

Chengdu HercuLux Photoelectric Technology Co.,Ltd **Product Approval**

Approval number:

Customer:

Manufacturer: Chengdu HercuLux Photoelectric Technology Co.,Ltd

PN	Code	Product
HK-RG-68@32-15-D12-21-1g-1	1. 01. 13003	HK Moony 68@32-15 degree lens
HK-RG-68@32-24-D12-21-1g-1	1. 01. 12988	HK Moony 68@32-24 degree lens
HK-RG-68@32-36-D12-21-1g-1	1. 01. 13026	HK Moony 68@32-36 degree lens
HK-RG-68@32-50-D12-21-1g-1	1. 01. 13038	HK Moony 68@32-50 degree lens



	Supplier	· confirmatio	n	Client confirmation						
Proposed		DATE		Qualified□						
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) $% \label{eq:confirmation} % \label{eq:confirmat$

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/

 $Sales\ Dept:\ Shenzhen\ Nanshan\ District\ Nanshan\ Cloud\ Valley\ Innovation\ Industrial\ Park\ Comprehensive\ Service\ Building,\ 501-505$

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

^{*}Approval In duplicate, for both supplier and customer.

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 withou t 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.

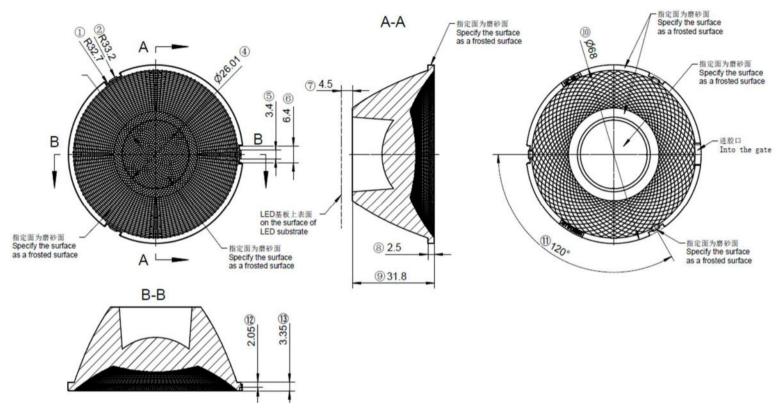


Basic product information

TEL: 0755-2937 1541 FAX: 0755-2907 5140 http://www.herculux.cn/ Date updated: 2023/5/17

Product Picture:	
Size(L*W*H/Φ*H):	Ф:68mm; H:32mm
Material:	PC
Effiency:	\
Temperature(Topr):	Material extreme temperature resistance : -40℃ to +120℃ long-term use temperature : -40℃ to +100℃
FWHM:	15°、24°、36°、50°
Matched LES:	D12
Recommended MAX power:	30W



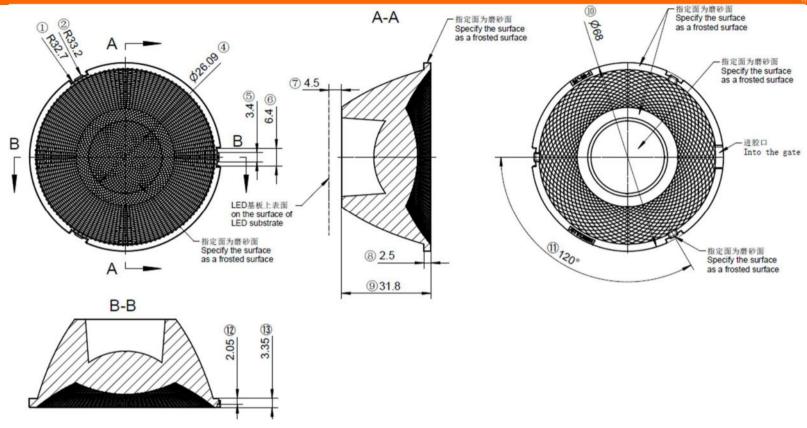


- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.
- *4. When the lamp adopts rubber ring for waterproofing: the roughness of the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

