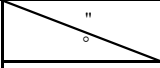


镜头参数 (Parameter of Lens)

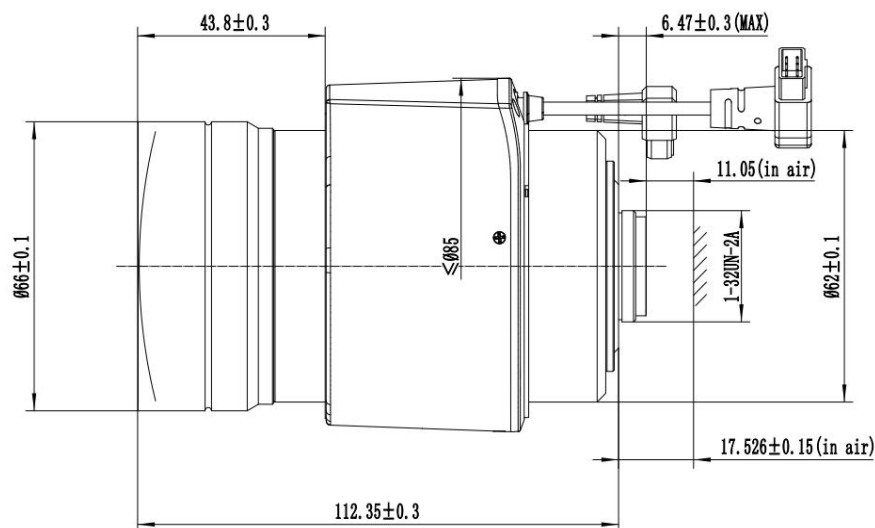
型号 (Model):

C-P1640IR(12MP)-EE



分辨率（Resolution）		12 MegaPixel					
像面尺寸（Image format）		1.1"（φ17.6mm）					
焦距（Focal length）		16（W）~40（T）（±5%mm）					
通光孔径（Aperture）		F1.5（W）~1.5（T）（±5%mm）					
接口（Mount）		C					
视场角（Field Angle） D×H×V(°) ±5%		1.1" （IMX428）		1" （17:9 IMX267）		1/1.2" （16:9 IMX485）	
		W	T	W	T	W	T
	D	60.3	25.3	55.7	23.5	44.4	18.8
	H	50.1	21.2	49	20.7	38.7	16.5
	V	34.4	14.7	25.9	11.1	21.7	9.3
光学畸变(Optical Distortion)		-9.0%	1.20%	-8.0%	0.81%	-5.4%	0.30%
主光束入射角（CRA°）		6.1	5.9	6.2	6.4	6.3	7.0
重量(Weight)		680±5g					
镀膜波段(Coating Range)		400-900nm					
最近物距(M.O.D.)		1.5m（W）~2.5m（T）					
外形尺寸(Dimension)		Φ66×112.35mm					
法兰后焦距(Flange BFL)		17.526±0.15mm (in air)					
光学后焦距(BFL)		12.48mm (in air)					
机械后焦距(MBF)		11.61mm (in air)					
相对照度（Relative illuminance）		44% (W) φ8.8mm, 43% (T) φ8.8mm					
日夜共焦（IR Correction）		Yes(<0.015mm)					
操作方法 (Operation)	光圈 (Iris)			P光圈（P-iris）			
	聚焦 (Focus)			电动聚焦（Motorized）			
	变焦 (Zoom)			电动变焦（Motorized）			
工作温度（Operating temperature）				-30℃～+70℃			

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

±2°

P光圈 (P Iris)

型号 (Model) :

C-P1640IR(12MP)-EE

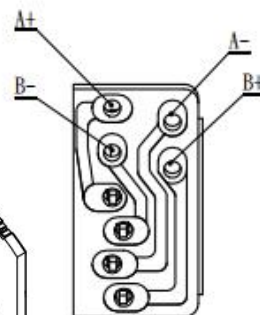
CONNECTION DIAGRAM



SEQUENCE OF EXCITATION

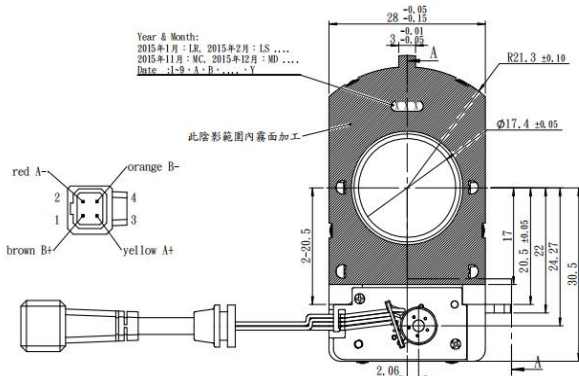
STEP	1	2	3	4
PHASE				
A+	H	H	L	L
A-	L	L	H	H
B+	L	H	H	L
B-	H	L	L	H

