



# ED-LENS-M12-170185-12 Data Sheet

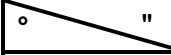
1/1.7" 12 Megapixel wide range M12 lens

## Overview

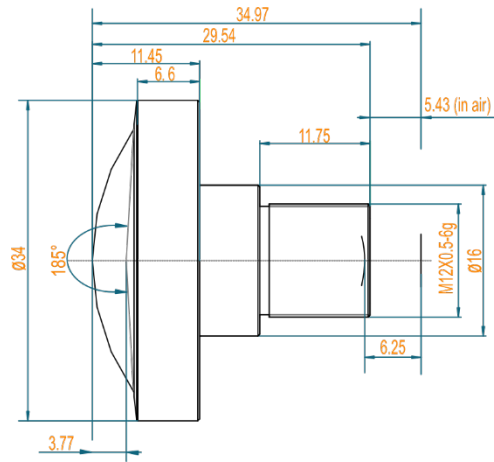
ED-LENS-M12-170185-12 lens can be used with Raspberry Pi M12 High Quality camera module and other cameras with M12 interface. This 1.85mm M12 lens provides an 185° Horizontal Field of View on 1/1.7" sensors.



# Specifications

<b>Resolution</b>		12 Megapixel		
<b>Optical format</b>		1/1.7"		
<b>TTL (Total Track Length)</b>		34.97mm		
<b>EFL (Effective Focal Length)</b>		1.85mm		
<b>Aperture</b>		F2.0		
<b>Mount</b>		M12		
<b>FOV (Field of View) DxHxV (°)</b>		1/1.7"	1/2"	1/2.5"
	<b>D</b>	185	185	185
	<b>H</b>	185	185	185
	<b>V</b>	185	154.9	126.4
<b>Optical Distortion</b>		-97.40%		
<b>CRA (Chief Ray Angle)</b>		≤14.88°		
<b>MOD (Minimum Object Distance)</b>		0.15m		
<b>BFL (Back Focal Length)</b>		6.25mm		
<b>MBF (Mechanical Back Focal)</b>		5.43mm		
<b>Structure</b>		9G		
<b>Operation</b>		<b>Focus</b>	Manual	
		<b>Iris aperture</b>	Fixed	
<b>Dimension (mm)</b>		Φ34×29.54		
<b>Weigh (g)</b>		30.4		
<b>Working Temperature</b>		-20°C to +60°C		

## Mechanical Drawing



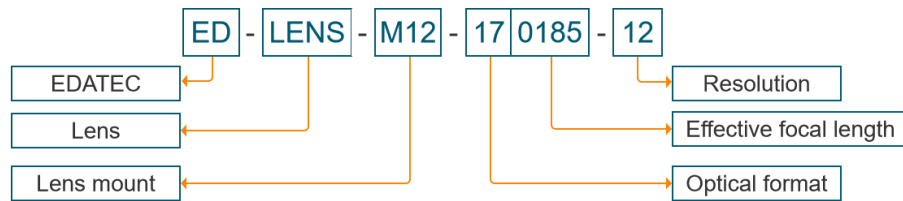
<b>Unit</b>	mm
<b>Size Tolerance</b>	0-10±0.1; 10-30±0.3; 30-120±0.5
<b>Angle Tolerance</b>	±2°

## Actual Photo

Below picture was taken by Raspberry Pi M12 HQ camera module with this lens in the lab, it just gives a reference about the Field of View and resolution of the lens, it may be different with the pictures taken in different light environment and other different conditions.



# Ordering Code



## Example

**P/N : ED-LENS-M12-170185-12**

**Configuration :** EDATEC selected a wide angle of 12 Megapixel M12-mount lens for Raspberry Pi High Quality Camera module, this 1.85mm M12 lens provides an 185° Horizontal Field of View on 1/1.7" sensors.

More details about Ordering Code, please check "[Selection Guide](#)" below.

