

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

Product Approval

Approval number:

Customer:

Manufacturer: Chengdu HercuLux Photoelectric Technology Co.,Ltd

PN	Code	Product
HK-CY-45@09-15-D6-20-1g-1	1. 01. 12660	HK Filmy 45@09-15° lens
HK-CY-45@09-36-D9-20-1g-1	1. 01. 12773	HK Filmy 45@09-36° lens
HK-CY-45@09-60-D9-20-1g-1	1. 01. 13015	HK Filmy 45@09-60° lens



	Supplier co	onfirmation		Client confirmation				
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, Iot 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, 501-

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.



HERCULUX Basic product information

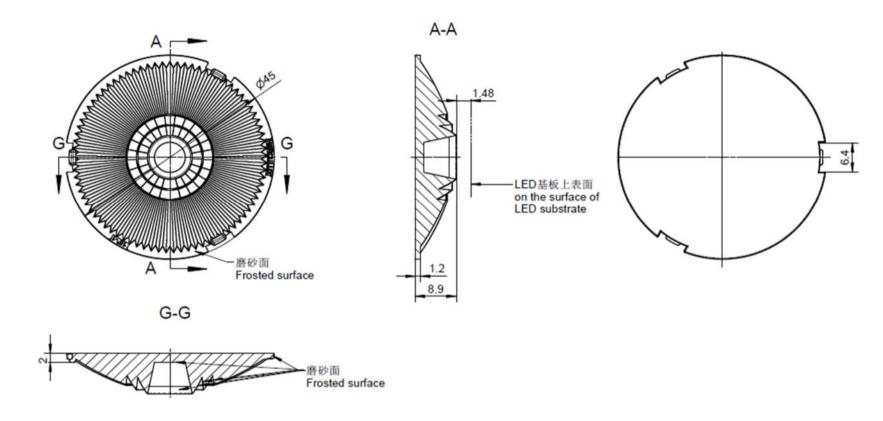
Date updated:

2023/1/4

http://www.herculux.com/

Product Picture:	
Size(L*W*H/Φ*H):	Ф:45mm; H:8.9mm
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°、36°、60°
Matched LES:	15°-D6 , 24°36°60°-D9
Recommended MAX power:	Not more than 20W



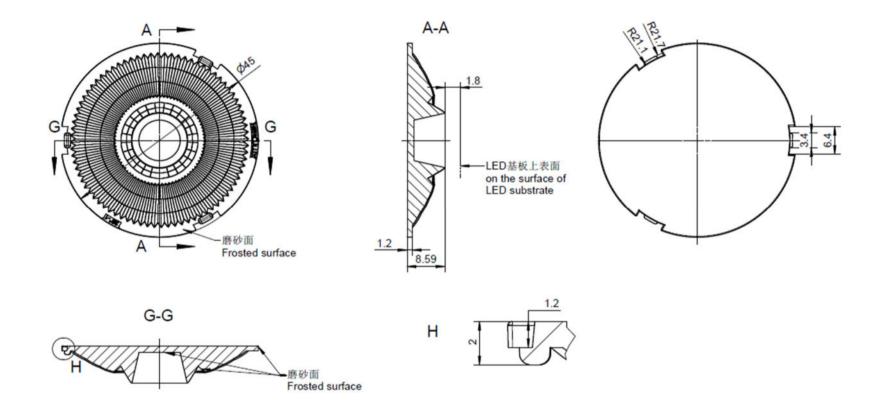


Technical remark:

- 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-CY-45@09-15-D6-20-1g-1						
	Structure desig					HK Filmy	45@09-15º lens			1.01.12660				
	Review							mber o	f drawi	qty	we	ght		
	Review													
	Validation		Material:	PC			CDHK							
_	250 250~450 >450				-									

MT5	Basic size	<3	3~10	10~24	24~65	65~140	140~250	250~	~450	>45	50
Tolerance table	lerance val	±0.1	±0.15	±0.2	±0.35	±0.50	±0.80	±1	, ,	±2.	.0

