ArduCam®

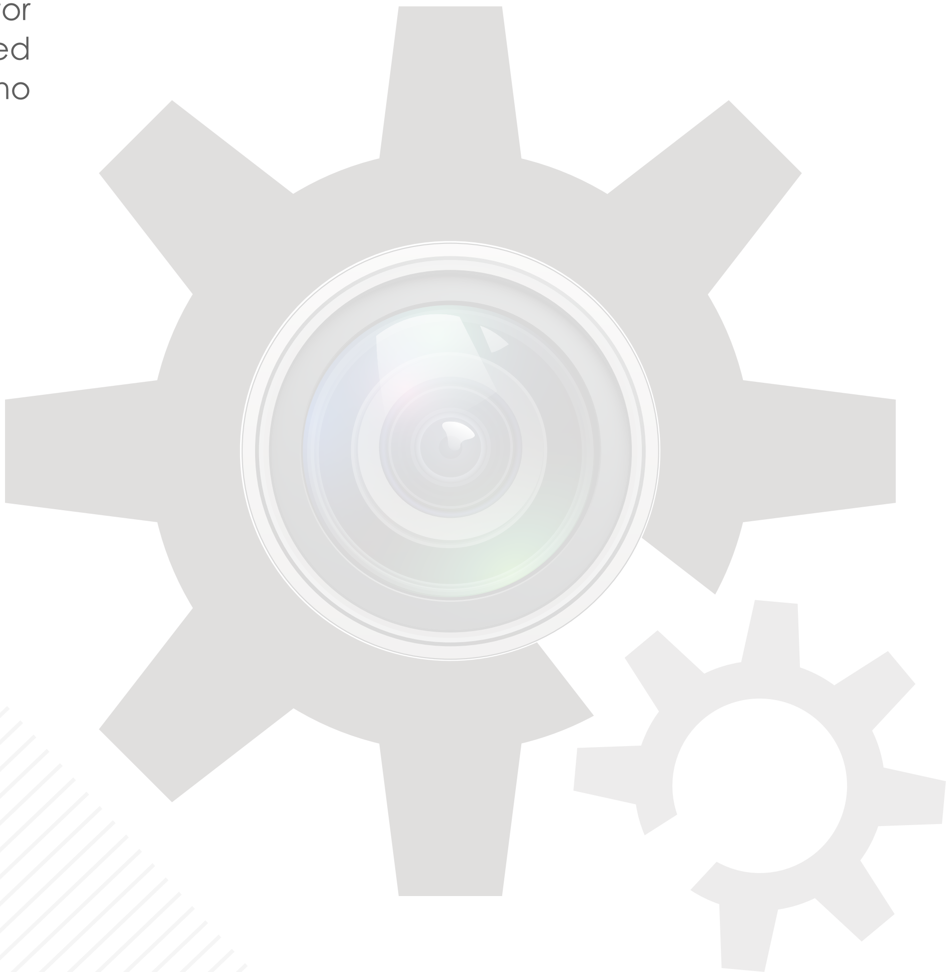
LOW DISTORTION

M12 Lens Kit

Build your vision, Capture everyone's imagination

ABOUT US

ArduCAM is a startup company dedicated to open source hardware and software, designed and manufacured in China specifically for Arduino and Raspberry Pi camera solutions. We also offer customized turnkey design and manufacturing solution services for customers who want their products to be unique.



GUIDELINES

1 **Choose a suitable lens holder as follows:**

a) Determine the lens holder height listed in the lens specifications for your selected lens. If you use a different lens holder height, you might not be able to focus the lens at all.

b) Ensure that the lens holder matches the screw hole pitch of your camera board. Lens holders are available with18mm and 20mm pitches.

