

ArduCam

M12 mount

Camera Lens Kit for Arduino
and Raspberry Pi Camera

SKU: LK001

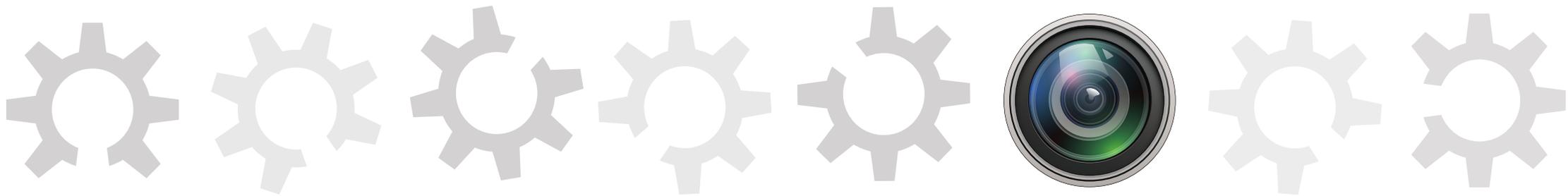


Build your vision, Capture everyone's imagination



About us

ArduCAM is a startup company dedicated to open source hardware and software, designed and manufactured 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 with 18mm 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

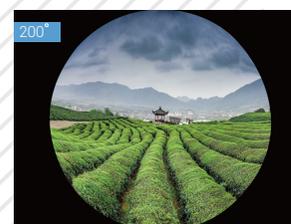
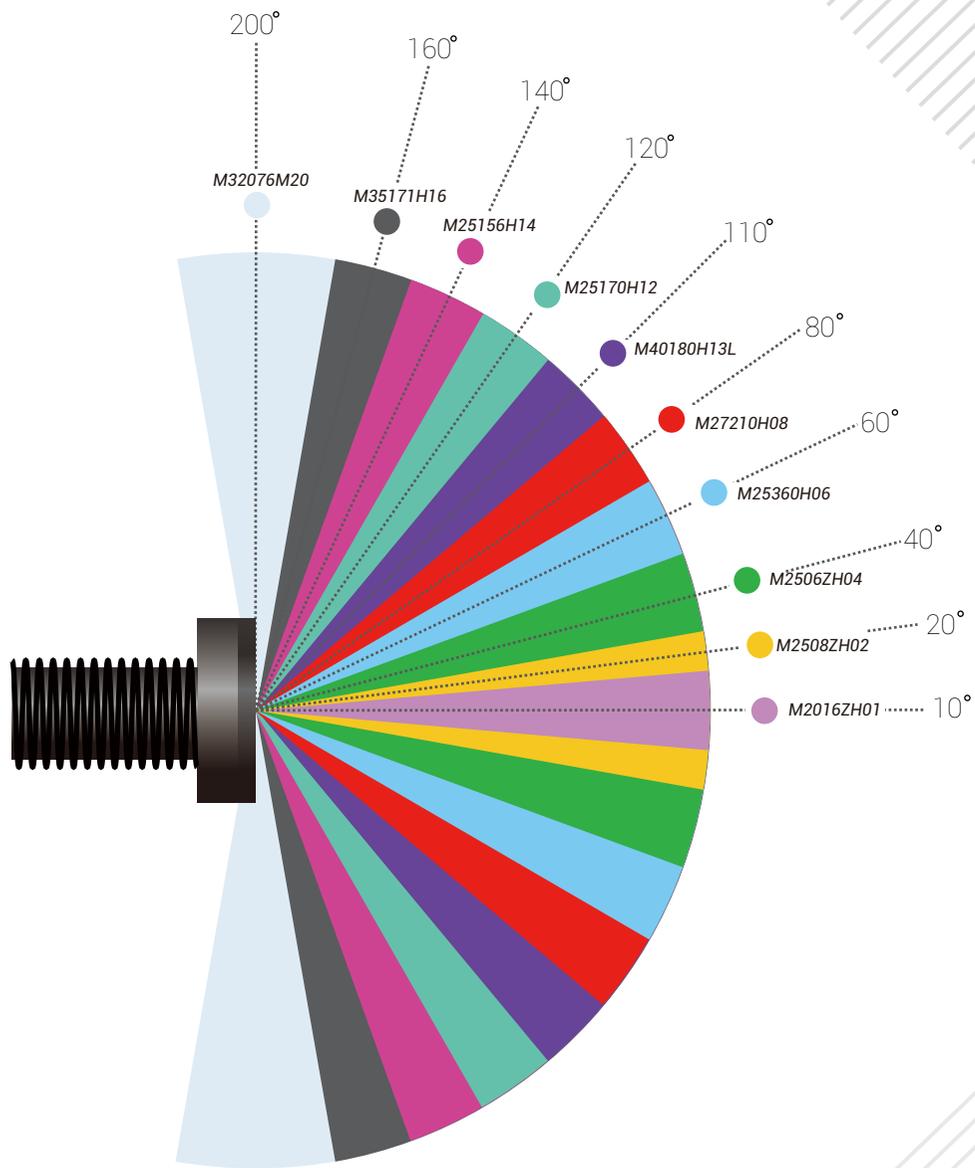
Specks of dust or tiny bubblers might be visible on the image while focusing the lens. These will disappear when the lens is in focus, and will not affect image quality.

