

深圳市创威时代光电有限公司  
Shenzhen ChuangWei Seculens CO., Ltd.

# 产品规格书

## Product Specification

型号:  
(Model Name): 30028DB. IR-5MP

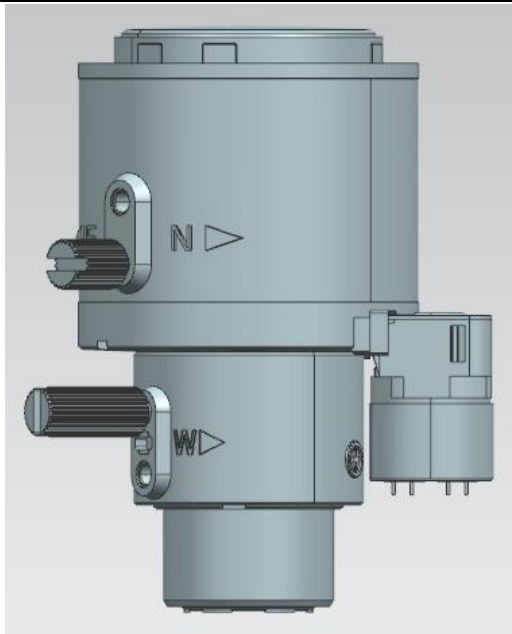
编码:  
(Part No.): 01. 30028. 001. 05

客户名称:  
(Customer Name):

客户编码:  
(Customer Part No.):

客户承认 (Customer Approved)

	承认 (Approved by)	检印 (Reviewed by)		作成 (Prepared by)	
			光学		
			结构		
			电子		



图片仅供参考  
(picture only for your reference)

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### 3 变更履历 (Revision History) 变更符号标记 (Mark revised) :

版本 (REV.)	变更日期 (DATE)	变更内容 (Revision content)	作成 (Prepared by)	备注 (Remark)
1.0	20.01.15	新规作成 (New Spec Document prepared)	LCQ	
1.1	21.01.29	IRIS-更新 (IRIS updated)	LCQ	
1.2				
1.3				

## 4.概要 (Outline)

### 4.1 应用范围 (Application)

适用于我司向贵司提供的镜头产品(The below datasheet is only suit to SECULENS products.)

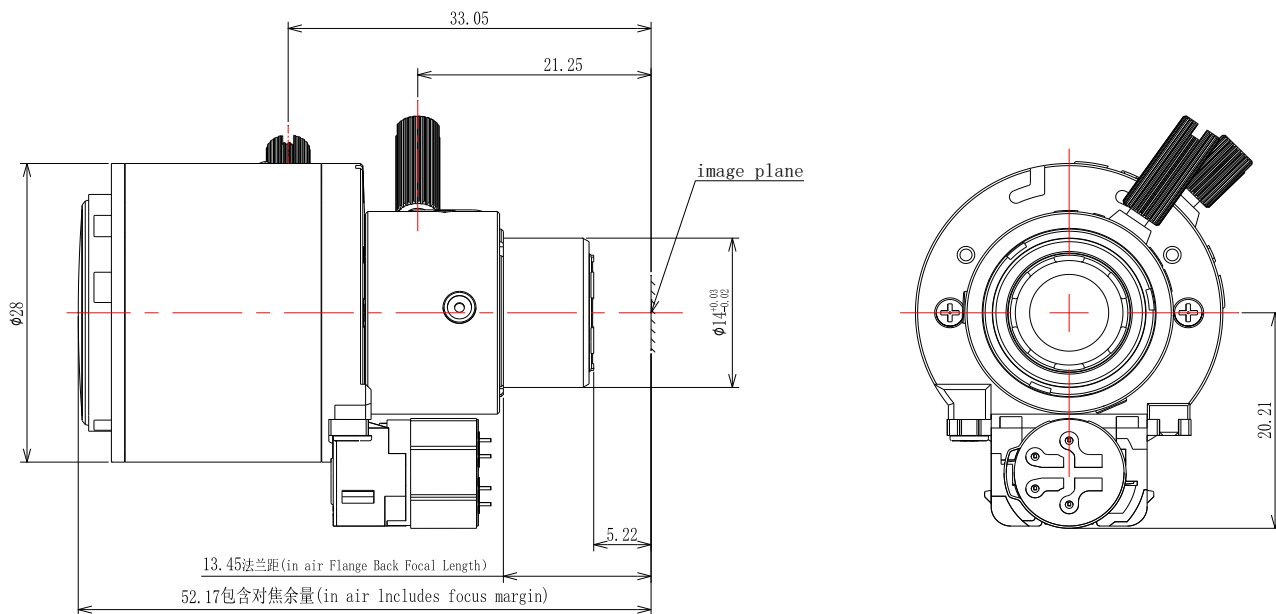
## 5 主要参数 (Main Items)

