

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-RG-50@24-15-D9-21-1g-1_A	1. 01. 12743	HK Moony 50@24-15° lens(D9) _A
HK-RG-50@24-24-D9-21-1g-1	1. 01. 12724	HK Moony 50@24-24° lens(D9)
HK-RG-50@24-36-D9-21-1g-1	1. 01. 12748	HK Moony 50@24-36° lens(D9)
HK-RG-50@24-50-D9-21-1g-1	1. 01. 12958	HK Moony 50@24-50° lens(D9)



	Supplier co	onfirmation			Client cor	nfirmation	
Proposed		DATE		Qualified□		5.4.75	
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.cn/ Sales Dept: Shenzhen Nanshan District Nanshan Cloud Valley Innovation Industrial Park Comprehensive Service Building,

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

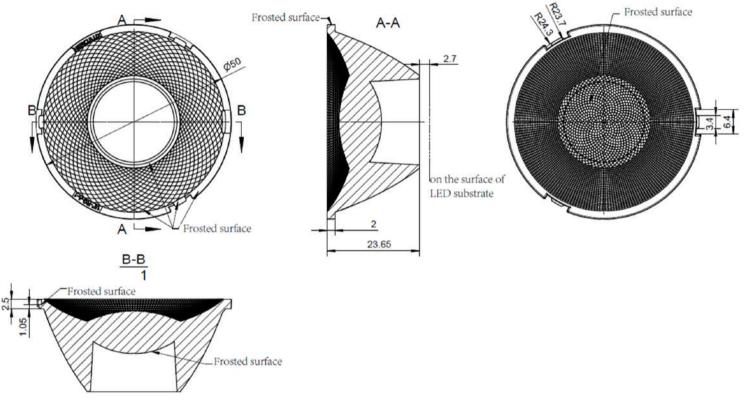
*Approval In duplicate, for both supplier and customer.



TEL: 0755-2937 1541 FAX: 0755-2907 5140 http://www.herculux.cn/ Date updated: 2022/5/20

Product Picture:	
PN:	HK-RG-50@24-15-D9-21-1g-1_A
Size(L*W*H/Φ*H):	Ф:50mm; H:23.65mm
Material:	PC
Effiency:	\
Temperature(Topr):	Material extreme temperature resistance : -40°C to +120°C long-term use temperature : -40°C to +100°C
FWHM:	15°、24°、36°、50°



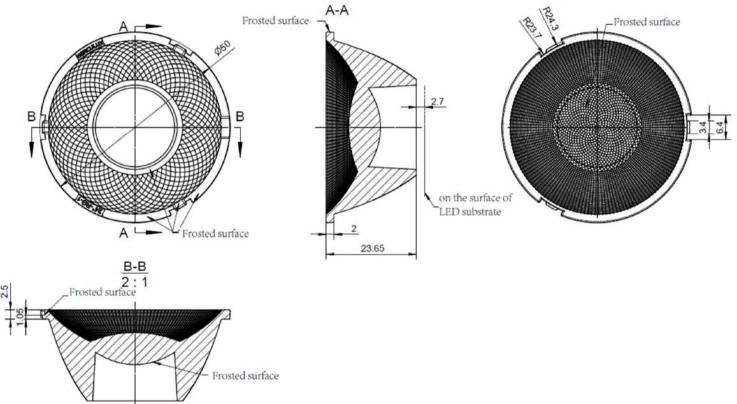


- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.
- *4. When the lamp adopts rubber ring for waterproofing: the roughness of the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

	Optical	design							Н	K-RG-50)@24-15-D9-2:	1-1g-1_	Α
	tructur	ure desig					HK Moony 50	@24-15º lens(D9)_A			1.01.12743		
	Review					1		umber o	f drawin	qty	we	ight	
	Validation				Material:	PC			CDHK				
^	~250	250~	~450	>4	450								

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			



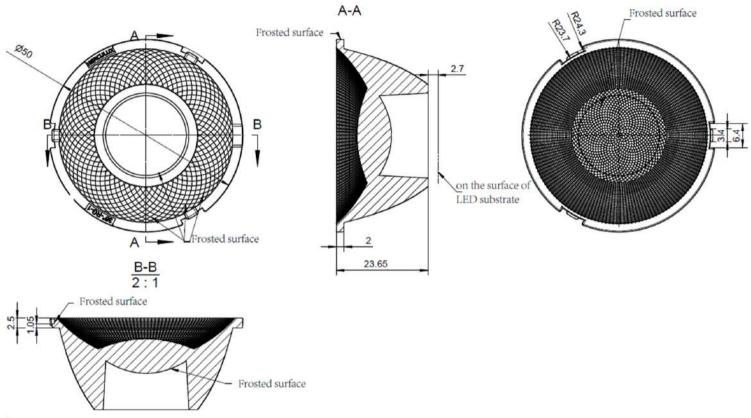


- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.
- *4. When the lamp adopts rubber ring for waterproofing: the roughness of the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