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

	M2016ZH01	M2508ZH02	M2506ZH04	M25360H06	M27210H08	M40180H13L	M25170H12	M25156H14	M30171H16	M32076M20
Optical Format	1/2"	1/2.5"	1/2.5"	1/2.5"	1/2.7"	1/4"	1/2.5"	1/2.5"	1/3"	1/3.2"
EFL(mm)	16	8	6	3.6	2.1	1.8	1.7	1.56	1.71	0.76
<i>35mm Equivalent FL on Arduino or Raspberry Pi Camera</i>	173.0	86.5	64.9	38.9	22.7	19.5	18.4	16.9	18.5	8.2
BFL(mm)	7.1	8.1	7.3	5	6.3	3	4.7	4.3	4.71	2
F/NO	2.0	2.0	2.0	2.0	2.0	2.4	2.0	2.0	2.2	2.1
FOV (D/H/V)	29/23/17	50/40/30	67/53/41	156/114/80	170/120/80	122/110/94.5	180/180/140	185/185/140	184/184/104	222/222/222
HFOV on 1/4" RPI Cam	10	26	33	67	73	110	118	141	180	220
Construction	6G+ IR	6G+ IR	6G+ IR	6G+ IR	6G+ IR	4G+ IR	6G+ IR	6G+ IR	5G+IR	2G4P+ IR
IR filter	650 IR filter									
Mount	M12									
Working Wavelength	400-700nm									
MOD	0.3m	0.3m	0.3m	0.2m	0.3m	0.1m	0.2m	0.2m	0.2m	0.2m
Size(mm)	14 x 16.2	14 x 16.9	14 x 17.4	14 x 16.8	14 x 15.2	14 x 14.7	20 x 18.7	20 x 17.3	15 x 19.7	16 x 13.5
Weight	5g	7g	5g	6g	5g	6g	8g	7g	7g	5g



ArduCam

Model No: M2016ZH01



Model No: M2016ZH01

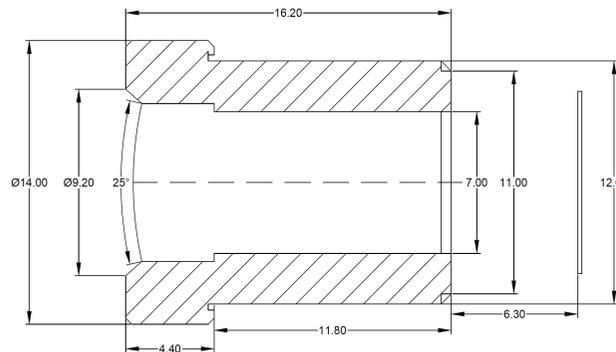
LENS SPECIFICATIONS

Optical Format	1/2"
EFL(mm)	16
35mm EFL *	173
BFL(mm)	7.1
Construction	6G+IR
F/NO	2
FOV (D/H/V) @ 1/2"	29/23/17