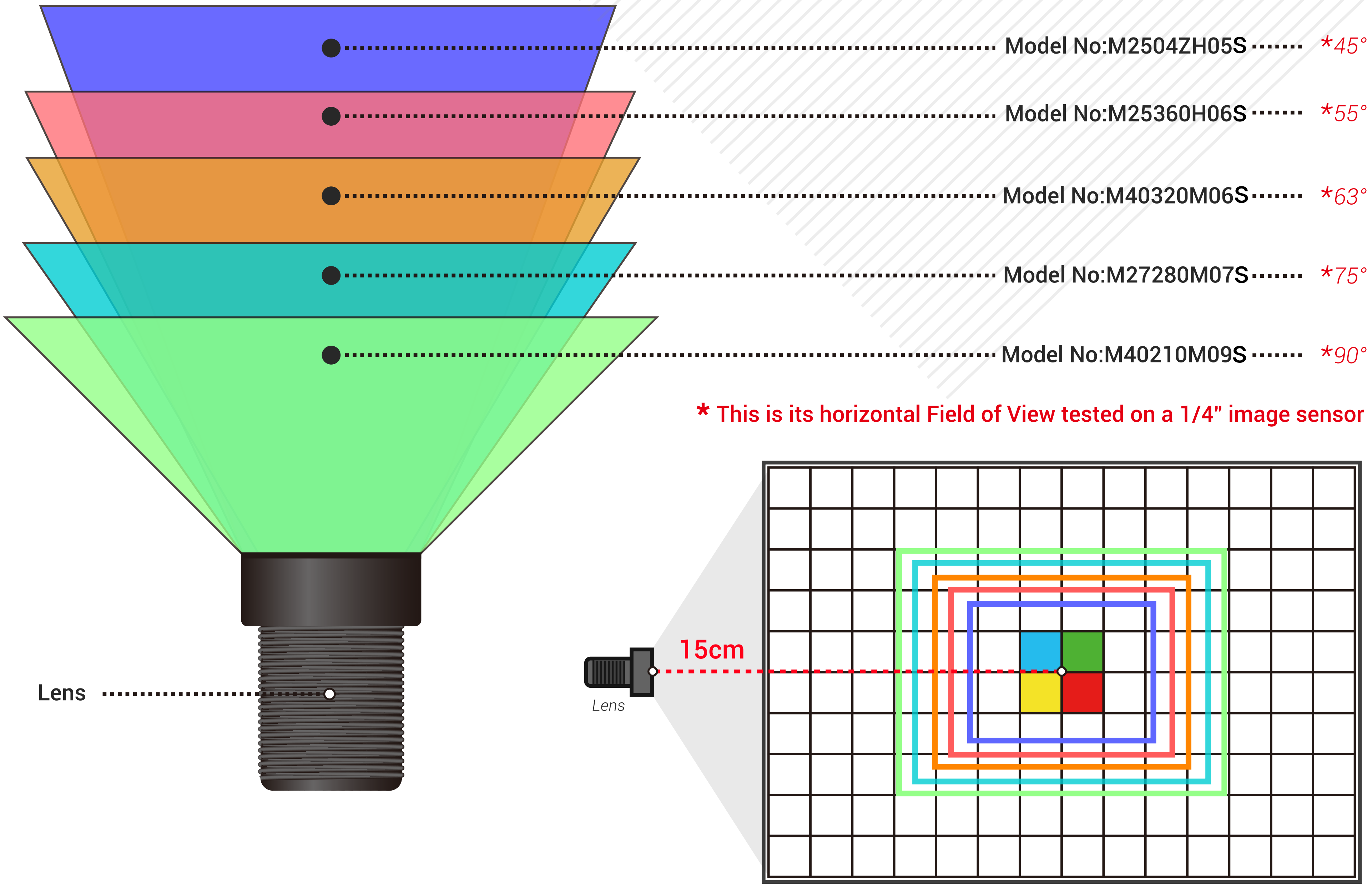
2 **If required, the thread gap between the lens and lens holder can be filled with damping grease or similar glue in order to fix the lens in position after focusing.**

3 **Specks of dust or tiny bubblers might be visible on the image while focusing the lens. These will disappear when the lens is in focus, and will not affect image quality.**

4 **When focusing or replacing a lens, do not screw the lens into the lens holder too deep, otherwise the lens might touch and damage the image sensor. Often, focusing a lens is performed while monitoring the image quality on a video screen. A blurry image will result if the lens is screwed in either too deep or too shallow from where it is in focus.**

