

HERCULUX Chengdu HercuLux Photoelectric 恒坤光电 Technology Co. Ltd Technology Co.,Ltd

Product Approval

Approval number:

Customer:

Manufacturer: Chengdu HercuLux Photoelectric Technology Co.,Ltd

PN	Code	Product
HK-DX-55@25-15-D9-21-1g-1	1. 01. 02551	HK Glareless 55@25-15° lens
HK-DX-55@25-24-D9-21-1g-1	1. 01. 02552	HK Glareless 55@25-24° lens
HK-DX-55@25-36-D9-21-1g-1	1. 01. 02553	HK Glareless 55@25-36° lens
HK-DX-55@25-60-D9-21-1g-1	1.01.12860	HK Glareless 55@25-60° lens



	Supplier co	onfirmation		Client cor	nfirmation	
Proposed		DATE	Qualified□		5.475	
Project manager		DATE	Unqualified□		DATE	
Audit		DATE	Audit		DATE	
Approved		DATE	Approved		DATE	
Stamp		DATE	Stamp		DATE	

(Confirmation of acceptance by both parties must be signed and sealed)

Factory: Chengdu Shuangliu District, lot industrial park 2 road HercuLux Photoelectric Park

Phone: 028-85887727 (801) 028-85887990 (801) Fax: 028-85887730 http://www.herculux.com/ Sales Dept: Shenzhen Nanshan District Nanshan Cloud Valley Innovation Industrial Park Comprehensive Service Building,

TEL: 0755-2937 1541 FAX: 0755-2907 5140

*Approval In duplicate, for both supplier and customer.

HERCULUX 恒坤光电

Disclaimer

Please use this product within the permitted range and environment according to the structure and material of the product. If the usage exceeds the recommended value, please test and verify by yourself. If the product is damaged due to out-of-range use, our company will not be responsible for the warranty.

Product material:

Customized products: The specifications and models of materials used are subject to the agreement between the two parties.

Conventional products: As a product that we continuously research and improve, under the premise of ensuring the quality and availability of the product, our company reserves the right to change the material. If the material specification and model change, without prior notice.

product data:

The measurement data and dimensional tolerances of the 2D drawings in the product data sheet of this acknowledgement are for reference only, and the final size shall prevail in kind.

The measurement data presented in this acknowledgment is a performance test of the product based on our company's internal test conditions and quality requirements, and the reported data is a typical value of the average results of multiple measurements. Therefore, in some cases, the actual product may deviate from the data provided. We reserve the right to notify you in advance of this data.

Product changes and improvements:

Changes and improvements of customized products are subject to the agreement between the two parties in the contract or technical documents.

As the conventional products that we continue to research and improve, our company reserves the right to make technical changes to its products, and reserves the right to make changes to data resulting from improvements without prior notice.

Operation cautions:

- 1. Please wear clean gloves during product assembly to prevent product surface contamination.
- 2. Try to avoid touching the optical surface of the lens when taking the lens.
- 3. When the surface of the product is polluted, please wipe it gently with a soft cotton cloth dipped in analytically pure neutral solvent. It is forbidden to use industrial solvents (alcohol, isopropanol, acetone, ether, toluene, xylene, carbon tetrachloride, MMA monomerm, etc.) wipe.
- 4.The lens made of PC should not be exposed to direct sunlight in the storage and use environment. If the lens turns yellow or cracks due to long-term sunlight exposure, our company will not be responsible for the warranty.

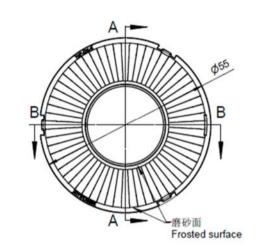


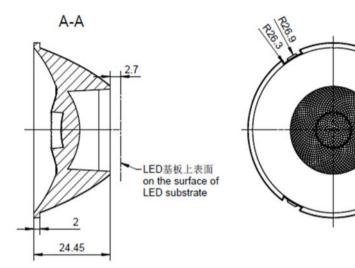
HERCULUX 恒坤光电 Basic product information

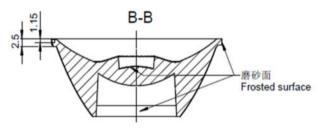
TEL: 0755-2937 1541 FAX: 0755-2907 5140 http://www.herculux.cpm/ Date updated: 2023/5/23

Product Picture:	
Size(L*W*H/Φ*H):	Φ:55mm; H:24.45mm
Material:	PC
Effiency:	\
Temperature(Topr):	Material extreme temperature resistance: -40°C to +120°C long-term use temperature: -40°C to +90°C
FWHM:	15°、24°、36°、60°
FWHM: Matched LES:	15°、24°、36°、60° D9







