

RICOM

产品规格书

Product Specification

Model No.

HV1250D.IR-S(6MP)

福建福光股份有限公司
Fujian Forecam Optics Co., Ltd.

修订履历

Version	Date	Reviser	Approved	Comments
V1.01	2016/06/30	Liliang Tang	Shizhong Zhang	First edition
V1.02	2016/08/22	Wei Jiang	Shizhong Zhang	Revised FOV
V1.03	2017/01/09	Xiaomei Luo	Shizhong Zhang	1. Modify aperture 2. Modify resolution Test

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4 概述 Outline

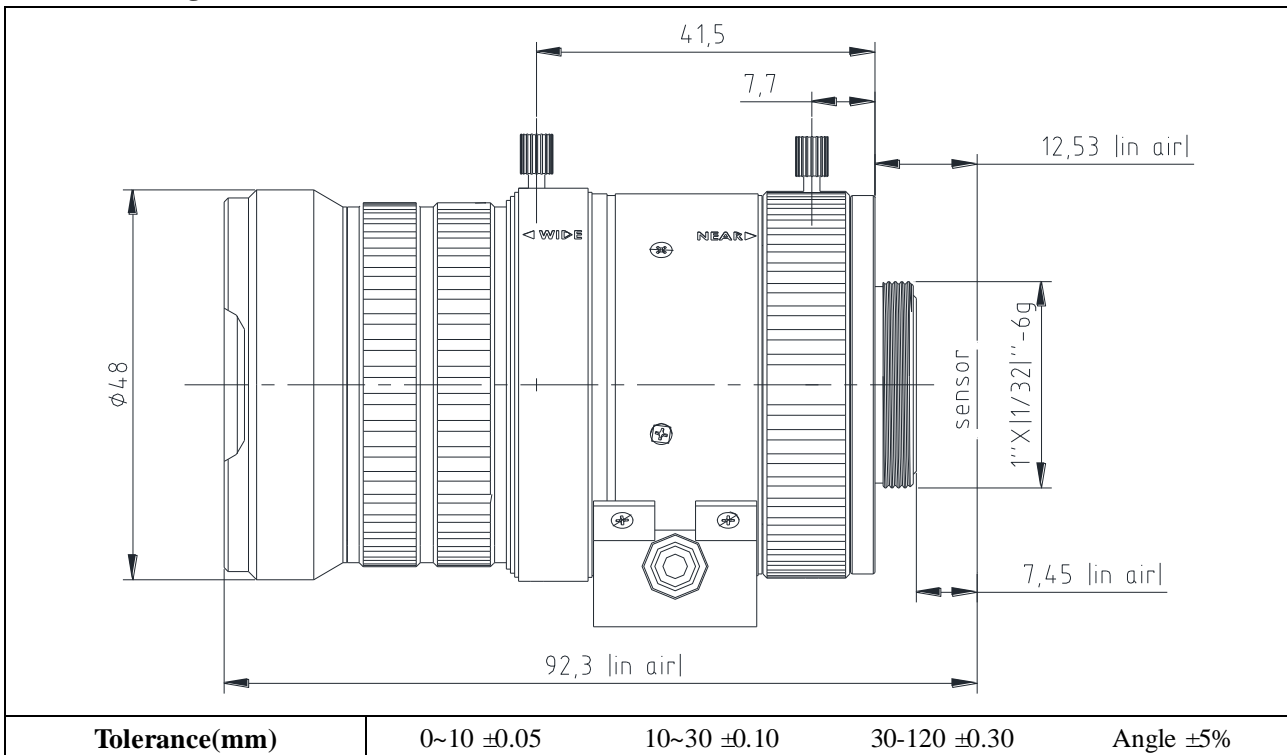
5 主要参数 Main Items
5.1 光学规格 Optical Specifications

	项目	Items	Description	Tolerances			
1	焦距	Focal length	12mm (W) ~ 50 mm (T)	±5%			
2	相对孔径	Aperture (D/f')	F1.5 (W) ~ F1.8 (T)	±5%			
3	成像靶面	Image Circle	1/1.8"	$\phi \geq 8.8\text{mm}$			
4	相对照度	R.I.	W>42%, T>52%	/			
	成像范围	Focus range	0.3m~INF	/			
	TV 畸变	TV distortion	-18% (1/1.8" 4:3)	/			
	主光角	Chief ray angle	W<9.9°, T<4.4°	±5%			
	视场角 (极限)	FOV (M.O.D)	CMOS	D	H	V	±5%
			IMX185 1080p	38~9.8°	33~8.6°	20~4.8°	
			IMX290 1080p	30~7.6°	26~6.6°	15~3.7°	

5.2 机械规格 Mechanical Specification

	项目	Items	Description	Tolerances
1	接口	Mount	CS (无转向结构)	±0.02mm
2	光学构成	Lens structure	8 groups, 11 elements	*
3	光学总长	Total track length	89mm (W)	±0.1
4	法兰后焦	Flange focal length	12.53mm	±0.1
5	机械后焦	Back focal length	7.45mm	±0.1
6	重量	Weight	155g	±10%
7	操作方式	Operation	变焦 Zoom 手动 Manual 聚焦 Focus 手动 Manual 光圈 Iris 自动 DC-Auto	*

5.3 结构图 Drawing



5.4 环境规格 Environment Specifications

	项目	Items	Description
1	工作温度	Working environment	-20°C~60°C; 10~90%RH
2	储存温度	Storage environment	-30°C~70°C; 10~90%RH
3	环保	HSF	RoHS

6 测试 Test

6.1 光学性能 Optical Performance

	项目	Items	Description
1	分辨率测试	Resolution Test	ISO12233 4X Center Edges 6MP 1400TVL 900TVL
2	测试方法	Test Method	<ul style="list-style-type: none"> • 2m of projection distance (W) • 8m of projection distance (T) • At max aperture. Focus on center, and then check edges.