* 35mm Equivalent Focal Length for 1/4" Arduino or RPi Camera

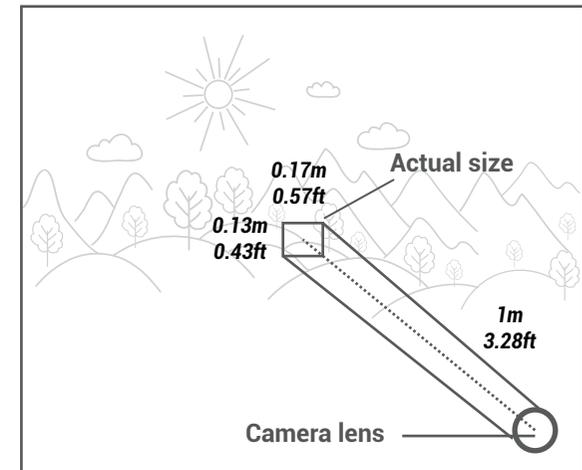
Lens Holder Height	13mm
IR filter	650 IR filter
Mount	M12
Working Wavelength	400-700nm
MOD	0.3m
Size(mm)	14 x 16.2
Weight	5g
HFOV on 1/4" RPi Cam	10°

MECHANICAL DRAWING



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

REFERENCE DIAGRAM



ArduCam

Model No: **M2508ZH02**

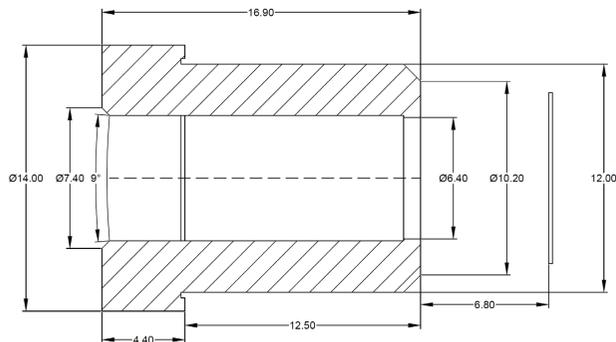
LENS SPECIFICATIONS

Optical Format	1/2.5"
EFL(mm)	8
35mm EFL *	86.5
BFL(mm)	8.1
Construction	6G+ IR
F/NO	2
FOV (D/H/V) @ 1/2.5"	50/40/30

* 35mm Equivalent Focal Length for 1/4" Arduino or RPi Camera

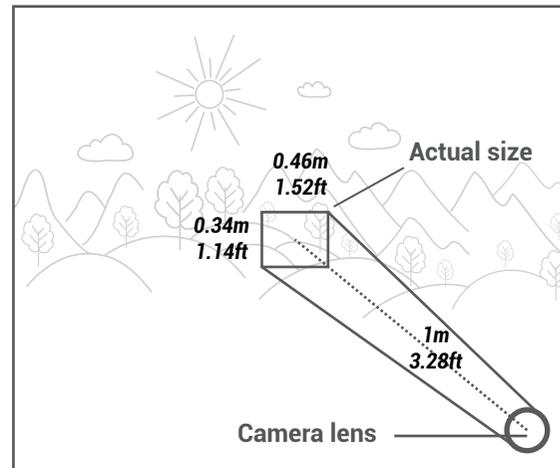
Lens Holder Height	13mm
IR filter	650 IR filter
Mount	M12
Working Wavelength	400-700nm
MOD	0.3m
Size(mm)	14 x 16.9
Weight	7g
HFOV on 1/4" RPi Cam	26°