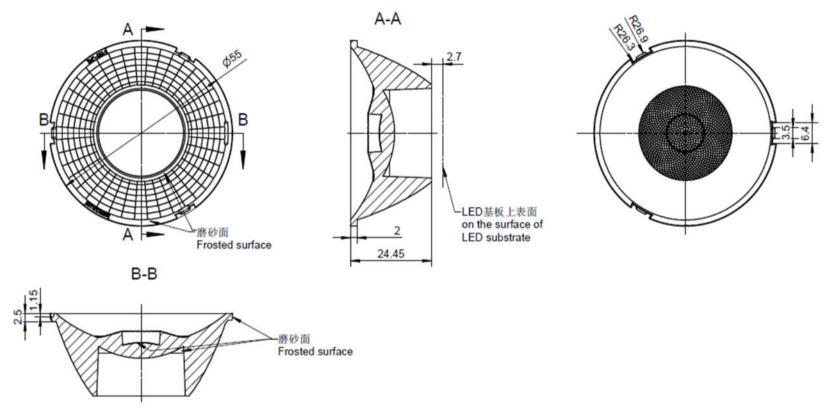


- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.
- *4. When the lamp adopts rubber ring for waterproofing: the roughness of the contact surface between the radiator and the rubber ring is required: Ra<3.2 μ m

C	Optical	design								HK-DX-	55@25-15-D9-2	21-1g-1	
t	ructur	icture desig					HK Glarele	ss 55@25-15º lens			1.01.02551		
ľ	Review								umber of	f drawin	qty	we	ight
Ī	Validation			Material:	PC			CDHK					
~	250	250~	~450	>4	450								

							****					. •	i
MT5 Tolerance	Basic size	<3	3∼10	10~24	24~65	65~140	140~250	250~4	150 >	450			
	olerance valu	±0.1	±0.15	±0.20	±0.35	±0.50	±0.80	±1.2	. ±	2.0			



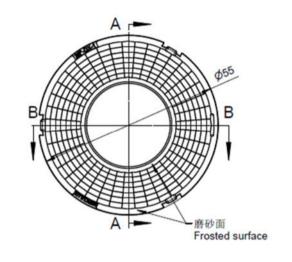


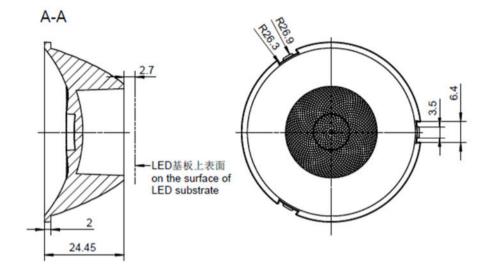
- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.
- *4. When the lamp adopts rubber ring for waterproofing: the roughness of the contact surface between the radiator and the rubber ring is required: Ra<3.2 μ m

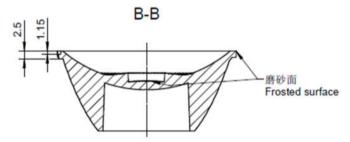
	Optical	design							I	HK-DX-	55@25-24-D9-2	21-1g-1	
	tructur	cture desig					HK Glareles	ss 55@25-24º lens			1.01.02552		
	Rev	Review							umber of	f drawin	qty	we	ight
		Review											
	Validation			Material:	PC			CDHK					
^	~250	250~	~450	>4	150								

MT5	Basic size	<3	3~10	10~24	24~65	65~140	140~250	250~450	>450
Tolerance table (mm)	olerance valu	±0.1	±0.15	±0.20	±0.35	±0.50	±0.80	±1.2	±2.0





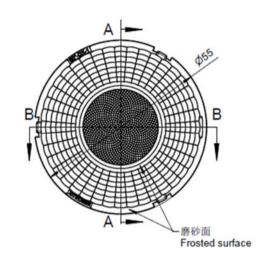


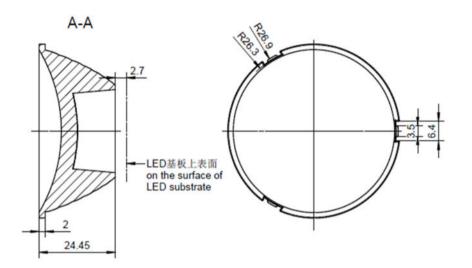


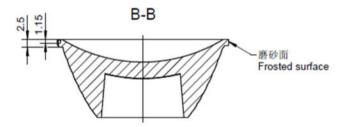
- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.
- *4. When the lamp adopts rubber ring for waterproofing: the roughness of the contact surface between the radiator and the rubber ring is required: Ra<3.2 μ m

	Optical	design							ŀ	HK-DX-	55@25-36-D9-2	21-1g-1	
	tructur						HK Glareles	ss 55@25-36º lens			1.01.02553		
	Rev	Review					umber of	fdrawin	qty	wei	ight		
	Valid	Validation			Material:	PC			CDHK				
)^	~250	250 250~450 >450											

							Van	aation			widterial:	1.0	CDTIK
MT5 Tolerance	Basic size	<3	3∼10	10~24	24~65	65~140	140~250	250~	450 >	450			
	olerance valu	±0.1	±0.15	±0.20	±0.35	±0.50	±0.80	±1.	2 ±	2.0			





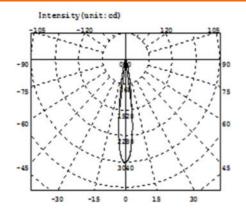


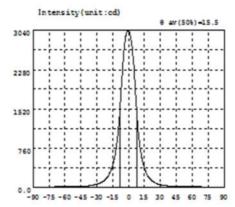
- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.
- *4. When the lamp adopts rubber ring for waterproofing: the roughness of the contact surface between the radiator and the rubber ring is required: Ra<3.2 μ m

