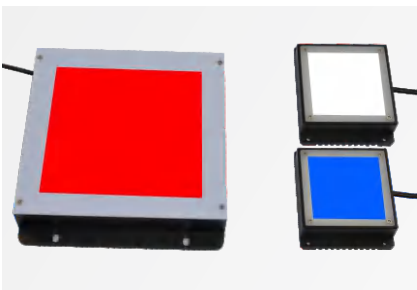
APPLICATION FIELDS

- 1.Precision measurement and edge detection and inspection application ;
- 2.Food processing and packing lighting, packing testing etc..
- 3.Crack detection ;
- 4.Inspect flatness of pin connector.

Bar Illumination parameter

Code	Item	Size(mm)	Voltage Power/Red	Voltage Power white/green/blue	Color
PMS-BRL-38X11R/G/B/W	#925-311	38mmx11mm	24V/0.26W	24V/0.5W	● ● ● ●
PMS-BRL-56X15R/G/B/W	#925-312	56mmx15mm	24V/0.72W	24V/0.96W	
PMS-BRL-90X19R/G/B/W	#925-313	90mmx19mm	24V/1.9W	24V/2.4W	
PMS-BRL-112X42R/G/B/W	#925-314	112mmx42mm	24V/3.84W	24V/6.72W	
PMS-BRL-140X19R/G/B/W	#925-315	140mmx19mm	24V/5.59W	24V/8.6W	
PMS-BRL-170X20R/G/B/W	#925-316	170mmx20mm	24V/3.456W	24V/5.76W	
PMS-BRL-210X19R/G/B/W	#925-317	210mmx19mm	24V/2.88W	24V/4.8W	
PMS-BRL-270X42R/G/B/W	#925-318	270mmx42mm	24V/10.56W	24V/17.28W	
PMS-BRL-380X40R/G/B/W	#925-319	380mmx40mm	24V/13W	24V/20W	
PMS-BRL-470X40R/G/B/W	#925-320	470mmx40mm	24V/18.2W	24V/29W	
PMS-BRL-580X40R/G/B/W	#925-321	580mmx40mm	24V/19.5W	24V/31W	
PMS-BRL-770X57R/G/B/W	#925-322	770mmx57mm	24V/30.24W	24V/50.4W	
PMS-BRL-900X26R/G/B/W	#925-323	900mmx26mm	24V/26W	24V/30W	
PMS-BRL-1420X34R/G/B/W	#925-324	1420mmx34mm	24V/45.5W	24V/50W	

Surface Illumination Series



PRODUCT ADVANTAGES

- 1.High density Led, even light for partial and whole area;
- 2.Variety of product specification for selection, easy for custom;
- 3.Usually used for outer shape inspection;

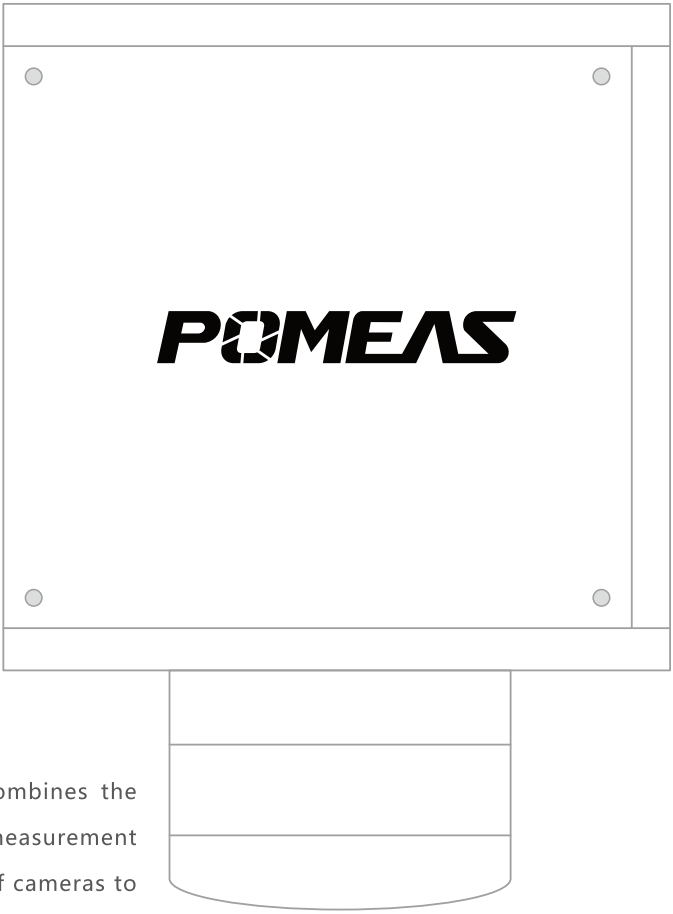
Application :

- 1.For outer shape inspection and dimension inspection
- 2.A large area circuit board detection and recognition ;
- 3.Scratch on the surface of a transparent object, stains, breakage detection ;
- 4.Check the various cavities and pinhole inspection

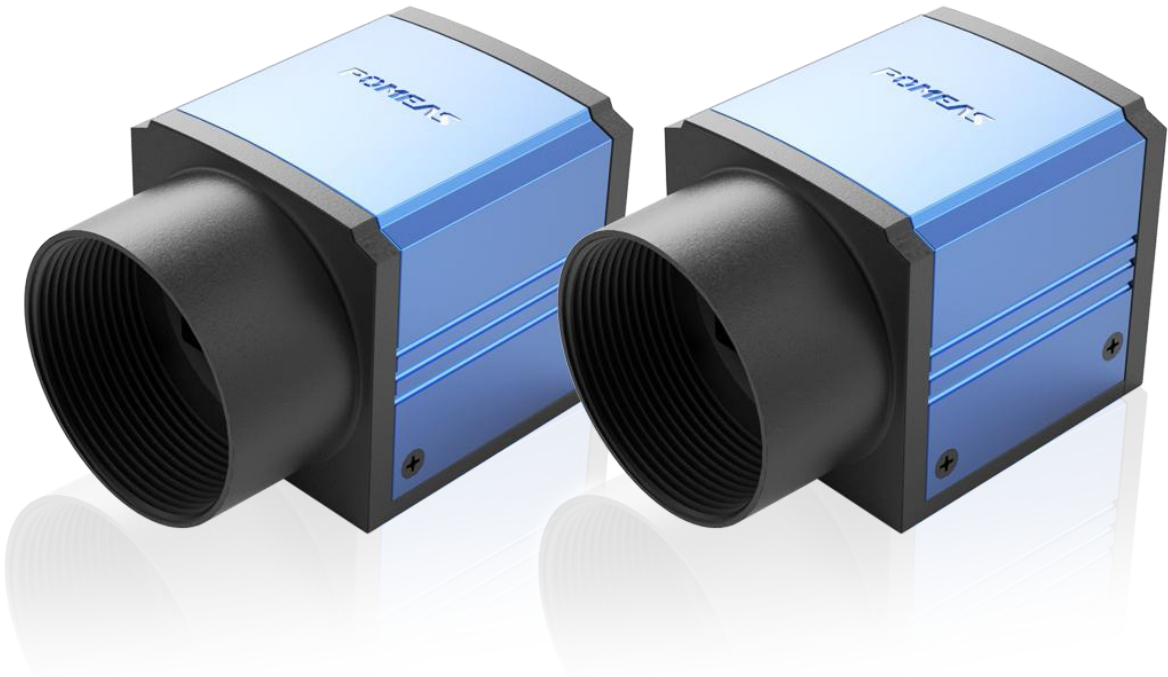
Surface Illumination Parameter

Code	Item	Size(mm)	Voltage Power/Red	Voltage Power white/green/blue	Color
PMS-BKL27X27R/G/B/W	#930-271	27mmx27mm	24V/1.82W	24V/2.8W	● ● ● ●
PMS-BKL50X50R/G/B/W	#930-272	50mmx50mm	24V/2.34W	24V/3.6W	
PMS-BKL70X70R/G/B/W	#930-273	70mmx70mm	24V/3.77W	24V/5.8W	
PMS-BKL75X50R/G/B/W	#930-274	75mmx50mm	24V/4.68W	24V/7.2W	
PMS-BKL100X100R/G/B/W	#930-275	100mmx100mm	24V/8.45W	24V/13W	
PMS-BKL180X150R/G/B/W	#930-276	180mmx150mm	24V/12.48W	24V/19.2W	
PMS-BKL240X234R/G/B/W	#930-277	240mmx234mm	24V/28.6W	24V/32.64W	
PMS-BKL300X300R/G/B/W	#930-278	300mmx300mm	24V/30.104W	24V/51.84W	
PMS-BKL400X300R/G/B/W	#930-279	400mmx300mm	24V/49.4W	24V/50W	

INDUSTRY CAMERA SERIES



According to customer requirements, and combines the characteristics of the machine vision and measurement industry, Pomeas make personalized design of cameras to match with POMEAS lenses, which maximizes the performance of the system. It is suitable for machine vision, industrial inspection, microscopic imaging, visual positioning, dimensional measurement and other industries.