I	Optical	design							H	HK-RG-6	8@32-15-D12-	-21-1g-1	1
	tructur	ture desig					HK Moony 68	@32-15 degree lens			1.01.13003		
	Rev	Review							umber o	f drawin	qty	wei	ight
	Valida	ation					Material:	PC		-	CDHK		
^	~250	250~	~450	>4	450								

							VC	iluation				iviateriar:	FC	CDIIK
MT5 Tolerance	Basic size	<3	3~10	10~24	24~65	65~140	140~250	250	~450	>4	50			
	olerance valu	±0.1	±0.15	±0.2	±0.35	±0.50	±0.80	+	1.2	±2.	.0			



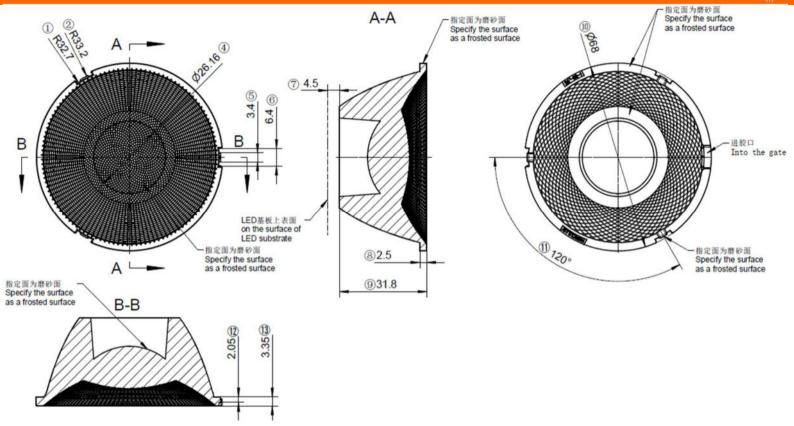


- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.
- *4. When the lamp adopts rubber ring for waterproofing: the roughness of the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

HK-RG-68@32-24-D12-2						l design	Optical	
degree lens 1.01.12988	@32-24 degree lens	HK Moony 68				e desig	tructur	
umber of drawin qty						/iew	Rev	or
PC CDHK	PC	Material:				lation	Valid	
			150	>4	~450	250~	~ 2 50	0
PC CDHK	PC	Material:	150	>4	~450		1	0^

MT5 Tolerance	Basic size	<3	3~10	10~24	24~65	65~140	140~250	250~450	>45	50	
	olerance valu	±0.1	±0.15	±0.2	±0.35	±0.50	±0.80	±1.2	±2.0		



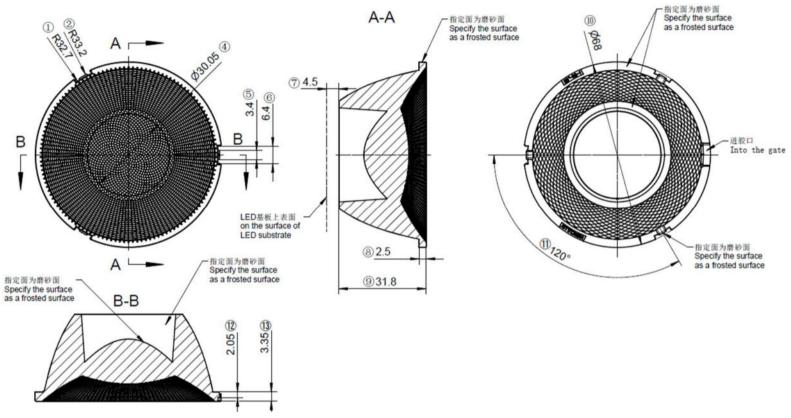


- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.
- *4. When the lamp adopts rubber ring for waterproofing: the roughness of the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