	Optical	design							HK	(-DX-5	55@25-60-D9-2	21-1g-1	
	tructur	lation					HK Glareles	ss 55@25-60º lens			1.01.12860		
	Rev	Review					umber of dr	rawin	qty	wei	ight		
	Valid	ation					Material:	PC			CDHK		
^	~250	250~	~450	>4	150								

							•	ilaation			1410	acciiai.	ebrik
MT5 Tolerance	Basic size	<3	3∼10	10~24	24~65	65~140	140~25	250	~450	>450			
	olerance valu	±0.1	±0.15	±0.20	±0.35	±0.50	±0.80		2	±2.0			







Intensity data: (deg , cd) C0-180

λ	1	λ	I	λ	1	λ	1	λ	1	λ	1
-90.0	0.9045	-58.5	8.816	-27.0	77.57	4.5	2471	36.0	26.70	67.5	5.795
-88.5	0.9168	-57.0	9.333	-25.5	93.84	6.0	2051	37.5	23.77	69.0	5.243
-87.0	0.9575	-55.5	9.882	-24.0	113.9	7.5	1551	39.0	21.27	70.5	4.531
-85.5	1.162	-54.0	10.48	-22.5	139.1	9.0	1139	40.5	19.39	72.0	3.978
-84.0	1.318	-52.5	11.21	-21.0	170.2	10.5	835.0	42.0	17.47	73.5	3.421
-82.5	1.586	-51.0	12.01	-19.5	209.4	12.0	625.2	43.5	15.97	75.0	3.119
-81.0	1.867	-49.5	12.76	-18.0	261.1	13.5	480.2	45.0	14.81	76.5	2.829
-79.5	2.264	-48.0	13.53	-16.5	330.2	15.0	365.4	46.5	13.82	78.0	2.547
-78.0	2.751	-46.5	14.58	-15.0	421.2	16.5	283.0	48.0	13.03	79.5	1.908
-76.5	3.020	-45.0	15.69	-13.5	539.9	18.0	223.2	49.5	12.27	81.0	1.676
-75.0	3.259	-43.5	17.16	-12.0	702.4	19.5	177.8	51.0	11.50	82.5	1.454
-73.5	3.618	-42.0	18.74	-10.5	940.9	21.0	144.2	52.5	10.84	84.0	1.273
-72.0	4.203	-40.5	20.75	-9.0	1269	22.5	118.2	54.0	10.20	85.5	1.133
-70.5	4.817	-39.0	22.99	-7.5	1696	24.0	97.27	55.5	9.641	87.0	1.078
-69.0	5.447	-37.5	25.84	-6.0	2175	25.5	80.28	57.0	9.115	88.5	0.9594
-67.5	5.987	-36.0	29.20	-4.5	2589	27.0	66.53	58.5	8.634	90.0	0.9504
-66.0	6.521	-34.5	33.47	-3.0	2877	28.5	55.59	60.0	8.219		
-64.5	7.043	-33.0	38.71	-1.5	3017	30.0	46.80	61.5	7.822		
-63.0	7.530	-31.5	45.43	0.0	3034	31.5	40.02	63.0	7.293		
-61.5	8.074	-30.0	53.76	1.5	2962	33.0	34.56	64.5	6.807		
-60.0	8.382	-28.5	64.39	3.0	2775	34.5	30.24	66.0	6.328		

Current I: 0.1000A Power: 3.700W Voltage V: 32.50V PF: 1.000

Optical Parameter (Distance=2.559m):

Diffuse angle: 0 (25%): 22.4deg0 (50%): 15.5deg0 (75%): 10.8deg0 (50%): 15.5deg

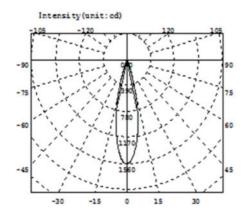
Diffuse angle: 0 (25%): 22.4deg0 (50%): 15.6deg0 (75%): 10.8deg0 (50%): 15.6deg

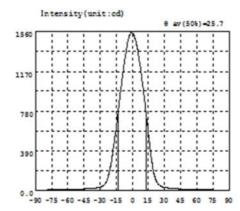
Imax=3039cd (C=0.0deg,G=-0.5deg)

C0-180Plane Imax= 3039cd (G=-0.5deg)