	Optical	design							ı	HK-RG-	50@24-24-D9-2	21-1g-1	
	tructur	cture desig Review					HK Moony 50)@24-24º lens(D9)			1.01.12724		
ĺ	Review								umber of	f drawin	qty	we	ight
ľ	Valid	Validation				Material:	PC			CDHK			
^	~250	0 250~450 >45		450									

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		

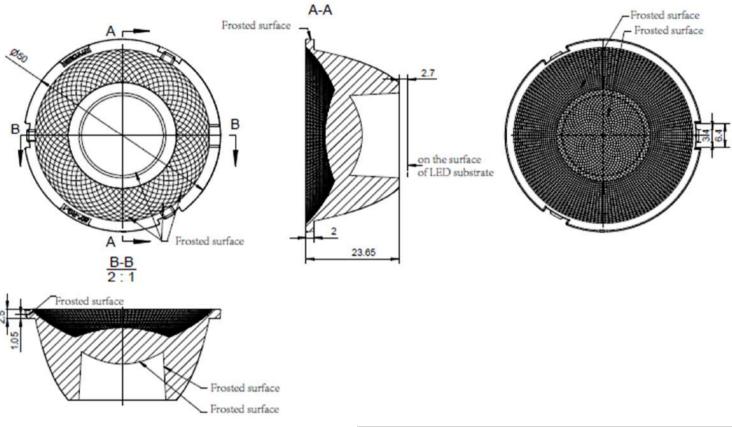




- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.
- *4. When the lamp adopts rubber ring for waterproofing: the roughness of the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

Ī	Optical	design							Н	K-RG-5	0@24-36-D9-	21-1g-1	-
	tructur	e desig					HK Moony 50	0@24-36º lens(D9)			1.01.12748		
	Pov	Review							umber of c	drawin	qty	we	ight
	nev	iew											
	Valid	ation					Material:	PC			CDHK		
^	~250	250~	~450	>4	150								

							• • • • • • • • • • • • • • • • • • • •			 	. 0	651
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			

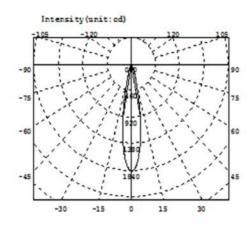


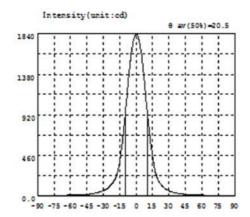
- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.
- *4. When the lamp adopts rubber ring for waterproofing: the roughness of the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

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	Optical	design							HK-RG-	50@24-50-D9-	21-1g-1	-
F	tructur	e desig				HK Moony 50	0@24-50º lens(D9)			1.01.12958		
ľ	Rev	iou				1		umber of drawin qty weight			ight	
L	nev	iew						umber of drawin qty weight				
	Valid	ation				Material:	PC			CDHK		
~	250	250~	~450	>	450							

MT5 Tolerance	Basic size	<3	3~10	10~24	24~65	65~140	140~250	250~4	50	>450		
	olerance valu	±0.1	±0.15	±0.20	±0.35	±0.50	±0.80	±1.2		±2.0	l	