Gigabit Industry Camera

The new generation camera has lower power and smaller dimension, transmission speed 1000m bit/s, compatible with fast ethernet. Low power consumption, low noise, high stability, clear and colored image can be provided in all kind of color temperature and situation.

PRODUCT ADVANTAGES

- 1.GigE Vision (1000M bit/s);
- 2.1.3MP to 29MP CCD and CMOS sensor;
- 3.Exquisite heat radiation design;
- 4.Compact structure, lower power consumption, high SNR ;
- 5.High resolution, big sensor.

APPLICATION FIELDS

Suitable for machine vision, industry inspection, micro imaging, visual positioning, dimension measurement, etc..

Gigabit Camera Parameter

Code	PMS-GE130D-M	PMS-GE130D-C	PMS-GE200D-M	PMS-GE200D-C	PMS-GE500D-M	PMS-GE500D-C	PMS-GE1200M-M	PMS-GE1200M-C	PMS-GE2900C-M/C
Item	#320-130	#320-131	#320-132	#320-133	#320-134	#320-135	#320-136	#320-137	#320-138
Resolution	1.3MP(1280*960)		2MP(1600*1200)		5MP(2456*2058)		12MP(4096*3072)		29MP(6576×4384)
FPS	30		39.8		15 20		9		3.9
Bit Depth	12		14		14 12		8/10		8
Camera Interface	Gigabit (1000Mbit/s)		Gigabit (1000Mbit/s)		Gigabit (1000Mbit/s)		Gigabit (1000Mbit/s)		Gigabit (1000Mbit/s)
Type	CCD		CCD		CCD		CMOS		CCD
Sensor Size	1/3"		1/1.8"		2/3"		4/3"		Full frame
Pixel Size(μm)	3.75		4.4		3.45		4.5		5.5
Shutter Type	Global Shutter		Global Shutter		Global Shutter		Global Shutter		Global Shutter
Output Color	Mono	Color	Mono	Color	Mono	Color	Mono	Color	Mono/color
Power Consumption	2.6W		2.4W		2.5W		12V ~ 9W		6W
Output Format	Mono8/10/10P/12/12P	Mono8/10/12 Bayer	Mono8,Mono16	Bayer8,Bayer16	Mono8/10packed	Mono8 , Bayer GR8/10/10P	Mono8/10/10packed	BayerRG8/10/10packed	Mono8 , Bayer8
Synchronization	External trigger,soft trigger or automatic run								
Inner Function	External trigger jitter,hot spot correction,check-up table								
Flash Synchronize	One-way optical coupling isolation		One-way optical coupling isolation		One-way optical coupling isolation		Three-way optical coupling isolation		Two-way optical coupling isolation
External Trigger	One-way optical coupling isolation		One-way optical coupling isolation		One-way optical coupling isolation		Three-way optical coupling isolation		Two-way optical coupling isolation
Drive	POMEAS SDKor the third party compatible Gige Vision standard software		POMEAS SDKor the third party compatible Gige Vision standard software		POMEAS SDKor the third party compatible Gige Vision standard software		POMEAS SDKor the third party compatible Gige Vision standard software		POMEAS SDKor the third party compatible Gige Vision standard software
Operation System	Windows XP, Win7, Win8, 32bit and 64bit		Windows XP, Win7, Win8, 32bit and 64bit		Windows XP, Win7, Win8, 32bit and 64bit		Windows XP, Win7, Win8, 32bit and 64bit		Windows XP, Win7 ,32bit and64bit
Compatible	GigE Vision V1.2		GigE Vision, GenICam, GenTL		GigE Vision, GenICam, GenTL		GigE Vision, GenICam, GenTL		Gige Vision ,GenICam,GenTL
Power	12V DC(±10%)6-pin Hirose plug		12V DC(±10%)6-pin Hirose plug		12V DC(±10%)6-pin Hirose plug		DC12-24V		12V DC(±10%)6-pin Hirose plug
Mount	C-Mount		C-Mount		C-Mount		M58x0.75 Back focal length12.3mm (Can change F-Mount,V-Mount)		F-Mount
Working Temperature	0℃~50℃		0℃~50℃		0℃~50℃		-30℃~50℃		0℃~50℃
Dimension	29mm*29mm*42mm		32.1mm*31mm*30mm		32.1mm*31mm*30mm		76mm*76mm*46mm		--
Weigt	68g		50g		50g		450g		--

VGA Camera

VGA Camera Parameter

Code	PSM-VGA100	PSM-VGA130-A	PSM-VGA130-B
Item	#340-225	#340-226	#340-228
Resolution	1280x720	1280x1024	1280x1024
FPS	60	30	30
Pixel Size	3.75μmx3.75μm	4.4μmx4.4μm	4.4μmx4.4μm
Sensor	1/3"	1/3"	1/2.5"
Output	VGA	VGA	VGA
White Balance	One button set-up,can adjust manually or automatically		
Avold Glare Option	3 grade option	One button	One button
Edge Sharpness Mode	3 grade option	No	No
Color Adjustment	R/G/B adjustable independtldly	R/G/B adjustable independtldly	R/G/B adjustable independtldly
Inner Reticle	Center reticle or 8 movable lines		
Mount	C-Mount	C-Mount	C-Mont
Voltage Input	DC-5V	DC-5V	DC-5V
Dimension	51mmx51mmx57mm	52.5mmx51mmx60mm	61mmx61mmx65mm
Working Temperature	0℃~80℃	0℃~80℃	0℃~80℃
Photo Storage SD	No	No	Sd card

Feature :

1. Mega pixels, 1280x1024;
2. Progressive scanning, ensure sharp image without twinkle;
3. SD card storage function;
4. 8:8:8 RBG full color output;
5. Connect directly with display, vivid color;
6. inbuilt function menu, user friendly;
7. Stable 30fps output, no real-time delay.



HDMI Camera

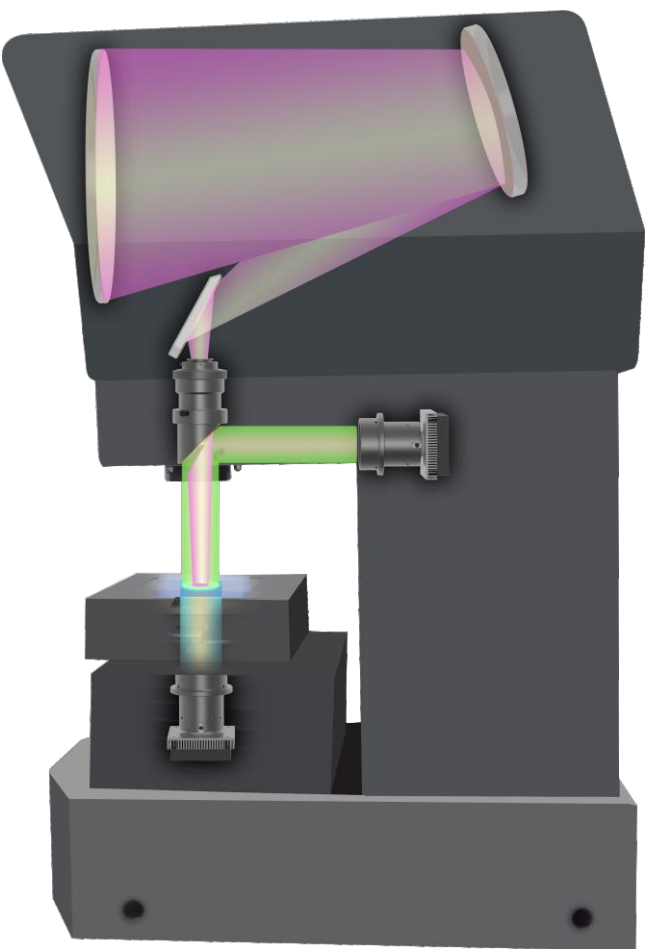
HDMI Camera Parameter

Code	PMS-HM200
Item	#330-223
Resolution	2MP 1920x1080
FPS	60
Pixel Size	3.75μm
Sensor	1/3"
Output	HDMI
White Balance	One Button For White Balance
Avold Glare Option	3 grade option
Edge Sharpness Mode	3 grade option
Color Adjustment	R、G、B adjustable independdly
Inner Reticle	Center reticle or 8 movable lines
Line Width	One Pixel
Mount	C-Mount
Voltage Input	DC-5V
Dimension	61mm x 61mm x 57mm
Working Temperature	0℃~50℃
Photo Storage SD	Memory Card(below 32G),Photoing hand shank/button