NO.	颜色	卷线
1	brown	B+
2	red	A-
3	yellow	A+
4	orange	B-

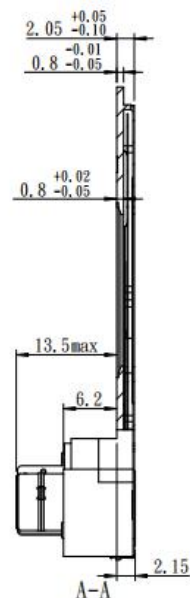
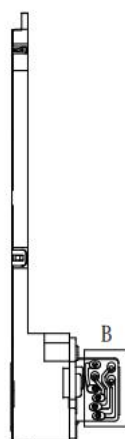
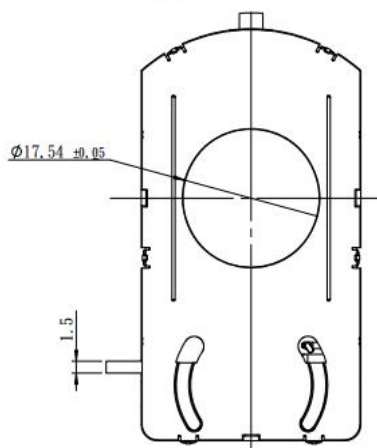


B (5 : 1)

CLOSE端 : A+:H A-:L B+:L B-:H



导线	Φ3.0 4芯线 (线颜色:黑)
规格	UL 1571 80℃ 30V VW-1
线材	橙 黄 红 褐(材質:PVC28F)



最大孔径Max.Image Circle		Φ17.4mm	电阻 Resistance	30Ω±10%, 25℃
线序 Iris Wire	棕 (brown)	B+	额定电压 Rated Voltage	DC 4.0V(端子电压)
	红 (red)	A-	工作电压范围 Operating Voltage	DC 2.7~5V
	黄 (yellow)	A+	马达步进角度 Motor Step Angle	18°±3°/step
	橙 (orange)	B-	输出步进角度 Output Step Angle	0.845°/step
Dimension	见尺寸图		连续动作时间 Continuous Time	30 sec以下(at 2.7DCV)
减速比 Reduction Ratio		1:21.3	工作环境 Operating Environment	-30℃~70℃

电机 (Motor)

型号 (Model):

C-P1640IR(12MP)-EE

CONNECTION DIAGRAM

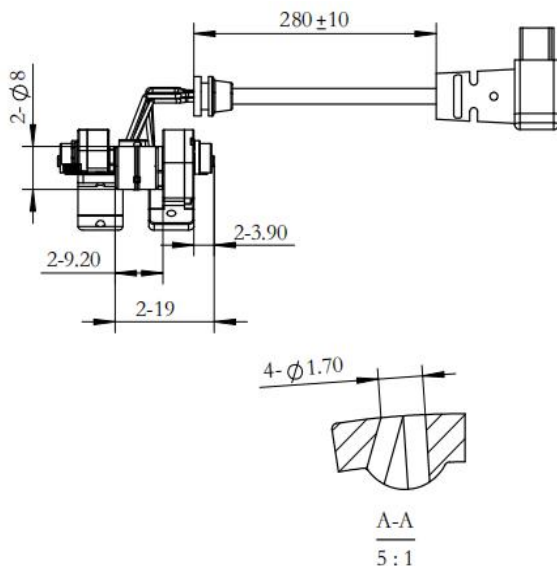
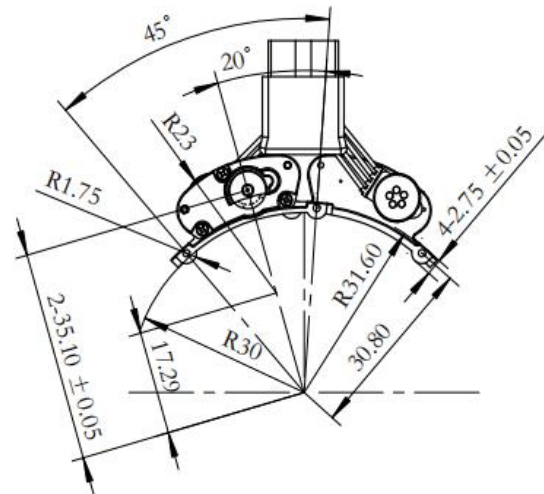
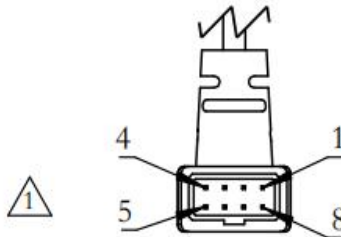
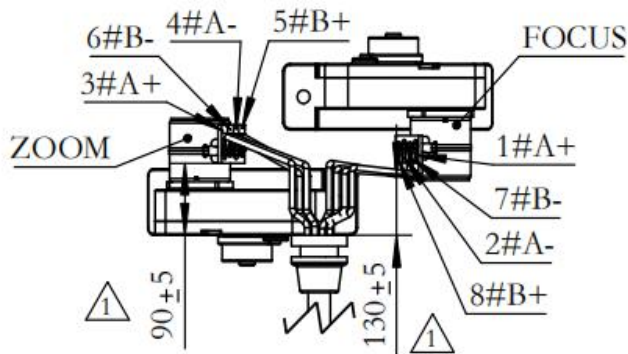
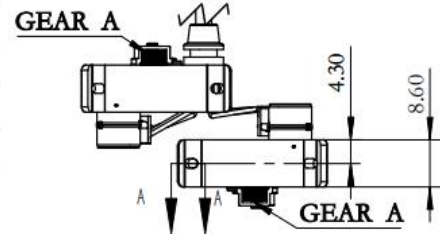
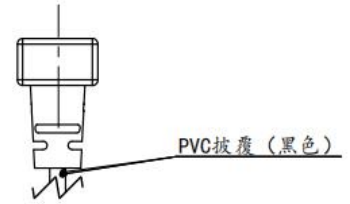