C0-180Plane I0= 3034cd







Intensity data: (deg , cd) C0-180

100											
λ	I	λ	1	λ	I	λ	I	λ	1	λ	1
-90.0	0.6440	-58.5	9.142	-27.0	44.33	4.5	1409	36.0	18.11	67.5	5.240
-88.5	0.7577	-57.0	9.539	-25.5	59.90	6.0	1320	37.5	16.82	69.0	4.649
-87.0	0.9607	-55.5	9.773	-24.0	86.45	7.5	1216	39.0	15.80	70.5	4.077
-85.5	1.152	-54.0	10.17	-22.5	129.8	9.0	1102	40.5	14.84	72.0	3.581
-84.0	1.366	-52.5	10.63	-21.0	194.3	10.5	973.5	42.0	13.97	73.5	3.142
-82.5	1.625	-51.0	11.02	-19.5	279.8	12.0	836.0	43.5	13.23	75.0	2.826
-81.0	1.856	-49.5	11.40	-18.0	383.5	13.5	694.0	45.0	12.54	76.5	2.621
-79.5	2.257	-48.0	11.85	-16.5	497.8	15.0	555.6	46.5	11.96	78.0	2.370
-78.0	2.596	-46.5	12.46	-15.0	620.0	16.5	424.8	48.0	11.45	79.5	1.999
-76.5	2.829	-45.0	13.07	-13.5	748.3	18.0	295.9	49.5	10.99	81.0	1.707
-75.0	3.147	-43.5	13.75	-12.0	878.1	19.5	200.4	51.0	10.57	82.5	1.420
-73.5	3.611	-42.0	14.47	-10.5	1007	21.0	133.8	52.5	10.22	84.0	1.196
-72.0	4.138	-40.5	15.15	-9.0	1129	22.5	90.57	54.0	9.682	85.5	1.023
-70.5	4.686	-39.0	15.95	-7.5	1246	24.0	63.60	55.5	9.464	87.0	0.8401
-69.0	5.254	-37.5	17.18	-6.0	1350	25.5	47.72	57.0	9.050	88.5	0.7528
-67.5	5.783	-36.0	18.32	-4.5	1441	27.0	38.23	58.5	8.621	90.0	0.6551
-66.0	6.333	-34.5	19.96	-3.0	1508	28.5	31.98	60.0	8.148		
-64.5	6.963	-33.0	22.10	-1.5	1545	30.0	27.60	61.5	7.611		
-63.0	7.559	-31.5	24.98	0.0	1550	31.5	24.31	63.0	7.028		
-61.5	8.154	-30.0	29.08	1.5	1528	33.0	21.80	64.5	6.443		
-60.0	8.635	-28.5	35.06	3.0	1481	34.5	19.78	66.0	5.844		

Current I: 0.1000A Power: 3.250W Voltage V: 32.50V PF: 1.000

Optical Parameter (Distance=2.410m):

Equivalent Luminous flux: Φ eff= 354.8lm Efficiency: Eff=109.19lm/W

Diffuse angle: 8 (25%): 34.8deg8 (50%): 25.7deg8 (75%): 16.7deg8 (50%): 25.7deg

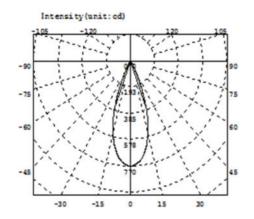
Diffuse angle: 8 (25%): 34.8deg8 (50%): 25.7deg8 (75%): 16.7deg8 (50%): 25.7deg

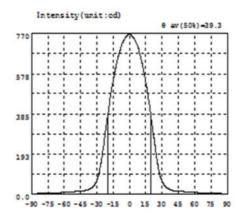
Imax=1552cd (C=0.0deg,G=-0.5deg)

C0-180Plane Imax= 1552cd (G=-0.5deg)

C0-180Plane I0= 1550cd







Intensity data: (deg , cd) C0-180

λ	I	λ	1	λ	I	λ	1	λ	1	λ	I
-90.0	0.8587	-58.5	8.221	-27.0	125.0	4.5	743.9	36.0	24.61	67.5	5.093
-88.5	0.9147	-57.0	8.684	-25.5	171.6	6.0	730.0	37.5	20.53	69.0	4.630
-87.0	1.072	-55.5	9.152	-24.0	223.0	7.5	711.5	39.0	17.80	70.5	4.150
-85.5	1.196	-54.0	9.588	-22.5	279.3	9.0	686.0	40.5	15.76	72.0	3.738
-84.0	1.334	-52.5	9.980	-21.0	336.5	10.5	654.9	42.0	14.29	73.5	3.354
-82.5	1.529	-51.0	10.41	-19.5	393.3	12.0	619.7	43.5	13.06	75.0	3.003
-81.0	1.753	-49.5	10.81	-18.0	448.4	13.5	580.5	45.0	12.24	76.5	2.692
-79.5	2.069	-48.0	11.30	-16.5	500.4	15.0	539.1	46.5	11.61	78.0	2.367
-78.0	2.441	-46.5	11.87	-15.0	544.4	16.5	493.0	48.0	11.12	79.5	2.029
-76.5	2.800	-45.0	12.53	-13.5	584.4	18.0	442.1	49.5	10.74	81.0	1.786
-75.0	3.135	-43.5	13.37	-12.0	621.7	19.5	388.2	51.0	10.33	82.5	1.663
-73.5	3.491	-42.0	14.42	-10.5	654.8	21.0	325.4	52.5	9.960	84.0	1.395
-72.0	3.832	-40.5	15.93	-9.0	685.1	22.5	268.9	54.0	9.620	85.5	1.226
-70.5	4.241	-39.0	18.04	-7.5	710.0	24.0	213.8	55.5	9.155	87.0	1.024
-69.0	4.747	-37.5	21.02	-6.0	728.8	25.5	159.3	57.0	8.659	88.5	0.8920
-67.5	5.198	-36.0	25.33	-4.5	743.2	27.0	115.8	58.5	8.133	90.0	1.062
-66.0	5.669	-34.5	30.67	-3.0	754.2	28.5	83.74	60.0	7.558		
-64.5	6.171	-33.0	37.85	-1.5	764.6	30.0	61.43	61.5	7.024		
-63.0	6.678	-31.5	48.22	0.0	767.5	31.5	46.89	63.0	6.545		
-61.5	7.182	-30.0	64.02	1.5	762.9	33.0	37.12	64.5	6.020		
-60.0	7.885	-28.5	89.08	3.0	754.5	34.5	30.01	66.0	5.558		