# Selection Guide

Model NO.	Optical Format	EFL (mm)	BFL (mm)	Resolution (Megapixel)	Structure	F/NO.	FOV (D/H/V) (°)	MOD (m)	Size (mm)
ED-LENS-M12-175000-12	1/1.7"	50	24.2	12	8G	2.8	1/1.7": 10.6/8.6/6.4 1/1.8": 10.15/8.88/4.9	0.3	Φ22×44.9
ED-LENS-M12-203500-08	1/2"	35	7.569	8	8G	2.4	12.6/10.1/7.6	1	Φ20×33.7
ED-LENS-M12-202500-05	1/2"	25	11.98	5	6G	2.4	1/2": 18.3/14.7/11.1 1/3": 13.8/11.1/8.3 1/4": 10.4/8.3/6.3	0.3	Φ14×20.4
ED-LENS-M12-201600-05	1/2"	16	5.75	5	6G	2.0	1/2": 28.9/23.3/17.6 1/2.5": 26.1/24.7/15.8 1/3.6": 18.3/14.7/11.1	0.3	Φ14×16
ED-LENS-M12-201200-08	1/2"	12	5.06	8	8G	2.0	1/2": 41.4/36.4/20.9 1/2.3": 36.9/29.8/22.4	0.15	Φ15×20.24
ED-LENS-M12-180780-08	1/1.8"	7.8	6.06	8	8G	2.0	1/1.8": 60.8/50.3/38.6 1/2": 55.1/45.2/34.5	0.15	Φ18.7×29.27
ED-LENS-M12-180770-04	1/1.8"	7.7	5.37	4	7G1P	1.6	1/1.8": 65.4/57.2/32.4 1/2.3": 57.6/49.5/28.6 1/2.5": 53.2/46.5/26.3	0.3	Φ14×20
ED-LENS-M12-170800-12	1/1.7"	8	10.02	12	8G	1.8	1/1.7": 72.64/57.12/42.44 1/2.5": 50.7/44.4/32.6 1/3": 43/34.7/26.4	0.3	Φ17×33.1
ED-LENS-M12-180450-08	1/1.8"	4.5	5.9	8	12G	2.0	98.5/90.2/54.8	0.5	Φ24×24.8
ED-LENS-M12-180520-04	1/1.8"	5.2	5.21	4	7G1P	1.6	111/92.3/48.5	0.3	Φ14×20.7
ED-LENS-M12-170500-12	1/1.7"	5	6.39	12	8G	2.0	1/1.7": 121.4/90/65 1/2.5": 87/68.6/49.7 1/3": 70.9/55.5/41.2	0.3	Φ17×29.4
ED-LENS-M12-230347-08	1/2.3"	3.47	5.34	8	4G2P	2.2	137/106.8/79	1.11	Φ14×15.05