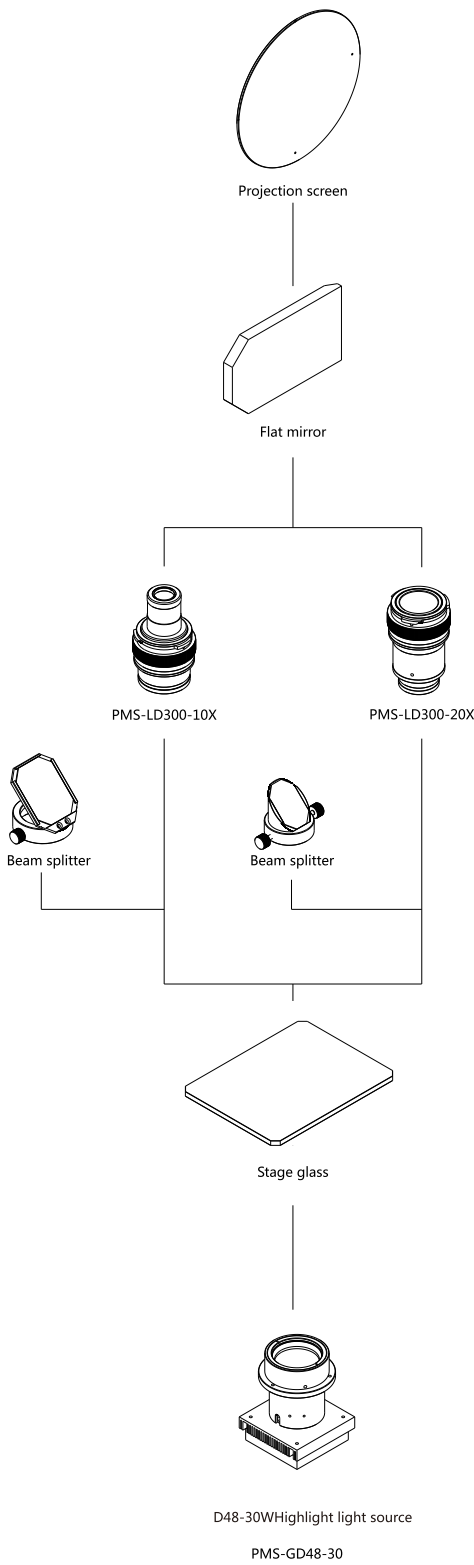
Feature :

1. 2MP high resolution, 1920x1080;
2. 60/fps high speed image, no delay in real-time;
3. New color calculation, ensure the real color;
4. HDMI digital high resolution output, support 16:9 display;
5. Independent color adjustment, special multiply wide dynamic function;
6. With cross line, it can be moved and overly;
7. SD card storage function;
8. With edge enhancement mode, it can improve the special image performance.

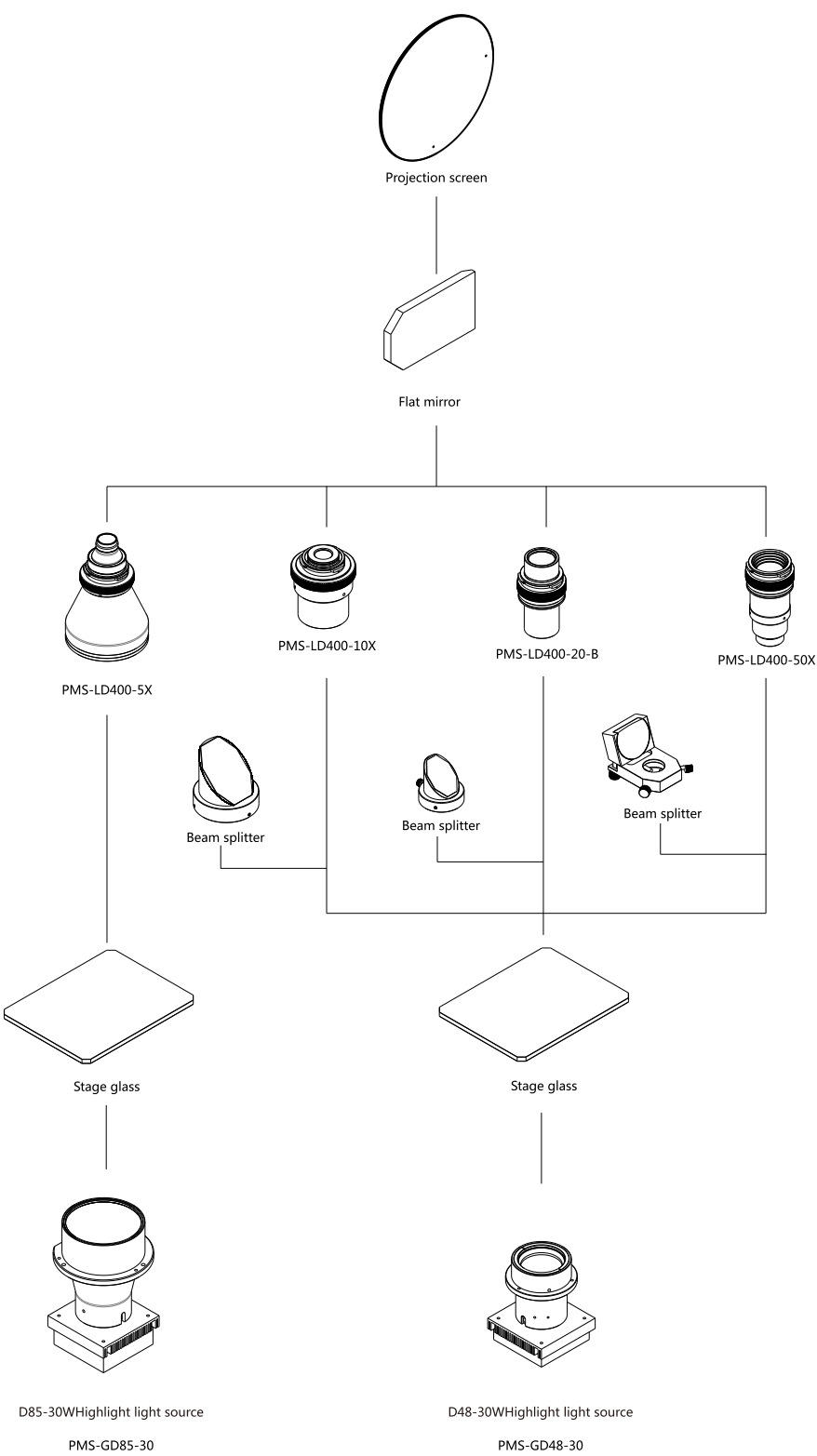
MEASUREMENT PROFILE PROJECTOR PARTS SERIES



D300series



D400series



Support D300, D400, 5x-50x Projection Objective Lens



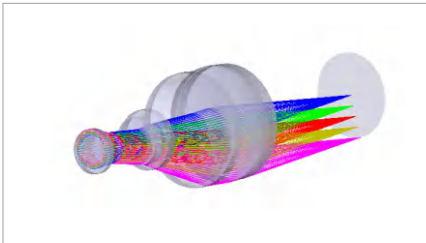
PRODUCT ADVANTAGES

- High resolution design
- Ultra-low distortion
- Telecentric
- Adjustable magnification
- Equipped with coaxial optical module

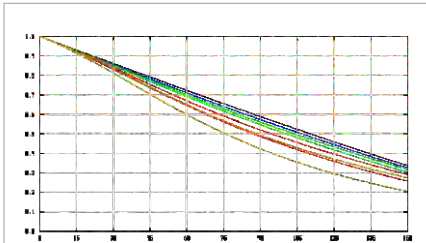
Projection lens D300 series

Code	Product Code	Magnification	Object resolution (lp/mm)	Telecentricity (°)	distortion	Object distance (mm)	Object field of view(mm)	Field of view(mm)	I/O distance (mm)
PMS-PLD300-10X	#510-310	10X	Center/Peripheral : 125/63	<0.02	<0.01%	80	φ 30	φ 300	1087
PMS-PLD300-20X	#510-320	20X	Center/Peripheral : 160/80	<0.02	<0.01%	67.7	φ 15	φ 300	1087

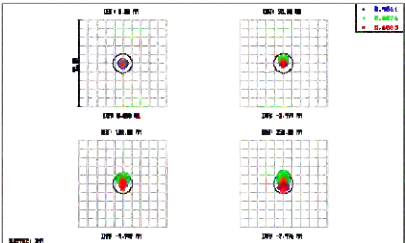
Light path diagram



MTF graph



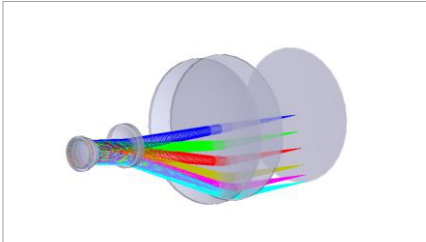
Spot



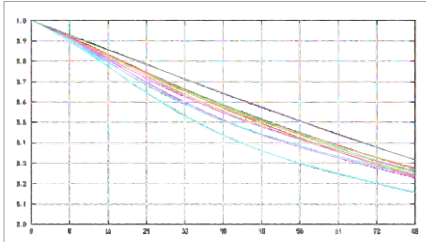
Projection lens D400 series

Model	Article number	Magnification	Object resolution (lp/mm)	Telecentricity (°)	Code	Product Code (mm)	Object field of view (mm)	Field of view(mm)	I/O distance(mm)
PMS-PLD400-5X	#510-405	5X	Center/Peripheral : 80/50	<0.02	<0.01%	58.3	φ 80	φ 400	1234
PMS-PLD400-10X	#510-410	10X	Center/Peripheral: 125/63	<0.02	<0.01%	79	φ 40	φ 400	1234
PMS-PLD400-200-B	#510-420	20X	Center/Peripheral : 160/80	<0.02	<0.01%	81.5	φ 20	φ 400	1234
PMS-PLD400-50X	#510-450	50X	Center/Peripheral : 160/125	<0.02	<0.01%	52	φ 8	φ 400	1234

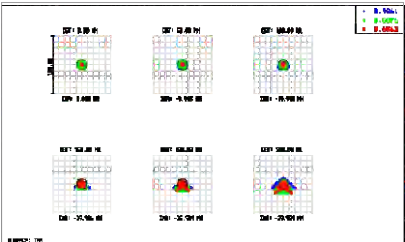
Light path diagram



MTF graph



Spot



Projection screen with uniform surface frosted density andlow dispersion loss.