	Optical design								Н	IK-RG-6	8@32-36-D12	-21-1g-1	l
	tructur	tructure desig					HK Moony 68	8@32-36 degree lens			1.01.13026		
	Review						umber of	fdrawin	qty	wei	ght		
	nev	iew											
	Validation				Material:	PC			CDHK				
)^	~250	250~	~450	>4	450								

MT5 Tolerance	Basic size	<3	3∼10	10~24	24~65	65~140	140~250	250~450	>450		
	olerance valu	±0.1	±0.15	±0.2	±0.35	±0.50	±0.80	±1.2	±2.0		





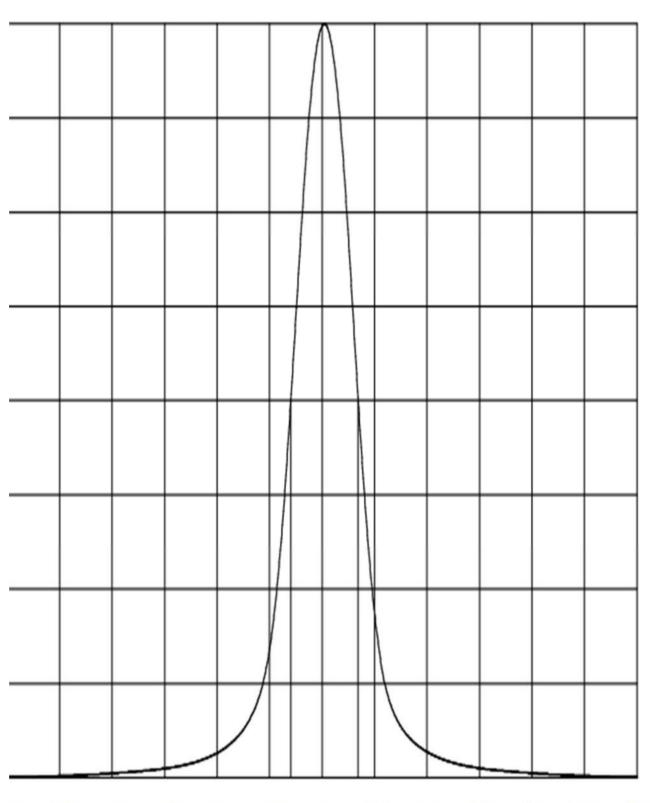
- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.
- *4. When the lamp adopts rubber ring for waterproofing: the roughness of the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

	Optical design								HK-RG-68@32-50-D12-21-1g-1						
	tructur	tructure desig					HK Moony 68	8@32-50 degree lens			1.01.13038				
	Review						umber of	f drawin	qty	wei	ght				
	nev	iew													
	Validation				Material:	PC			CDHK						
)^	~250	250~	~450	>4	450										

MT5 Tolerance	Basic size	<3	3∼10	10~24	24~65	65~140	140~250	250~450	>450	
	olerance valu	±0.1	±0.15	±0.2	±0.35	±0.50	±0.80	±1.2	±2.0	