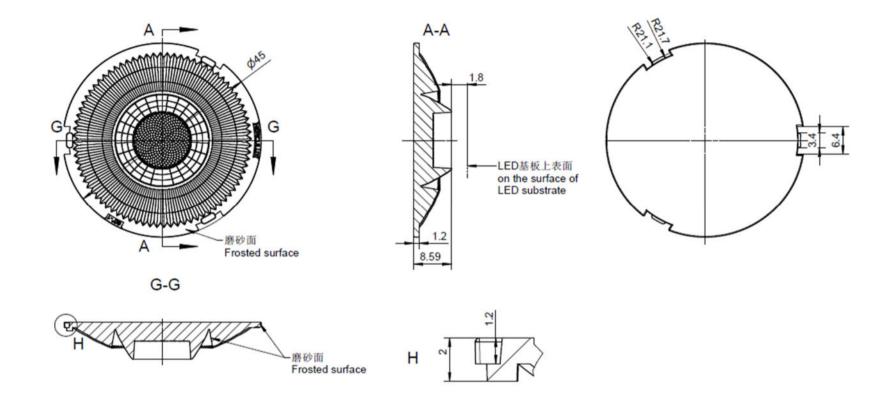


Technical remark:

- 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-C	Y-45	5@09-36-D9-	·20-1g	;-1
Structure desigr						45@09-36º lens			1.01.12773		
Review]		mber of dr	awi	qty	we	ight
Validation					Material:	PC			CDHK		
~250 250~450 >450					-	-	-				

MT5	Basic size	<3	3~10	10~24	24~65	65~140	140~250	250~450	>45
Tolerance table	lerance val	±0.1	±0.15	±0.2	±0.35	±0.50	±0.80	±1.2	±2.0



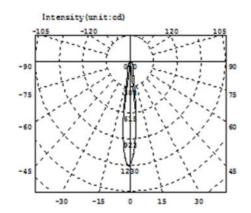
Technical remark:

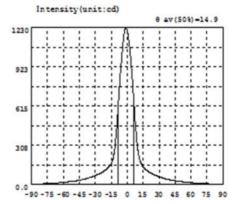
- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.
- *4. When the lamp adopts rubber ring for waterproofing: the roughness of the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

	Optical design							НК	C-CY-45	5@09-60-D9	-20-1g	;-1
	Structure desig						45@09-60º lens			1.01.13015		
	Review						mber of	drawi	qty	wei	ight	
	Review											
	Validation					Material:	PC			CDHK		
_	~250 250	~450	>	450			-	-				

MT5	Basic size	<3	3~10	10~24	24~65	65~140	140~250	250~4	50	>450
Tolerance table	lerance val	±0.1	±0.15	±0.2	±0.35	±0.50	±0.80	±1.2		±2.0







Intensity data: (deg , cd) C0-180

λ	I	λ	I	λ	1	λ	1	λ	1	λ	1
-90.0	0.8474	-58.5	16.38	-27.0	79.94	4.5	852.4	36.0	43.49	67.5	8.654
-88.5	1.074	-57.0	17.75	-25.5	86.04	6.0	670.6	37.5	40.26	69.0	7.982
-87.0	1.402	-55.5	19.24	-24.0	92.86	7.5	490.3	39.0	37.27	70.5	7.243
-85.5	1.822	-54.0	20.85	-22.5	100.2	9.0	336.6	40.5	34.72	72.0	6.478
-84.0	2.287	-52.5	22.56	-21.0	108.4	10.5	239.5	42.0	32.31	73.5	5.612
-82.5	2.799	-51.0	24.42	-19.5	118.6	12.0	186.2	43.5	30.14	75.0	4.822
-81.0	3.343	-49.5	26.40	-18.0	129.9	13.5	155.4	45.0	28.05	76.5	4.136
-79.5	3.945	-48.0	28.43	-16.5	143.3	15.0	137.4	46.5	26.01	78.0	3.540
-78.0	4.590	-46.5	30.55	-15.0	163.6	16.5	123.9	48.0	24.12	79.5	2.971
-76.5	5.282	-45.0	32.65	-13.5	197.5	18.0	111.9	49.5	22.30	81.0	2.427
-75.0	6.061	-43.5	34.87	-12.0	263.5	19.5	102.1	51.0	20.62	82.5	2.027
-73.5	6.869	-42.0	37.40	-10.5	381.7	21.0	94.32	52.5	19.10	84.0	1.685
-72.0	7.764	-40.5	40.38	-9.0	552.5	22.5	87.34	54.0	17.72	85.5	1.321
-70.5	8.626	-39.0	43.61	-7.5	751.8	24.0	80.85	55.5	16.39	87.0	1.141
-69.0	9.452	-37.5	47.04	-6.0	916.9	25.5	74.75	57.0	15.19	88.5	0.9830
-67.5	10.23	-36.0	51.01	-4.5	1064	27.0	69.31	58.5	14.03	90.0	0.8835
-66.0	10.99	-34.5	55.39	-3.0	1175	28.5	64.37	60.0	12.99		
-64.5	11.99	-33.0	59.94	-1.5	1229	30.0	59.46	61.5	12.08		
-63.0	13.09	-31.5	64.37	0.0	1206	31.5	55.07	63.0	11.14		
-61.5	14.16	-30.0	69.16	1.5	1124	33.0	50.89	64.5	10.19		
-60.0	15.16	-28.5	74.37	3.0	1005	34.5	46.92	66.0	9.375		