MECHANICAL DRAWING



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

REFERENCE DIAGRAM



Model No: **M2508ZH02**



Model No: M2506ZH04

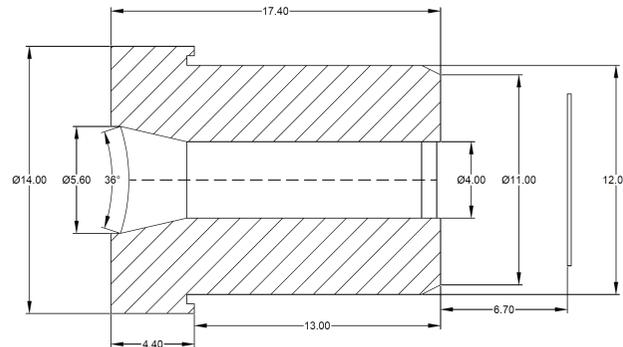
LENS SPECIFICATIONS

Optical Format	1/2.5"
EFL(mm)	6
35mm EFL *	64.9
BFL(mm)	7.3
Construction	6G+IR
F/NO	2
FOV (D/H/V) @ 1/2.5"	67/53/41

* 35mm Equivalent Focal Length for 1/4" Arduino or RPi Camera

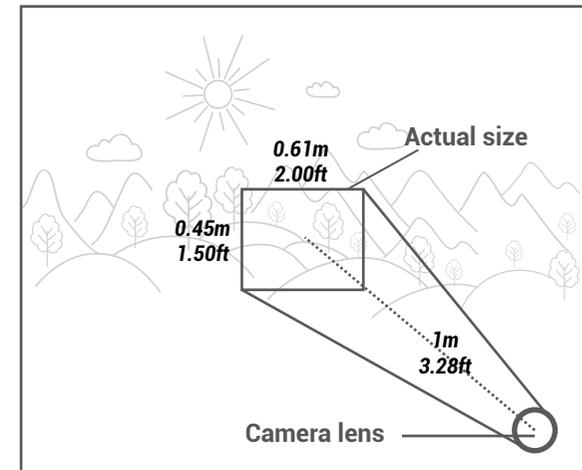
Lens Holder Height	13mm
IR filter	650 IR filter
Mount	M12
Working Wavelength	400-700nm
MOD	0.3m
Size(mm)	14x 17.4
Weight	5g
HFOV on 1/4" RPi Cam	33°

MECHANICAL DRAWING



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

REFERENCE DIAGRAM



ArduCam

Model No:M27210H08



Model No:M27210H08

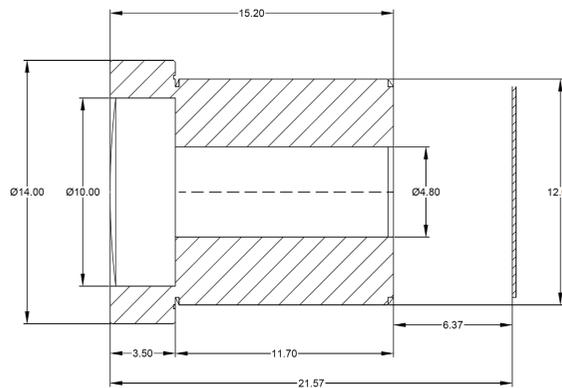
LENS SPECIFICATIONS

Optical Format	1/2.7"
EFL(mm)	2.1
35mm EFL *	22.7
BFL(mm)	6.3
Construction	6G+IR
F/NO	2
FOV (D/H/V) @ 1/2.7"	170/120/80