PRODUCT ADVANTAGES

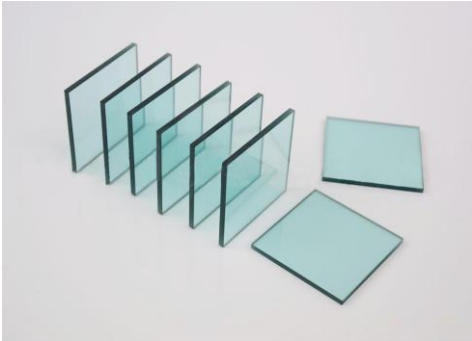
- Low dispersion loss reduces light energy loss.
- Surface matte density is uniform, can form a uniform diffusion.
- Precision scale, clear and sharp lines.

Parameters Table

Code	Product Code	Diameter / length and width mm	Thickness mm
PMS-PA-320	#520-320	φ 320	6
PMS-PA-368	#520-368	φ 368	5
PMS-PA-392	#520-392	φ 392	6
PMS-PA-380	#520-380	φ 380	6
PMS-PA-312	#520-312	φ 312	6

The above can be customized other specifications

Stage glass with visible light transmittance> 95% and flatness <0.01mm



PRODUCT ADVANTAGES

- 1.Material selection of ultra-white high-quality float glass.
2. Visible light transmittance> 95%.
3. Flatness < 0.01mm
- 4.The refractive index is 1.51

Parameters Table

Code	Product Code	Diameter / length and width mm	Thickness mm
PMS-PG-200/120	#530-120	200*120	30
PMS-PG-155/155	#530-155	155*155	6
PMS-PG-126/100	#530-100	126*100	8
PMS-PG-200/130	#530-130	200*130	6

The above can be customized other specifications

Plane Reflector With High Reflectivity And High Surface Accuracy



PRODUCT ADVANTAGES

- 1.High surface accuracy.
- 2.Metallized reflective film with high reflectivity.
- 3.There is a protective film on the surface to avoid scratching and aging of the reflective film.

Parameters Table

Code	Product Code	Diameter / length and width mm	Thickness mm
PMS-PM-120/60	#540-120	120*60	12.75
PMS-PM-260	#540-260	0260	19
PMS-PM-240	#540-240	0240	19
PMS-PM-80/45	#540-080	80*45	10
PMS-PM-190	#540-190	0190	19
PMS-PM-350	#540-350	0350	19
PMS-PM-280	#540-280	0280	19
PMS-PM-406	#540-406	0406	25
PMS-PM-381	#540-381	0381	19
PMS-PM-470	#540-470	0470	19
PMS-PM-686	#540-686	0686	38
PMS-PM-533	#540-533	0533	38
PMS-PM-762	#540-762	0762	38
PMS-PM-838	#540-838	0838	38
PMS-PM-914	#540-914	0914	51
PMS-PM-240	#540-240	0240	15
PMS-PM-100	#540-100	100*10	5
PMS-PM-136/80	#540-136	130*80	11

The above can be customized other specifications

High Brightness, High Flatness, Good Uniformity Projection Led Light Source



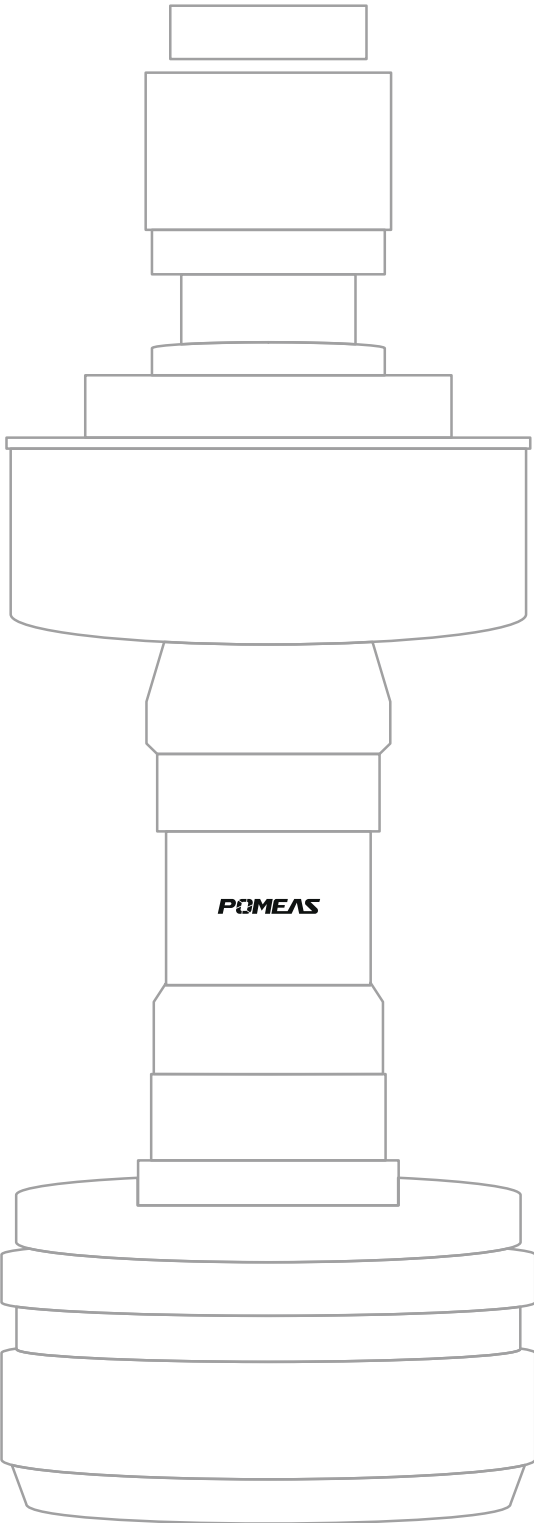
PRODUCT ADVANTAGES

- 1.High brightness
- 2.High parallelism
- 3.Good uniformity

Parameters Table

Code	Product Code	Beam diameter mm	Forward Voltage(V)	Maximum current(A)	colour
PMS-PGS-48/30	#550-048	48	3.2~3.6	9	yellow-green
PMS-PGS-85/30	#550-085	85	3.2~3.6	9	yellow-green

MICROSCOPE
SERIES



Microscope System



POMEAS metallographic microscope is a high-precision and high-efficiency micro-measurement instrument, integrating software, light, mechanic and electricity. It closely follows the internationally leading design trend from appearance to performance, and is committed to expanding the new industrial field. POMEAS adheres to the continuous exploration and continuation of the brand design concept, to provide customers with complete industrial testing solutions

PRODUCT ADVANTAGES

- 1. Newly adopts half complex Shaw technology, covering bright field, dark field, polarized light, differential interference and other observation methods, to provide you with efficient solutions;
- 2. Adopt the illumination system and optical system of the research-grade microscope, the illumination is uniform and the imaging is clear;
- 3. The new operating system mechanism adopts ergonomic design to replace the operator's fatigue;
- 4. The design of the faulty component can freely combine the system functions to meet the professional field needs of industrial inspection and metallographic analysis;
- 5. Highly integrated software system, let you operate more convenient.