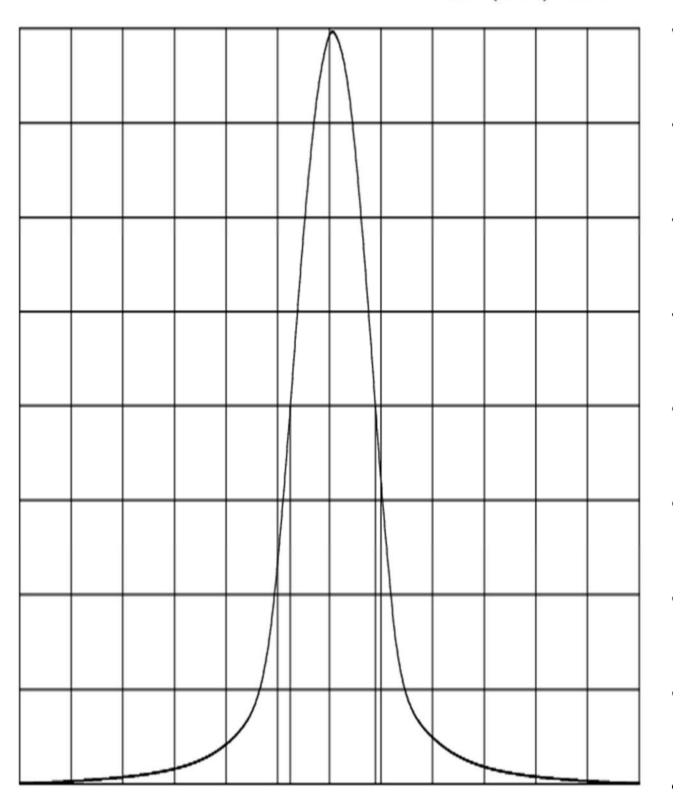


HERCULUX 相由 (50%) = 19.2



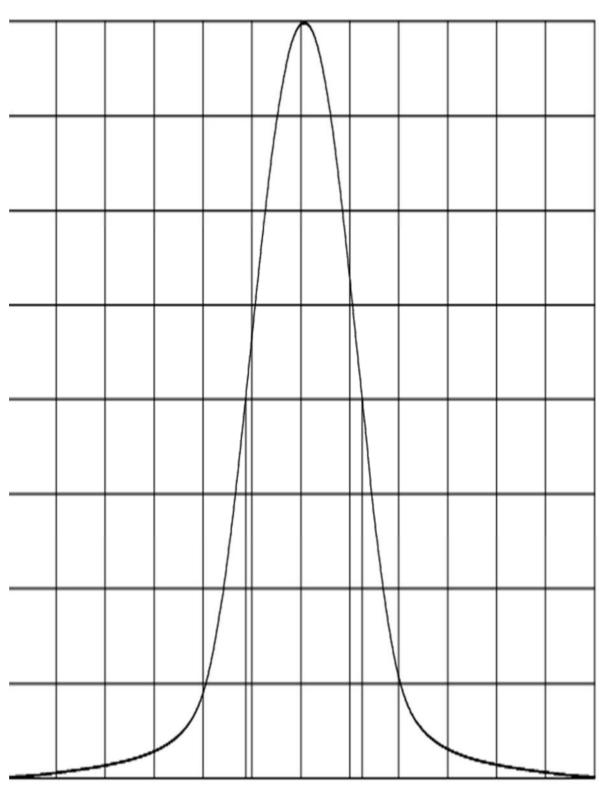


 $\theta av(50\%) = 24.7$





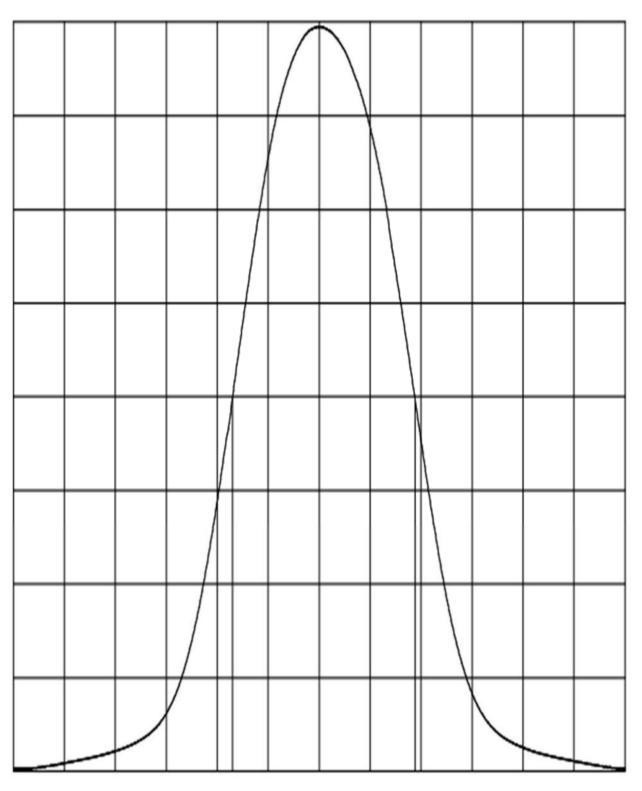
 $\theta av(50\%) = 35.7$



D12



 $\theta av(50\%) = 53.7$





		Standard size	Upper Size limit	Lower size limit	Test result1	Test result2	Test result3	Test result4	Jud gme nt	Remarks
	highly	31.8			31.89	31. 91	31. 91	32.05		
1.Size	The diameter of	68			67. 84	67. 76	67. 78	67.77		Test environment: In 20 °C -25 °C environment to achieve thermal
	The thickness of the	2. 5			2. 53	2. 54	2. 58	2. 58		equilibrium after the test.
			Gate	shear can	not affect	he appear	ance of the	lamp		
			See	attachmen	t "Appeara	nce Inspec	tion Standa	ards"		
2.Appear	ranc ",	See tachment opearance	E	N	lo burr	No burr	No burr	No bu	rr	OK
e Quality	Ir	spection andards"	_	No	o stains	No stains	No stains	No stai	ins	S.v.
3.Materia	al		PC	'		Color	Tra	nsparent		OK
	esting LE	:0				D12	•			
		g to the hea			o prevent t		-	litions of th	ne use	e environment,
4.Optica	angle			_	20.4°	20.3°	19. 2°	18.7°		
I index	K-value (CD/LM)				4. 7	4. 79	5. 24	5. 42		
	Efficie ncy				90. 80%	90. 00%	90. 00%	90. 02%		
	acul See	the signatu	ıre sample		`					
Comprel ve judgr					•	(Qualified			
				PC produ	uct size ch	anges wit	th temper	ature tak	ole	
Vernier (Quadrati Gauge M Microsco Thick Ga Gauge E 2 Amb temperat of the pro	Number: \Caliper 2D c H-Heigh I-Tool ope P-Nee ouge R-Ra I-Visual.	t dle T-dius	Length 0.9 (nmm) 0.7 (nmm) 0.7 (nmm) 0.7 (nmm) 0.7 (nmm) 0.3 (nmm) 0.2 (nmm) 0.2 (nmm) 0.9 (nmm)		10	20	30	40	Si: Si: Si: Si:	ze: 50mm ze: 100mm ze: 150mm ze: 200mm ze: 250mm ze: 300mm