LENS PARAMETERS

	M2504ZH05S	M25360H06S	M40320M06S	M27280M07S	M40210M09S
Optical Format	1/2.5"	1/2.5"	1/4"	1/2.7"	1/4"
EFL(mm)	4	3.6	3.2	2.8	2.1
HFOV on 1/4" RPi Cam	45	55	65	70	90
BFL(mm)	3.24	4.21	1.6	2.6	1.19
F/NO	2.8	2.8	2	2.8	2.2
FOV (D/H/V)	96/75/60	96/80/65	85/63/51	125/110/85	110/93/70
Construction	2G2P+IR	2G2P+IR	5E+IR	2G2P+IR	2G2P+IR
IR filter	650 IR Filter				
Mount	M12				
Working Wavelength	400-700 nm				
MOD	0.3m	0.2m	0.3m	0.3m	0.3m
Size(mm)	14x18.7	14x16.3	14x12	14x15.6	14x13
Weight	5g	4g	3g	4g	3g



* This is its horizontal Field of View tested on a 1/4" image sensor

Each block is 3cm wide

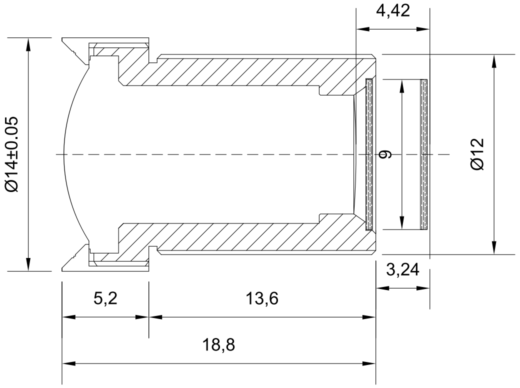
Model No:M2504ZH05S

LENS SPECIFICATIONS

Optical Format	*1/2.5"*
EFL(mm)	*4*
35mm EFL	*43.25*
BFL(mm)	*3.24*
Construction	*2G2P+IR*
F/NO	*2.8*
FOV (D/H/V) @ 1/2.5"	*96/75/60*

Lens Holder Height	*7-13mm*
IR filter	*650 IR filter*
Mount	*M12*
Working Wavelength	*400-700nm*
MOD	*0.3m*
Size(mm)	*14 x 18.7*
Weight	*5g*
HFOV on 1/4" RPi Cam	*45°*

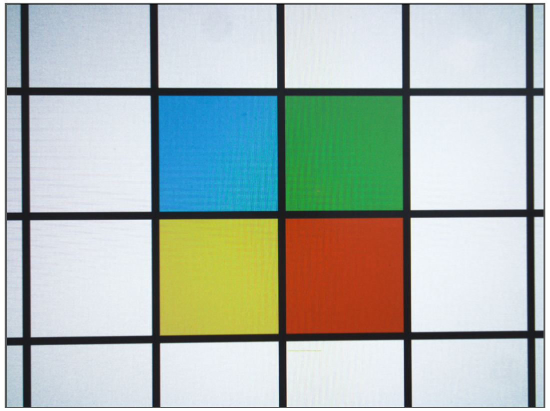
MECHANICAL DRAWING



Size tolerance（mm）	0-10±0.05	10-30±0.10	30-120±0.20
Angle tolerance			±2°

REFERENCE PHOTO

Each block is 3cm wide



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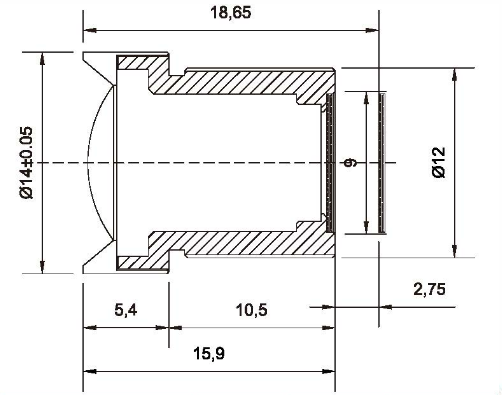
LENS SPECIFICATIONS

Optical Format	1/2.5"
EFL(mm)	3.6
35mm EFL	38.92
BFL(mm)	4.21
Construction	2G2P+IR
F/NO	2.8
FOV (D/H/V) @ 1/2.5"	96/80/65