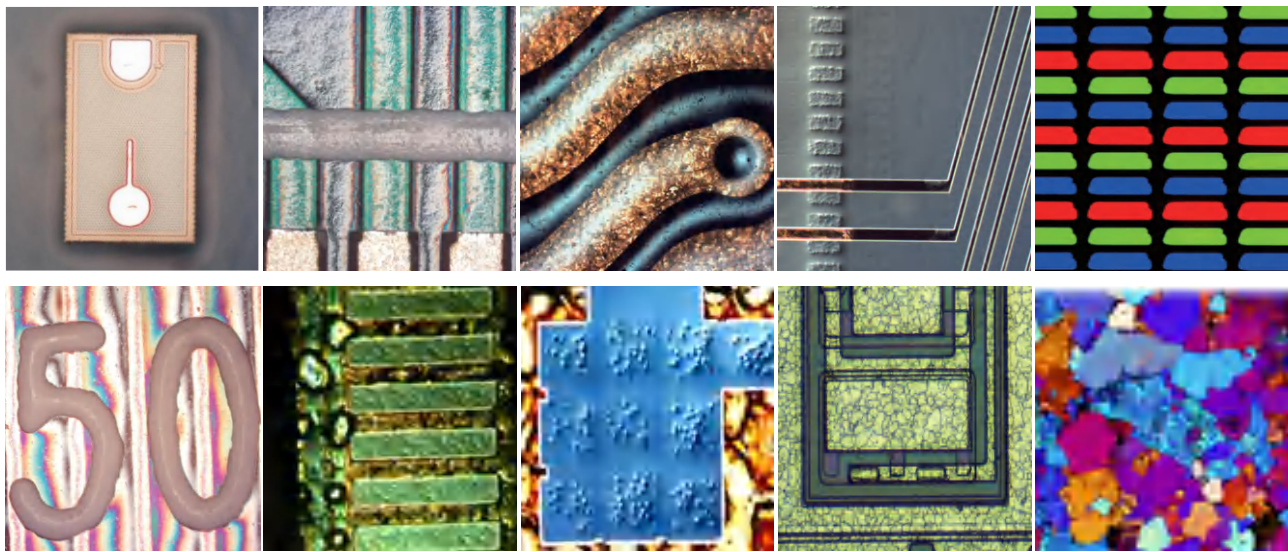
The following model are available

Model	Specification
PMS-MM-CX40M	Brightfield, polarized light; infinitely long working distance plan achromatic metallurgical objective lens (5X / 10X / 20X / 50X); swing-out achromatic condenser N.A 0.9
PMS-MM-MX40R	Infinity light chromatic aberration optical system; bright field, dark field, polarized light, DIC; infinity long working distance plan achromatic metallurgical objective lens (5X-DIC / 10X-DIC / 20X-DIC / 50X)
PMS-MM-RX60M	Infinity light chromatic aberration optical system; bright field, dark field, polarized light, DIC bright and dark field semi-apochromatic metallographic objective lens (5X / 10X / 20X / 50X) swing-out achromatic condenser NA 0.9, variable volume diaphragm, center Adjustable

Note: For more model is coming

APPLICATION FIELDS

Widely used for electronic components, precision modules, precision tools, springs, plastics, rubber, oil-sealed check valves, camera parts, auto parts, PCB processing and other fields.



Metallurgical Microscope Technical Parameter

Optical system	Infinity chromatic aberration correction optical system
Observation tube	30° tilt, positive image, infinity hinged three-way observation tube, pupil distance adjustment: 50mm~76mm, two-stage split ratio binocular: trinocular = 100:0 or 0:100 30° tilt, inverted image, infinity hinged three-way observation tube, pupil distance adjustment: 50mm~76mm, three-stage splitting ratio binocular: trinocular = 100:0 or 20:80 or 0:100
eyepiece	High eye point wide field plan eyepiece PL10X25mm, adjustable diopter High eye point wide field plan eyepiece PL10X25mm with single adjustable diopter scale cross reticle High eye point wide field plan eyepiece PL10X26.5mm, adjustable diopter High eye point wide field plan eyepiece PL10X26.5mm, with single adjustable diopter scale cross reticle
Objective lens	Bright and dark field semi-apochromatic metallurgical objectives (5X / 10X / 20X / 50X / 100X) Brightfield semi-apochromatic metallurgical objectives (5X / 10X / 20X / 50X / 100X)
Objective lens converter (with DIC slot)	Bright and dark field 5 hole converter, bright and dark field 6 hole converter Brightfield 6-hole converter, Brightfield 7-hole converter
frame	Transflective dual-purpose frame, low-hand position coarse and fine adjustment coaxial focusing mechanism. The coarse adjustment stroke is 25mm, and the fine adjustment accuracy is 0.001mm. Equipped with anti-tilt adjustment elastic device and upper limit device. Built-in 100-240V wide voltage system, using digital dimming, with light intensity setting and reset function, reflected / transmitted light switch, built-in transmitted light filter (LBD / ND6 / ND25) Frame for reflection, low-hand coarse and fine coaxial focusing mechanism. The coarse adjustment stroke is 25mm, and the fine adjustment accuracy is 0.001mm. Equipped with adjustable elastic device and upper limit device to prevent alignment. Built-in 100-240V wide voltage system, using digital dimming, with light intensity setting and reset function.
Stage	Right-handed 4-inch mechanical platform, travel 105mmX102mm, with Y-axis locking mechanism, light barrier for transmission system, with glass stage plate
Condenser	Shake-out achromatic condenser (N.A.0.9)
Reflective illuminator	Bright and dark field reflection illuminator, with variable beam diaphragm, field diaphragm, adjustable center; with bright and dark field illumination switching device; with color filter slot, with polarizer/analyzer slot
Lamp room	12V100W halogen lamp room, transparent, universal reflection, reservation center
other attachments	Photographic camera accessories: 0.5X, C-type interface, adjustable focus Polarizer insert, fixed analyzer insert, 360° rotating analyzer insert DIC differential servo component Coaxial color filter for reflection: blue≤480nm, green: 520nm~570nm, red: 630-750nm, red: 630nm~750nm, color balance sheet (white light) Advanced micrometer with a grid value of 0.01mm



Automatical Focus Video Microscope

Video microscope can inspect the samples in the display from the new perspective, without eyepieces. It can show and save high quality color static image, dynamic high resolution video. PMS-XHD -AF series video microscope is with all in one mechanical structure, full self-developed optical system, light switch function, continuous zooming in/out, auto focusing function. It will help you improve the quality control career.

Product Advantages

01

Help you accelerate your work process

Without eyepiece, big screen for better inspection;
Real time focusing, save time, compare with manual focusing type;
Continuous zooming, quick change the magnification.

02

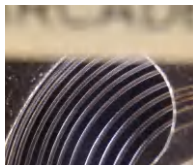
Help you to find more details

Special HDR function can improve edge profile,the image will be clearer;
Electronic magnification 180X, see more details;
2MP high resolution camera, 60fps high photo speed.

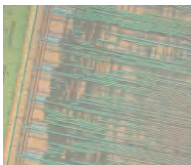
03

Bring you more convenient

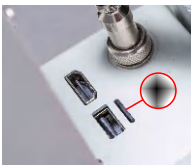
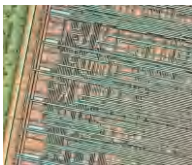
Portable TF card, can save image and dynamic video;
Simple human-computer interface improves the operation efficiency;
Varies of lights are optional, can be selected according to customers, demands.



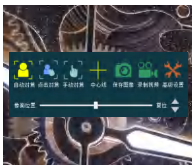
Move the inspected parts to the focusing area, the clear image will be gotten.



Common inspection (IC 180x) HDR inspection (IC 180x)



TF card can save the image and dynamic video
Simple and easy human-computer operation interface



Original Illumination Control Mode

Select illumination based on sample features which could provide perfect observation and inspection effects.



Ring light



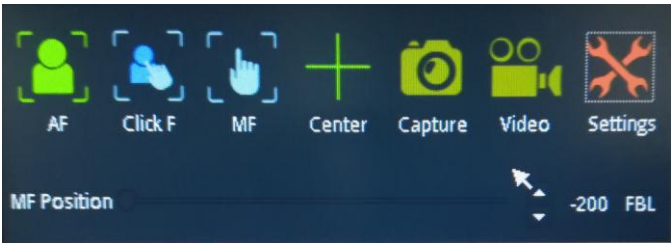
Back Light(optional)



Side Light (optional)

Easy To Control With Man-machine Interface

- 1.Easy to control;
- 2.Switchable from auto focus and manual focus;
- 3.USB interface and USB 2.0 high-speed storage flash disk enable to storage HD videos.

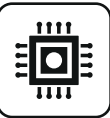



All-parameter Adjustment


- Parameter adjustment supports better inspection and image effects;
- Basic parameter includes brightness/white balance adjustment, contrast ratio and sharpness adjustment,image flips, and storage pictures and videos etc;
- Support Chinese/English operation languages;
- Auxiliary functions include focus mode switch, color/black & white mode switch, reticle display and reticle ruler display etc.