Intensity data: (deg , cd) C0-180

λ	I	λ	1	λ	I	λ	I	λ	I	λ	I
-90.0	0.2260	-58.5	4.496	-27.0	77.89	4.5	1638	36.0	30.54	67.5	1.530
-88.5	0.2719	-57.0	5.140	-25.5	91.17	6.0	1487	37.5	26.40	69.0	1.224
-87.0	0.3167	-55.5	5.842	-24.0	107.0	7.5	1310	39.0	22.95	70.5	0.9945
-85.5	0.3487	-54.0	6.632	-22.5	126.6	9.0	1119	40.5	20.02	72.0	0.7690
-84.0	0.3801	-52.5	7.389	-21.0	151.1	10.5	927.8	42.0	17.57	73.5	0.5968
-82.5	0.3682	-51.0	8.201	-19.5	182.5	12.0	746.3	43.5	15.44	75.0	0.4415
-81.0	0.3575	-49.5	9.132	-18.0	226.1	13.5	581.2	45.0	13.67	76.5	0.4310
-79.5	0.3497	-48.0	10.29	-16.5	289.0	15.0	443.5	46.5	12.09	78.0	0.3544
-78.0	0.3618	-46.5	11.68	-15.0	382.2	16.5	328.0	48.0	10.76	79.5	0.3124
-76.5	0.4062	-45.0	13.25	-13.5	509.9	18.0	250.1	49.5	9.587	81.0	0.2792
-75.0	0.6037	-43.5	15.11	-12.0	669.8	19.5	197.1	51.0	8.475	82.5	0.2989
-73.5	0.8623	-42.0	17.26	-10.5	857.6	21.0	159.0	52.5	7.502	84.0	0.3329
-72.0	1.147	-40.5	19.88	-9.0	1055	22.5	130.6	54.0	6.651	85.5	0.4062
-70.5	1.389	-39.0	22.93	-7.5	1254	24.0	108.9	55.5	5.801	87.0	0.3501
-69.0	1.644	-37.5	26.50	-6.0	1440	25.5	91.27	57.0	5.139	88.5	0.3669
-67.5	1.935	-36.0	30.68	-4.5	1603	27.0	77.14	58.5	4.486	90.0	0.5382
-66.0	2.187	-34.5	35.71	-3.0	1727	28.5	65.64	60.0	3.869		
-64.5	2.534	-33.0	41.61	-1.5	1806	30.0	56.11	61.5	3.276		
-63.0	2.913	-31.5	48.67	0.0	1837	31.5	47.94	63.0	2.760		Ĭ,
-61.5	3.376	-30.0	56.98	1.5	1818	33.0	41.10	64.5	2.289		
-60.0	3.908	-28.5	66.73	3.0	1752	34.5	35.17	66.0	1.883		

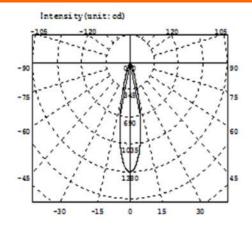
Electricity Parameter:

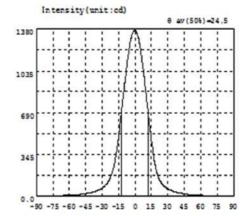
Current I: 0.1000A Power: 3.250W Voltage V: 36.59V PF: 1.000

Optical Parameter (Distance=2.410m):

C0-180Plane I0= 1837cd







Intensity data: (deg , cd) C0-180

λ	1	λ	1	λ	I	λ	1	A	1	λ	I
-90.0	0.2260	-58.5	5.344	-27.0	87.48	4.5	1245	36.0	34.10	67.5	1.044
-88.5	0.2383	-57.0	6.260	-25.5	102.7	6.0	1156	37.5	29.82	69.0	0.7688
-87.0	0.2614	-55.5	7.321	-24.0	122.9	7.5	1052	39.0	26.18	70.5	0.6931
-85.5	0.3166	-54.0	8.446	-22.5	150.8	9.0	937.6	40.5	23.08	72.0	0.5947
-84.0	0.3599	-52.5	9.735	-21.0	187.8	10.5	816.8	42.0	20.42	73.5	0.5505
-82.5	0.4029	-51.0	11.10	-19.5	238.1	12.0	694.2	43.5	18.11	75.0	0.4991
-81.0	0.4248	-49.5	12.59	-18.0	304.4	13.5	573.5	45.0	16.13	76.5	0.4728
-79.5	0.4597	-48.0	14.11	-16.5	389.0	15.0	462.8	46.5	14.25	78.0	0.4121
-78.0	0.4852	-46.5	15.79	-15.0	488.3	16.5	361.4	48.0	12.37	79.5	0.4175
-76.5	0.5477	-45.0	17.52	-13.5	601.0	18.0	274.3	49.5	10.69	81.0	0.3583
-75.0	0.6099	-43.5	19.96	-12.0	720.5	19.5	211.7	51.0	9.182	82.5	0.3390
-73.5	0.6938	-42.0	22.51	-10.5	844.0	21.0	165.5	52.5	7.842	84.0	0.2659
-72.0	0.9305	-40.5	25.52	-9.0	964.0	22.5	132.8	54.0	6.656	85.5	0.2337
-70.5	1.241	-39.0	28.93	-7.5	1075	24.0	109.5	55.5	5.602	87.0	0.2199
-69.0	1.556	-37.5	32.91	-6.0	1176	25.5	92.08	57.0	4.474	88.5	0.2420
-67.5	1.934	-36.0	37.53	-4.5	1261	27.0	78.77	58.5	3.899	90.0	0.1466
-66.0	2.340	-34.5	42.96	-3.0	1324	28.5	68.03	60.0	3.267		
-64.5	2.797	-33.0	49.19	-1.5	1361	30.0	58.99	61.5	2.685		
-63.0	3.278	-31.5	56.57	0.0	1371	31.5	51.16	63.0	2.205		
-61.5	3.857	-30.0	65.18	1.5	1355	33.0	44.63	64.5	1.775		
-60.0	4.549	-28.5	75.37	3.0	1313	34.5	38.99	66.0	1.395		