SEQUENCE OF EXCITATION

STEP PHASE	1	2	3	4
A	H	H	L	L
Ā	L	L	H	H
B	L	H	H	L
B̄	H	L	L	H

OUTPUT SHAFT ROTATION CW

PIN NO.	COLOR
1	BLACK(FOCUS A+)
2	BLUE(FOCUS A-)
3	ORANGE(ZOOM A+)
4	GREEN(ZOOM A-)
5	YELLOW(ZOOM B+)
6	BROWN(ZOOM B-)
7	WHITE(FOCUS B-)
8	RED(FOCUS B+)



总表			
NO.	TIME	PARAMETER	TEST CONDITION
1	额定电压 RATED VOLTAGE	3.3 V DC	/
2	电阻 COIL RESISTANCE	30Ω ± 10%	/
3	相数 NO. OF PHASES	2 PHASES	/
4	步进角度 STEP ANGLE	18°/STEP	SINGLE MOTOR
5	激励方式 EXCITATION METHOD	2 PHASE EXCITATION	/
6	驱动模式 DRIVE MODE	BI-POLAR DRIVE	/
7	减速比 GEAR RATIO	80.095:1	/
8	引入力矩 PULL-IN TORQUE	1.2 gf-cm (MIN.)	AT 900 pps, 3.3 V, 2-2 PHASE, SINGLE MOTOR
9	脱出力矩 PULL-OUT TORQUE	1.5 gf-cm (MIN.)	AT 900 pps, 3.3 V, 2-2 PHASE, SINGLE MOTOR
10	齿轮箱出力力矩 OUTPUT GEAR TORQUE	90 gf-cm (MIN.)	AT 900 pps, 3.3 V, 2-2 PHASE
12	最大启动频率 MAXIMUM STARTING FREQUENCY	1000 pps (MIN.)	AT 3.3 V, 2-2 PHASE
13	最大连续运转频率 MAXIMUM SLEWING FREQUENCY	2000 pps (MIN.)	AT 3.3 V, 2-2 PHASE
14	最小启动电压 MIN. STARTING VOLTAGE	DC 2.6 V (MAX.)	AT 900pps 2-2PHASE, NO LOAD
15	噪音 NOISE	45dB (max.)	AT 900pps 3.3 V, NO LOAD, DISTANCE 10cm
16	绝缘等级 INSULATION CLASS	CLASS F FOR COILS	/
17	绝缘耐压 INSULATION STRENGTH	1mA (MAX.)	100 V AC FOR ONE SECOND
18	绝缘阻抗 INSULATION RESISTANCE	1.0 MΩ (MIN.)	100 V DC
19	使用温度范围 OPERATING TEMPERATURE RANGE	-40~+80 °C	/

检测标准 (Test Standard)

型号（Model）：		C-P1640IR(12MP)-EE	
检测项目Test Items		检测内容 Test Content	
1	逆投影检测 Resolution Test	Test Range	Set focus:17.526mm Thickness of Cover Glass: 1.5±0.2mm projector distance:W: 0.95m(by using RL6858 Teleconverter); T: 3.0m(by using RL7035 Teleconverter)
		Center≥	160 lp/mm
		φ16≥	100 lp/mm
		Image standard	The image should be clear.
环境Environment		25±2℃, ≤1 lux Dark room	

2	外观 Appearance	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.
		Rotation	Feel the rotation back and forth smoothly without jumping, stuck and abnormal sounds, etc.
3	环境Environment	25±2℃ 700~1000 lux	



福建福特科光电股份有限公司

Foctek Photonics, Inc.

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

型号 (Model) :		C-P1640IR(12MP)-EE
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$(-30\pm3)^{\circ}\text{C}$放置1.5小时, $(70\pm3)^{\circ}\text{C}$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 $(-30\pm3)^{\circ}\text{C}$ for 1.5 hours and in $(70\pm3)^{\circ}\text{C}$ 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$(70\pm3)^{\circ}\text{C}$, 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 $(70\pm3)^{\circ}\text{C}$, 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$(\pm0.1\text{m})$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 $(1\pm0.1\text{m})$ 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, 经重新聚焦镜头各指标均合格。 Lens vibrates 2h in sinusoidal wave under 1 mm of amplitude and 50Hz of frequency. After the testing, refocus the lens, the indicators are qualified.

包装规格 (Packing Specification)

型号 (Model) :

C-P1640IR(12MP)-EE

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