APPLICATION FIELDS


Electronic

Phone

Hardware

Car

Clocks

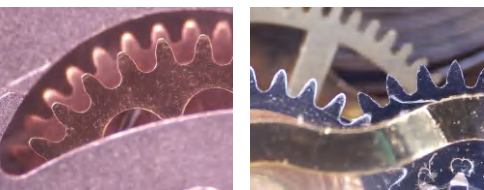
Mechanical

Type	Parameter	Value	
Specifications	Code	PMS-XHD-AF	
	Item	#980-511	
	Dimension	320*308.5*417.5mm	
	Tested item	Height MAX:50mm	
Optical parameter	System magnification (1-6X)	Min.29.92-179.5X	
		Max. 192.34-1154X	
	Optical magnification	0.35-2.25X	
	Display	21.5 inches	
	Resolution	Min. < 8.77μm Max. < 3.94μm	
	WD	88±2mm	
	FOV (D*H*V) mm	Min. 18.3*15.9*8.95	Max. 2.84*2.47*1.39
Camera parameter	Image Sensor	CMOS Color	
	Effective Pixel	200W (1920*1080)	
	Sensor	1/2.8"	
	Menu	POMEAS Software	
	Operation Manual	USB Mouse/Controller	
	Output mode	HDMI	
	WB	Manual/Auto/One Click	
	Exposure	Manual/Auto	
	frame rate	1080P@60FPS	
	Scanning Mode	Line by line	
	Electronic shutter speed	1/50S(1/60S~1/10000S)	
	Working temperature	0℃~50℃	
	Electronic magnify	Support	
	storage function	support TF card storage	
Instrument	Optional light	Ring light/Side lights/Bottom lights Outside coaxial light	
	Optional Lens	Without/With magnification output	

Clock And Watch Application

01

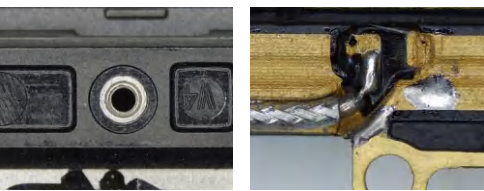
Clock movement is high precision parts. It is very small and it is difficult to inspect the failed parts by eyes. It takes a lot of time to inspect with traditional microscope. XHD -AFvideo microscope can quickly find and focus the inspected parts, with its zooming and focusing function.



Mobile Industry Application

02

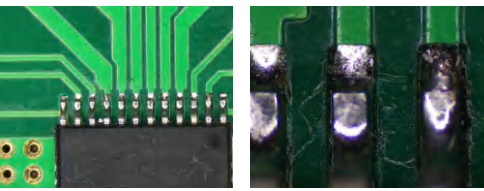
As there are many screws with different size and height in mobile cover. Working distance is needed to adjust frequently for better focusing, if using traditional microscope. XHD -AFvideo microscope can quickly find and focus the inspected parts, with its zooming and focusing function.



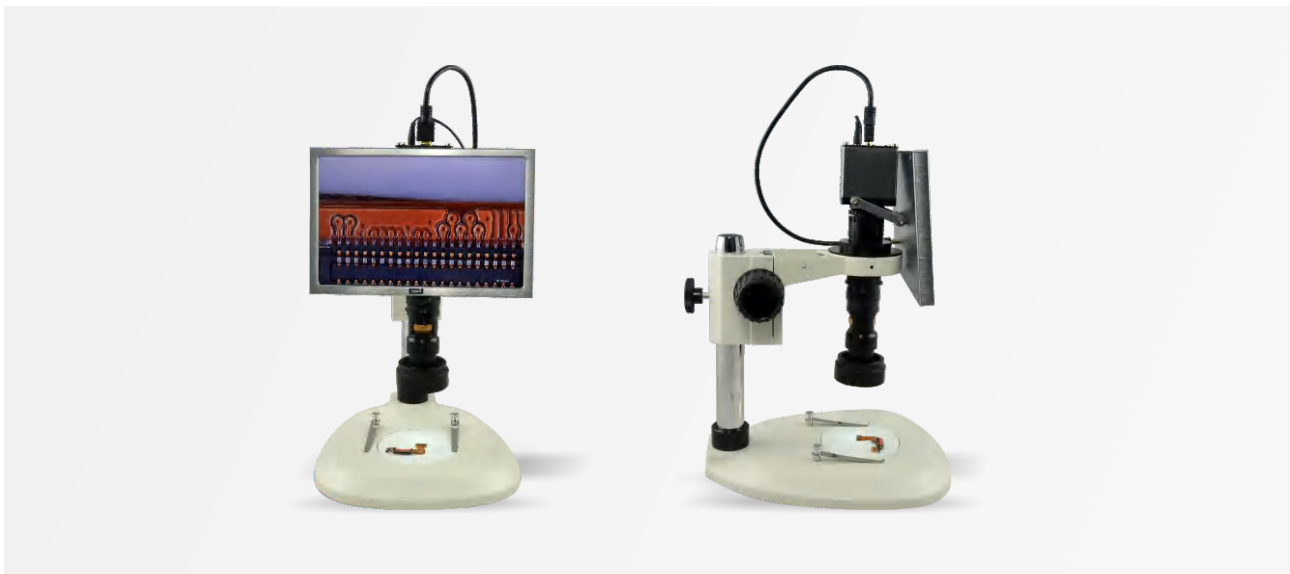
Electronic Industry Application

03

As there are many parts with different size and height on PCB board. Working distance is needed to adjust frequently for better focusing, if using traditional microscope. XHD -AFvideo microscope can quickly find and focus the inspected parts, with its zooming and focusing function.

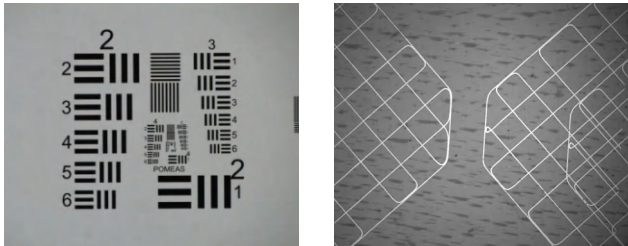


All-in-one Video Microscope

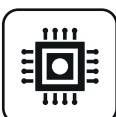



PRODUCT ADVANTAGES


- 1. Integrated integrated design, easy to use, small and beautiful;
- 2. Real-time storage of SD card images to improve quality analysis and judgment;
- 3. Original suppression of reflection, enhanced depth of field, and better imaging effect;
- 4. Telecentric optical path design lens, excellent optical performance, low distortion, clear imaging;
- 5. Full-view metal brushed LCD 10-inch display with a resolution of 1280*800, high-definition imaging, durable wear-resistant;
- 6. HDMI high-definition digital signal camera, 60 frames per second frequency, handle-type button adjustment, high-speed image transmission, no attenuation, delicate and realistic colors





APPLICATION FIELDS


Electronic

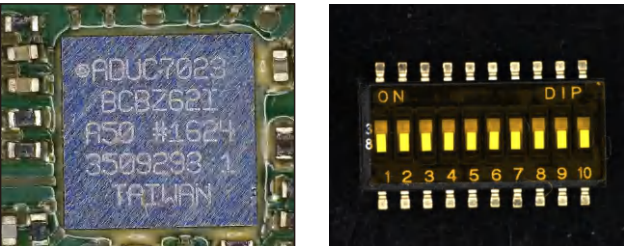
Phone

Hardware

Car

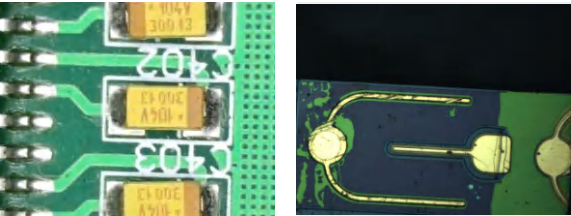
Clocks

Mechanical



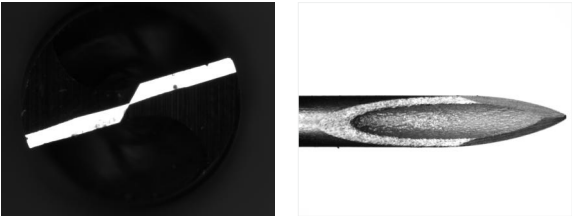
01 Electronic Application

The integrated video microscope can be used to observe various parts on the PCB board. Simple adjustment can focus to achieve quick observation, as well as LED chips, etc.