Electricity Parameter:

Current I: 0.1000A Power: 3.279W Voltage V: 32.79V PF: 1.000

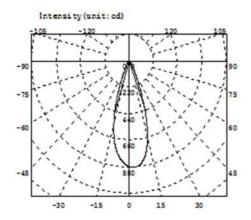
Optical Parameter (Distance=2.410m):

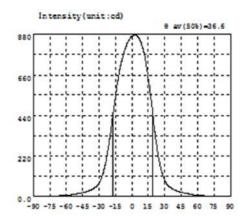
Equivalent Luminous flux: Φ eff= 333.91m Efficiency: Eff=101.85lm/W

Diffuse angle: @(25%): 33.9deg@(50%): 24.5deg@(75%): 15.9deg@(50%): 24.5deg Diffuse angle: @ (25%): 33.9deg@ (50%): 24.5deg@ (75%): 15.9deg@ (50%): 24.5deg C0-180Plane Imax= 1371cd(G=0.0deg) Imax=1371cd (C=0.0deg,G=0.0deg)

C0-180Plane I0= 1371cd







Intensity data: (deg , cd) CO-180

Α	1	λ	I	A	I	A	I	Α	I	λ	I
-90.0	0.3694	-58.5	5.273	-27.0	110.5	4.5	874.2	36.0	43.71	67.5	1.117
-88.5	0.3562	-57.0	6.279	-25.5	141.6	6.0	865.5	37.5	38.24	69.0	0.7751
-87.0	0.3801	-55.5	7.424	-24.0	180.9	7.5	849.6	39.0	33.75	70.5	0.5649
-85.5	0.3425	-54.0	8.665	-22.5	225.9	9.0	825.8	40.5	29.91	72.0	0.5773
-84.0	0.2922	-52.5	10.06	-21.0	281.4	10.5	794.4	42.0	26.72	73.5	0.5246
-82.5	0.1841	-51.0	11.58	-19.5	343.9	12.0	753.6	43.5	23.98	75.0	0.4880
-81.0	0.2959	-49.5	13.25	-18.0	409.1	13.5	703.7	45.0	21.20	76.5	0.4608
-79.5	0.3131	-48.0	15.01	-16.5	477.1	15.0	643.3	46.5	18.91	78.0	0.4894
-78.0	0.3860	-46.5	16.98	-15.0	542.1	16.5	575.8	48.0	16.71	79.5	0.4025
-76.5	0.4595	-45.0	19.02	-13.5	602.4	18.0	504.1	49.5	14.65	81.0	0.3476
-75.0	0.5213	-43.5	21.16	-12.0	656.4	19.5	428.3	51.0	12.76	82.5	0.0724
-73.5	0.5701	-42.0	23.55	-10.5	704.8	21.0	347.3	52.5	11.07	84.0	0.1407
-72.0	0.7505	-40.5	26.30	-9.0	744.4	22.5	282.5	54.0	9.504	85.5	0.3725
-70.5	0.8115	-39.0	29.44	-7.5	777.4	24.0	224.8	55.5	8.144	87.0	0.2860
-69.0	0.9480	-37.5	33.06	-6.0	804.8	25.5	176.4	57.0	6.787	88.5	0.4780
-67.5	1.170	-36.0	37.34	-4.5	827.2	27.0	138.4	58.5	5.619	90.0	0.5573
-66.0	1.518	-34.5	42.57	-3.0	845.0	28.5	108.8	60.0	4.792		
-64.5	2.074	-33.0	49.08	-1.5	859.8	30.0	86.82	61.5	3.702		
-63.0	2.719	-31.5	57.95	0.0	869.7	31.5	70.28	63.0	2.904		
-61.5	3.470	-30.0	69.90	1.5	876.0	33.0	58.76	64.5	2.182		
-60.0	4.311	-28.5	87.08	3.0	877.5	34.5	50.28	66.0	1.563		

