

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

### **Product Approval**

#### Approval number:

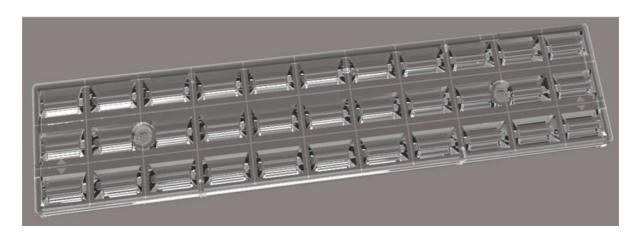
Customer:

Product: HK 33 double offset line lamp lens

Material Code: 1.01.81469

PN: HK-286@08-85X80-2835-22-1g-33

Manufacturer: Chengdu HercuLux Photoelectric Technology Co.,Ltd



	Supplier co	onfirmation	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: 028-8588730 www.hkoptics.com
Sales Dept: Shenzhen Nanshan District Nanshan Cloud Valley Innovation Industrial Park Comprehensive Service Building,

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

\*Approval In duplicate, for both supplier and customer.

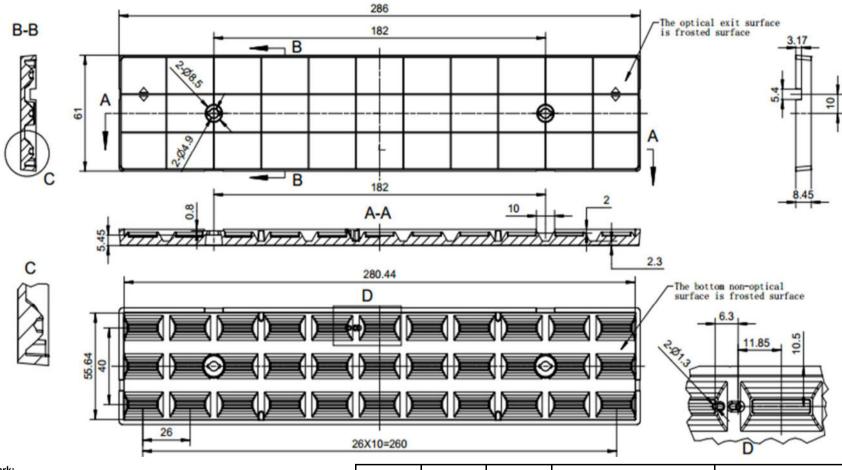


# HERCULUX Product Approval

TEL: 0755-2937 1541 Date updated: 2019/3/1 FAX: 0755-2907 5140 www.hkoptics.com

Product Picture:	
PN:	HK-286@08-85X80-2835-22-1g-33
Size(L*W*H/Φ*H):	L:286mm*W:61mm*H:8mm
1.07.81418_HK-166@03-0223-S	PMMA
Effiency:	≥88%
Temperature(Topr):	-40°C to +80°C
FWHM:	90°X100°
Matched LES:	2835



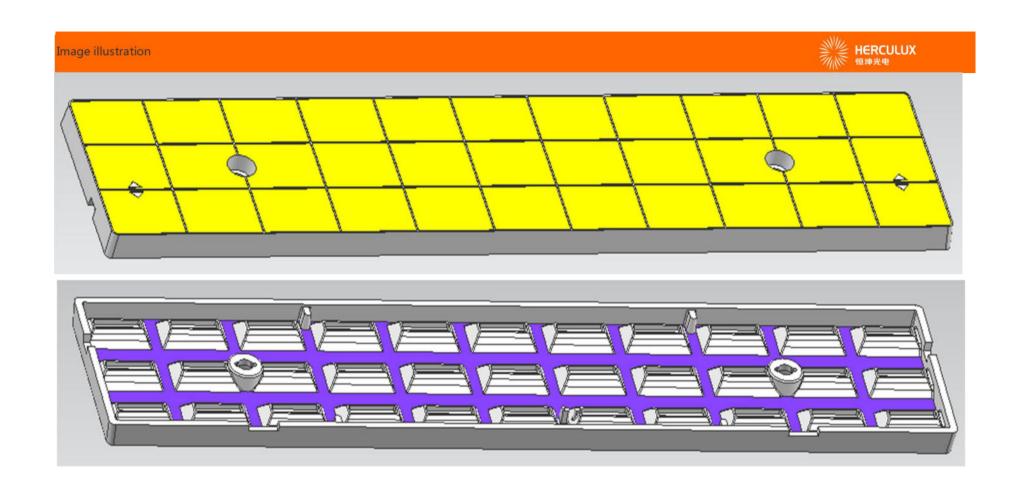


#### Technical remark:

- 1. The 3D map is not indicated for rounded corners and draft angle.
- 2. The dimensional tolerances are not specified according to GB/T 14486 2008 MT5.
- 3, The surface has no flash, shrinkage, bubbles and other defects.

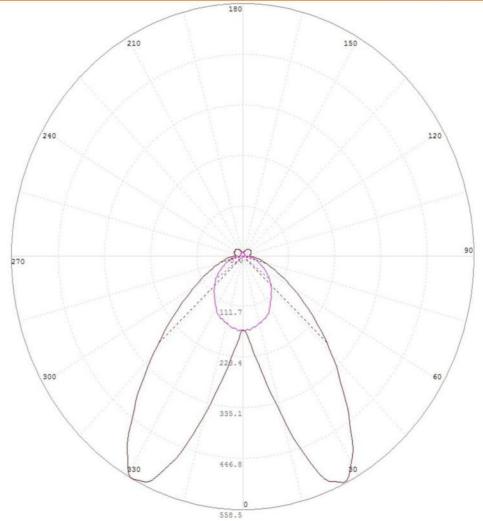
Optica	l design							HK-286@08-85X80-2835-22-1g-33							
tructu	re desig					HK 33 double offset line lamp lens			HK 33 double offset line lamp lens 1.0						
Rev	view						umber o	f drawin	qty	we	ight				
Valid	dation					Material:	PMMA	CDHK							
~,250	2500	~150	_	4E0											