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.



		Standar d size	Upper Size limit	Lower size limit	Test result1	Test result2	Test result3	Test result4	Jud gme nt	Remarks			
	highly	31.8		$\overline{\ \ }$	31. 77	31. 84	31. 83	31. 74					
1.Size	The diamet er of	68			67. 98	68. 04	68. 04	67. 99		Test environment: In 20 °C -25 °C environment			
	The thickn ess of the	2. 5			2. 55	2. 66	2. 64	2. 54		to achieve thermal equilibrium after the test.			
	Gate shear can not affect the appearance of the lamp												
				Se	e attachment "A	ppearance Insp	ection Standard	s"					
2.Appea	aran 👢 🔥 ,	See achment opearanc	E		No burr	No burr	No burr	No burr		OK			
ce Qual	e Ir	spection andards"			No stains	No stains	No stains	No stains	3				
3.Materi	ial		Р	С		Color	Tra	nsparent		ОК			
	sting LI					D12	•						
	and tes	ted to pre	bility of the event the le			nditions of the use		the lens should	d be ful	ly tested			
4.Optic	angla				25. 2°	24. 2°	24. 7°	24. 7°					
al index	K- value	K- value (CD/LM) Effic			3. 46 3. 66 3. 71 3. 55								
	Effic iency				85. 00%	84. 10%	85. 7%%	85. 10%					
Compre sive	hen	e the sign	ature samp	ole	`	Qual	ified						
iudame	ent												
Vernier Quadrat Gauge I Microsc Needle Gauge I Gauge I 2. Aml	Numbe Caliper : tic H-He M-Tool ope P- T-Thick R-Radiu: E-Visual	2D- ight	Length 0.0 (mm) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	9 3 7 5 5 4 4 3	product size ch	nanges with te	mperature tal	Size: Size: Size: Size: Size: Size: Size:	100mn 150mn 200mn 250mn	า า า			