Electricity Parameter:

Current I: 0.1000A Power: 3.319W Voltage V: 33.20V PF: 1.000

Optical Parameter (Distance=2.410m):

Equivalent Luminous flux: Φ eff= 241.5lm Efficiency: Eff=72.77lm/W

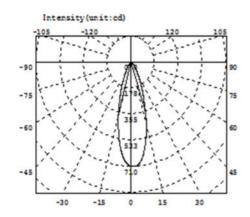
Diffuse angle: @(25%): 20.6deg@(50%): 14.9deg@(75%): 9.7deg @(50%): 14.9deg

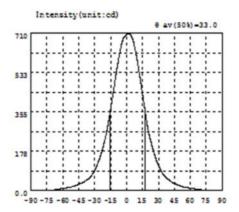
Diffuse angle: @(25%): 20.8deg@(50%): 15.1deg@(75%): 10.1deg@(50%): 15.1deg

Imax=1230cd (C=0.0deg,G=-1.0deg)

C0-180Plane Imax= 1230cd(G=-1.0deg)

CO-180Plane IO= 1206cd





Intensity data: (deg , cd) CO-180

λ	1	λ	I	λ	I	λ	I	λ	1	λ	I
-90.0	0.8361	-58.5	9.516	-27.0	123.7	4.5	695.5	36.0	62.62	67.5	4.094
-88.5	0.9943	-57.0	10.61	-25.5	143.9	6.0	676.9	37.5	55.56	69.0	3.085
-87.0	0.9797	-55.5	11.83	-24.0	166.2	7.5	648.6	39.0	49.72	70.5	2.308
-85.5	0.4060	-54.0	13.25	-22.5	191.5	9.0	612.7	40.5	44.22	72.0	1.623
-84.0	0.3622	-52.5	15.05	-21.0	217.0	10.5	571.6	42.0	39.15	73.5	1.107
-82.5	0.3624	-51.0	17.26	-19.5	249.4	12.0	527.4	43.5	34.76	75.0	0.8793
-81.0	0.3651	-49.5	19.56	-18.0	285.0	13.5	480.5	45.0	31.01	76.5	0.7513
-79.5	0.4317	-48.0	21.94	-16.5	325.1	15.0	432.9	46.5	27.79	78.0	0.6422
-78.0	0.4786	-46.5	24.52	-15.0	368.7	16.5	385.0	48.0	24.97	79.5	0.5180
-76.5	0.6191	-45.0	27.38	-13.5	414.8	18.0	336.7	49.5	22.34	81.0	0.3761
-75.0	0.7570	-43.5	30.41	-12.0	460.2	19.5	292.3	51.0	19.88	82.5	0.3112
-73.5	0.9293	-42.0	33.96	-10.5	507.4	21.0	257.3	52.5	17.59	84.0	0.2981
-72.0	1.157	-40.5	37.90	-9.0	552.8	22.5	226.5	54.0	15.34	85.5	0.2639
-70.5	1.357	-39.0	42.16	-7.5	595.6	24.0	198.7	55.5	13.60	87.0	0.3100
-69.0	1.800	-37.5	46.70	-6.0	633.2	25.5	173.6	57.0	12.09	88.5	0.2801
-67.5	2.541	-36.0	51.98	-4.5	664.2	27.0	151.0	58.5	10.82	90.0	0.2304
-66.0	3.718	-34.5	58.74	-3.0	685.9	28.5	130.0	60.0	9.716		
-64.5	5.131	-33.0	67.23	-1.5	698.0	30.0	111.4	61.5	8.751		
-63.0	6.763	-31.5	77.75	0.0	704.6	31.5	95.48	63.0	7.839		
-61.5	7.724	-30.0	90.06	1.5	706.7	33.0	82.59	64.5	6.730		
-60.0	8.540	-28.5	105.5	3.0	704.5	34.5	71.48	66.0	5.387		