* 35mm Equivalent Focal Length for 1/4" Arduino or RPi Camera

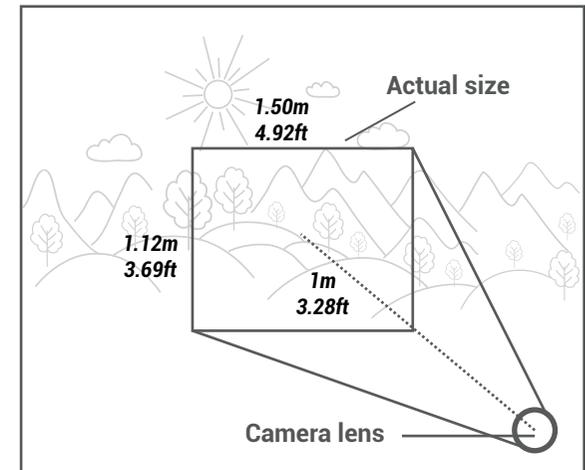
Lens Holder Height	13mm
IR filter	650 IR filter
Mount	M12
Working Wavelength	400-700nm
MOD	0.3m
Size(mm)	14 x 15.2
Weight	5g
HFOV on 1/4" RPi Cam	73°

MECHANICAL DRAWING



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

REFERENCE DIAGRAM



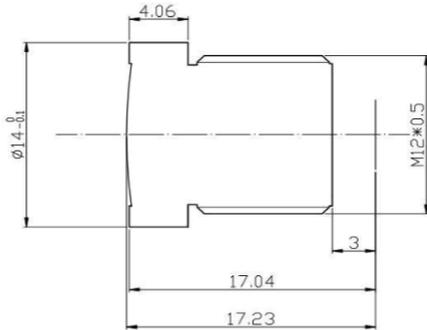
LENS SPECIFICATIONS

Optical Format	1/4"
EFL(mm)	1.8
35mm EFL *	19.5
BFL(mm)	3
Construction	4G+ IR
F/NO	2.4
FOV (D/H/V) @ 1/4"	122/110/94.5

* 35mm Equivalent Focal Length for 1/4" Arduino or RPI Camera

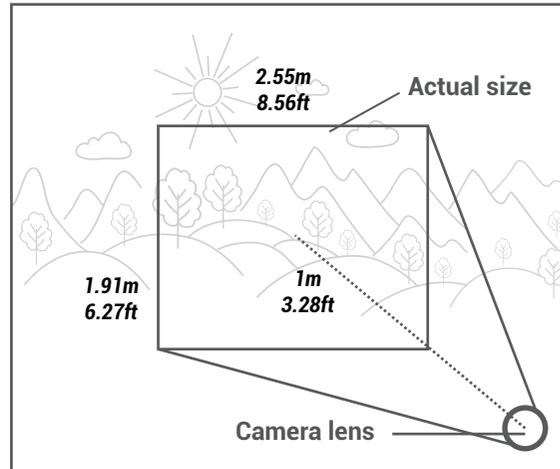
Lens Holder Height	13mm
IR filter	650 IR filter
Mount	M12
Working Wavelength	400-700nm
MOD	0.1m
Size(mm)	14x14.7
Weight	6g
HFOV on 1/4" RPi Cam	110°

MECHANICAL DRAWING



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

REFERENCE DIAGRAM



Model No:M40180H13L

ArduCam

Model No: M25170H12



Model No: M25170H12

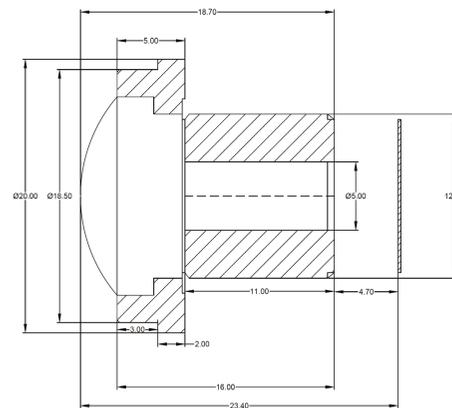
LENS SPECIFICATIONS

Optical Format	1/2.5"
EFL(mm)	1.7
35mm EFL *	18.4
BFL(mm)	4.7
Construction	6G+IR
F/NO	2
FOV (D/H/V) @ 1/2.5"	180/180/140

