

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

Approval number :

Customer :

Manufacturer : Chengdu HercuLux Photoelectric Technology Co.,Ltd

PN	Code	Product
HK-RG-25@13-18-D4-21-1g-1_PC	1.01.12959_PC	HK Moony 25@13-18° lens (PC)
HK-RG-25@13-24-D4-21-1g-1_PC	1.01.12818_PC	HK Moony 25@13-24° lens (PC)
HK-RG-25@13-36-D4-21-1g-1_PC	1.01.12869_PC	HK Moony 25@13-36° lens (PC)



	Supplier confirmation	1		Client cor	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)

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

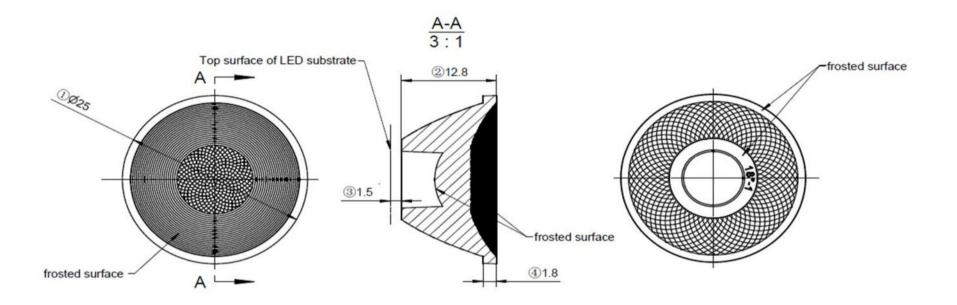
*Approval In duplicate, for both supplier and customer.



TEL: 0755-2937 1541	FAX: 0755-2907 5140 http://www.herculux.cn/ Date updated: 2022/5/19
Product Pictur	
PI	: HK-RG-25@13-18-D4-21-1g-1_PC
Size(L*W*Η/Φ*Η	- Φ:25mm; H:12.8mm
Materia	PC
Effiency	λ
Temperature(Top	Material extreme temperature resistance : -40°C to +120°C long-term use temperature : -40°C to +90°C
FWHM	: 18°、24°、36°
Matched LE	CXM-4

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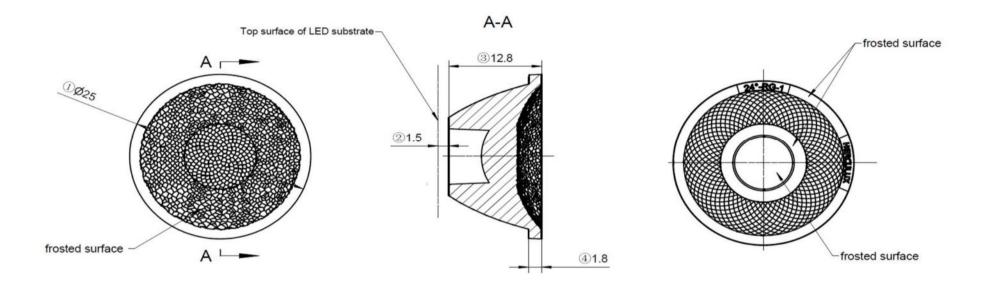
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Technical remark:

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	ional tolerances has no flash, sh	•	•		2008 MT5.		itruc	itructure desig				HK Moony 25	HK Moony 25@13-18°lens(PC)		1.01.12959_PC				
		-			of the contact s	urface betwee	n the 🔰	Review						umber of drawin	qty	weight			
radiator and tl	*4. When the lamp adopts rubber ring for waterproofing: the roughness of the contact surface betweer radiator and the rubber ring is required: Ra<3.2μm											Material:	PC		CDHK				
MT5 Tolerance	Basic size	<3	3~10	10~24	24~65	65~140	140~25	0 250^	~450	>4	50								
table (mm)	olerance valu	±0.35	±0.50	±0.80	±	1.2	±2.	.0											

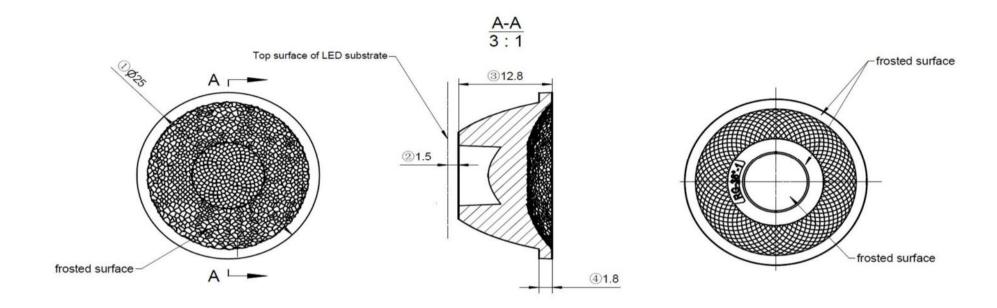
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Tech	nical	remark	٠

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*4. When the	lamp adopts ru	bber ring for v	waterproofing:		of the contact	surface betwe	een R							umber of drawir	qty	weight		
the radiator a	nd the rubber r	ing is required	l: Ra<3.2μm				Va	lidation				Material:	PC		CDHK			
MT5 Tolerance	Basic size	<3	3~10	10~24	24~65	65~140	140~250	250~	~450	>4	150							
table (mm)	olerance valu	±0.35	±0.50	±0.80	±1	.2	±2	.0										

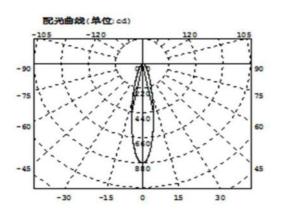
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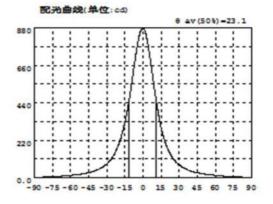


Technical	remark:
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the radiator a	ind the rubber r	ing is required	: Ra<3.2µm				V					Material: PC		СДНК				
MT5 Tolerance	Basic size	<3	3~10	10~24	24~65	65~140	140~25	50 250~	~450	>45	50							
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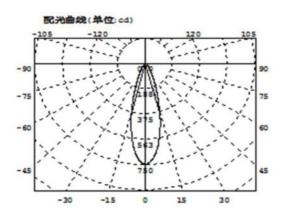


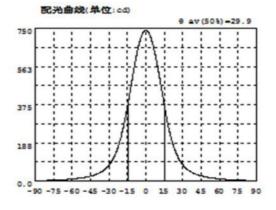


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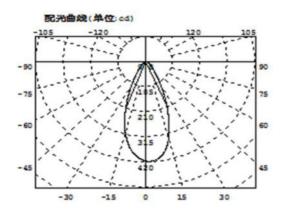


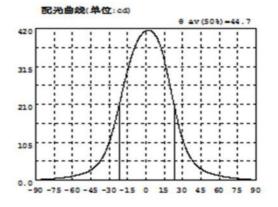


HK Moony 25@13-36°lens (PC)

CXM-4

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Sample parameter test rep HK Moony 25@13-18°lens(PC)

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		S	Standard size	Upper Size limit	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	Jud gme nt	Remarks
	diamet	er	25			25.05	25. 04	25. 03	25.04	25.06	25. 05	25. 05	25.08	\backslash	Test environment: In 20 °C -25 °C
1.Size	heigh	t	12.8		\sum	12.85	12.85	12.86	12.88	12.85	12.9	12.9	12.89	\backslash	environment to achieve thermal equilibrium after the
	thickne	SS	1.8		$\overline{\ }$	1.88	1.89	1.86	1.87	1.87	1.88	1.89	1.91	\backslash	test.
						ate shea					•				
					5	ee attacl	nment "A	ppearan	ce Inspe	ction Sta	ndards"	I			
2.Appear	ance	attac	See chment earance	E		No bu	rr	No	burr	No	burr	١	No burr		ОК
Quality			ection dards"			No sta	ins	No s	tains	No s	tains	N	o stains		
3.Materia	al			Р	С			OK							
4.Optica		ommen f it is re		be out of	range. A		to the he	eat dissip e fully tes	ation ca ted and t	ed for thi pability o	f the lam prevent	p and the	e actual o		the source of the ions of the use
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	K-val	ue							\backslash				\sim		
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	Facula	See the	e signatu	re sample	9		````								
	ehensive ment							Qı	ualified						
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Precautions:

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

 Try to avoid touching the total reflection surface when taking the lens.
 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.).