- Please wear clean gloves during the lens assembly process to prevent the lens surface from being contaminated.
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- 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.



		Standar d size	Upper Size limit	Lower size limit	Test result1	Test result2	Test result3	Test result4	Jud gme nt	Remarks
	highly	31. 8			31. 88	31. 9	31.89	31. 94		
1.Size	The diamet er of	68			67. 76	67. 8	67.76	67. 88		Test environment: In 20 °C -25 °C environment
	The thickne ss of the	2. 5			2. 61	2.6	2. 56	2. 62		to achieve thermal equilibrium after the test
				Gate	e shear can not	affect the appea	arance of the lar	np		
				See	attachment "A	ppearance Inspe	ection Standards	s"		
2.Appea	aran " _^ ,	See achment pearanc	E		No burr	No burr	No burr	No burr		ОК
ce Quali	e Ir	spection indards"	_		No stains	No stains	No stains	No stains	3	O.C
3.Materi	ial		Р	C		Color	Tra	insparent		OK
	sting LE					D12	•			•
	the hea tested a	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. See light distribution curve								
4.Optic al index	angla				35. 7° 35° 35. 3° 35		35. 7°	35. 7°		
armacx	K- value (CD/LM)			_	2. 04	2. 07	2. 11	2. 06		
	Effic iency			_	87.00%	87. 00%	87. 20%	87. 00%		
		the sign	ature sam	ple	•					
compre sive						Qual	lified			
iudame	ent			PC i	aroduct size cl	nanges with te	mnerature ta	hle		
Remarks 1. Tool Vernier (Quadrat Gauge N Microsco Needle	s: Number Caliper 2 ic H-Hei M-Tool ope P- T-Thick R-Radius	PD- ght	0.	.9	product size cl	nanges with te	mperature ta	Size: Size: Size: Size:	100mn 150mn 200mn	n n n
Remarks 1. Tool Vernier (Quadrat Gauge M Microsco Needle	s: Number Caliper 2 ic H-Hei M-Tool ope P- T-Thick R-Radius E-Visual. bient uture on t	PD- ght he	changes 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9 8 7 6 5 .4	product size cl	nanges with te	mperature ta	Size:	100mn 150mn 200mn 250mn	n n n