Electricity Parameter:

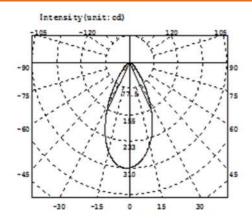
Current I: 0.1000A Power: 0.2700W Voltage V: 2.700V PF: 1.000

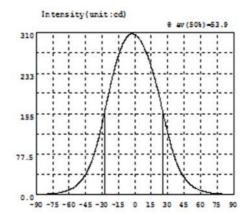
Optical Parameter (Distance=2.559m):

Equivalent Luminous flux: \$\Phi\$ eff= 375.3lm Efficiency: Eff=1390.27lm/W

C0-180Plane I0= 869.7cd







Intensity data: (deg , cd) C0-180

A	I	λ	1	A	I	λ	I	λ	I	λ	I
-90.0	0.3729	-58.5	9.928	-27.0	163.2	4.5	297.1	36.0	73.85	67.5	3.323
-88.5	0.3618	-57.0	11.62	-25.5	177.6	6.0	292.2	37.5	64.74	69.0	2.825
-87.0	0.3616	-55.5	13.57	-24.0	192.0	7.5	286.3	39.0	56.58	70.5	2.387
-85.5	0.3497	-54.0	15.81	-22.5	206.2	9.0	279.6	40.5	49.42	72.0	1.963
-84.0	0.3273	-52.5	18.40	-21.0	219.8	10.5	272.2	42.0	43.17	73.5	1.596
-82.5	0.3599	-51.0	21.35	-19.5	232.6	12.0	264.1	43.5	37.63	75.0	1.275
-81.0	0.4078	-49.5	24.75	-18.0	244.8	13.5	255.1	45.0	32.84	76.5	0.9696
-79.5	0.5334	-48.0	28.63	-16.5	256.1	15.0	245.4	46.5	28.58	78.0	0.7546
-78.0	0.7172	-46.5	33.17	-15.0	266.4	16.5	235.0	48.0	24.82	79.5	0.5395
-76.5	0.9914	-45.0	38.16	-13.5	275.6	18.0	223.9	49.5	21.47	81.0	0.4310
-75.0	1.238	-43.5	43.80	-12.0	283.8	19.5	212.0	51.0	18.61	82.5	0.3487
-73.5	1.686	-42.0	50.10	-10.5	291.0	21.0	199.5	52.5	16.15	84.0	0.3262
-72.0	2.102	-40.5	57.36	-9.0	296.8	22.5	186.4	54.0	13.97	85.5	0.3277
-70.5	2.544	-39.0	65.52	-7.5	301.5	24.0	173.0	55.5	12.03	87.0	0.3063
-69.0	3.044	-37.5	74.62	-6.0	304.9	25.5	159.2	57.0	10.35	88.5	0.2379
-67.5	3.603	-36.0	84.71	-4.5	307.0	27.0	145.4	58.5	8.872	90.0	0.3379
-66.0	4.264	-34.5	95.93	-3.0	308.0	28.5	132.0	60.0	7.603		
-64.5	5.075	-33.0	108.0	-1.5	307.9	30.0	119.0	61.5	6.467		
-63.0	6.034	-31.5	120.9	0.0	306.7	31.5	106.4	63.0	5.480		
-61.5	7.143	-30.0	134.5	1.5	304.4	33.0	94.68	64.5	4.638		
-60.0	8.422	-28.5	148.7	3.0	301.2	34.5	83.85	66.0	3.937		

Electricity Parameter:

Current I: 0.1000A Power: 3.608W Voltage V: 36.09V PF: 1.000

Optical Parameter (Distance=2.410m):