Electricity Parameter:

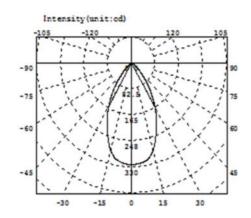
Current I: 0.1000A Power: 3.250W Voltage V: 32.50V PF: 1.000

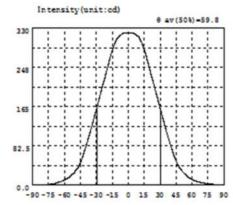
Optical Parameter (Distance=2.410m):

Equivalent Luminous flux: Φ eff= 329.1lm Efficiency: Eff=101.26lm/W

Diffuse angle: @(25%): 48.6deg@(50%): 33.0deg@(75%): 21.6deg@(50%): 33.0deg
Diffuse angle: @(25%): 48.6deg@(50%): 33.0deg@(75%): 21.7deg@(50%): 33.0deg
Imax=706.7cd (C=0.0deg,G=1.5deg)
C0-180Plane Imax= 706.7cd(G=1.5deg)

CO-180Plane IO= 704.6cd





Intensity data: (deg , cd) C0-180

λ	I	λ	I	λ	I	λ	I	λ	I	λ	I
-90.0	0.5310	-58.5	12.20	-27.0	184.9	4.5	319.1	36.0	111.5	67.5	5.351
-88.5	0.5307	-57.0	14.22	-25.5	197.6	6.0	317.5	37.5	99.83	69.0	4.585
-87.0	0.5081	-55.5	16.55	-24.0	210.1	7.5	315.2	39.0	88.93	70.5	3.892
-85.5	0.4953	-54.0	19.18	-22.5	222.1	9.0	312.9	40.5	78.59	72.0	3.340
-84.0	0.4403	-52.5	22.26	-21.0	234.4	10.5	308.8	42.0	68.49	73.5	2.817
-82.5	0.4310	-51.0	25.74	-19.5	247.3	12.0	302.3	43.5	58.61	75.0	2.373
-81.0	0.4309	-49.5	29.68	-18.0	260.2	13.5	294.1	45.0	49.85	76.5	1.969
-79.5	0.4662	-48.0	34.11	-16.5	273.0	15.0	284.5	46.5	42.69	78.0	1.627
-78.0	0.5012	-46.5	39.72	-15.0	283.6	16.5	273.5	48.0	37.08	79.5	1.232
-76.5	0.6494	-45.0	47.13	-13.5	292.9	18.0	261.4	49.5	32.13	81.0	0.8377
-75.0	0.8872	-43.5	55.93	-12.0	301.2	19.5	248.4	51.0	27.95	82.5	0.4755
-73.5	1.170	-42.0	65.57	-10.5	307.4	21.0	235.6	52.5	24.33	84.0	0.3659
-72.0	1.463	-40.5	76.07	-9.0	311.1	22.5	223.4	54.0	21.17	85.5	0.3760
-70.5	1.858	-39.0	86.99	-7.5	314.3	24.0	211.2	55.5	18.26	87.0	0.3603
-69.0	2.541	-37.5	98.28	-6.0	317.3	25.5	199.1	57.0	15.75	88.5	0.3841
-67.5	3.754	-36.0	109.8	-4.5	319.0	27.0	186.4	58.5	13.55	90.0	0.3819
-66.0	5.228	-34.5	121.9	-3.0	319.8	28.5	173.5	60.0	11.61		
-64.5	6.243	-33.0	134.2	-1.5	320.1	30.0	160.8	61.5	9.940		
-63.0	7.454	-31.5	146.4	0.0	320.2	31.5	147.9	63.0	8.516		
-61.5	8.851	-30.0	159.0	1.5	320.0	33.0	135.6	64.5	7.273		
-60.0	10.37	-28.5	172.0	3.0	319.7	34.5	123.3	66.0	6.229		