Sample parameter test rep HK Moony 25@13-24°lens(PC)

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Precautions:

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

 Try to avoid touching the total reflection surface when taking the lens.
 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.).

Sample parameter test rep HK Moony 25@13-36°lens(PC)

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			Standard	Upper	Lower	Test	Test	Test	Test	Test	Test	Test	Test	Jud		
			size	Size limit	size limit	result		result		result	result		result	gme nt	Remarks	
	diamet	er	25			24. 93	2 24.94	3 24.94	4 24.91	5 24.9	6 24.92	7 24.94	8	\sum_{n}		
			-			21.00	21.01	21.01	21.01	21.0	21.02	21.01	21.02		Test environment: In 20 ℃ -25 ℃	
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	thickne	SS	1.8		\swarrow	1.81	1.85	1.84	1.85	1.82	1.81	1.81	1.82	$\overline{}$	test.	
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					5	See attacl	nment "A	ppearan	ce Inspe	ction Sta	ndards"					
			See													
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Quanty			spection andards"			No sta	ins	No s	tains	No s	tains	N	o stains			
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Precautions:

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

 Try to avoid touching the total reflection surface when taking the lens.
 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.).

Packaging Information



P	N	HK-RG-25@13-18-D4-21-	1g-1_PC	Product Name	HK Moony 25@13	-18°lens	(PC)
Product	material	PC		Customer			
Package	diagram	Single Va	cuum packa	age Bo	ox package	2	>
Product	packing	44	A/ Box	4	pcs/Layer		
		18	Layer/Box	3168	A/ Carton		
	NO.	Part No	Part name	Size	Dosage	Unit	Remarks
	1	2.07.0093	Blister box	23cm*21cm	72	BAG	
Packagin	2	2.08.0001	PE film	25cm*27cm	72	PCS	
g Materials	3	2.06.0005	Reel label paper	62mm*42mm	72	PCS	
Materials	4	2.06.0005	Box label paper	62mm*70mm	1	PCS	
	5	2.06.0003	big plate	46cm*42cm	19	PCS	
	6	2.06.0011	big flat carton	48cm*44cm*37	cm 1	PCS	
Remarks		The loose packing is not subjec	t to this speci	fication. Customer's	s requirements shall	prevail	

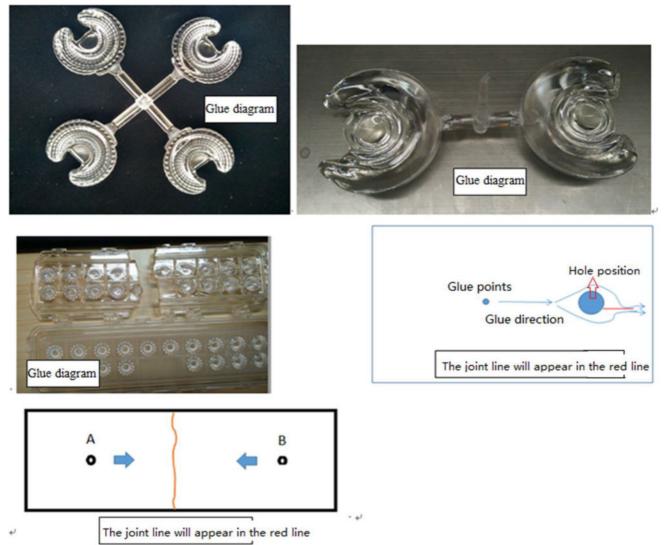


Annex I

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:

Synmen



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	ludeing standard	Inspection equipment	Defect level				
rescilents	Judging standard	Testing method	МІ	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			V		

	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	V	
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	V	
Fingerprint	Fingerprints are not allowed on all products	Visual	V	
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		V
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, point card	~	
Insufficient filling	visual obvious strain. Insufficient filling shall not affect the appearance of the assembly and the exposed surfaces, The signature sample shall prevail.	Visual, point card	V	
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	V	
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 	Visual	V	
	in the optical surface, a single $L \le 10$ mm, no more than two			
Bubble	No bubbles are allowed	Visual	\checkmark	

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			\checkmark
Cold glue	Optical surface may not have cold glue, non- optical surface cold glue should meet the visual is not obvious.	Visual	\checkmark		
	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			V
	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 $D \le 1$ mm and no more than 1 area within a 50x50 mm area	Visual		V	



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

Approval number :

Customer :

Manufacturer : Chengdu HercuLux Photoelectric Technology Co.,Ltd

PN	Code	Product
HK-RG-25@13-18-D4-21-1g-1_PMMA	1.01.12959_PMMA	HK Moony 25@13-18° lens (PMMA)
HK-RG-25@13-24-D4-21-1g-1_PMMA	1.01.12818_PMMA	HK Moony 25@13-24° lens (PMMA)
HK-RG-25@13-36-D4-21-1g-1_PMMA	1.01.12869_PMMA	HK Moony 25@13-36° lens (PMMA)



	Supplier confirmatic	n	Client confirmation					
Proposed	DATE		Qualified□		5 A 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, 501-505 TEL: 0755-2937 1541 FAX: 0755-2907 5140

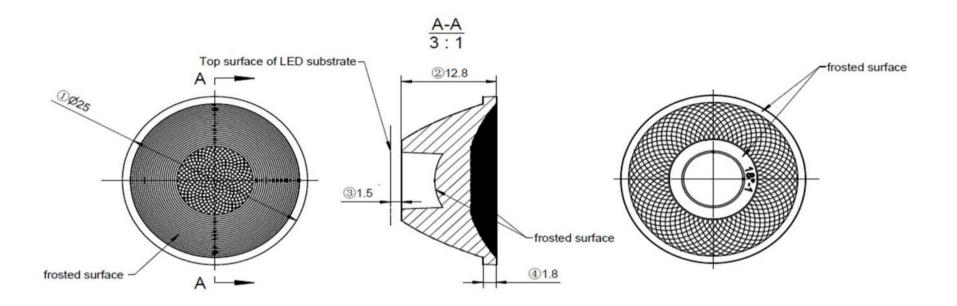
*Approval In duplicate, for both supplier and customer.



TEL: 0755-2937 1541	AX: 0755-2907 5140 http://www.herculux.cn/ Date updated: 2022/5/19
Product Pictu	
Р	HK-RG-25@13-18-D4-21-1g-1_PMMA
Size(L*W*Η/Φ*ŀ	Ф:25mm; Н:12.8mm
Materi	РММА
Effienc	λ
Temperature(Top	Material extreme temperature resistance : -40°C to +100°C long-term use temperature : -40°C to +80°C
FWH	18°、24°、36°
Matched LE	CXM-4

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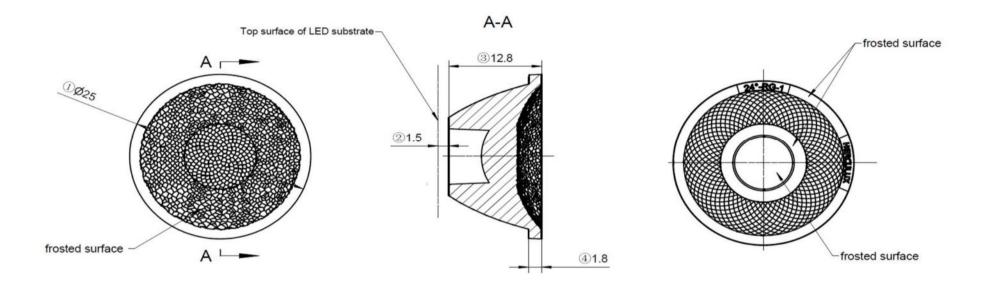
HERCULUX @####