Equivalent Luminous flux: Φ eff= 279.31m Efficiency: Eff=77.421m/W

CO-180Plane IO= 306.7cd



		\$	Standard size	Upper Size limit	Lower size limit	Test result1	Test result2	Test result3	Test result4	Jud gme nt	Remarks
	diamet	er	50			50	50. 01	50	50. 01		Test environment: In 20 °C -25 °C
1.Size	heigh	t	23. 65			23. 87	23. 87	23. 87	23. 87		environment to achieve thermal equilibrium after the
	thickne	ess	2			2. 25	2. 22	2. 25	2. 22		test.
				Gate	shear can r	not affect th	e appearar	nce of the la	amp		
				See	attachment	"Appearan	ce Inspecti	on Standar	ds"		
2.Appear	ance	atta	See chment earance	ent nce E ——		lo burr	No burr	No burr	No burr		ОК
Quality		Insp	pection ndards"		N	o stains	No stains	No stains	No stai	ns	
3.Materia	ıl		<u> </u>	PC	<u> </u>		Color	Tra	nsparent		ОК
	Testing I	LED					D9				
4.Optica	to the so	ource o	of the test,	if it is requ	ired to be o	ut of range nt, the lens	. According	to the heat fully tested	t dissipatio	n capa	ald be comparable ability of the lamp event the lens life.
I index	angle					20.5	19. 7	19.9	19.8		
	K-val	ue					5. 92	6. 02	6.06		
	Efficie	ency				81.6%	82.1%	82.1%	80.4%		
	Facula	See th	e signatui	e sample		`	•				
Compre judgi						•	Qu	ıalified			
				Length	PC pro	oduct size	changes w	vith tempe	erature ta	ble	
Remarks				changes						— 9	Size: 50mm
	Number: V D-Quadra		er	(mm)	0.6				*		Size: 100mm
Height Ga	auge M-To	ool			0.5			*	×		Size: 150mm
	pe P-Need uge R-Ra				0.4		8				Size: 200mm
Gauge E-	•	uius			0.3		***				Size: 250mm
2、Ambi	ent tempe				0.2	.0:					Size: 300mm
	of the prodole on the		er		0.1						
.5 4.10 (41)	5.17 (110)				0	10	20	30	40		
									(℃)		

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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 50			49.94	49.95	49.93	49.95	49.96	49.95	49.90	49.92		Test environment: In 20 °C -25 °C
1.Size	heigh	t 23.65			23.57	23.56	23.58	23.63	23.60	23.60	23.60	23.64		environment to achieve thermal
	thick ess	n 2			1.96	1.94	1.96	2.01	1.96	2.01	1.95	1.96		equilibrium after the test.
					Gate	shear ca	an not aff	ect the a	ppearan	ce of the	lamp			
					See	attachm	ent "App	earance	Inspectio	n Standa	ırds"			
2.Appear		tachmen t			No bu	ırr	No	burr	No	burr	1	No burr		
ce Qualit	y In	oppearan ce spection	E		No sta	ins	No s	tains	No s	stains	N	o stains		OK
3.Materia		tandards		PC			Co	olor		Tra	ansparen	t		OK
1	sting L	7		-				D	<u> </u>		moparon			Oit
4.Optica	sourc	con	he test, if it is required to be out of ra conditions of the use environment, the			ne lens sl	nould be		ed and te					
I index	angle				24. 5	24. 6	24	23.9	23. 2	23. 7	24.8	24.8		
	K-val	u	_		4. 06	4. 10	4. 24	4. 25	4. 45	4. 26	4. 00	4. 03		
	ficie	n			82. 2%	78. 1%	80. 5%	79. 8%	80. 8%	81. 0%	78. 6%	80. 3%		
	acu Se	ee the sig	nature s	ample		,								
Compred sive								Qua	lified					
Remarks					PC p	roduct	size cha	nges wit	th temp	erature	table			
1. Tool I		er: V-	Leng	eth 0.8	7									
Vernier C				iges 0.7									Cia/	e: 50mm
Quadration		eight	(m	m) _{0.6}										
Gauge M													■ Size	e: 100mm
Microsco				0.5						*			Size	e: 150mm
Needle T				0.4						**			∠ Sizα	e: 200mm
Gauge R				0.3	+			X						
Gauge E		1.		0.2	-	1							K →Size	e: 250mm
temperat		the		0.1			07						-Size	e: 300mm
size of th				0.1										
refer to the the right	he tabl			O	0	:	10	20	0	30	(•	40 C)		
Precautio	ons:													