Current I: 0.1000A Power: 3.230W Voltage V: 32.29V PF: 1.000

Optical Parameter (Distance=2.410m):

Equivalent Luminous flux: Φ eff= 348.3lm Efficiency: Eff=107.84lm/W

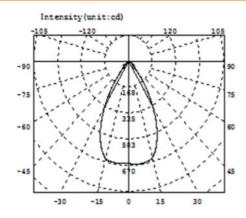
Diffuse angle: @ (25%): 49.3deg@ (50%): 39.3deg@ (75%): 27.4deg@ (50%): 39.3deg

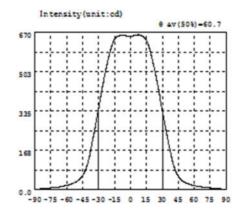
Diffuse angle: @ (25%): 49.3deg@ (50%): 39.3deg@ (75%): 27.4deg@ (50%): 39.3deg

Imax=767.7cd (C=0.0deg,G=-0.5deg)

C0-180Plane Imax= 767.7cd (G=-0.5deg)

C0-180Plane I0= 767.5cd





Intensity data: (deg , cd) C0-180

A	1	A	1	Α	1	Α	1	λ	1	Α	1
-90.0	1.579	-58.5	19.28	-27.0	424.7	4.5	657.0	36.0	192.5	67.5	10.10
-88.5	1.682	-57.0	21.31	-25.5	460.3	6.0	659.0	37.5	159.8	69.0	9.521
-87.0	1.951	-55.5	23.68	-24.0	494.3	7.5	660.0	39.0	128.6	70.5	9.091
-85.5	2.334	-54.0	26.31	-22.5	525.8	9.0	658.1	40.5	102.5	72.0	8.623
-84.0	2.679	-52.5	29.44	-21.0	555.9	10.5	655.2	42.0	82.78	73.5	7.737
-82.5	3.088	-51.0	33.09	-19.5	583.1	12.0	651.6	43.5	67.47	75.0	6.664
-81.0	3.575	-49.5	37.54	-18.0	605.6	13.5	645.8	45.0	55.88	76.5	5.678
-79.5	4.124	-48.0	43.12	-16.5	625.6	15.0	635.4	46.5	47.02	78.0	4.853
-78.0	4.727	-46.5	50.37	-15.0	640.8	16.5	619.9	48.0	40.19	79.5	4.170
-76.5	5.521	-45.0	59.50	-13.5	649.7	18.0	599.1	49.5	34.83	81.0	3.619
-75.0	6.469	-43.5	71.31	-12.0	653.1	19.5	573.2	51.0	30.63	82.5	3.059
-73.5	7.506	-42.0	86.64	-10.5	654.9	21.0	544.5	52.5	27.26	84.0	2.597
-72.0	8.557	-40.5	106.9	-9.0	656.6	22.5	513.9	54.0	24.51	85.5	2.212
-70.5	9.143	-39.0	133.2	-7.5	657.7	24.0	481.7	55.5	22.05	87.0	1.864
-69.0	9.519	-37.5	166.3	-6.0	656.3	25.5	447.4	57.0	19.99	88.5	1.577
-67.5	10.34	-36.0	202.1	-4.5	655.7	27.0	411.7	58.5	18.17	90.0	1.384
-66.0	11.55	-34.5	234.3	-3.0	654.6	28.5	369.2	60.0	16.63		
-64.5	13.19	-33.0	271.9	-1.5	653.9	30.0	332.5	61.5	15.14		
-63.0	14.47	-31.5	309.0	0.0	654.2	31.5	296.2	63.0	13.78		
-61.5	15.92	-30.0	347.8	1.5	655.2	33.0	261.3	64.5	12.58		
-60.0	17.47	-28.5	386.4	3.0	656.1	34.5	226.2	66.0	11.15		

Current I: 0.4000A Power: 14.00W Voltage V: 33.50V PF: 1.000

Optical Parameter (Distance=2.559m):

Equivalent Luminous flux: Φ eff= 677.8lm Efficiency: Eff=48.42lm/W

Diffuse angle: @(25%): 74.7deg@(50%): 60.7deg@(75%): 47.2deg@(50%): 60.7deg

Diffuse angle: @(25%): 74.9deg@(50%): 60.9deg@(75%): 47.6deg@(50%): 60.9deg

Imax=660.2cd (C=0.0deg,G=7.0deg)

C0-180Plane Imax= 660.2cd(G=7.0deg)