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**ED-LENS-M12-170185-12**

Model NO.	Optical Format	EFL (mm)	BFL (mm)	Resolution (Megapixel)	Structure	F/NO.	FOV (D/H/V) (°)	MOD (m)	Size (mm)
ED-LENS-M12-230325-13	1/2.3"	3.25	5.61	13	7G	2.7	154.2/117.6/85.8	0.89	Φ17.5×19.7
ED-LENS-M12-170320-12	1/1.7"	3.2	6.14	12	8G	2.0	1/1.7": 160/131/99 1/1.8": 153.6/129/88 1/2.3": 136/113.5/83	0.3	Φ28×38.9
ED-LENS-M12-180250-08	1/1.8"	2.5	5.59	8	8G	2.2	1/1.8": 180/142.4/106.8 1/2": 180/147.8/106.8 1/2.3": 180/142.4/106.8	0.3	Φ22×22.19
ED-LENS-M12-180160-05	1/1.8"	1.6	4.88	5	6G	2.0	1/1.8": 180/180/180 1/2.3": 180/180/180 1/3": 180/180/132	0.3	Φ20×16
ED-LENS-M12-170185-12	1/1.7"	1.85	6.25	12	9G	2.0	1/1.7": 185/185/185 1/2": 185/185/154.9 1/2.5": 185/185/126.4	0.15	Φ34×29.54
ED-LENS-M12-170183-08	1/1.7"	1.83	5.03	8	8E	2.07	186/186/186	0.2	Φ21×21.97
ED-LENS-M12-280167-08	1/2.8"	1.67	4.36	8	5G2P	2.0	1/2.8": 190/190/120 1/2.7": 190/190/115.9	0.3	Φ22×19.6
ED-LENS-M12-230155-12	1/2.3"	1.55	4.63	12	8G	2.0	1/2.3": 195/195/195 1/2.5": 195/195/172 1/2.7": 195/195/157	0.15	Φ26×23.16
ED-LENS-M12-250150-05-A	1/2.5"	1.5	3.66	5	6G	2.4	210/210/210	0.3	Φ16×13.4
ED-LENS-M12-230130-12	1/2.3"	1.3	2.96	12	8G	2.0	240/240/240	0.25	Φ22×18.24
ED-LENS-M12-230112-04	1/2.3"	1.12	3.01	4	4G2P	2.2	225/225/225	0.17	Φ17×18.19
ED-LENS-M12-230430-08	1/2.3"	4.3	3.62	8	4G2P	F3.0	1/2.3": 85.7/71.9/26.7 1/2.5": 79/71/43 1/2.8": 73/65/40 1/3": 67.5/60.3/36.4	0.3	Φ14.0×19.58
ED-LENS-M12-230280-08	1/2.3"	2.8	4.92	8	4G2P	F2.4	1/2.3": 115/102/85 1/2.5": 109.5/101.4/68	0.3	Φ18×18.26

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**ED-LENS-M12-170185-12**

Model NO.	Optical Format	EFL (mm)	BFL (mm)	Resolution (Megapixel)	Structure	F/NO.	FOV (D/H/V) (°)	MOD (m)	Size (mm)
							1/2.7": 106/95/66 1/2.9": 100.9/92.6/60.4		
ED-LENS-M12-230390-08	1/2.3"	3.9	4.49	8	4G2P	F2.8	1/2.3": 90/77.5/61 1/2.7": 80.5/72.8/44.8 1/2.8": 78/71/43	0.3	Φ14.0×18.67
ED-LENS-M12-230325-12	1/2.3"	3.25	4.45	12	4G2P	F2.6	1/2.3": 101.6/88.5/71.6 1/2.5": 96.1/87.9/56.2 1/2.8": 89.4/81.2/51.0 1/3.06": 84.4/71.7/56.0	0.3	Φ14×19.0
ED-LENS-M12-230270-08	1/2.3"	2.7	4.97	8	5G2P	F2.8	1/2.3": 113/100/82.7 1/2.5": 108/97/67 1/2.8": 101/92.8/60.3	0.3	Φ16.0×18.43
ED-LENS-M12-230356-08	1/2.3"	3.56	5.92	8	4G3P	F2.5	1/2.3"(IMX117): 105/88/69 1/2.3"(OV12896): 107/89/70 1/2.3"(IMX557): 106/88/69 1/2.5"(JX-K08): 98/87/53	0.3	Φ14×16.42
ED-LENS-M12-230220-08	1/2.3"	2.2	4.36	8	7E	F1.8	1/2.3"(IMX577): 124/112/82 1/2.5"(IMX317): 122/114/78 1/2.7"(SC8238): 118/109/74 1/2.8"(IMX415): 116/107/71	0.3	Φ22×20.98
ED-LENS-M12-230191-12	1/2.3"	1.91	3.56	12	9G	F1.8	1/2.3"(IMX577): 185/185/140.5 1/2"(IMX385): 185/185/121 1/2"(IMX586): 185/185/185	0.3	Φ23.5×24.90

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