02 Hardware Application

Use the integrated video microscope to observe the shape of various shaped parts such as drills, turning tools, milling cutters, and dies; syringe needles in medical devices;



Parameter Table Of All-in-one Video Microscope:

Code		PMS-VA90	PMS-VA90F	PMS-VH90	PMS-VH90F	PMS-VH90-B
Item		#950-190	#950-191	#950-192	#950-193	#950-194
Lens	Type	Zoom Lens	12mm Fine Focus+Coaxial	Zoom Lens	12mm Fine Focus+Coaxial	Zoom Lens
	Lens Magnification	0.7X-4.5X(6.5:1)	0.7X-4.5X(6.5:1)	0.7X-4.5X(6.5:1)	0.7X-4.5X(6.5:1)	0.7X-4.5X(6.5:1)
	TV Adapter Magnification	0.5X	0.5X	0.5X	0.5X	0.5X
Camera	Resolution	1.3MP	1.3MP	1.3MP	1.3MP	2MP
	Sensor Size	1/3"	1/3"	1/3"	1/3"	1/3"
	FPS	30FPS(1280*800)	30FPS(1280*800)	60FPS(1920*1080)	60FPS(1920*1080)	60FPS(1280*800)
	Video Output Format	VGA	VGA	HDMI	HDMI	HDMI
Illumination		White Ring Light Illumination	White Coaxial Illumination	White Ring Light Illumination	White Coaxial Illumination	30mm White Ring Light Illumination
Display		17"High Resolution LCD Display(Non Standard Delivery)		17"High Resolution LCD Display(Non Standard Delivery)		10 inches LCD display,Metal Wire drawing(1280*800)
Stage		Base 32cm*28.5cm*3.3cm Rod Ø2.4*28cm		Base 32cm*28.5cm*3.3cm Rod Ø2.4*28cm		Base 32cm*28.5cm*3.3cm Rod Ø2.4*28cm
Picture Effect	Optical Magnification	0.35X-2.25X	0.35X-2.25X	0.35X-2.25X	0.35X-2.25X	0.35X-2.25X
	Eletronic Magnification	14X-90X	14X-90X	14X-90X	14X-90X	14X-90X
	Working Distance	90±2mm	90±2mm	90±2mm	90±2mm	90±2mm
	Color	Colored	Colored	Colored	Colored	Colored
	Working Temperature	-10℃-50℃	-10℃-50℃	-10℃-50℃	-10℃-50℃	-10℃-50℃

Zoom Lens Magnification	0.7X	1X	2X	3X	4X	4.5X
TV Adapter	0.5X	0.5X	0.5X	0.5X	0.5X	0.5X
Electronic Magnification	14X	20X	40X	60X	80X	90X

Microscope Series
Stereo microscope with continuously zoom magnification



Using excellent optical system, has a clearer image, and can maintain high-quality and bright imaging at any magnification. It is the first choice for modern electronic industry inspection and equipment. Suitable for PCB/LCD/IC assembly inspection

Model	PMS-SM45S	PMS-SM60S	PMS-SM45D
Observation Head	45° tilted binocular observation head, pupil distance adjustment: 54mm-75mm, fixed eyepiece tube	45° tilted binocular observation head, pupil distance adjustment: 54mm-75mm, fixed eyepiece tube	60° tilt binocular observation head, pupil distance adjustment: 54mm-75mm, fixed eyepiece tube
	Oblique binocular observation head tilted at 45°, interpupillary distance adjustment: 54mm-75mm, fixed eyepiece tube, with fixed and fixed locking function		
	/	45° tilted trinocular observation head, interpupillary distance adjustment: 54mm-75mm, fixed eyepiece tube, with fixed and fixed locking function	/
Eyepiece	High eye point large field eyepiece WF10TX20mm, adjustable diopter, micrometer can be installed	High eye point large field eyepiece WF10TX20mm, adjustable diopter, micrometer can be installed	High eye point large field eyepiece WF10TX20mm, adjustable diopter, micrometer can be installed
	High eye point large field eyepiece WF15TX15mm, adjustable diopter, micrometer can be installed	High eye point large field eyepiece WF15TX15mm, adjustable diopter, micrometer can be installed	High eye point large field eyepiece WF15TX15mm, adjustable diopter, micrometer can be installed
	High eye point large field eyepiece WF20TX10mm, adjustable diopter, micrometer can be installed	High eye point large field eyepiece WF20TX10mm, adjustable diopter, micrometer can be installed	High eye point large field eyepiece WF20TX10mm, adjustable diopter, micrometer can be installed
Objective Lens	0.70X~4.5X zoom lens, working distance 100mm	0.67X-4.5X zoom lens, working distance 100mm	0.67X-4.5X zoom lens, working distance 100mm
	/	0.8X-5.0X zoom lens, working distance 100mm	/
	/	1.0X-6.7X s zoom lens, working distance 100mm	/
Auxiliary Objective	0.3X/287mm , 0.4X/217mm , 0.5X/177mm , 0.7X/120mm , 1.5X/47mm , 2X/26mm		
Frame	Integrated stand arm type with frame		
	Dismantable column type, can be equipped with any frame		
Base	Flat base		
	Base with light source		
Photographic Device	Camera receiver, adjustable focus		



3D Video Microscope

3D video microscope has varied inspection angles: 30° , 35° , 40° , 45° , Rotating prism is driven by DC servo-motor, live images will be transmitted to HD display for inspection. The rotating speed can be controlled by our standard control box, which also control the rotating direction and the brightness of the ring light, by these to provide a perfect inspection. Its structure is modular designed, magnification increasing lens and DOF increasing lens are optional. Camera VGA-A3 has a function of saving images into a SD card, by which operator can copy images to PC or share with others.

PRODUCT ADVANTAGES

- 1、 Live inspection, 360°rotating for all direction inspection;
- 2、 Vivid image with high contrast;
- 3、 Rotating speed is adjustable, continual zoom, multiple angle inspection;
- 4、 Deep DOF, High resolution (supported by digital camera).

APPLICATION FIELDS

Applied in semiconductor, SMT welded head, QFP, capacitor, connector, medical instrument, biology industry, chemical industry etc, to gain a 3D inspection which can’ t be achieved by traditional 2D microscope.

Parameter of 3D microscope with deep DOF.

Code	PMS-VHL-3010	PMS-VHL-3020
Item	#950-195	#950-196
Optical Magnification	0.35X-2.25X	0.35X-2.25X
Video Magnification	24X-152X	24X-152X
Inspection Angle	45°	30°
Rotary Augle	360°	360°
Illumination	Adjustable LED light	Adjustable LED light
Rotary Speed Control	Adjustable DC Motor	Adjustable DC Motor
VGA Camera	1/3"Colored CMOS	1/3"Colored CMOS
Display	17"Colored LCD	17"Colored LCD
Power	90-250V/50Hz/60Hz	90-250V/50Hz/60Hz
Application	SMT、 PCB、 BGA、 etc	SMT、 PCB、 BGA、 etc

High Contrast, Uniform Interference Color Dic Micro Vision System



The lens tube adopts infinity optical design, with a professional average achromatic long working distance objective lens, using DIC technology, and a coaxial light source, that is specifically designed to make the small height difference on the surface of the measured object produce an obvious relief effect, which can crack , Bumps, particles and holes are clearly identified, the entire field of view has uniform interference colors, clear images and high contrast.

APPLICATION

LCD/OLED/PCB/FPC/FPD and semiconductor testing.

OPTIONAL ACCESSORIES

- 1. APO objective lens 5X, 10X, 20X, 50X, etc.;
- 2. Nose wheel assembly



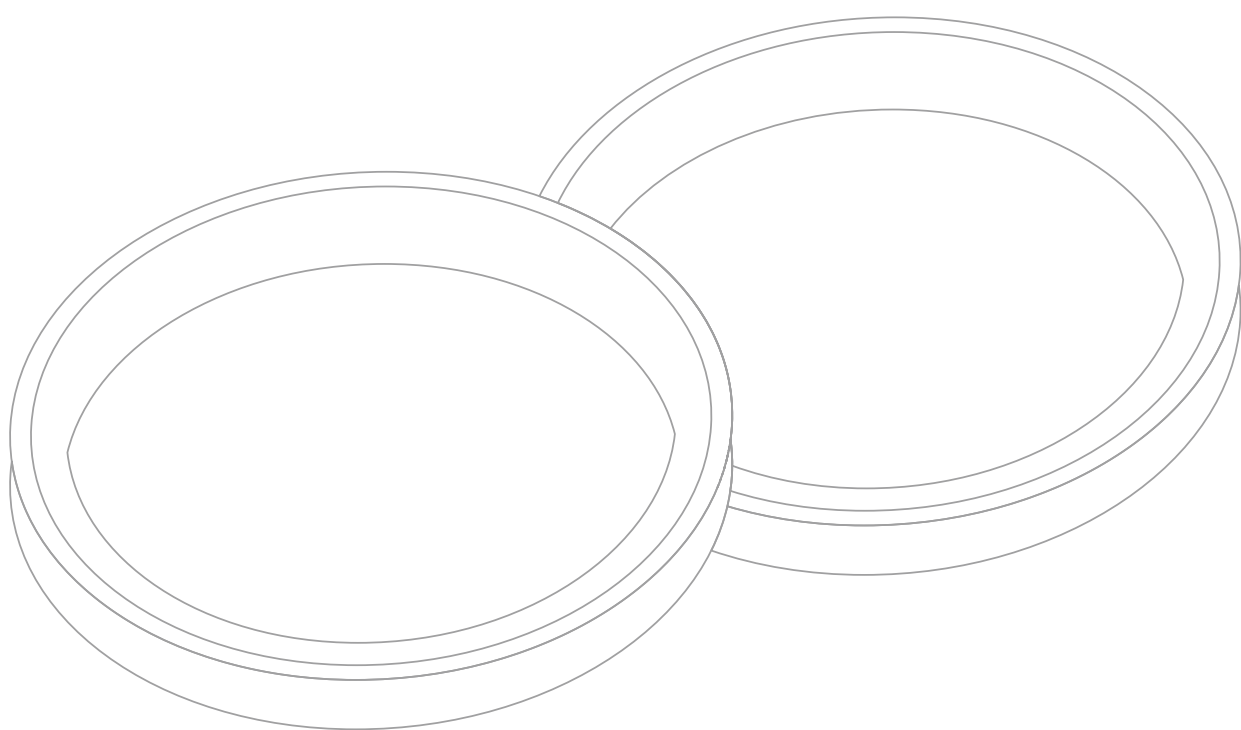
Liquid crystal display conductive substrate conductive particle detection