Lens Holder Height	7-13mm
IR filter	650 IR filter
Mount	M12
Working Wavelength	400-700nm
MOD	0.2m
Size(mm)	14 x 16.3
Weight	4g
HFOV on 1/4" RPi Cam	55°

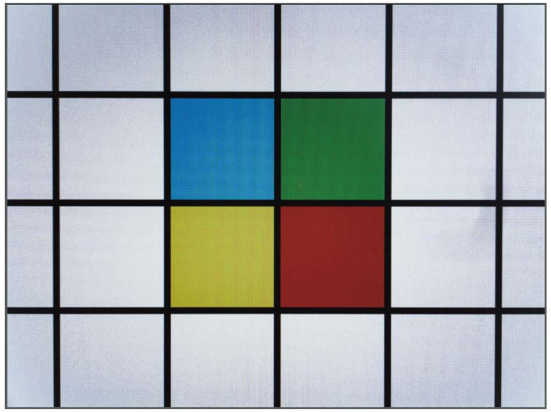
MECHANICAL DRAWING



Size tolerance（mm）	0-10±0.05	10-30±0.10	30-120±0.20
Angle tolerance			±2°

REFERENCE PHOTO

Each block is 3cm wide



Model No:M25360H06S

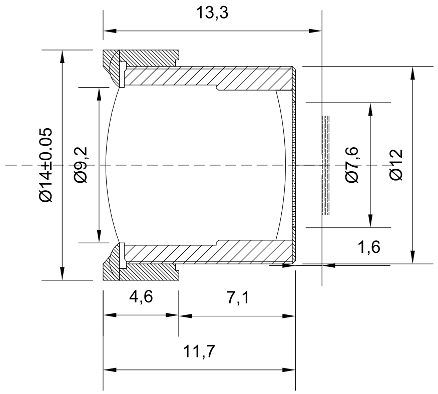
Model No:M40320M06S

LENS SPECIFICATIONS

Optical Format	1/4″
EFL(mm)	3.2
35mm EFL	34.6
BFL(mm)	1.6
Construction	5E+IR
F/NO	2
FOV (D/H/V) @ 1/4″	85/63/51

Lens Holder Height	7mm
IR filter	650 IR filter
Mount	M12
Working Wavelength	400-700nm
MOD	0.3m
Size(mm)	14 x 12
Weight	3g
HFOV on 1/4″ RPi Cam	63°

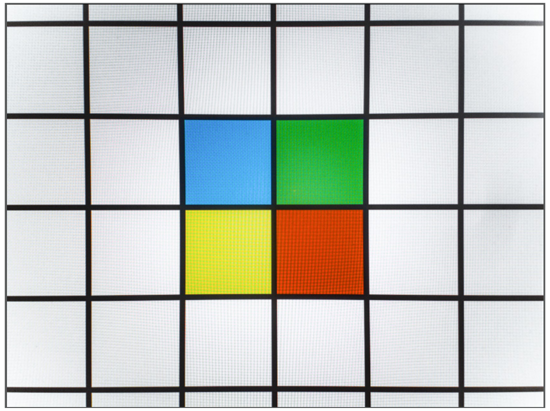
MECHANICAL DRAWING



Size tolerance（mm）	0-10±0.05	10-30±0.10	30-120±0.20
Angle tolerance			±2°

REFERENCE PHOTO

Each block is 3cm wide



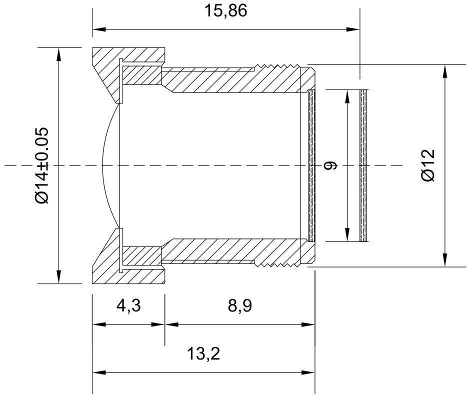
LENS SPECIFICATIONS

Optical Format	1/2.7"
EFL(mm)	2.8
35mm EFL	30.27
BFL(mm)	2.6
Construction	2G2P+IR
F/NO	2.8
FOV (D/H/V) @ 1/2.7"	125/110/85