### 5.1 光学参数规格 (Optical Specifications)

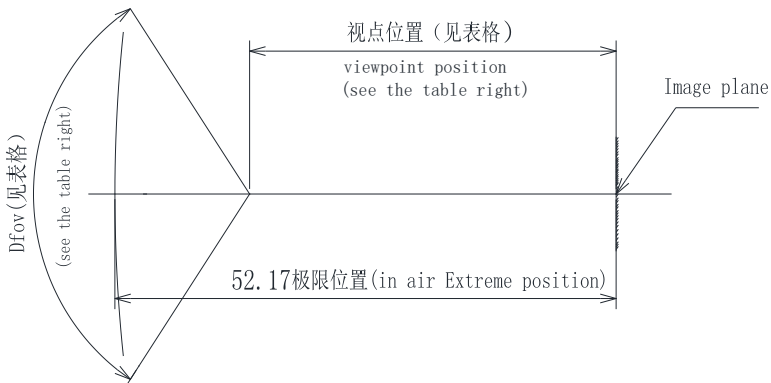
NO.	项目 (Items)	设计规格 (Specification)			
1	F No.	1.6-3.3±10%			
2	焦距(FocalLength)	3.2-10.5±5%			
3	光学后焦 (Optical Back Focal Length)	5.98±0.2 (in air)			
4	法兰距 (Flange distance)	13.45±0.2 (in air)			
5	镜头总长(TTL)	52.17±0.2 (in air)			
6	像面大小 (Image circle)	Ø7.0(MAX)			
7	镜片构成 (Lens structure)	4G5P			
8	接口 (Mount )	Ø14			
9	视场角 (FOV)	sensor型号	H(水平)	V(垂直)	D(对角)
		1/2.7"	113° (W) - 31.4° (T)	58.4° (W) - 17.6° (T)	138.2° (W) - 36° (T)
		1/2.8"	108.1° (W) - 30.3° (T)	56.3° (W) - 17.1° (T)	130.9° (W) - 34.8° (T)
		1/2.9"	103.4° (W) - 29.3° (T)	54.3° (W) - 16.5° (T)	124.2° (W) - 33.6° (T)
10	光学畸变 (OpticalDistortion)	1/2.7"	1/2.8"	1/2.9"	
		-61%(W) - -3.3%(T)	-55.3%(W) - -3.1%(T)	-50.4%(W) - -2.9%(T)	
11	相对亮度 (RelativeIllumination)	1/2.7"	1/2.8"	1/2.9"	
		43.2%(W) - 95.2%(T)	48%(W) - 95.5%(T)	49.5%(W) - 95.6%(T)	
12	最大主光线夹角 (CRA)	1/2.7"	1/2.8"	1/2.9"	
		7.9°	7.7°	7.2°	
13	近摄距 (M.O.D)	0.8m			
14	解像标准 (Resolution)	分辨率 (Resolution):		2592×1944 (5MP)	
15	重量 (Weight)	/			
16	操作方法 (Operation)	聚焦 ( Focus )	手动 ( Manual)		
		光圈 (Iris)	自动 ( auto)		
17	环保&安全 (HSF&Safety)	RoHS			

## 5.2 机构参数规格 (Mechanical Specifications)

### 5.2.1 外形尺寸图 (Dimension Figure)



### 5.2.2 视点图 (Viewpoint Figure)



像面大小 (Format)	Dfov	视点位置(mm) viewpoint position
(1/2.7"以下镜头) (lens format<1/2.7")	Φ4.41	81.8° 43.3
	Φ5.60	108.9° 44.7
	Φ6.00	119.4° 45.3
	Φ6.17	124.2° 45.6
	Φ6.39	130.9° 46.1
	Φ6.61	138.2° 46.6
	Φ7.00	154.0° 47.8

未注公差(Unmarked Tolerance):  $\Phi \pm 0.1$ ,  $L \pm 0.15$

本规格书未注单位(Unit is not indicated in the document): mm

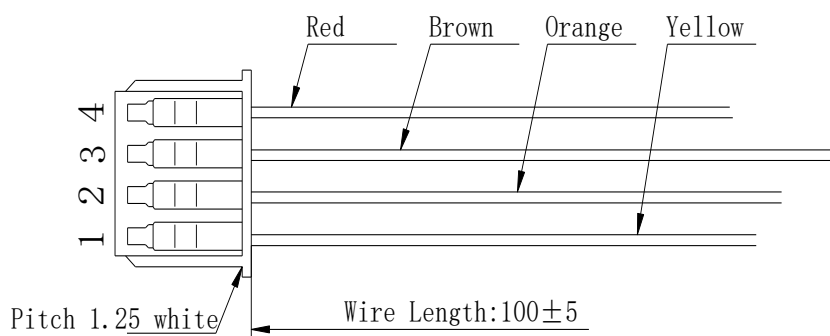
## 5.3 日本单光驱相关参数 (IRIS0131) IRIS Specifications