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











			Standard size	Upper Size limit	Lower size limit	Test result1	Test result2	Test result3	Test result4	Jud gme nt	Remarks
	Lei	ngth	286	286	285. 2	285. 68	285. 6			ОК	
	wi	dth	61	61. 1	60. 7	60. 92	60.88			OK	
	inside	length	280.5	281	280.2	280.56	280.64			ОК	Test environment:
	inside width		55.69	55.9	55.5	55.67	55.63			OK	In 20 °C -25 °C
1.Size	slot	depth	3.17	3. 32	3. 02	3. 18	3. 19			OK	environment
	slot	width	5.4	5. 6	5. 3	5. 48	5. 47			OK	to achieve thermal
		of locating umn	1.3	1. 4	1. 15	1. 25	1. 26			ОК	equilibrium after the test.
		of locating umn	6.3	6. 5	6. 1	6. 28	6. 34			ОК	
			(	Gate shear	can not a	ffect the appe	earance of t	he lamp			
				See attach	ment "Ap	pearance Insp	pection Sta	ndards"			
2.Appear	rance		See attachment "Appearance			No burr	No burr	No burr	No bu	rr	ОК
Quality			ection lards"	E		No stains	No stains	No stains No sta		ns	OK
3.Materia	al			PMMA Color Transpare					nsparent		OK
	Testir	ng LED		2835							
	to the so	ource of the	test, if it is	required to	be out of	Dight source range. Accor ne lens should	ding to the	heat dissip sted and te	ation capa	bility o	of the lamp
4.Optica I index			000	F° V100°	1.50		listribution	curve			
······	-	gle ciency	90 ±	5° X100°	±5	93. 4X103. 8					$\overline{}$
		ciency of		≥88%		90.00%					$\overline{}$
	Facula		gnature sar			,					
	ehensive ment		griature our	Пріс			Qualified				
Remarks				Length changes	0.8	duct size cha	anges with	temperati	→ Size:		
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			ius he	Cilling	0. 7 0. 6 0. 5 0. 4 0. 3 0. 2 0. 1 0	10 2	20 30	40 (°C)	Size: Size: Size: Size: Size:	150mm 200mm 250mm	h h

- 1、Wear clean gloves during lens assembly to prevent contamination of the lens surface.
- Take the lens try to avoid touching the total reflection surface.
   When the lens surface contamination, you can only gently wipe with soft cotton sticky neat neutral solvent, not allowed to wipe with industrial solvents.



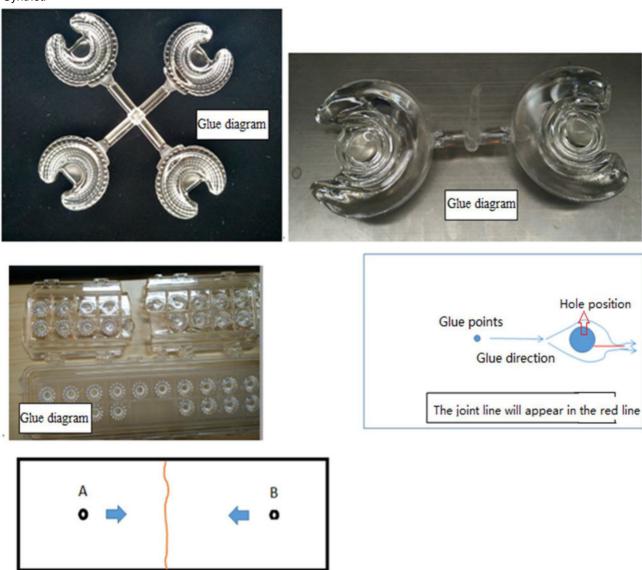
Pl	N	HK-286@08-85X80-2835	i-22-1g-33	Product Name	HK 33 double offs	et line la	mp lens
Product	material	РММА		Customer			
Package	diagram	Single Vacu	um package	Boxp	ackage	>	
Product packing		2	One pack	46	one/layer		
	p	5	one/box	162	one box		
	NO.	Part No	Part name	Size	Dosage	Unit	Remarks
	1		plastic bag		81	bag	
Packagin	2	2. 06. 0005	box label paper	62mm*70mm	1	one piece	
g Materials	3	2. 06. 0007	medium partition	39*29cm	6	one piece	
ivialeriais	4	2. 06. 0006	medium carton	41cm*31cm*27c	m 1	one piece	
Remarks	Loose pac (23 bags fo	king is not limited by this specif or each of the following three la	fication, and cur	stomers' requireme s for each of the up	nts shall prevail oper two layers).		



#### Special notice

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

#### Syntneti



#### Please note:

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

The joint line will appear in the red line



#### Appearance inspection standards

#### 1 Operating procedures

1.1.1Sampling standards, sampling plan and AQL

Test level: GB/T2828.1-2012The first part is according to the acceptance quality limit (AQL) retrieval batch inspection sampling plan, general inspection level  $\Pi$  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	ludaina atondord	Inspection equipment	Defec	t level	
restitems	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	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			√
	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.	Visual, point card		<b>V</b>	
	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.				
Insufficient filling	Insufficient filling shall not affect the appearance of the assembly and the exposed surfaces, The signature sample shall prevail.	Visual, point card		<b>V</b>	
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;  On the constitution of the presence of the	Visual		V	
	2: The remaining flow marks shall not appear in the optical surface, a single L ≤ 10mm, no more than two				
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	<b>V</b>		
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	<b>√</b>		
	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		√	