* 35mm Equivalent Focal Length for 1/4" Arduino or RPi Camera

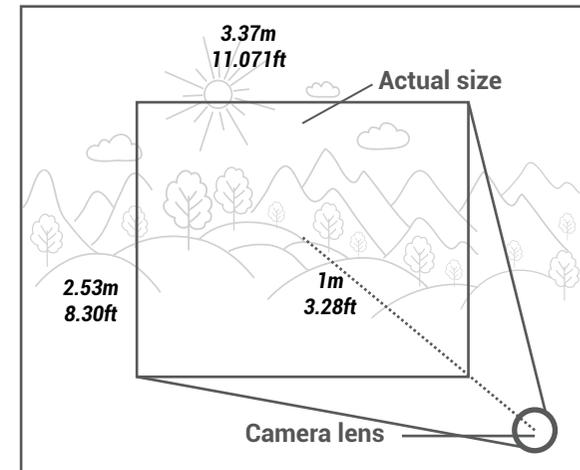
Lens Holder Height	13mm
IR filter	650 IR filter
Mount	M12
Working Wavelength	400-700nm
MOD	0.2m
Size(mm)	20 x 18.7
Weight	8g
HFOV on 1/4" RPi Cam	118°

MECHANICAL DRAWING



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

REFERENCE DIAGRAM



LENS SPECIFICATIONS

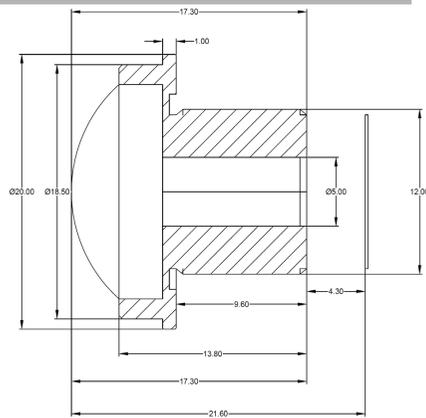
Optical Format	1/2.5"
EFL(mm)	1.56
35mm EFL *	16.9
BFL(mm)	4.3
Construction	6G+ IR
F/NO	2
FOV (D/H/V) @ 1/2.5"	185/185/140

* 35mm Equivalent Focal Length for 1/4" Arduino or RPi Camera

Lens Holder Height	13mm
IR filter	650 IR filter
Mount	M12
Working Wavelength	400-700nm
MOD	0.2m
Size(mm)	20x17.3
Weight	7g
HFOV on 1/4" RPi Cam	141°

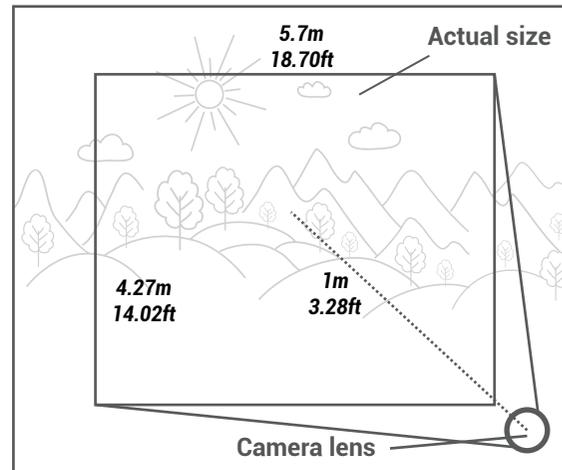


MECHANICAL DRAWING



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

REFERENCE DIAGRAM



Model No:M25156H14

ArduCam

Model No:M30171H16



Model No:M30171H16

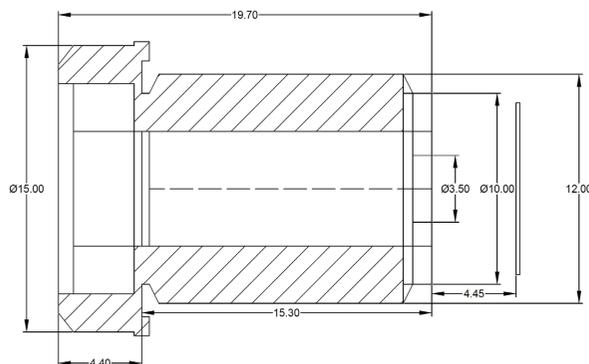
LENS SPECIFICATIONS

Optical Format	1/3"
EFL(mm)	1.71
35mm EFL *	18.5
BFL(mm)	4.71
Construction	5G+IR
F/NO	2.2
FOV (D/H/V) @ 1/3.5"	184/184/104