Technical remark:

	is not indicated			0			Opti	Optical design						HK-RG-25@13-18-D4-21-1g-1_PMMA			
	ional tolerances has no flash, shi		0		2008 MT5.		itruc	itructure desig					y 25@13-18°lens PMMA)	1.01.12959_PMMA			
*4. When the		f the contact s	urface betwee	n the F	Review				Ì		umber of draw	n qty	weight				
radiator and tl	he rubber ring is	required: Ra<	:3.2μm				Va	Validation		Material:	PMMA		CDHK				
								~250 250~450 >		>45	50						
Tolerance table (mm)	olerance valu	±0.1	±0.15	±0.2	±0.35	±0.50	±0.80	.80 ±1.2		±2.0	0						

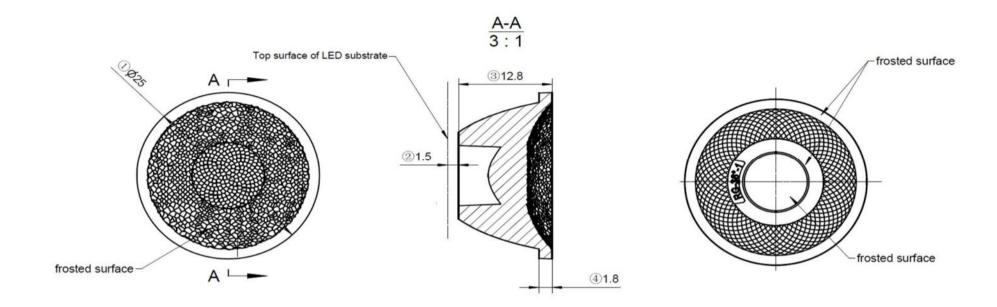
HERCULUX



Tachaia	al remark:
rechnic	ai remark.

	p is not indicate sional tolerance			0	2008 MT5		Op	ptical desigr	ו			HK Moon	y 25@13-24°lens	HK-RG-25@13-24-D4-21-1g-1_PMMA			
3, The surface	-	2000 1113.		itru	itructure desig					(PMMA)		1.01.12818_PMMA					
*4. When the lamp adopts rubber ring for waterproofing: the roughness of the contact surface between									Review					qty	weight		
the radiator a	and the rubber r	ing is required	: Ra<3.2µm				,	Validation				Material:	PMMA	СДНК			
MT5 Tolerance	Basic size <3 $3\sim10$ $10\sim24$ $24\sim65$ $65\sim140$ 14								~450	>4	150						
							±0.80	0 ±	1.2	±2	.0						

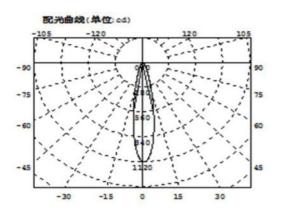
HERCULUX

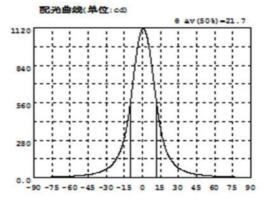


Technical remark:

 The dimensional tolerances are not specified according to GB/T 14486 2008 MT5. 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 								Optical design itructure desig Review				HK Moony 25@13-36°lens (PMMA)			HK-RG-25@13-36-D4-21-1g-1_PMMA 1.01.12869_PMMA mber of drawin qty weight	
the radiator a	and the rubber r	ing is required	l: Ra<3.2µm				,	Validation			Material:	Material: PMMA		СDНК		
							140~2	~250 250~450 >		>45	50					
Tolerance table (mm) ± 0.1 ± 0.15 ± 0.2 ± 0.35 ± 0.50 ± 0.50									±1.2	±2.	0					





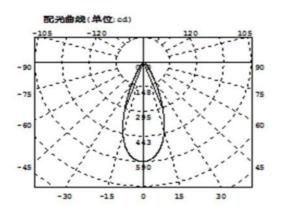


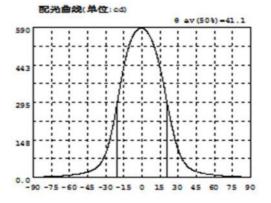
IES——	HK Moony 25@13-24°lens (PMMA)	CXM-4
162		CXIVI-4



IES——







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Sample parameter test rep HK Moony 25@13-18°lens (PMMA)

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			Standard size	Upper Size limit	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	Jud gme nt	Remarks
	diamet	er	25			25.05	25.04	25.03	25.04	25.06	25.05	25.05	25.08	\backslash	Test environment: In 20 °C -25 °C
1.Size	heigh	ıt	12.8	\searrow	\searrow	12.85	12.85	12.86	12.88	12.85	12.9	12.9	12.89	\setminus	environment to achieve thermal equilibrium after the
	thickne	SS	1.8		\searrow	1.88	1.89	1.86	1.87	1.87	1.88	1.89	1.91	\backslash	test.
				Gate shear can not affect the appearance of the lamp											
	See attachment "Appearance Inspection Standards"														
2.Appear	rance	atta	See achment bearance	E		No bu	Irr	No	burr	No	burr	١	No burr		ОК
Quality			pection ndards"			No sta	ins	No s	tains	No s	tains	N	o stains		
3.Materia	al			PN	IMA			Co	olor		Tra	insparen	t		OK
	Testing I								CXM-						
4.Optica		f it is r		be out of	range. A		to the h	eat dissip e fully tes	bation ca	pability o	f the lam prevent	p and the	e actual o		the source of the ions of the use
l index	angle	Э				21.7	21.8	21.8	20.8	22.3	21.3	21.4	21.6		
	K-val	ue													
	Efficie	ency											\sim	/	
	Facula	See t	he signatu	re sample	9		•								
	ehensive ment							Q	ualified						
					PMM	A prod	uct size c	hangesv	vith temp	perature	table				
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 Length changes 0.8 ('mm) 0.7 0.6 0.5 0.4 0.3 0.2 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.3 0.2 0.3 0.2 0.5 0.4 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.5 0.5 0.4 0.5 0.4 0.3 0.2 0.1 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5															

Precautions:

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

 Try to avoid touching the total reflection surface when taking the lens.
 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.).

Sample parameter test rep HK Moony 25@13-24°lens (PMMA)

HERCULUX 恒坤光电

		S	Standard size	Upper Size limit	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	Jud gme nt	Remarks
	diamet	er	25			25.03	25. 05	25.04	25.05	25.04	25.04	25.05	25.04	\backslash	Test environment: In 20 °C -25 °C
1.Size	heigh	t	12.8		$\overline{\ }$	12.82	12.81	12.81	12.83	12.8	12.8	12.82	12.83	\backslash	environment to achieve thermal equilibrium after the
	thickne	SS	1.8		$\overline{\ }$	1.83	1.85	1.86	1.86	1.87	1.86	1.87	1.87	\setminus	test.
						ate shea									
	See attachment "Appearance Inspection Standards"														
2.Appear	rance	attac	see chment earance	E		No bu	rr	No	burr	No	burr	١	No burr		ОК
Quality			pection ndards"			No sta	ins	No s	tains	No s	tains	N	o stains		
3.Materia	al			PM	MA			Co	olor		Tra	insparen	t		OK
4.Optica I index		ommen f it is re M ue		be out of	range. A		to the he	eat dissip e fully tes	bation ca ted and t	ed for thi pability o	f the lam prevent	p and the	e actual o		the source of the ions of the use
	Facula	See th	ie signatu	re sample	;		•								
	ehensive ment							Q	ualified						
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 Markov MA product size changes with temperature table Length changes 0.8 (mm) 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0 0 0 0 0 0 0 0 0 0 0 0 0															

Precautions:

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 Try to avoid touching the total reflection surface when taking the lens.
 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.).