- Please wear clean gloves during the lens assembly process to prevent the lens surface from being contaminated.
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		Standard size	Upper Size limit	Lower size lim		Test result2	Test result3	Test result4	Jud gme nt	Remarks
	highly	31.8			31. 83	31.89	31.83	31.86		
1.Size	The diamete of	er 68			67. 95	67. 92	67. 98	67. 92		Test environment: In 20 ℃ -25 ℃ environment to achieve thermal
	The thicknes of the				2.5	2. 54	2. 54	2. 52		equilibrium after the test.
		•	Gate	shear c	an not affect	the appear	rance of the	e lamp		
			See	attachm	ent "Appear	ance Inspe	ction Stand	dards"		
2.Appea	ranc "/	See attachment Appearance	E		No burr	No burr	No burr	No bu	ırr	OK
e Quality	′	Inspection Standards"			No stains	No stains	No stains	No sta	ins	
3.Materia	al		PC			Color	Tra	nsparent		OK
	esting L	Εľ				D12	•			•
			4 4::	n canahi	lity of the lan	nn and the a	actual cond	litions of th	ne use	e environment,
		should be fu			d to prevent		l.			
4.Optica	the lens	should be fu			d to prevent	the lens life	l.	54. 5°	<u> </u>	
4.Optica I index	the lens	should be fu			See lig	the lens life	ion curve			
•	the lens FWHM angle K-valu	should be full			See lig	the lens life the life the lens life the life th	ion curve	54. 5°		
l index	the lens FWHM angle K-valu (CD/LM) Effici ncy Facul Se	should be full	illy tested a		See lig 53. 7°	the lens life on the life on the lens life on the life on the life on the lens life on the	53. 2°	54.5° 1.17		
I index	the lens FWHM angle K-valu (CD/LM) Effici ncy Facul Se	should be fu	illy tested a		See lig 53. 7°	the lens life on the life on the lens life on the life on the life on the lens life on the	53. 2° 1. 17 80. 00%	54.5° 1.17		
Comprel ve judgr	FWHM angle K-valu (CD/LM) Effici ncy Facul Sehensi ment	should be full	illy tested a	PC pro	See lig 53. 7°	the lens life on the life on the lens life on the life	53. 2° 1. 17 80. 00% Qualified	54. 5° 1. 17 80. 00%	ble	
Comprel ve judgr Remarks 1. Tool Vernier C	the lens FWHM angle K-valu (CD/LM) Effici ncy Facul Se hensi ment Si: Number: Caliper 20	e the signatu	Length 0.9 hanges 0.8 (mm) 0.7	PC pro	See lig 53. 7° 1. 12 79. 00%	the lens life on the life on the lens life on the life	53. 2° 1. 17 80. 00% Qualified	54. 5° 1. 17 80. 00%	bble	Size: 50mm Size: 100mm
Comprel ve judgr Remarks 1. Tool Vernier C Quadrati Gauge M	the lens FWHM angle K-valu (CD/LM) Effici ncy Facul Se hensi ment S: Number: Caliper 2t c H-Heig	e the signatu	ure sample	PC pro	See lig 53. 7° 1. 12 79. 00%	the lens life on the life on the lens life on the life	53. 2° 1. 17 80. 00% Qualified	54. 5° 1. 17 80. 00%	ble	Size: 50mm
Comprel ve judgr Remarks 1. Tool Vernier (Quadrati Gauge Microsco	the lens FWHM angle K-valu (CD/LM) Effici ncy Facul Se hensi ment S: Number: Caliper 2I C H-Heig A-Tool ope P-Ne	e the signatu	Length 0.9 hanges 0.8 (mm) 0.7 0.6 0.5 0.4	PC pro	See lig 53. 7° 1. 12 79. 00%	the lens life on the life on the lens life on the life	53. 2° 1. 17 80. 00% Qualified	54. 5° 1. 17 80. 00%	bble	Size: 50mm Size: 100mm
Comprel ve judgr Remarks 1. Tool Vernier C Quadrati Gauge M	the lens FWHM angle K-valu (CD/LM) Effici ncy Facul Se hensi ment S: Number: Caliper 20 C H-Heig M-Tool ope P-Ne auge R-R	e the signatu	Length 0.9 hanges 0.8 (mm) 0.7 0.6 0.5 0.4 0.3	PC pro	See lig 53. 7° 1. 12 79. 00%	the lens life on the life on the lens life on the life	53. 2° 1. 17 80. 00% Qualified	54. 5° 1. 17 80. 00%	bble	Size: 50mm Size: 100mm Size: 150mm
Comprel ve judgr Remarks 1. Tool Vernier C Quadrati Gauge M Microscc Thick Ga Gauge E 2. Amb	The lens FWHM angle K-valu (CD/LM) Effici ncy Facul Se hensi ment S: Number: Caliper 2Ig cH-Heig cH-Tool ppe P-Ne pauge R-R E-Visual. sient	e the signatu	Length 0.9 hanges 0.8 (mm) 0.7 0.6 0.5 0.4	PC pro	See lig 53. 7° 1. 12 79. 00%	the lens life on the life on the lens life on the life	53. 2° 1. 17 80. 00% Qualified	54. 5° 1. 17 80. 00%	ble	Size: 50mm Size: 100mm Size: 150mm Size: 200mm
Comprel ve judgr Remarks 1. Tool Vernier (Quadrati Gauge M Microsco Thick Ga Gauge E	FWHM angle K-valu (CD/LM) Effici ncy acul Se hensi ment S: Number: Caliper 2I c H-Heig M-Tool page R-Ne E-Visual. sient ture on th	e the signatu V- D- ht edle T- adius	Length 0.9 hanges 0.8 (mm) 0.7 0.6 0.5 0.4 0.3 0.2	PC pro	See light 53.7° 1.12 79.00%	the lens life oht distribut 53° 1. 18 80%	53. 2° 1. 17 80. 00% Qualified th temper	54. 5° 1. 17 80. 00%	ble	Size: 50mm Size: 100mm Size: 150mm Size: 200mm Size: 250mm
Comprel ve judgr Remarks 1. Tool Vernier C Quadrati Gauge M Microsco Thick Ga Gauge E 2. Amb temperal	FWHM angle K-valu (CD/LM) Effici ncy acul Se hensi ment S: Number: Caliper 2I c H-Heig M-Tool page R-R -Visual. sient ture on thoduct refe	e the signature e the size e t	Length 0.9 hanges 0.8 (mm) 0.7 0.6 0.5 0.4 0.3 0.2 0.1	PC pro	See lig 53. 7° 1. 12 79. 00%	the lens life on the life on the lens life on the life	53. 2° 1. 17 80. 00% Qualified	54. 5° 1. 17 80. 00%	bble	Size: 50mm Size: 100mm Size: 150mm Size: 200mm Size: 250mm