Electricity Parameter:

Current I: 0.1000A Power: 3.358W Voltage V: 33.59V PF: 1.000

Optical Parameter (Distance=2.410m):

Equivalent Luminous flux: 4 eff= 339.6lm Efficiency: Eff=101.13lm/W

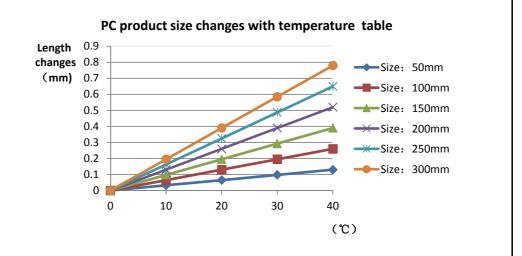
CO-180Plane IO= 320.2cd



		Sta ar siz	-	Upper Size Iimit	Lower size limit	Test result 1	Test result 2	Test result 3	Test result 4	Test result 5	Test result 6	Test result 7	Test result 8	Judg ment	Remarks
	dia te	1 4	5			44. 99	45. 03	45. 1	45. 1	45. 07	45	45. 05	45. 02		Test environment : In 20 °C -
1.Size	thio nes	.	.2			1.21	1. 19	1. 22	1. 25	1. 21	1. 23	1. 19	1. 19		25 ℃ environment to achieve thermal
	hei t	gh 8.	.9			8.8	8. 79	8.84	8. 77	8.86	8.84	8. 81	8. 76		equilibrium after the test.
		Gate shear can not affect the appearance of the lamp													
					Se	ee attac	hment "	Appeara	ance Ins	spectior	Standa	ards"			
2.Appeara	See attachme nt nc "Appeara		me	No burr		ırr	No burr		No burr		1	No burr		014	
e Quality	ı	nce Inspect Standa	tion	E		No stains		No stains No		No stains N		lo stains		OK	
3.Material					PC			Co	lor		Tra	anspare	nt		ОК
	Γesti	ng LE[15°-D6,24°36°60°-D9												
	The size and rated power of the light-emitting surface (LES) of the COB recommended by this lens should conform to the parameters in the product basic information table. if it is required to be out of rang According to the heat dissipation capability of the lamp and the actual conditions of the use environment the lens should be fully tested and tested to prevent the lens life.								t of range.						
4.Optical index	F۷	VHM	See	e light di	istributi	on curve	Э								
macx	ar	ngle			/	14.9	13. 2	14.6	14. 3	13.9	14. 3	13. 3	14.3		
		value D/LM)		\		5. 10	6. 66	5. 32	5. 56	5. 39	6.38	5. 44	6. 38		
	Effic	Efficiency		_	77. 2%	79. 5%	79. 2%	76.6%	0.8%	77. 2%	76.9%	78. 5%			
	Fa	ıcula						See th	ne signa	ature sa	mple				
Comprehensive judgment						Quali	ified								

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



Precautions:

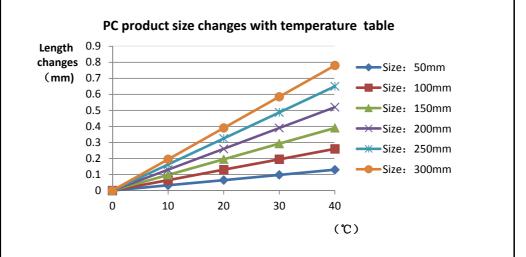
- 1. Please wear clean gloves during the lens assembly process to prevent the lens surface from being contaminated.
- 2. Try to avoid touching the total reflection surface when taking the lens.
- 3. The lens surface is contaminated. Only use a soft cotton cloth dipped in analytically pure neutral solvent to wipe gently. Do not wipe with industrial solvents (alcohol, isopropanol, acetone, ether, toluene, xylene, carbon tetrachloride, MMA Body, etc.).
- 4. The working temperature of the lens should be within the temperature resistance limit of the lens material. Exceeding the temperature resistance limit will cause the lens to crack or melt and affect the service life of the lens. It is recommended that the upper surface temperature of the LED colloid should be less than 120 degrees.