Sample parameter test rep HK Moony 25@13-36°lens(PMMA)

HERCULUX 恒坤光电

		s	Standard size	Upper Size limit	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	Jud gme nt	Remarks
	diamet	er	25			25.03	25. 02	25	24.99	25	24.97	25.01	25.02	\setminus	Test environment: In 20 ℃ -25 ℃
1.Size	heigh	t	12.8	\square	$\overline{\ }$	12.78	12.81	12.81	12.82	12.8	12.8	12.79	12.79	\backslash	environment to achieve thermal equilibrium after the
	thickne	ss	1.8			1.86	1.83	1.85	1.86	1.85	1.85	1.86	1.85	\setminus	test.
				Gate shear can not affect the appearance of the lamp											
	<u> </u>	See attachment "Appearance Inspection Standards"													
2.Appear	rance	attac	See chment earance	E		No bu	rr	No	burr	No	burr	٢	No burr		ОК
Quality		Insp	ection dards"			No sta	ins	No s	tains	No s	tains	N	o stains		-
3.Materia				PM	MA			Co	olor		Tra	insparen	t		ОК
4.Optica	test, if	ommeno f it is re		be out of	range. A		to the he	eat dissip e fully tes	bation ca ted and t	ed for thi pability o	f the lam prevent	p and the	e actual o		the source of the ions of the use
l index	angle)				40.7	41.1	41.2	41.4	40.9	40	40.1	42.1		
	K-val	ue				\sum		\square		/			\square		
	Efficie	ncy				\sum	\leq	\sim	\sim	\sim	\sim	\sim	\sim		
	Facula	See the	e signatu	re sample	9		•								
	ehensive Iment							Q	ualified						
							PMMA p	oroduct s	ize chan	ges with t	emperat	ture tabl	e		
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 Length changes 0.8 (mm) 0.7 0.6 0.5 0.4 0.5 0.5 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5															

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Packaging Information



PI	N	HK-RG-25@13-18-D4-21-1g	g-1_PMMA	Product Name	HK Moony 25@13-1	8°lens ((PMMA)			
Product	material	PMMA		Customer						
Package	diagram	Single Va	cuum packa	age B	ox package	2	>			
Product packing		44	A/ Box	4	pcs/Layer					
		18	Layer/Box	3168	A/ Carton					
	NO.	Part No	Part name	Size	Dosage	Unit	Remarks			
	1	2.07.0093	Blister box	23cm*21cm	72	BAG				
Packagin	2	2.08.0001	PE film	25cm*27cm	72	PCS				
g	3	2.06.0005	Reel label paper	62mm*42mm	72	PCS				
Materials	4	2.06.0005	Box label paper	62mm*70mm	1	PCS				
	5	2.06.0003	big plate	46cm*42cm	19	PCS				
	6	2.06.0011	big flat carton	48cm*44cm*37	7cm 1	PCS				
Remarks	narks The loose packing is not subject to this specification. Customer's requirements shall prevail									

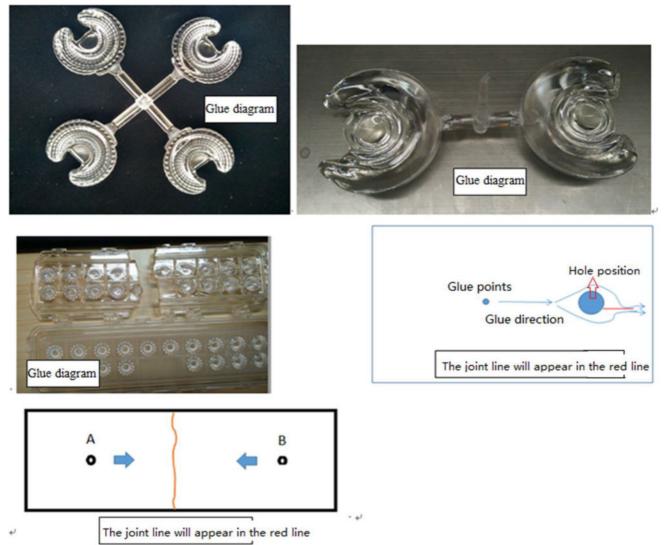


Annex I

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Synmen



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

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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.

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S	Proportion	mm²	SS	Offset	mm

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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	ludeing standard	Inspection equipment	Defec	t level	
rescilents	Judging standard	ard equipment Delect level Testing method MI MA CR I process, all appearance of of the sample is as and limited Image: Comparison of the sample is as and limited Image: Comparison o			
	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;				V

	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	V	
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	V	
Fingerprint	Fingerprints are not allowed on all products	Visual	V	
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			V
Deformation	Insufficient filling shall not affect the appearance of the assembly and the exposed surfaces.	Visual, feeler		V
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, point card	~	
Insufficient filling	visual obvious strain. Insufficient filling shall not affect the appearance of the assembly and the exposed surfaces, The signature sample shall prevail.	Visual, point card	V	
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	V	
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 	Visual	V	
	in the optical surface, a single $L \le 10$ mm, no more than two			
Bubble	No bubbles are allowed	Visual	\checkmark	

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			\checkmark
Cold glue	Optical surface may not have cold glue, non- optical surface cold glue should meet the visual is not obvious.	Visual	\checkmark		
	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			V
	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 $D \le 1$ mm and no more than 1 area within a 50x50 mm area	Visual		V	



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

Approval number :

Customer :

Manufacturer : Chengdu HercuLux Photoelectric Technology Co.,Ltd

PN	Code	Product
HK-RG-25@13-18-D4-21-1g-1_PC	1.01.12959_PC	HK Moony 25@13-18° lens (PC)
HK-RG-25@13-24-D4-21-1g-1_PC	1.01.12818_PC	HK Moony 25@13-24° lens (PC)
HK-RG-25@13-36-D4-21-1g-1_PC	1.01.12869_PC	HK Moony 25@13-36° lens (PC)



	Supplier confirmation	1	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)

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

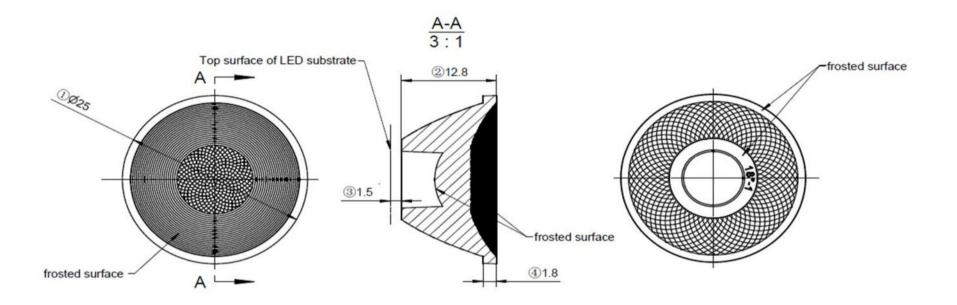
*Approval In duplicate, for both supplier and customer.



TEL: 0755-2937 1541	FAX: 0755-2907 5140	http://www.herculux.cn/	Date updated: 2022/5/19
Product Pictur	e:		
Ρ	N:	HK-RG-25@13-18-D4-21-1	g-1_PC
Size(L*W*H/Φ*H	I):	Ф:25mm; Н:12.8mm	
Materi	al:	PC	
Effienc	y:	λ	
Temperature(Top		xtreme temperature resistance g-term use temperature:-40	
FWHI	vi:	18°、24°、36°	
Matched LE	S:	TX-H1309	

第2页

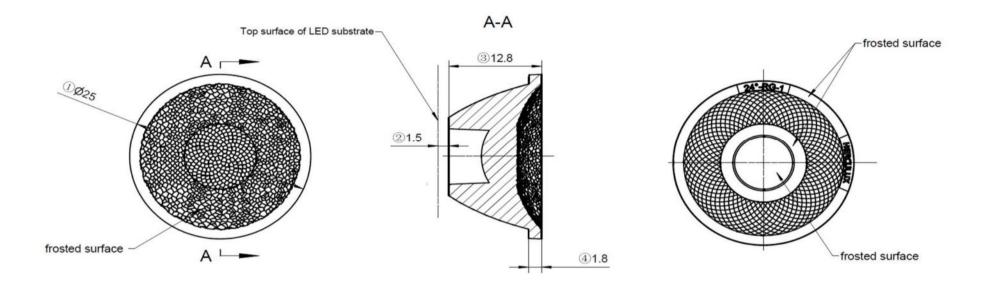
HERCULUX



Technical remark:

	1. The 3D map is not indicated for rounded corners and draft angle.													HK-RG-25@13-18-D4-21-1g-1_PC			
 The dimensional tolerances are not specified according to GB/T 14486 2008 MT5. The surface has no flash, shrinkage, bubbles and other defects. 								itructure desig		HK Moony 25	5@13-18°lens (PC)		1.01.12959_PC				
	n the 🔰	Review						umber of drawin qty weig									
*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						Va	alidation				Material:	Material: PC		СДНК			
MT5	Basic size <3 $3 \sim 10$ $10 \sim 24$ $24 \sim 65$ $65 \sim 140$ 14								~450	>4	50						
Tolerance table (mm) ± 0.1 ± 0.15 ± 0.2 ± 0.35 ± 0.50							±0.80	±	1.2	±2.	.0						

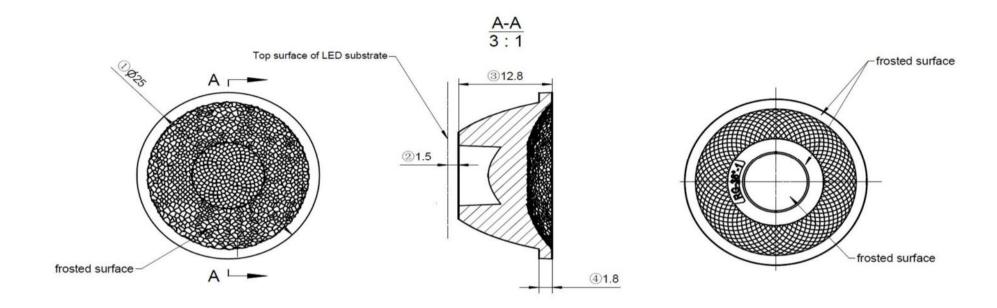
HERCULUX



Technical remain	ark

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.								Optical design						HK-RG-25@13-24-D4-21-1g-1_PC		
								itructure desig				HK Moony 25@13-24°lens (PC)		1.01.12818_PC		
*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							een R	Review							qty	weight
							Val	Validation				Material: PC		СДНК		
MT5 Tolerance	Basic size	<3	3~10	10~24	24~65	65~140	140~250	250~	~450	>45	50					
table (mm)	olerance valu	±0.1	±0.15	±0.2	±0.35	±0.50	±0.80	±1.	.2	±2.0	.0					

HERCULUX



Technical	remark:
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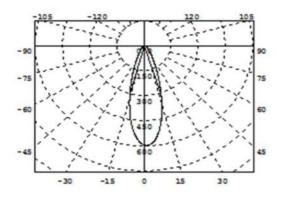
	1. The 3D map is not indicated for rounded corners and draft angle.							tical design						HK-RG-25@13-36-D4-21-1g-1_PC				
 The dimensional tolerances are not specified according to GB/T 14486 2008 MT5. The surface has no flash, shrinkage, bubbles and other defects. *4. When the lamp adopts rubber ring for waterproofing: the roughness of the contact surface between 							itru	itructure desig Review				HK Moony 25	HK Moony 25@13-36°lens(PC)		1.01.12869_PC			
							een			1		umber of drawin	qty	weight				
the radiator a	ind the rubber r	ing is required	: Ra<3.2µm				V	Validation		Material:	PC		CDHK					
MT5 Tolerance	Basic size	<3	3~10	10~24	24~65	65~140	140~25	50 250~	~450	>45	50							
table (mm)	olerance valu	±0.1	±0.15	±0.2	±0.35	±0.50	±0.80	±1	1.2	±2.0	0							

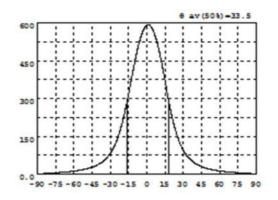
IES—— HK Moony 25@13-18°lens (PC)

TX-H1309





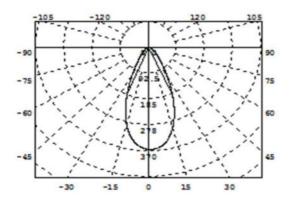


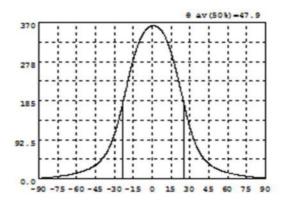


IES——









Sample parameter test rep HK Moony 25@13-18°lens(PC)

HERCULUX 恒坤光电

			Standard size	Upper Size limit	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	Jud gme nt	Remarks
	diamet	er	25			25.05	25.04	25.03	25.04	25.06	25.05	25.05	25.08	\setminus	Test environment: In 20 °C -25 °C
1.Size	heigh	t	12.8	\searrow	$\overline{\ }$	12.85	12.85	12.86	12.88	12.85	12.9	12.9	12.89	\backslash	environment to achieve thermal equilibrium after the
	thickne	SS	1.8		$\overline{\ }$	1.88	1.89	1.86	1.87	1.87	1.88	1.89	1.91	\backslash	test.
Gate shear can not affect the appearance of the lamp															
	See attachment "Appearance Inspection Standards"														
2.Appear	ance	atta	See achment bearance	E		No bu	ırr	No	burr	No	No burr No burr				ОК
Quality			pection indards"	dards"			ins	No s	tains	No s	tains	N	o stains		
3.Materia	al			PC Color Transparent OK							OK				
	Testing I	ED							TX-H13	309					
4.Optica		f it is r		be out of	range. A		to the h	eat dissip e fully tes	bation ca ted and t	pability o	f the lam prevent	p and the	e actual o		the source of the ions of the use
lindex	angle	e				\sim	\sim	\sim		\sim	\sim	\sim	\sim		
	K-val					\sum	\sum	\sum	\sum	\sum	\sum	\sum	\sum		
	Efficie	ency				\sim	\searrow	\sim	\searrow	\sim	\sim	\sim	\sim		
	Facula	See t	he signatu	re sample	;		`								
	ehensive ment							Q	ualified						
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 PC product size changes with temperature table (mm) 0.7 0.6 0.5 0.4 0.9 0.6 0.5 0.4 0.9 0.7 0.6 0.5 0.4 0.9 0.7 0.6 0.5 0.4 0.9 0.7 0.6 0.5 0.4 0.9 0.7 0.6 0.5 0.4 0.9 0.7 0.6 0.5 0.4 0.9 0.7 0.6 0.5 0.4 0.9 0.7 0.6 0.5 0.4 0.9 0.7 0.6 0.5 0.4 0.9 0.7 0.6 0.7 0.6 0.7 0.6 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7															

Precautions:

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

 Try to avoid touching the total reflection surface when taking the lens.
 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.).

Sample parameter test rep HK Moony 25@13-24°lens(PC)

HERCULUX 恒坤光电

		S	tandard size	Upper Size limit	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	Jud gme nt	Remarks
	diamet	er	25			25.03	25. 05	25.04	25. 05	25.04	25.04	25.05	25.04	\setminus	Test environment: In 20 °C -25 °C
1.Size	heigh	t	12.8	\searrow	$\overline{\ }$	12.82	12.81	12.81	12.83	12.8	12.8	12.82	12.83	\setminus	environment to achieve thermal equilibrium after the
	thickne	SS	1.8	\searrow	\backslash	1.83	1.85	1.86	1.86	1.87	1.86	1.87	1.87	\setminus	test.
Gate shear can not affect the appearance of the lamp															
					5	See attacl	nment "A	ppearan	ce Inspe	ction Sta	ndards"	1			
2.Appear	"Appearance E			rr	No	burr	No	burr	١	No burr		ОК			
Quality			ection dards"	on No stains No stains			tains	No s	tains	N	o stains				
3.Materia	al			PC Color Transparent OK						OK					
4.Optica		ommeno f it is rec		be out of	range. A		to the h	eat dissip fully tes	ation ca ted and t	ed for thi pability o	f the lam prevent	p and the	e actual o		the source of the ions of the use
l index	angle	;				33.5	34.1	34.3	34.1	33.9	34.3	34.2	34.1		
	K-val	ue			_	\square		\sum	\sum	\geq	\sum	\geq	\sum		
	Efficie	ncy				\square	\searrow	$\overline{}$	\searrow	\searrow	\searrow	\searrow	\searrow		
	Facula	See the	e signatu	re sample	;		`								
	ehensive ment							Q	ualified						
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 PC product size changes with temperature table Composition of the product refer to the table on the right PC product size changes with temperature table PC product size changes with temperature table PC product size changes with temperature table Size: 50mm Size: 100mm Size: 250mm Size: 300mm (TC)															

Precautions:

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

 Try to avoid touching the total reflection surface when taking the lens.
 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.).