Long Working Distance Apo Objective Lens Parameter Table

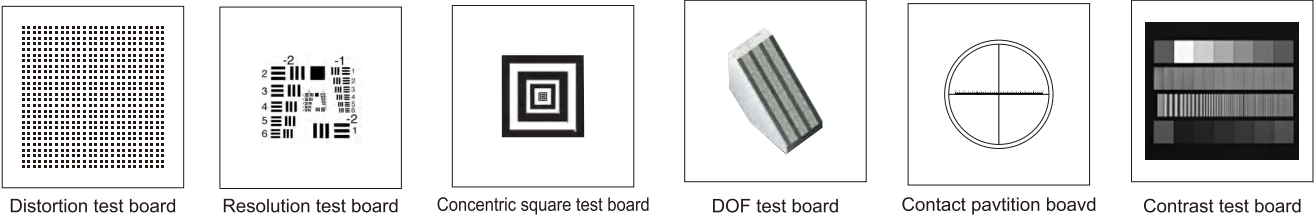
Code	Item	Magnification	Numerical apertureWorking	distance (mm)	Focal length (mm)	Depth of field (μm)	Resolution (μm)	Field of view	
								Eyepiece WF 10/24	CCD Sensor 1/2"
PMS-IC5X	#660-205	5X	0.14	45	40	14	2	Φ4.8	0.96x1.28
PMS-IC10X	#660-210	10X	0.28	34	20	3.5	1	Φ2.4	0.48x0.64
PMS-IC20X	#660-220	20X	0.29	30.8	10	3.5	1	Φ1.2	0.24x0.32
PMS-IC50X	#660-250	50X	0.42	20.5	4	1.6	0.7	Φ0.48	0.10x0.13

ACCESSARY SERIES



■ Testing Board Series

Testing board is used to test resolution、contrast 、MTF、DOF 、distortion、telecentricity and so on for the machine vision system . It can estimate imaging system performance .Choosing a suitable testing method can assess the imaging system is good or not , setting up a estimating standard can help solve the quality issues .

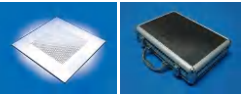


■ Grid Calibration Board

Grid calibration board is used to modify vision system and microscope stage , it provide repeatable parallel lines of XY

- Test and modify distortion of vision machine system .
- Modify microscope stage perspective error .
- Measure vision field .

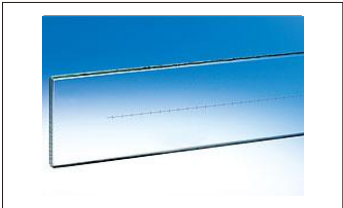
Grid size	Thickness	Photolithography base material	Minium line width	Contact hole	CD tolerance	Uniform	Alignment Accuracy	Flaw size	Flaw density
550x450mm	4.8mm	Quartz	1.0um	1.5x1.5um	+/-0.1um	0.12um	0.12um	0.8um	0.6DPSI
540x420mm	3.0mm	Soda Lime	1.0um	1.5x1.5um	+/-0.1um	0.12um	0.12um	0.8um	0.6DPSI



■ Glass Ruler Series

Standard glass ruler is a widely application for research institutes and workshops , it can modify the accuracy of measuring tools and equipment . it is a measuring component of vision measuring machine measuring microscope and profile projector , the allowable tolerance is ±0.2um

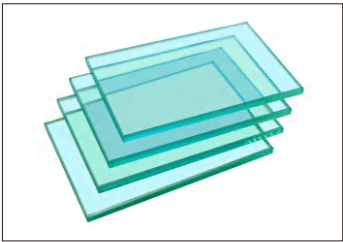
1. Specification : 100mm , 200mm, vernier grid reading : 1mm (national standard : class two)
2. Specification : 300mm , 400mm , 500mm , 600mm , 700mm , 800mm , 900mm , 1000mm, vernier grid reading :0.1mm (corporation standard)



■ Testing Board Series

1. Flatness less than 0.01mm
 2. Refractive index 1.51
 3. The transmittance of visible light is over 95%
 4. Absorbing ultraviolet ray below 280nm
- Specification:

 1. 200mm X 100mm
 2. 300mm X 200mm
 3. 700mm X 600mm
 4. 1200mmX 800mm
 5. The maximum is 3-meter (as per the drawing)



High Glass Filter



PRODUCT ADVANTAGES

- 1.Adopt multilayer films coating technology for dual surface of glass, reduce reflected light of surface.
- 2.Adopt high precision grinding technology, high surface smoothness.
- 3.Excellent aluminum with black frame,reduce reflected ray effectively.
- 4.Super thin filter frame, avoid vignetting effectively.
- 5.Embossing design for the frame,anti-skidding,easy assembly and more convenient usage.

High Glass Filter Parameter



Code	Item	Spectral Specification			Aperture	Screw Dimension
		Central wavelength	Transmission band (Transmissivity>95% avg)	Blocked band(Transmissivity<1%avg)		
PMS-F850-355	#970-355	850nm	830nm~870nm	350nm~80nm&900nm~1000nm	32.3mm	M35.5x0.5
PMS-F850-305	#970-305	850nm	830nm~870nm	350nm~800nm&900nm~1000nm	26mm	M30.5x0.5
PMS-F465-305	#970-465	465nm	445nm~485nm	350nm~415nm&515nm~1200nm	26mm	M30.5x0.5
PMS-FTBR-375	#970-375	460nm&650nm	440nm~480nm&630nm~670nm	350nm~410nm&510nm~600nm&700nm~1000nm	34.3mm	M37.5x0.5
PMS-FTBR-305	#970-405	460nm&650nm	440nm~480nm&630nm~671nm	350nm~410nm&510nm~600nm&700nm~1000nm	26mm	M30.5x0.5
PMS-F405-305	#970-325	405nm	385nm~425nm	350nm~475nm&455nm~1000nm	26mm	M30.5x0.5
PMS-F405-375	#970-386	405nm	385nm~426nm	350nm~475nm&455nm~1000nm	34.3mm	M37.5x0.5
PMS-FTHW-305	#970-387	——	400nm~665nm	350nm~385nm&675nm~1000nm	26mm	M30.5x0.5

Optical Polarizer

PRODUCT ADVANTAGES

- 1.Adopt multilayer films coating technology for dualsurface of glass,to achieve a high transmittance;
- 2.Adopt high precision grinding technology, high surface smoothness.
- 3.Excellent aluminum with black frame,reduce reflected ray effectively.Super thin filter frame,avoid vignetting effectively
- 4.Embossing design for the frame, anti-skidding, easy assembly and more convenient usage.



Optical Polarizer Parameter

Code	Item	Specification	Aperture	Screw dimension
PMS-CPL-305	#960-305	Polarizing filter Rotatable structure	26mm	M30.5x0.5
PMS-CPL-355	#960-355	Polarizing filter Rotatable structure	32.3mm	M35.5x0.5
PMS-CPL-405	#960-405	Polarizing filter Rotatable structure	35.7mm	M40.5x0.5
PMS-CPL-375	#960-375	Polarizing filter Rotatable structure	34.4mm	M37.5x0.5

Pomeas Optical Technology / Optical Terms

OPTICAL TERMS

■ FOCAL LENGTH

The distance over which initially collimated rays are brought to a focus.

■ DEPTH OF FIELD (DOF)

The distance between the nearest and farthest objects in a scene that appear acceptably sharp in an image without refocusing.

■ FIELD OF VIEW (FOV)

The area that is visible through a lens or lens system at a particular postion, and it is most often expressed as the angular size of the view cone.

■ OPTICAL MAGNIFICATION

The ratio between the apparent size of object image and its true size.

■ WORKING DISTANCE (W.D.)

The distance between the objective and lowest objective lens.

■ Numerical Aperture (N.A.)

The largest cone or number of light rays that enter a lens system.

■ DISTORTION

A deviation from rectilinear projection across the field of view.

■ F-NUMBER

It is the ratio of the lens's focal length to the diameter of the entrance pupil.

■ Telecentric Optical System Definition

The telecentric system is a compound system which has its entrance or exit pupil at infinity; in the prior case, this produces an orthographic view of the subject. This means that the chief rays are parallel to the optical axis in front of or behind the system, respectively. The simplest way to make a lens telecentric is to put the aperture stop at one of the lens's focal points.