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		Standa rd size	Upper Size limit	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	50			49.90	49.91	49.96	49.93	49.91	49.88	49.89	49.91		Test environment: In 20 °C -25 °C
1.Size	height	23. 65			23.76	23.73	23.74	23.77	23.79	23.73	23.68	23.76		environment to achieve thermal
	thickn ess	2			2.03	2.04	2.04	2.03	2.01	2.04	1.98	1.99		equilibrium after the test.
					Gate	shear ca	n not aff	ect the a	appearar	nce of the	e lamp	-		
										on Stand				
2.Appear	atta	See chment pearan	E		No bu	ırr	No	burr	No	burr	١	No burr		OK
ce Qualit	Ins	ce pection ndards"	L		No sta	ins	No s	tains	No s	stains	N	o stains		OK
3.Materia	al			PC			Co	olor		Tra	nsparen	t		OK
	sting LE							С	9					
4.Optica		of the te	est, if it is	require		out of rar	nge. Acc e lens sl	ording to	the hea	t dissipa	tion cap	ability of	the la	comparable to the mp and the actual ens life.
I index	angle				36.6	36. 4	36. 5	37. 1	35. 6	36. 1	36. 4	35. 2		
	K-value				2.34	2.35	2. 37	2. 33	2.46	2. 38	2. 36	2. 45		
	ficien				81.2%	81.0%	81.4%	82. 3%	81.6%	80.5%	80.3%	81.6%		
	acu See	the sigr	nature sa	ample		•								
Compred sive								Qua	alified					
Remarks	i •				PC pı	roduct s	size cha	nges wi	th temp	perature	e table			
1、Tool I		V-		th 0.8	1									
Vernier C			chan	ges 0.7									-Size	e: 50mm
Quadration Gauge M		ht	(m	m) _{0.6}								X -	Size	e: 100mm
Microsco				0.5						V				e: 150mm
Needle T				0.4	+					\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				
Gauge R	-Radius	1		0.3				*						e: 200mm
Gauge E				0.2				X					← Size	e: 250mm
2、Ambi		_		0.1								→	-Size	e: 300mm
temperat size of th				0				<u></u>						
refer to th				3	0	1	0	20		30		40		
the right											('	C)		
Precautio														

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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	50			49. 94	49. 93	49. 94	49. 93		Test environment: In 20 °C -25 °C
heigh	t	23. 65			23. 66	23. 7	23. 66	23. 7		environment to achieve thermal equilibrium after the
thickne	ess	2			2. 1	2. 08	2. 1	2.08		test.
			Gate	shear can i	not affect th	e appearar	nce of the la	amp		
			See	attachment	t "Appearan	ce Inspecti	on Standar	ds"		
rance			E	1	No burr	No burr	No burr	No bu	rr	OK
	Ins	spection	_	N	o stains	No stains	No stains	No stai	ns	
al			PC	•		Color	Tra	nsparent		OK
Testing I	ED					D9	I			
to the so	ource actual	of the test,	if it is requ	ired to be c	out of range ent, the lens	. According should be	to the hear	t dissipatio	n capa	ability of the lamp
angle					53. 9	52. 2	54. 6	53. 4		
K-val	ue									
Efficie	ncy				67. 23%	66. 51%	67. 95%	65. 78%		
Facula	See t	the signatu	re sample		`					
ehensive gment					•	Qu	ualified			
2D-Quadra Gauge M-To ope P-Need auge R-Ra E-Visual oient tempe of the prod	tic H- pol dle T- dius erature uct re	e on	changes 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 7 6 5 4 3 2 1 1	duct size cl	nanges wit	th temper	ature tab	Siz Siz Siz Siz Siz	ee: 50mm ee: 100mm ee: 150mm ee: 200mm ee: 250mm ee: 300mm
	heigh thicknee thicknee thicknee thicknee Take the second the	Testing LED The recomme to the source and the actua FWHM angle K-value Efficiency Facula See to the source and the actual see the source and	diameter 50 height 23.65 thickness 2 Thickness 2 Testing LED The recommended size ato the source of the test, and the actual conditions FWHM angle K-value Efficiency Facula See the signatue enensive and the source of the test, and the actual conditions FWHM angle K-value Efficiency Facula See the signatue enensive and the actual conditions See the signature enensive and the source of the test, and the actual conditions FWHM angle K-value Efficiency Facula See the signature enensive and the source of the test, and the actual conditions FWHM angle K-value Efficiency Facula See the signature enensive and the source of the test, and the actual conditions FWHM angle K-value Efficiency Facula See the signature enensive and the source of the test, and the actual conditions FWHM angle K-value Efficiency Facula See the signature enensive and the source of the test, and the actual conditions FWHM angle K-value Efficiency Facula See the signature enensive and the source of the test, and the actual conditions FWHM Angle K-value Efficiency Facula See the signature enensive and the source of the test, and the actual conditions FWHM angle K-value Efficiency Facula See the signature enensive and the source of the test, and the source of the test	size Size limit diameter 50 height 23.65 thickness 2 Gate See attachment "Appearance Inspection Standards" al PC Testing LED The recommended size and power read to the source of the test, if it is requested and the actual conditions of the use FWHM angle K-value Efficiency Facula See the signature sample enensive gment See the signature sample enensi	size Size limit size limit diameter 50 height 23.65 thickness 2 Gate shear can See attachment "Appearance Inspection Standards" al PC Testing LED The recommended size and power rating of the to the source of the test, if it is required to be and the actual conditions of the use environment FWHM angle K-value Efficiency Facula See the signature sample enensive gment See Alius Changes 0.7 (mm) 0.6 Changes 0.7 (mm) 0.6	size Size limit result1 diameter 50	size Size limit size limit result1 result2 diameter 50 49.94 49.93 height 23.65 23.66 23.7 thickness 2 2.1 2.08 Gate shear can not affect the appearar See attachment "Appearance Inspection Inspection Standards" No burr No burr No burr No stains No stai	size Size Imit result1 result2 result3 diameter 50 49.94 49.93 49.94 height 23.65 23.66 23.7 23.66 thickness 2 2.1 2.08 2.1 Gate shear can not affect the appearance of the late See attachment "Appearance Inspection Standards" No burr No burr No burr No burr Testing LED No stains No stains No stains No stains No stains Testing LED DP DP The recommended size and power rating of the LED light source recommended to the source of the test, if it is required to be out of range. According to the hea and the actual conditions of the use environment, the lens should be fully tested FWHM See light distribution curve See the signature sample See the signature sample PC product size changes with temper Length 0.8 changes 0.7 (mm) 0.6 changes 0.7 (mm) 0	size Size limit size limit result1 result2 result3 result4	Standard Size Size limit Size limit Fest Fe