CO-180Plane IO= 654.2cd



			Standard size	Upper Size limit	Lower size limit	Test result1	Test result2	Test result3	Test result4	Jud gme nt	Remarks
	diamet	er	55			55. 03	55	55. 03	55		Test environment: In 20 ℃ -25 ℃
1.Size	heigh	t	25. 45			24. 51	24. 53	24. 51	24. 53		environment to achieve thermal equilibrium after the
	thickne	ess	2			2.04	2.09	2.04	2.09		test.
				Gate	shear can ı	not affect th	e appearar	nce of the la	amp		
				See	attachment	"Appearan	ce Inspecti	on Standar	ds"		
2.Appear	rance	atta	See chment earance	E	١	No burr	No burr	No burr	No bu	rr	ок
Quality		Insp	pection ndards"		N	o stains	No stains	No stains	No stai	ns	
3.Materia	al		<u> </u>	PC			Color	Tra	nsparent		ОК
	Testing	LED					cree1512)			
4.Optica	to the so	ource o	of the test,	if it is requ	ired to be o	out of range ent, the lens	. According	to the heat fully tested	t dissipatio	n capa	uld be comparable ability of the lamp event the lens life.
I index	angle	9				15.5	15. 5	15.9	15.8		
	K-val	ue				7. 79	7. 63	7. 46	7.66		
	Efficie	ncy				87. 28%	87.05%	86. 83%	87. 05%		
	Facula	See th	ne signatui	e sample		,					
	ehensive ment						Qu	ıalified			
Remarks: 1. Tool Number: V-Vernier Caliper 2D-Quadratic H- Height Gauge M-Tool Microscope P-Needle T- Thick Gauge R-Radius Gauge E-Visual. 2. Ambient temperature on the size of the product refer to the table on the right				changes (mm)	0.8	oduct size	changes w	vith tempe	40 (°C)	→ 5 → 5 → 5 → 5	Size: 50mm Size: 100mm Size: 150mm Size: 200mm Size: 250mm Size: 300mm

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		Stand ard size	Upper Size Iimit	Lower size limit	Test result1	Test result2	Test result3	Test result4	Test result5	Test result6	Test result7	Test result8	Jud gme nt	Remarks
	diame er	t 55			54.86	54.85	54.91	54.90	54.90	54.89	54.99	54.91		Test environment: In 20 °C -25 °C
1.Size	heigh	t 25. 45			24.46	24.52	24.53	24.49	24.57	24.54	24.55	24.56		environment to achieve thermal
	thick ess	n 2			1.98	2.00	2.09	2.08	2.10	2.04	2.08	2.05		equilibrium after the test.
					Gate	shear ca	an not aff	ect the a	ppearan	ce of the	lamp			
					See	attachm	ent "Appe	earance	Inspectio	n Standa	ırds"			
2.Appear	ran	tachmen t			No bu	ırr	No	burr	No	burr	1	No burr		
ce Qualit	y In	ce spection	E		No sta	ins	No s	tains	No s	tains	N	o stains		OK
3.Materia		tandards		PC			Co	olor		Tra	nsparen	t		OK
	sting I	1						cree	1540		Порагоп	•		OI.
4.Optica	sourc	con					ne lens sl	nould be		ed and te	on capab sted to p			o and the actual s life.
I index	angle					26.6	25. 3	26. 2	24. 7	25.6	25.8	25. 3		
	K-val	u	_		4. 38	4.02	4.53	4. 18	4. 52	4.30	4. 37	4. 36		
	ficie	n			89. 15%	91.73%	92.76%	92.76%	92.51%	92.76%	92. 25%	92. 25%		
	acu Se	ee the sig	nature s	ample		`								
Comprei sive								Qua	lified					
Remarks					PC p	roduct	size cha	nges wit	th temp	erature	table			
1、Tool I	Numbe	er: V-	Leng	th 0.8	1									
Vernier C	•		chan	ges 0.7	+								Size	e: 50mm
Quadrati		eight	(m	m) _{0.6}	+							*		e: 100mm
Gauge M				0.5										
	Microscope P- Needle T-Thick 0.5 0.4										e: 150mm			
Gauge R				0.3				V		<u></u>			← Size	e: 200mm
Gauge E	-Visua			0.2									← Size	e: 250mm
2、Amb							07						Size	e: 300mm
temperat				0.1						-			0.20	
size of th refer to th				0	_		10	3/		30		40		
the right					0	<u>-</u>	10	20	J	30	(°	40 C)		
Precaution	ons:													