Lens Holder Height	7mm
IR filter	650 IR filter
Mount	M12
Working Wavelength	400-700nm
MOD	0.3m
Size(mm)	14 x 15.6
Weight	4g
HFOV on 1/4" RPi Cam	75°

Model No:M27280M07S

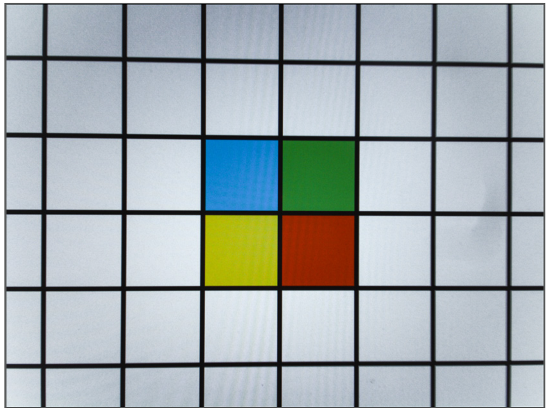
MECHANICAL DRAWING



Size tolerance（mm）	0-10±0.05	10-30±0.10	30-120±0.20
Angle tolerance			±2°

REFERENCE PHOTO

Each block is 3cm wide



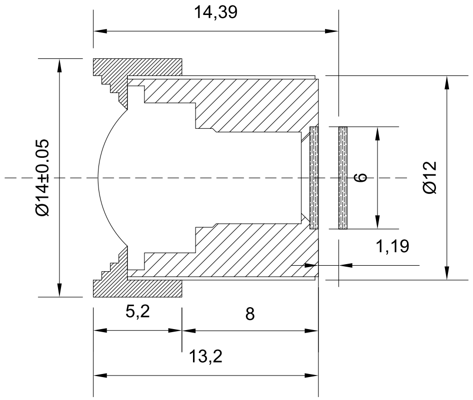
Model No:M40210M09S

LENS SPECIFICATIONS

Optical Format	*1/4"*
EFL(mm)	*2.1*
35mm EFL	*22.71*
BFL(mm)	*1.19*
Construction	*2G2P+IR*
F/NO	*2.2*
FOV (D/H/V) @ 1/4"	*110/93/70*

Lens Holder Height	*7mm*
IR filter	*650 IR filter*
Mount	*M12*
Working Wavelength	*400-700nm*
MOD	*0.3m*
Size(mm)	*14 x 13*
Weight	*3g*
HFOV on 1/4" RPi Cam	*90°*

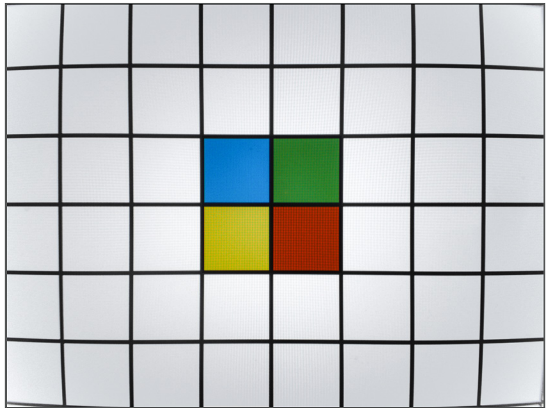
MECHANICAL DRAWING



Size tolerance（mm）	0-10±0.05	10-30±0.10	30-120±0.20
Angle tolerance			±2°

REFERENCE PHOTO

Each block is 3cm wide



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FIELD OF VIEW 35MM DSLR LENS EQUIVALENT

Lenses with a similar field of view capture similar images. Refer to this table if you have an idea of what DSLR lens can shoot.

DSLR Lens Focal Length	Horizontal	Vertical	Diagonal
12mm	112.6	90	122
15mm	100.4	77.3	110.5
19mm	86.9	64.6	97.4
24mm	73.7	53.1	84.1
28mm	65.5	46.4	75.4
35mm	54.4	37.8	63.4
50mm	39.6	27	46.8
85mm	23.9	16.1	28.6
90mm	22.6	15.2	27
100mm	20.4	13.7	24.4
105mm	19.5	13	23.3
135mm	15.2	10.2	18.2
200mm	10.3	6.9	12.3

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