		а	and rd ze	Upper Size Iimit	Lower size limit	Test result 1	Test result 2	Test result 3	Test result 4	Test result 5	Test result 6	Test result 7	Test result 8	Judg ment	Remarks
	dia te	1 4	ŀ5			45. 02	45. 03	45. 04	45. 03	44. 99	45. 01	45	45. 03		Test environment : In 20 °C -
1.Size	thi nes		.2			1. 27	1. 31	1. 28	1. 26	1. 28	1.25	1.22	1.28		25 °C environment to achieve thermal
	hei t	1 0.	59			8. 61	8. 57	8. 51	8. 57	8. 51	8. 53	8. 53	8. 53		equilibrium after the test.
		Gate shear can not affect the appearance of the lamp													
					Se	ee attac	hment "	Appeara	ance Ins	spection	Standa	ards"			
2.Appeara		See attach nt "Appe	me	_		No bu	ırr	No	burr	No	burr	ı	No burr		014
e Quality		nce Inspec Standa	tion	E		No stains		No stains No		No s	No stains N		No stains		OK
3.Material					PC			Co	lor		Tra	anspare	nt		ОК
	Γesti	ng LEI	15°-D6,24°36°60°-D9												
	sho	The size and rated power of the light-emitting surface (LES) of the COB recommended by this lens should conform to the parameters in the product basic information table. if it is required to be out of range According to the heat dissipation capability of the lamp and the actual conditions of the use environment, the lens should be fully tested and tested to prevent the lens life.								t of range.					
4.Optical index	F۷	VHM	See	e light di	stributi	on curve	Э								
IIIdex	a	ngle				33	34.3	33. 5	33. 1	34. 7	36. 6	34. 2	33. 2		
		value D/LM)		\		2. 15	1. 93	1. 95	2.00	1. 90	1.90	1.81	1.95		
	Effi	Efficiency		_	74.8%	80.5%	74.8%	80.5%	74.8%	80. 5%	74.8%	80. 5%			
	Fa	acula						See th	ne signa	iture sa	mple				
Comprehensive judgment						Quali	ified								

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



Precautions:

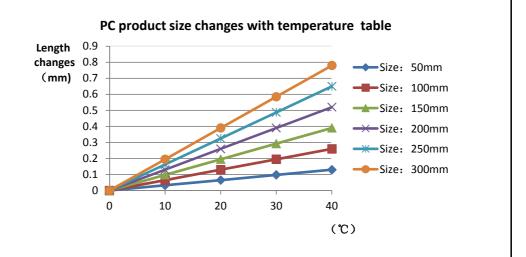
- 1. Please wear clean gloves during the lens assembly process to prevent the lens surface from being contaminated.
- 2. Try to avoid touching the total reflection surface when taking the lens.
- 3. The lens surface is contaminated. Only use a soft cotton cloth dipped in analytically pure neutral solvent to wipe gently. Do not wipe with industrial solvents (alcohol, isopropanol, acetone, ether, toluene, xylene, carbon tetrachloride, MMA Body, etc.).
- 4. The working temperature of the lens should be within the temperature resistance limit of the lens material. Exceeding the temperature resistance limit will cause the lens to crack or melt and affect the service life of the lens. It is recommended that the upper surface temperature of the LED colloid should be less than 120 degrees.