Sample parameter test rep HK Moony 25@13-36°lens(PC)

HERCULUX 恒坤光电

		:	Standard size	Upper Size limit	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	Jud gme nt	Remarks
	diamet	er	25			24.93	24.94	24.94	24.91	24.9	24. 92	24.94	24.92	\setminus	Test environment: In 20 °C -25 °C
1.Size	heigh	t	12.8	\searrow	$\overline{\ }$	12.78	12.77	12.78	12.75	12.76	12.77	12.76	12.73	\setminus	environment to achieve thermal equilibrium after the
	thickne	SS	1.8	\searrow	\backslash	1.81	1.85	1.84	1.85	1.82	1.81	1.81	1.82	\setminus	test.
Gate shear can not affect the appearance of the lamp															
	See attachment "Appearance Inspection Standards"														
2.Appear	"Appearance E				rr	No	burr	No	burr	١	No burr		ОК		
Quality			pection ndards"	on No stains No stains No stains			N	o stains							
3.Materia	al			PC Color Transparent OK						OK					
4.Optica		ommen f it is re		be out of	range. A		to the h	eat dissip fully tes	ation ca ted and t	ed for thi pability o	f the lam prevent	p and the	e actual o		the source of the ions of the use
l index	angle	e				47.9	47.1	47	47.2	47	47.7	46.9	47.6		
	K-val	ue				\square	\geq	\sum	\sum	\geq	\geq	\sum	\geq		
	Efficie	ŗ				\sim	\geq	\searrow	\searrow	\sim	\sim	\searrow	\sim		
	Facula	See th	ne signatu	re sample	;		`								
	ehensive ment							Q	ualified						
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 PC product size changes with temperature table Uength 0.9 0.8 (mm) 0.7 0.6 0.5 0.4 0.9 0.6 0.5 0.4 0.9 0.9 0.8 0.9 0.8 0.9 0.9 0.6 0.5 0.4 0.9 0.6 0.5 0.4 0.9 0.6 0.5 0.4 0.9 0.6 0.5 0.4 0.9 0.6 0.5 0.4 0.9 0.6 0.5 0.4 0.9 0.6 0.5 0.4 0.9 0.6 0.9 0.6 0.5 0.4 0.9 0.7 0.6 0.9 0.9 0.9 0.7 0.6 0.9 0.9 0.7 0.6 0.9 0.7 0.6 0.9 0.9 0.7 0.6 0.9 0.9 0.7 0.6 0.9 0.9 0.7 0.6 0.9 0.9 0.9 0.7 0.6 0.9 0.7 0.6 0.9 0.7 0.6 0.9 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7															

Precautions:

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

 Try to avoid touching the total reflection surface when taking the lens.
 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.).

Packaging Information



P	N	HK-RG-25@13-18-D4-21-	1g-1_PC	Product Name	HK Moony 25@13	-18°lens	(PC)
Product	material	PC		Customer			
Package diagram				ox package	2	>	
Product	packing	44	A/ Box	4	pcs/Layer		
		18	Layer/Box	3168	A/ Carton		
	NO.	Part No	Part name	Size	Dosage	Unit	Remarks
	1	2.07.0093	Blister box	23cm*21cm	72	BAG	
Packagin	2	2.08.0001	PE film	25cm*27cm	72	PCS	
g Materials	3	2.06.0005	Reel label paper	62mm*42mm	72	PCS	
Materials	4	2.06.0005	Box label paper	62mm*70mm	1	PCS	
	5	2.06.0003	big plate	46cm*42cm	19	PCS	
	6	2.06.0011	big flat carton	48cm*44cm*37	cm 1	PCS	
Remarks		The loose packing is not subjec	t to this speci	fication. Customer's	requirements shall	prevail	

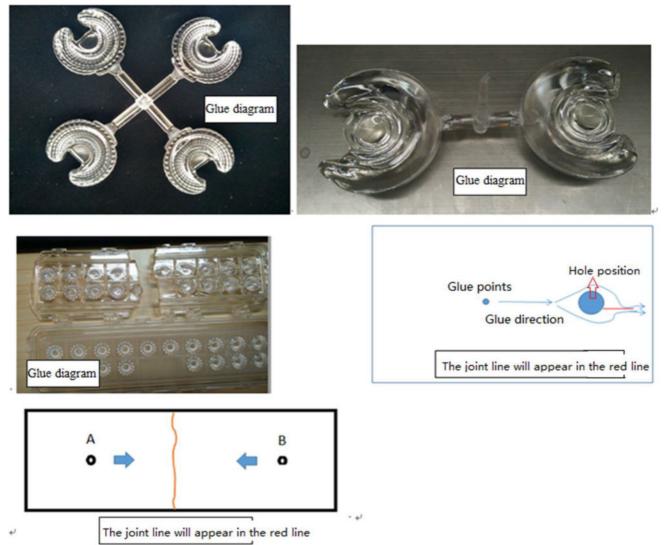


Annex I

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:

Synmen



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	ludeing standard	Inspection equipment	Defec	Defect level			
rescilents	Judging standard	Testing method	МІ	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			V		

	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	V	
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	V	
Fingerprint	Fingerprints are not allowed on all products	Visual	V	
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			V
Deformation	Insufficient filling shall not affect the appearance of the assembly and the exposed surfaces.	Visual, feeler		V
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, point card	~	
Insufficient filling	visual obvious strain. Insufficient filling shall not affect the appearance of the assembly and the exposed surfaces, The signature sample shall prevail.	Visual, point card	V	
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	V	
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 	Visual	V	
	in the optical surface, a single $L \le 10$ mm, no more than two			
Bubble	No bubbles are allowed	Visual	\checkmark	

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			\checkmark
Cold glue	Optical surface may not have cold glue, non- optical surface cold glue should meet the visual is not obvious.	Visual	\checkmark		
	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			V
	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 $D \le 1$ mm and no more than 1 area within a 50x50 mm area	Visual		V	



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

Approval number :

Customer :

Manufacturer : Chengdu HercuLux Photoelectric Technology Co.,Ltd

PN	Code	Product
HK-RG-25@13-18-D4-21-1g-1_PMMA	1.01.12959_PMMA	HK Moony 25@13-18° lens (PMMA)
HK-RG-25@13-24-D4-21-1g-1_PMMA	1.01.12818_PMMA	HK Moony 25@13-24° lens (PMMA)
HK-RG-25@13-36-D4-21-1g-1_PMMA	1.01.12869_PMMA	HK Moony 25@13-36° lens (PMMA)



	Supplier confirmation	on		Client cor	nfirmation	
Proposed	DATE		Qualified□		DATE	
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, 501-505 TEL: 0755-2937 1541 FAX: 0755-2907 5140

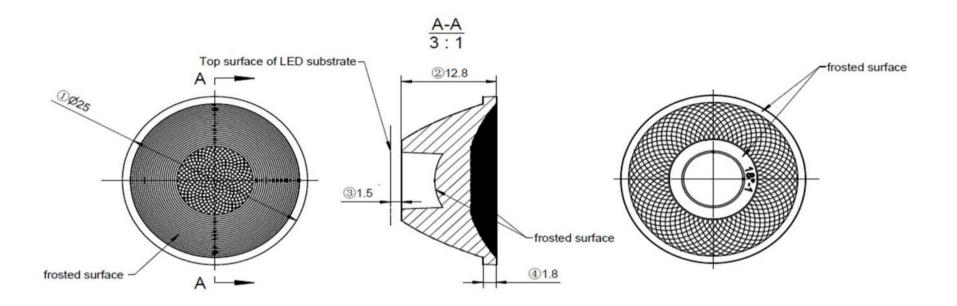
*Approval In duplicate, for both supplier and customer.