NO	项目ITEM	条件Condition	单位Unit	标准Standard	
1	开放口径 (Opening Aperture)	-	mm	φ 6.7	
2	线长 (Wire Length)	-	mm	100±5	
3	线圈阻抗 DC Coil	驱动电阻 (Driving Coil)	20°C	Ω	190±10%
4		制动电阻 (Braking Coil)	20°C	Ω	465±10%
5	操作电压Action voltage	电压使用范围 (Voltage range)	-	V	3.5-5.25
6		推荐使用电压 (Voltage recommended)	-	V	5
7		全开保证电压 (Open voltage)	20°C	V	3.5以上 (Above)
8		关闭保证电压 (Close voltage)	20°C	V	0.5以下 (Under)
9	IRIS制动速度 IRIS speed	关 close→开 open	20°C	秒 (sec)	2~3
10		开 open →关 close	20°C	秒 (sec)	2~3
11	操作温度Operating Temp	-	-	参照环境参数规格 Refer to the environmental parameter specifications	
12	相关湿度Relative Humidity	-	-	参照环境参数规格 Refer to the environmental parameter specifications	

### 端子定义Terminal definition

PIN	线颜色 Line Color	端口名称 Pin Name
1	黄色 (Yellow)	Damp+
2	橙色 (Orange)	Damp-
3	棕线 (Brown)	Drive+
4	红色 (RED)	Drive-

### 配线细节Line details



## 5.4 光学检测标准 (Optical Performance)

No.	检测项目 (Items)	描述 (Description)
1	解像力 (Resolution)	1.1: 逆投影解像条件 (Condition) A: Chart:1/2.5" VCL-4 (N) B: 投影距离(Distance): $\varnothing 6$ 圈直径 (diameter) 为1m即可 1.2: 解像标准(Criteria) 5MP: 逆投影: 中心250本 0.7F 160本 0.9F 125本 The inverse projection:(center:250lp/mm 0.7Y:160lp/mm 0.9Y:125lp/mm)
2	外观标准 (Appearance Standards)	2.1镜头内污 (LENS DUST) A:规格 60-40 伤痕: 宽度 <60um, 长度和 <D/2, $\leq 15\text{um}$ 不计; 脏污: 单点直径 <400um, 200~400um点 $\leq 3$ 个, $\leq 200\text{um}$ 不计。 2.2其他外观(Other appearance) 外表面颜色均匀, 无明显缺陷、污渍、异物伸出、明显划伤和收缩; 胶水不得溢入有效通光内。 2.1 LENS DUST A: Specification 60-40 Scratch: width<60um, total length<D/2, $\leq 15\text{um}$ ignored; Smudge: Single dot diameter <400um, 200~400um dot $\leq 3$ pcs, $\leq 200\text{um}$ ignored. 2.2 Other appearance Outside surface uniform color; no visible flaws, stains, foreign bodies extended, obvious scratch or contraction; no glue spill into the effective aperture.
3	作动检查 (Operation check)	社内作动检测治具。(Fixture check) 连接后测试镜头齿轮箱/IRIS/IR-CUT作动无异常。(Check lens gearbox//IRIS/IRCUT operation,no abnormal noise) 齿轮箱马达无异音。(No abnormal noise in gearbox motor)

## 5.5 环境参数规格 (Environment Specifications)

No.	环境描述 (Items)	条件(Description)
1	存放环境 (Storage condition)	-30°C~+80°C; 10-90%RH (No condensing)
2	工作环境 (Operation condition)	-20°C~+60°C; 10-90%RH (No condensing)