		Stan ard size	Size	Lowe size limit	r Test result 1	Test result 2	Test result 3	Test result 4	Test result 5	Test result 6	Test result 7	Test result 8	Judg ment	Remarks
	dian ter	1 45			45. 09	45. 12	45. 11	45. 08	45. 07	45. 08	44. 99	45. 02		Test environment : In 20 °C -
1.Size	thic nes	1 1.2			1. 23	1. 23	1. 24	1. 26	1. 24	1. 24	1. 23	1. 24		25 °C environment to achieve thermal
	heig t	gh 8.59			8. 66	8. 63	8. 62	8. 64	8. 67	8.66	8. 63	8. 65		equilibrium after the test.
		Gate shear can not affect the appearance of the lamp												
				5	See attac	hment "	'Appear	ance In	spectior	n Standa	ards"			
2.Appeara		See attachme nt c "Appeara			No burr		No	No burr No		burr N		No burr		
e Quality	ı	nce nspection Standard	on =		No stains		No s	No stains No sta		tains	No stains		3	- OK
3.Material				PC			Co	olor		Tra	anspare	nt		ОК
	Γestir	ng LEC	15°-D6,24°36°60°-D9											
	The size and rated power of the light-emitting surface (LES) of the COB recommended by this lens should conform to the parameters in the product basic information table. if it is required to be out of ran According to the heat dissipation capability of the lamp and the actual conditions of the use environme the lens should be fully tested and tested to prevent the lens life.								t of range.					
4.Optical index	FW	/HM S	ee light	distribu	tion curv	е								
macx	ar	ngle		/	59. 8	59.8	59. 6	59.8	58.8	29. 3	60. 2	57.9		
		/alue)/LM)		\										
	Effic	fficiency			85. 0%	85. 0%	85. 0%	85.0%	85.0%	85.0%	85.0%	85. 0%		
	Fa	cula					See th	ne signa	ature sa	mple				
Comprehensive judgment						Qual	ified							

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



Precautions:

- 1. Please wear clean gloves during the lens assembly process to prevent the lens surface from being contaminated.
- 2. Try to avoid touching the total reflection surface when taking the lens.
- 3. The lens surface is contaminated. Only use a soft cotton cloth dipped in analytically pure neutral solvent to wipe gently. Do not wipe with industrial solvents (alcohol, isopropanol, acetone, ether, toluene, xylene, carbon tetrachloride, MMA Body, etc.).
- 4. The working temperature of the lens should be within the temperature resistance limit of the lens material. Exceeding the temperature resistance limit will cause the lens to crack or melt and affect the service life of the lens. It is recommended that the upper surface temperature of the LED colloid should be less than 120 degrees.



P	N	HK-CY-45@09-15-D6-2	.0-1g-1	Product Name	HK Filmy 45@	HK Filmy 45@09-15° lens			
Product	material			PC					
Package diagram		Single Va	cuum packa	ge Box	x package		>		
Product	packing	18	A/ Box	4	pcs/Layer				
	. •	20	Layer/Box	1440	A/ Carton				
	NO.	Part No	Part name	Size	Dosage	Unit	Remarks		
	1	2.07.0043	Blister box	23cm*21cm	80	BAG			
Dookogin	2	2.08.0001	PE film	30cm*30cm	80	PCS			
Packagin g	3	2.06.0005	Reel label paper	6.2cm*8cm	80	PCS			
Materials	4	2.06.0005	Box label paper	6.2cm*9.2cm	1	PCS			
	5	2.06.0003	big plate	46.8cm*42.8cm	21	PCS			
	6	2.06.0015	big flat carton	48cm*44cm*19cr	n 1	PCS			
Remarks		The loose packing is not subject	ct to this specif	ïcation. Customer's	requirements shall	prevail			



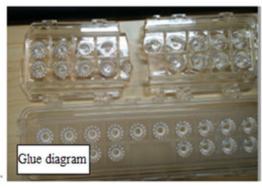
Special notice

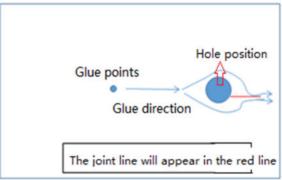
When gule pass through holes, columns and other structures, or part of the thin structure, will form a weld line. The product which uses multi-point injection welding line will appear because of the combination of sol, as shown below:

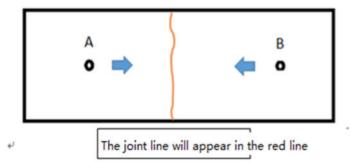
Syntneti











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 description	Unit	Code	Code description	Unit
N	Amount/pcs	pcs	D	Diameter	mm
L	Length	mm	Н	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 atondard	Inspection equipment	Defec	Defect level		
restitems	Judging standard	Testing method	MI	efect level 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		1	Ī	1	
	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	 1: Product does not allow the presence of flow marks and welding lines unless the structure can not be avoided; 2: The remaining flow marks shall not appear in the optical surface, a single L ≤ 10mm, no more than two 	Visual		٧	

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	V		
	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 \leq 1 mm and no more than 1 area within a 50x50 mm area	Visual		√	