TEL: 0755-2937 1541	FAX: 0755-2907 5140	http://www.herculux.cn/	Date updated: 2022/5/19
Product Pictur	e:		
PI	4: I	HK-RG-25@13-18-D4-21-1g-1	L_PMMA
Size(L*W*Η/Φ*Η);	Ф:25mm; H:12.8mm	
Materia	al:	РММА	
Effiency	r.	λ	
Temperature(Top		xtreme temperature resistance g-term use temperature:-40	
FWHN	Л:	18°、24°、36°	
Matched LE	S:	TX-H1309	

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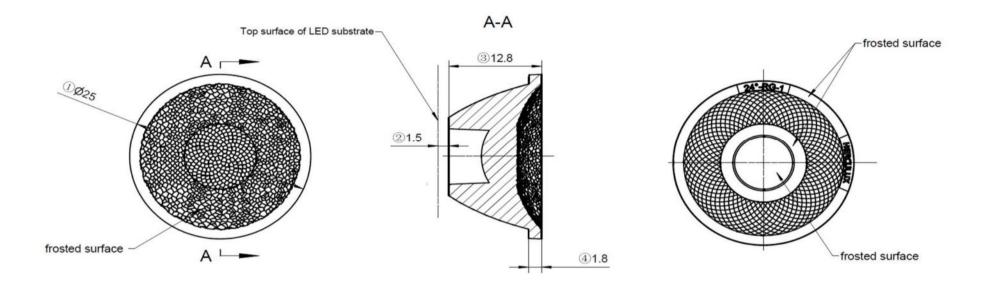
HERCULUX @####



Technical remark:

	is not indicated			0			Opti	cal design						HK-RG-25@13-18-D4-21-1g-1_PMMA				
	ional tolerances has no flash, shi		0		2008 MT5.		itruc	itructure desig					y 25@13-18°lens PMMA)	1	01.12959_PMI	AN		
	lamp adopts rub				f the contact s	urface betwee	n the F	eview				Ì		umber of draw	n qty	weight		
radiator and tl	he rubber ring is	required: Ra<	:3.2μm				Va	Validation			Material:	Material: PMMA		СДНК				
MT5 Tolerance	Basic size	<3	3~10	10~24	24~65	65~140	140~250) 250~	~450	>45	50							
table (mm)	tolerance tolerance <thtolerance< th=""> tolerance <thtolerance< th=""> tolerance <thtolerance< th=""> <thtolerance< th=""> <thtol< td=""><td>.2</td><td>±2.0</td><td>0</td><td></td><td></td><td></td><td></td><td></td></thtol<></thtolerance<></thtolerance<></thtolerance<></thtolerance<>								.2	±2.0	0							

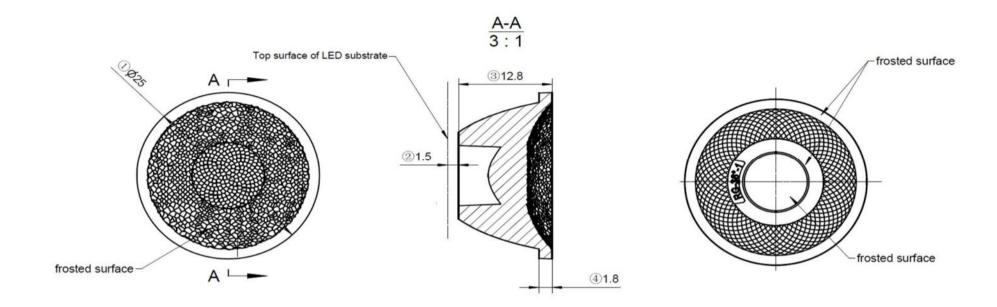
HERCULUX



Tachaia	al remark:
rechnic	ai remark.

	p is not indicate sional tolerance			0	2008 MT5		Op	Optical design				HK Moon	y 25@13-24°lens	HK-RG-25@13-24-D4-21-1g-1_PMMA			
	e has no flash, sl		-	-	2000 1113.		itru	itructure desig				PMMA)	1.01.12818_PMMA umber of drawin qty weight				
	lamp adopts ru		the roughness	of the contact	surface betwe	een	Review						umber of drawin	qty	weight		
the radiator a	and the rubber r	ing is required	: Ra<3.2µm				,	Validation				Material:	PMMA		CDHK		
MT5 Tolerance	Basic size	<3	3~10	10~24	24~65	65~140	140~2	250 250	~450	>4	150						
table (mm)	olerance valu	±0.35	±0.50	±0.80	0 ±	1.2	±2	.0									

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Technical remark:

 The 3D map is not indicated for rounded corners and draft angle. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5. 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 								Optical design itructure desig Review				HK Moony 25@13-36°lens (PMMA)		 HK-RG-25@13-36-D4-21-1g-1_PMMA 1.01.12869_PMMA imber of drawin qty weight	
the radiator a	and the rubber r	ing is required	l: Ra<3.2µm				,	Validatio	n			Material:	PMMA	CDHK	
MT5 Tolerance	Basic size	<3	3~10	10~24	24~65	65~140	140~2	250 25	50~450	>45	50				
table (mm)	olerance valu	±0.35	±0.50	±0.80)	±1.2	±2.	0							

HK Moony	25@13-18°lens	(PMMA)
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IES——

TX-H1309

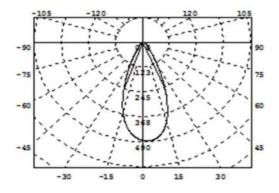


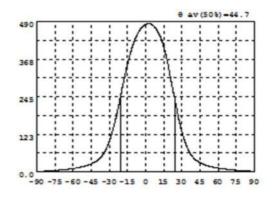
IES—— HK Moony 25@13-	-24°lens (PMMA)
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TX-H1309









Sample parameter test rep HK Moony 25@13-18°lens (PMMA)

HERCULUX 恒坤光电

		\$	Standard size	Upper Size limit	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	Jud gme nt	Remarks		
	diamet	er	25			25.05	25.04	25.03	25.04	25.06	25.05	25.05	25.08	\backslash	Test environment: In 20 ℃ -25 ℃		
1.Size	heigh	t	12.8		$\underline{\ }$	12.85	12.85	12.86	12.88	12.85	12.9	12.9	12.89	\backslash	environment to achieve thermal equilibrium after the		
	thickne	ss	1.8		$\overline{\ }$	1.88	1.89	1.86	1.87	1.87	1.88	1.89	1.91		test.		
	<u> </u>							an not affect the appearance of the lamp									
	L,	;	0	e See attachment "Appearance Inspection Standards"													
2.Appear	rance	attao	See chment earance	E		No bu	rr	No	burr	No	burr	١	No burr		ОК		
Quality		Insp	pection ndards"			No sta	ins	No s	tains	No s	tains	N	o stains				
3.Materia				PN	IMA			Co	olor		Tra	insparen	t		ОК		
4.Optica	test, if	ommen f it is re		be out of	range. A		to the h	eat dissip e fully tes	bation ca ted and t	ed for thi pability o	f the lam prevent	p and the	e actual o		the source of the ions of the use		
l index	angle	_			_	\geq	\geq	\geq	\geq	\geq	\geq	\geq	\sum				
	K-val	-				$ \ge$	\geq	\square	\sum	\square	\square	\square	\sum				
	Efficie	ĩ				\sim				\sim		\sim	\sum				
	Facula	See th	ne signatu	re sample	9		`										
	ehensive ment							Q	ualified								
					PMM	MA prod	uct size c	hanges v	vith temp	perature	table						
Caliper 2 Height G Microsco Thick Ga Gauge E 2、 Amb the size o	Number: V 2D-Quadra auge M-To ope P-Neeo auge R-Rao	tic H- ool dle T- dius erature luct ref	on	Length change: (mm)		10	20	30			ize: 50m ize: 100r ize: 150r ize: 200r ize: 250r ize: 300r	nm nm nm					

Precautions:

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

 Try to avoid touching the total reflection surface when taking the lens.
 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.).