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		Standa rd size	Upper Size Iimit	Lower size limit	Test result1	Test result2	Test result3	Test result4	Test result5	Test result6	Test result7	Test result8	Jud gme nt	Remarks
	diamet er	55			54.99	54.95	54.93	54.96	54.94	54.92	54.93	54.89		Test environment: In 20 °C -25 °C
1.Size	height	25. 45			24.55	24.55	24.61	24.55	24.57	24.55	24.49	24.53		environment to achieve thermal
	thickn ess	2			2.050	2.070	2.080	2.060	2.090	2.070	2.050	2.040		equilibrium after the test.
					Gate	shear ca	n not aff	ect the a	ppearar	nce of the	e lamp	•		
									• •	on Stand	•			
2.Appear	ran "Ap	See achment opearan	E		No bu	ırr	No	burr	No	burr	N	No burr		OK
ce Qualit	Ins	ce spection andards"	_		No sta	ins	No s	tains	No s	stains	N	o stains		OK .
3.Materia	al			PC			Co	olor		Tra	nsparen	t		OK
	sting LI							cree	1512					
4 Onting		of the te	est, if it is	require	d to be o	out of rar	nge. Acco	ording to nould be	the hea	t dissipa ted and	tion cap	ability of	the la	comparable to the amp and the actual ens life.
4.Optica I index	-				39.3	39.0	37.9	39.2	38.3	37.7	39.1	39.2		
	angle												_	$\overline{}$
	K-valu		\equiv	_	2.20	2.25	2.33	2.19	2.30	2.35 91.3%	2.20	2.23	_	
	ficien			<u> </u>	91.076	91.070	91.370	91.076	91.570	91.576	91.076	91.076		
Compre		e the sigr	nature sa	ample										
sive								Qua	alified					
					PC p	roduct s	ize cha	nges wi	th temp	perature	table			
Remarks 1、Tool I	•	· \/_	Lena	th 0.8	1									
Vernier C			chan	ges 0.7									Size	e: 50mm
Quadration	c H-Hei		(m	m) _{0.6}										e: 100mm
Gauge M				0.5						-				
Microsco Needle T				0.4						*			├ ─Size	e: 150mm
Gauge R		. [0.3				W.				\longrightarrow	← Size	e: 200mm
Gauge E				0.2									K ─Size	e: 250mm
2、Amb	ient												Size	e: 300mm
temperat				0.1										
size of th				0	0	1	0	20		30		40		
refer to the the right	ne labie	UII			0	1	U	20		30	('	40 C)		
Precautio	ons:													

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			Standard size	Upper Size limit	Lower size limit	Test result1	Test result2	Test result3	Test result4	Jud gme nt	Remarks
	diamet	er	55			54. 94	54.9	54. 94	54.9		Test environment: In 20 °C -25 °C
1.Size	heigh	ıt	25. 45			24. 55	24. 55	24. 55	24. 55		environment to achieve thermal
	thickne	ess	2			2.06	2.04	2. 06	2.04		equilibrium after the test.
				Gate	shear can	not affect th	ne appearar	nce of the la	amp		
				See	attachmen	t "Appearar	ice Inspecti	on Standar	ds"		
2.Appear	rance		See achment pearance	E	1	No burr	No burr	No burr	No burr		ОК
Quality		Ins	spection andards"	_	N	lo stains	No stains	No stains	No stains		
3.Materia	al			PC	•		Color	Tra	nsparent		OK
	Testing	LED					cree1512	<u> </u>			
4.Optica	to the so	ource actual	of the test,	if it is requ	ired to be o	out of range ent, the lens	. According	to the heat fully tested	t dissipatio	n capa	uld be comparable ability of the lamp event the lens life.
I index	ang1	е					60.7	62.6	58.6		
	K-val	ue									
	Efficie	ency				88%	89%	89%	89%		
	Facula	See t	he signatu	re sample		,					
	ehensive ment						Qı	ıalified			
Remarks				Length ⁰ changes 0	.8	duct size c	hanges wit	th temper			ze: 50mm
	Number: \ !D-Quadra		nier	(mm) ₀	.6						ze: 100mm
	auge M-T			0	.5			W			ze: 150mm
	pe P-Nee			0			8	X	<u> </u>		ze: 200mm
Gauge E	uge R-Ra -Visual	aius			.3		*				ze: 250mm
2、Amb	ient tempe			0							
	e size of the product refer the table on the right				.1					SIZ	ze: 300mm
to the tar	ole on the	right			0	10	20	30	40		
					v	10	20	30	(℃)		
Precaulic	ane.										

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Pl	N	HK-DX-55@25-15-D9-2	1-1g-1	Product Name	HK Glareless 55	@25-15	o lens					
Product	material	PC		Customer								
Package	diagram	Single Vacuum package Box package										
Product	packing	10	A/ Box	4	pcs/Layer							
		12	Layer/Box	480	A/ Carton							
	NO.	Part No	Part name	Size	Dosage	Unit	Remarks					
	1	2.07.0081	Blister box	23cm*21cm	48	BAG						
Daaltaain	2	2.08.0001	PE film	25cm*27cm	48	PCS						
Packagin g	3	2.06.0005	Reel label paper	62mm*42mm	48	PCS						
Materials	4	2.06.0005	Box label paper	62mm*70mm	1	PCS						
	5	2.06.0003	big plate	46cm*42cm	13	PCS						
	6	2.06.0011	big flat carton	48cm*44cm*37c	cm 1	PCS						
Remarks		The loose packing is not subjec	ct to this specif	ication. Customer's	s requirements shall	orevail						



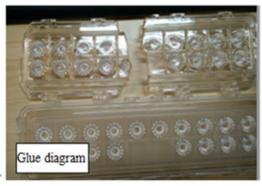
Special notice

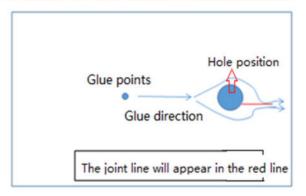
When gule pass through holes, columns and other structures, or part of the thin structure, will form a weld line. The product which uses multi-point injection welding line will appear because of the combination of sol, as shown below:

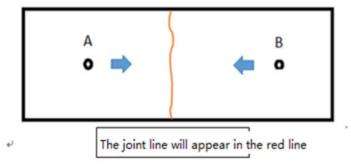
Syntneti











Please note:

The appearance of lines in the structure of the product as well as at the screw hole is a normal phenomenon, will not affect the actual use of the product, and can not be avoided at this stage.