6.2 外观测试 Appearance Performance

	项目	Items	Description
1	外观	Appearance	<ul style="list-style-type: none"> • Dust standard: 60-20 • Scratches: Width<60um, Length<D/2 • Spot: φ<200um, 100~200um≤3
2	测试方法	Test Method	<ul style="list-style-type: none"> • Visual inspection

6.3 可靠性测试 Reliability Test
6.3.1 测试方法 Test Method

	项目	Test Item	Specification						
1	高低温测试 (储存)	Temperature test (non-operating)	<ul style="list-style-type: none"> 70 °C, normal humidity, 72hours -30 °C, normal humidity, 72hours 						
2	温度循环 (储存)	Temperature cycle test (non-operating)	<table border="1"> <tr> <td>2hours</td> <td>2hours</td> <td>2hours</td> </tr> <tr> <td>-30 °C</td> <td>70 °C</td> <td>-30 °C</td> </tr> </table> <ul style="list-style-type: none"> Stay 2 hours each phase, 10 cycles totally 	2hours	2hours	2hours	-30 °C	70 °C	-30 °C
2hours	2hours	2hours							
-30 °C	70 °C	-30 °C							
3	温度循环 (工作)	Temperature cycle test (Operating with camera)	<table border="1"> <tr> <td>2hours</td> <td>2hours</td> <td>2hours</td> </tr> <tr> <td>-20 °C</td> <td>60 °C</td> <td>-20 °C</td> </tr> </table> <ul style="list-style-type: none"> Stay 2 hours each phase, 10 cycles totally 	2hours	2hours	2hours	-20 °C	60 °C	-20 °C
2hours	2hours	2hours							
-20 °C	60 °C	-20 °C							
4	温度循环 (带包装)	Temperature Cycle Test (With package)	<table border="1"> <tr> <td>2hours</td> <td>2hours</td> <td>2hours</td> </tr> <tr> <td>-30 °C</td> <td>70 °C</td> <td>-30 °C</td> </tr> </table> <ul style="list-style-type: none"> Stay 2 hours each phase, 10 cycles totally 	2hours	2hours	2hours	-30 °C	70 °C	-30 °C
2hours	2hours	2hours							
-30 °C	70 °C	-30 °C							
5	冷热冲击 (储存)	Thermal shock test (non-operating)	<table border="1"> <tr> <td>0.5 hours</td> <td>0.5hours</td> <td>0.5hours</td> </tr> <tr> <td>-30 °C</td> <td>70 °C</td> <td>-30 °C</td> </tr> </table> <ul style="list-style-type: none"> Stay 0.5 hours each phase, 10 cycles totally 	0.5 hours	0.5hours	0.5hours	-30 °C	70 °C	-30 °C
0.5 hours	0.5hours	0.5hours							
-30 °C	70 °C	-30 °C							
6	振动测试 (储存)	Vibration test (non-operating)	<ul style="list-style-type: none"> 1.5G, Sine- Wave 10 ~ 450 Hz for 1.0 octave/min; X/Y direction for 0.5 hour; Z direction for 1 hour 						
7	振动测试 (带包装)	Vibration test (With package)	<ul style="list-style-type: none"> 1.5G, Sine- Wave 10 ~ 450 Hz for 1.0 octave/min; X/Y direction for 0.5 hour; Z direction for 1 hour 						
8	跌落测试 (带包装)	Drop test (With package)	<ul style="list-style-type: none"> Drop height: 100 cm Drop position: 1 corner, 3 edges, 6 planes 						

6.3.2 使用寿命测试 Life Test

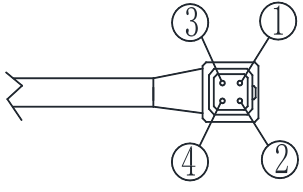
	项目	Items	Description
1	自动光圈	Auto-Iris	<ul style="list-style-type: none"> Testing condition: Auto-Iris control board, Voltage 3.5V Iris cycle index: at least 300,000 times Iris close →open →close, 1 cycle 4~8 seconds

*All tests are doing under the standard parameter settings of testing machine. Lens will be judged as qualified when the motor can be driven normally without jump, idling, stalling and other anomalies. Testing environment: 27±2 °C; 45% ±5% RH

7 镜头附件 Accessories

7.1 DC-Iris

7.1.1 Connector and Cord Specification

	1	Damping (-)
	2	Damping (+)
	3	Driving (+)
	4	Driving (-)
Connector	Square 4 pin	JEITA Standard
	Cable Length	250mm

7.1.2 DC-Iris Specification

DC Motor	Driving Coil	190Ω at 20°C
	Damping Coil	560Ω at 20°C
	Storage Temperature	-30 ~ 70°C
Operating	Voltage (Open)	3.5 ~ 5V
	Voltage (Close)	<0.5V
	Operating Temperature	-20 ~ 60°C

8 包装规格 Package

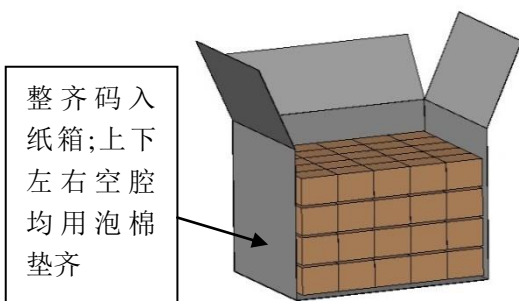
示意图:



图 1



图 2



整齐码入
纸箱;上下
左右空腔
均用泡棉
垫齐

图 4



图 3

用纸盒包
装好镜头,
内置说明
书、干燥
剂,纸盒外
贴外标