Sample parameter test rep HK Moony 25@13-24°lens (PMMA)

HERCULUX 恒坤光电

		:	Standard size	Upper Size limit	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	Jud gme nt	Remarks	
	diamet	er	25			25.03	25. 05	25.04	25.05	25.04	25.04	25.05	25.04	\setminus	Test environment: In 20 ℃ -25 ℃	
1.Size	heigh	t	12.8		\sum	12.82	12.81	12.81	12.83	12.8	12.8	12.82	12.83	\backslash	environment to achieve thermal equilibrium after the	
	thickne	SS	1.8			1.83	1.85	1.86	1.86	1.87	1.86	1.87	1.87		test.	
					G	ate shea	r can not	affect th	e appear	rance of t	the lamp					
	Ĺ		-	See attachment "Appearance Inspection Standards"												
2.Appear	rance	atta	See achment bearance	E		No bu	Irr	No	burr	No	burr	١	No burr		ОК	
Quality		Ins	pection ndards"			No sta	ins	No s	tains	No s	tains	N	o stains			
3.Materia		<u> </u>		PM	MA			Co	olor		Tra	insparen	t		ОК	
4.Optica	test, if	ommer f it is re M		be out of	range. A	ccording	to the h	eat dissip e fully tes		led for thi pability o tested to	f the lam prevent	p and the	e actual o		the source of the ions of the use	
TINGEX	angle K-val	-				\geq	\geq	\sim	\geq	\triangleright	\geq	\geq	\sim	-		
	Efficie	ncy				\sim						\sim	\sim			
	Facula	See th	he signatu	re sample	9	<u> </u>	```			<u> </u>		3	<u> </u>			
	ehensive ment							Q	ualified							
					PM	MA proc	luct size	changes	with tem	perature	e table					
Caliper 2 Height G Microsco Thick Ga Gauge E 2、 Amb the size o	Number: V 2D-Quadra auge M-To ope P-Neeo auge R-Rao	tic H- ool dle T- dius erature luct ref	e on	Length change (mm	es 0.8 T	10	2	0 3		* + *	Size: 50n Size: 100 Size: 150 Size: 200 Size: 250 Size: 300)mm)mm)mm				

Precautions:

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

 Try to avoid touching the total reflection surface when taking the lens.
 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.).

Sample parameter test rep HK Moony 25@13-36°lens(PMMA)

HERCULUX 恒坤光电

		:	Standard size	Upper Size limit	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	Jud gme nt	Remarks	
	diamet	er	25			25.03	25. 02	25	24.99	25	24.97	25.01	25.02	\setminus	Test environment: In 20 °C -25 °C	
1.Size	heigh	t	12.8		$\overline{\ }$	12.78	12.81	12.81	12.82	12.8	12.8	12.79	12.79	\backslash	environment to achieve thermal equilibrium after the	
	thickne	SS	1.8		$\overline{\ }$	1.86	1.83	1.85	1.86	1.85	1.85	1.86	1.85	$\left[\right]$	test.	
					G	ate shea	r can not	affect th	the appearance of the lamp							
	<u> </u>		-	See attachment "Appearance Inspection Standards"												
2.Appear	rance	atta	See chment earance	e E												
Quality		Insp	pection ndards"			No sta	ins	tains	N	o stains		ОК				
3.Materia				PM	MA			Co	olor		Tra	insparen	t		ОК	
l l	Testing L								TX-H13		. <u></u>					
1 Ontion		f it is re		be out of	range. A		to the h	eat dissip e fully tes	bation ca	pability o	f the lam prevent	p and the	e actual o		the source of the ions of the use	
4.Optica I index	angle	_	<u> </u>			44.7	44.5		44.6	44.3	44.6	44.9	46.2			
	K-val	-												<u> </u>		
	Efficie	ncy		-		\sim	\sim	\sim	\sim	\sim	\sim	\sim	\sim			
	Facula	See th	ne signatu	re sample												
	ehensive ment		-					Q	ualified							
							PMMA p	oroduct s	ize chan	ges with t	emperat	ture tabl	e			
Caliper 2 Height G Microsco Thick Ga Gauge E 2、 Amb the size o	Number: V 2D-Quadra auge M-To pe P-Neeo auge R-Rao	tic H- col dle T- dius erature luct ref	on		ch	ength ianges 0.8 mm) 0.7 0.6 0.9 0.4 0.1 0.1 0.1 0.1 0.1	8 7 5 5 4 4 2	10	20	30		Size: Size: Size: Size: Size:	50mm 100mm 150mm			

Precautions:

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

 Try to avoid touching the total reflection surface when taking the lens.
 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.).

Packaging Information



P	N	HK-RG-25@13-18-D4-21-1g	g-1_PMMA	Product Name	HK Moony 25@13-1	8°lens ((PMMA)
Product	material	PMMA		Customer			
Package	diagram	Single Va	cuum packa	age B	ox package	2	>
Product	packing	44	A/ Box	4	pcs/Layer		
		18	Layer/Box	3168	A/ Carton		
	NO.	Part No	Part name	Size	Dosage	Unit	Remarks
	1	2.07.0093	Blister box	23cm*21cm	72	BAG	
Packagin	2	2.08.0001	PE film	25cm*27cm	72	PCS	
g Materials	3	2.06.0005	Reel label paper	62mm*42mm	72	PCS	
Materials	4	2.06.0005	Box label paper	62mm*70mm	1	PCS	
	5	2.06.0003	big plate	46cm*42cm	19	PCS	
	6	2.06.0011	big flat carton	48cm*44cm*37	7cm 1	PCS	
Remarks		The loose packing is not subjec	t to this speci	fication. Customer'	s requirements shall	prevail	

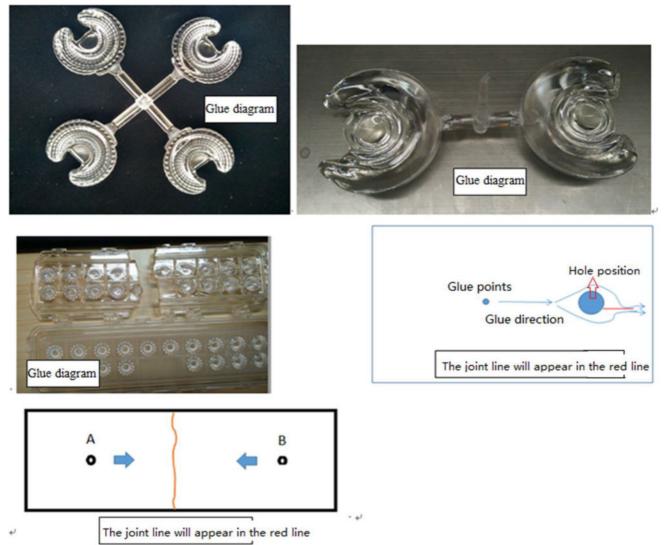


Annex I

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:

Synmen



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	Judging standard	Inspection equipment	Defect level		
rescilents		Testing method	МІ	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			V

	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	V	
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			V
Deformation	Insufficient filling shall not affect the appearance of the assembly and the exposed surfaces.	Visual, feeler		V
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, point card	~	
Insufficient filling	visual obvious strain. 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 	Visual	V	
	in the optical surface, a single L \leq 10mm, no more than two			
Bubble	No bubbles are allowed	Visual	\checkmark	

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	Damaged No damage is allowed				\checkmark
Cold glue	Optical surface may not have cold glue, non- optical surface cold glue should meet the visual is not obvious.	Visual	\checkmark		
	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			V
	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 $D \le 1$ mm and no more than 1 area within a 50x50 mm area	Visual		V	