Appearance inspection standards

1 Operating procedures

1.1.1Sampling standards, sampling plan and AQL

Test level: GB/T2828.1-2012The first part is according to the acceptance quality limit (AQL) retrieval batch inspection sampling plan, general inspection level Π level, CR class defect coefficient 0, MA defect rejection level AQL = 0.65, MI class defect rejection level AQL = 1.0; defect level please see 5.4.

2 Code table

Code	Code	Unit	Code	Code	Unit
	description			description	
N	Amount/pcs	pcs	D	Diameter	mm
L	Length	mm	Ħ	Depth	mm
W	Width	mm	DS	Distance	mm
S	Proportion	mm²	SS	Offset	mm

3 Test conditions

- 3.1 Sight distance and working hours: Sight distance should be 30-35cm, each side of the inspection time does not exceed 12s, the visual angle of 45-135 degrees;
- 3.2 Light: 2x40w cool white fluorescent lamp, the light source is 500-550mm away from the lens surface; in order to make the appearance defect can be correctly recognized, the illumination should be 500-1000Lux, and the observation time is 10 seconds.
 - 3.3 Visual inspection staff should be 1.0 (including corrected visual acuity) above, no color blindness, color weakness.

4 Appearance inspection standards

Test items	ludging standard	Inspection equipment	Defec	t level	
resciteriis	Judging standard	Testing method	MI	MA	CR
	When start the machine and process, all products have to check the appearance of the sample, the appearance of the sample is divided into qualified samples and limited samples.				
Check the sample	1: Qualified sample refers to the appearance and structure standard of the product which recognized by the client, the sample size should be confirmed before mass production;	Sample comparison , visual			√

1		Ī	1	Ī	
	2: The limited sample refers to the limit of a particular exceptionally developed sample. Limit the sample only for its specific point of exception to confirm; The priority is higher than the other criteria in this table. When there is a limited sample, the limit sample shall prevail.				
Raw edge	Not allowed to affect the size and assembly	Visual, point card		√	
Scratch	1: Non-optical surface and non-exposed surface scratches should be visually insignificant and the length is less than 1/10 of the maximum surface size.	Visual, point card, calipers		√	
Fingerprint	Fingerprints are not allowed on all products	Visual		√	
Foreign objects, black spots, white spots	The product may not be attached to foreign objects, including oil, fiber, dregs of water gap and so on				√
Deformation	Insufficient filling shall not affect the appearance of the assembly and the exposed surfaces.	Visual, feeler			√
Poor ejection	Products may not appear bad ejection, including no convex top, thimble printed on the assembly surface shall not be higher than the product surface, non-assembled surface thimble height should not exceed the product size tolerances; thimble printing should be less than the product surface and no more than 0.3; thimble surface treatment should be consistent with the product side. Ejection strain: the optical surface and the appearance of the exposed surface after assembly are not allowed to have a strain, and the structural surface does not allow visual obvious strain.	Visual, point card		✓	
Insufficient filling	Insufficient filling shall not affect the appearance of the assembly and the exposed surfaces, The signature sample shall prevail.	Visual, point card		√	
Shrink	When the entire surface of the product shrinks, the optical properties and dimensions must meet the requirements, and the visual will not significantly affect the appearance.Part shrink reference point defects	Visual, point card		√	
Flow marks、Welding line	 Product does not allow the presence of flow marks and welding lines unless the structure can not be avoided; The remaining flow marks shall not appear in the optical surface, a single L ≤ 10mm, no more than two 	Visual		✓	

Bubble	No bubbles are allowed	Visual		√	
Foreign objects, black spots, white spots	Not obvious or D ≤ 0.3mm black spots and foreign bodies in the area of 100x100mm not more than 1; Exceeded foreign matter black spots is judged bad.	Visual, point card	V		
Damaged	No damage is allowed	Visual			√
Cold glue	Optical surface may not have cold glue, non- optical surface cold glue should meet the visual is not obvious.	Visual	√		
	1: Do not affect the product size, shall not penetrate the optical surface, the cut should be smooth;				
Bad incision	2: Laser cutting products, the optical surface burns shall not occur after the processing is completed. Beading must not affect product installation	Visual			√
	3: Three molds and hot runner gate shall not appear residue.				
Scrub	Scrub surface should be uniform, off the scrub phenomenon should not be obvious, A single off scrub imprint requires D ≤ 1 mm and no more than 1 area within a 50x50 mm area	Visual		√	