## 6 信赖性测试( Reliability Test)

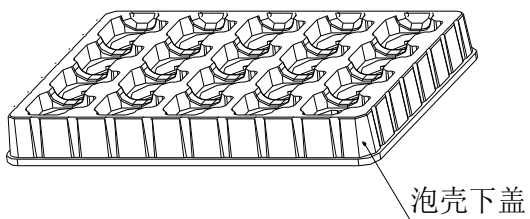
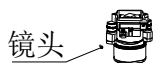
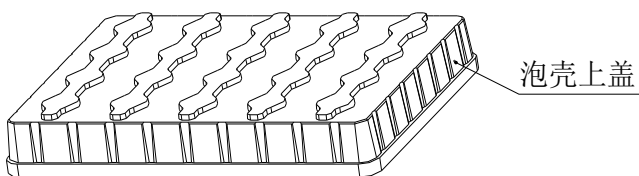
No.	项目 (ITEM)	测试条件 (CONDITION)
1	高温存放试验 Storage Test At High Temperature	镜头在80℃温度中存放48小时，之后再存放在常温常湿环境中恢复6小时后，所有规格满足规定要求 All specification are to be satisfied after lens is exposed to 80℃ for 48 hours and then to normal temperature/humidity for 6 hours
2	低温存放试验 Storage Test At Low Temperature	镜头在-30℃温度中存放48小时，之后再存放在常温常湿环境中恢复6小时后，所有规格满足规定要求 All specification are to be satisfied after lens is exposed to -30℃ for 48 hours and then to normal temperature/humidity for 6 hours
3	冷热冲击试验 Temperature Cycle Test	镜头在-30℃条件下保持30分钟，然后升温至+80℃，稳定后保持30分钟作为一个周期，共10个周期。之后再存放在常温常湿环境中恢复6小时后，所有规格满足规定要求 All specification are to be satisfied after lens is exposed to -30℃ for 30min, Tank temperature change +80℃ for 30min as one cycle, 10 cycle shall be performed. And then to normal temperature/humidity for 6 hours
4	振动试验 Vibration Test	镜头在振幅为1.5mm、频率为10-55Hz的正弦波参数下，在三个互相垂直的轴线上依次振动25分钟后，镜头无松动并满足所有规格要求 All specification are to be satisfied after lens is subjected to the sine wave of 1.5mm amplitude and 10-55Hz directions for 25 minutes each



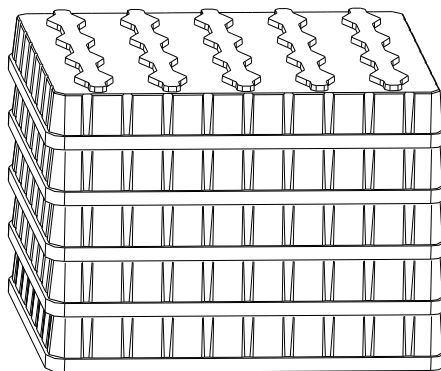
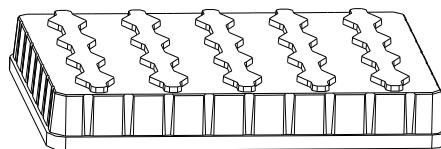
No.	项目 (ITEM)	测试条件 (CONDITION)
5	耐久试验 (Durability)	<ul style="list-style-type: none"> <li>▪ 齿轮箱: zoom 马达: wide-tele-wide /time 100,000 times focus 马达: far-near-far /time 100,000 times</li> <li>▪ iris: Close <math>\rightleftharpoons</math> Open 1 往复 4 ~ 8秒 300000次 4 ~ 8 seconds for each reciprocating, 300,000 times.</li> <li>▪ IR-cut filter section IN <math>\rightleftharpoons</math> OUT 驱动100ms, 断电2500ms 往复驱动, 20000次 0.5 ~ 1.0 seconds for each reciprocating 20,000 times</li> </ul>
6	跌落试验 (drop test)	<ol style="list-style-type: none"> <li>1. 高度: 包装后, 高度1.5m;</li> <li>2. 落下方向: 六面八角;</li> <li>3. 次数: 各一次;</li> </ol> <p>上述实验条件后作动无异常。(NO abnormalities for operation after testing with above experiment conditions)</p> <ol style="list-style-type: none"> <li>1.Height: 1.5m after packaged;</li> <li>2.Direction: All directions;</li> <li>3.NO abnormality after experiment above all.</li> </ol>

## 7 包装规格 (Package)

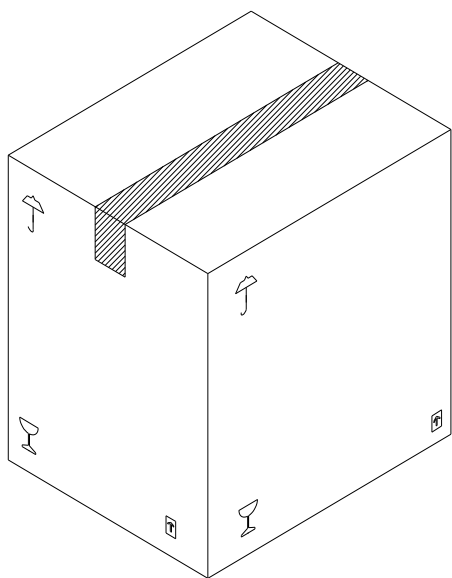
1. 镜头盖上镜头盖后，放入泡壳



2. 盖上泡壳上盖，泡壳上贴标示票。



3. 装满镜头的泡壳抽真空后重叠放入纸箱。



4. 密封胶带，箱子外面贴标示票。

注：包装纸箱可根据客户订单灵活选用，  
以上包装以纸箱（320\*240\*490）包装示  
例

数量：

20 PCS/盒

10 盒/箱

200 PCS/箱