* 35mm Equivalent Focal Length for 1/4" Arduino or RPi Camera

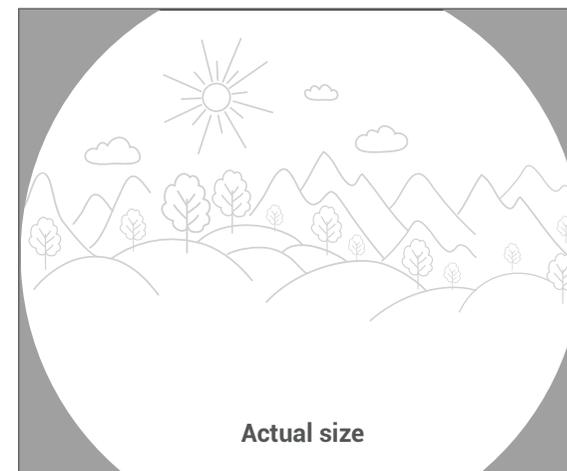
Lens Holder Height	13mm
IR filter	650 IR filter
Mount	M12
Working Wavelength	400-700nm
MOD	0.2m
Size(mm)	15x19.7
Weight	7g
HFOV on 1/4" RPi Cam	180°

MECHANICAL DRAWING



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

REFERENCE DIAGRAM



LENS SPECIFICATIONS

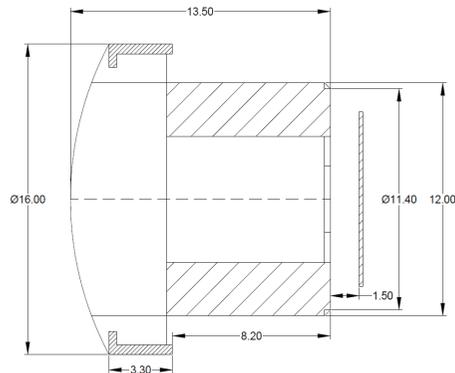
Optical Format	1/3.2"
EFL(mm)	0.76
35mm EFL *	8.2
BFL(mm)	2
Construction	2G4P+ IR
F/NO	2.1
FOV (D/H/V) @ 1/3.2"	222/222/222

Lens Holder Height	7mm
IR filter	650 IR filter
Mount	M12
Working Wavelength	400-700nm
MOD	0.2m
Size(mm)	16x13.5
Weight	5g
HFOV on 1/4" RPi Cam	220°

★ 35mm Equivalent Focal Length for 1/4" Arduino or RPi Camera

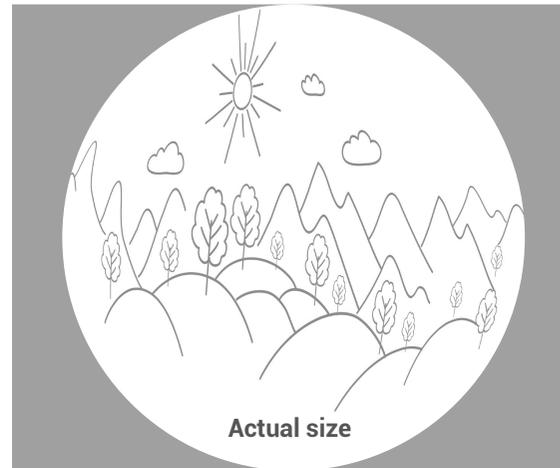


MECHANICAL DRAWING



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

REFERENCE DIAGRAM



Model No: **M32076M20**

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