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- 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.



PI	N	HK-RG-68@32-15-D12-	21-1g-1	Product Name	HK Moony 68@32	-15 degı	ree lens
Product	material			PC			
Package	diagram	© □ Va	cuum packa	ge Bo	ox package		>
Product	packing	8	A/ Box	4	pcs/Layer		
	. 3	4	Layer/Box	128	A/ Carton		
	NO.	Part No	Part name	Size	Dosage	Unit	Remarks
	1	2. 07. 0080	Blister box	23cm*21cm	16	BAG	
Dookogin	2	2. 08. 0001	PE film	25cm*27cm	16	PCS	
Packagin g	3	2. 06. 0005	Reel label paper	62mm*42mm	16	PCS	
Materials	4	2. 06. 0005	Box label paper	62mm*70mm	1	PCS	
	5	2. 06. 0003	big plate	46cm*42cm	5	PCS	
	6	2. 06. 0018	big flat carton	48cm*44cm*19	em 1	PCS	
Remarks		The loose packing is not subje	ct to this specif	ication. Customer'	s requirements shall	prevail	



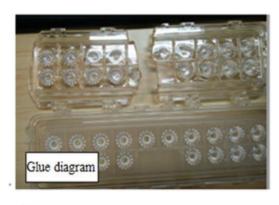
Special notice

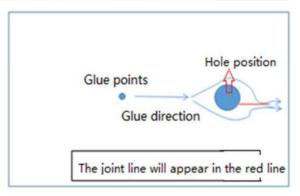
When gule pass through holes, columns and other structures, or part of the thin structure, will form a weld line. The product which uses multi-point injection welding line will appear because of the combination of sol, as shown below:

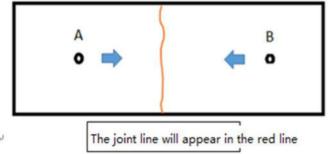
Syntneti











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.



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	Ι	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	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	 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		√	