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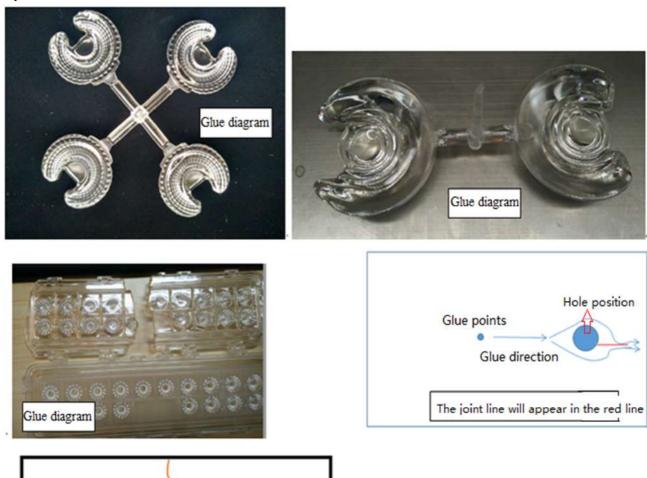
P	N	HK-RG-50@24-15-D9-21	-1g-1_A	Product Name	HK Moony 50@24-	15º lens	(D9) _A
Product	material	PC		Customer			
Package	diagram	Single Vac	cuum packa	ge Bo	ox package		^
Product	packing	14	A/ Box	4	pcs/Layer		
	. 5	10	Layer/Box	560	A/ Carton		
	NO.	Part No	Part name	Size	Dosage	Unit	Remarks
	1	2.07.0024-1	Blister box	23cm*21cm	40	BAG	
Dookogin	2	2.08.0001	PE film	25cm*27cm	40	PCS	
Packagin g	3	2.06.0005	Reel label paper	62mm*42mm	40	PCS	
Materials	4	2.06.0005	Box label paper	62mm*70mm	1	PCS	
	5	2.06.0003	big plate	46cm*42cm	11	PCS	
	6	2.06.0011	big flat carton	48cm*44cm*37c	cm 1	PCS	
Remarks		The loose packing is not subject	ct to this specif	ication. 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.

The joint line will appear in the red line



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	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 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			√

	_	Ī	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	√	

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