



福建福特科光电股份有限公司

Foctek Photonics, Inc.

镜头参数 (Parameter of Lens)

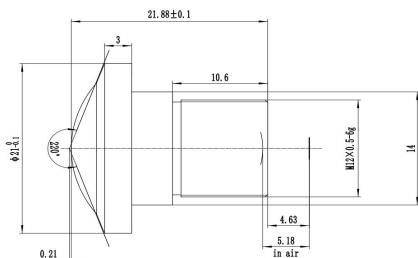
型号 (Model) :

M12-0.85IR(4MP)-F



分辨率 (Resolution)	4 Megapixel			
像面尺寸 (Image Circle)	$\Phi 2.66\text{mm}@220^\circ$			
焦距 (Focal length)	0.85mm			
通光孔径 (Aperture)	F2.3			
接口 (Mount)	M12			
视场角 (Field Angle) $D \times H \times V (^{\circ})$		1/3	1/4 ($\Phi 4.5 \times 3.6 \times 2.7$)	1/4 ($\Phi 4.0 \times 3.2 \times 2.4$)
	D	220	220	220
	H	220	220	220
V	220	220	181.4	
畸变 (Optical Distortion)	-97.5@180°			
最近物距 (M. O. D.)	0.15m			
外形尺寸 (Dimension)	$\Phi 21 \times 21, 88\text{mm}$			
法兰后焦距 (Flange BFL)	/			
光学后焦距 (BFL)	5.18mm (in air)			
机械后焦距 (MBF)	4.63mm (in air)			
日夜共焦 (IR Correction)	Yes			
镜片材质 (Lens material)	全玻璃			
镜片组成 (Lens structure)	7G			
操作方法 (Operation)	光圈 (Iris)	固定光圈 (Fixed)		
	聚焦 (Focus)	手动聚焦 (Manual)		
	变焦 (Zoom)	/		
防护等级 (Ingress Protection)	IP67			
工作温度 (Operating temperature)	-20°C ~ +60°C			

尺寸 (Size)



尺寸公差 Size tolerance (mm) : 0-10 ± 0.05 | 10-30 ± 0.10 | 30-120 ± 0.20

角度公差 Angle tolerance : ± 5°



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检测标准 (Test Standard)

型号 (Model):

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检测项目 Test Items

检测内容 Test Content

1	逆投影检测 Resolution Test	Test Range	Φ1.9 (diameter 0.4m)
		Center ≥	200 lp/mm
		edge ≥	160 lp/mm
		Image standard	The image should be clear.
	环境 Environment	25±2℃ ≤1 lux的暗房	

2	外观检测 Appearance Inspection	Apperance (Inner barrel)	60-40: The maximum scratch width is allowed to be 0.06mm, the length allows the 1/4 edge position of the lens; the visually invisible fineness is negligible; the maximum diameter of the pip is allowed to be 0.2mm, and only one lens surface is allowed; the pip is smaller than 0.002mm~0.005m can be neglected; the film color is uniform; there is no obvious color spot on the surface.
		Apperance (Outer barrel)	The lens barrel has no obvious color difference, scratch, break, deformation; the glue is not allowed to overflow into the effective light path; no word drop, clear writing, the same font size, even spacing, etc.
	环境 Environment	25±2℃ 700~1000 lux	



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环境可靠性测试 (Reliability and Environmental Testing)

型号 (Model):

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检测项目 Test Items

检测内容 Test Content

1

温度循环试验
Temperature Cycling Test

镜头在试验温度 $(-30\pm 3)^{\circ}\text{C}$ 放置1.5小时, $(70\pm 3)^{\circ}\text{C}$ 放置3小时的条件下, 放置2个循环。试验后, 将镜头放置于室温24小时后进行检验, 各指标均合格。

Lens is placed on two cycles in the test temperature $(-30\pm 3)^{\circ}\text{C}$ for 1.5 hours and in $(70\pm 3)^{\circ}\text{C}$ for 3 hours separately. Then, the indicators are qualified after placing the lens at room temperature for 24 hours.

2

高温高湿试验
Damp heat test

镜头在试验温度 $(70\pm 3)^{\circ}\text{C}$, 湿度85%RH的条件下, 放置48小时。试验后, 将镜头放置于室温24小时后进行检验, 各指标均合格。

Lens is placed in the test temperature $(70\pm 3)^{\circ}\text{C}$, humidity 85% RH for 48 hours. Then, the indicators are qualified after placing the lens at room temperature for 24 hours.

3

跌落试验
Drop Test

镜头在1米高 $(\pm 0.1\text{m})$ 处, 自由跌落到混凝土地板上。试验后, 镜头各指标均合格。

Lens drops from the height of $(1\pm 0.1\text{m})$ to the concrete ground. After the testing, the indicators are qualified.

4

振动试验
Vibration Test

镜头正弦波振动2小时, 在振幅为1mm, 频率为50Hz的条件下, 试验后, 镜头各指标均合格。

Lens vibrates 2h in sinusoidal wave under 1 mm of amplitude and 50Hz of frequency. After the testing, the indicators are qualified.

5

防水试验
Waterproof Test

镜头在1米水深放置0.5小时, 试验后, 镜头各指标均合格。

Lens is placed in 1 m water depth for 0.5 hours. After the testing, the indicators are qualified.



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包装规格 (Packing Specification)

型号 (Model) :

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1. Stick label on the surface of lens after capped.
2. Put the lens into the carton box.
3. The unit will be packaged in a corrugated box.
4. Seal the corrugated box with tape and mark the surface.

