

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

Product Approval

Approval number : Effective date of approval :

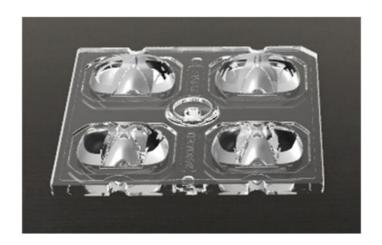
Customer:

Product: HK-4in 1 Road lam Lens (TYPEⅢ_M)

Material Code: 1.02.71229

PN: HK-50@09-150X70-5050-#0-1g-4_T3M

Manufacturer: Chengdu HercuLux Photoelectric Technology Co.,Ltd



	Supplier confirmation			Client confirmation			
Proposed		DATE		Qualified□		5.4.75	
Project manager		DATE		Unqualified□		DATE	
Audit		DATE		Audit		DATE	
Approved		DATE		Approved		DATE	
Stamp		DATE		Stamp		DATE	

(Confirmation of acceptance by both parties must be signed and sealed)

Factory: Chengdu Shuangliu District, Iot industrial park 2 road HercuLux Photoelectric Park

Phone: 028-85887727 (801) 028-85887990 (801) Fax: 028-85887730 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.

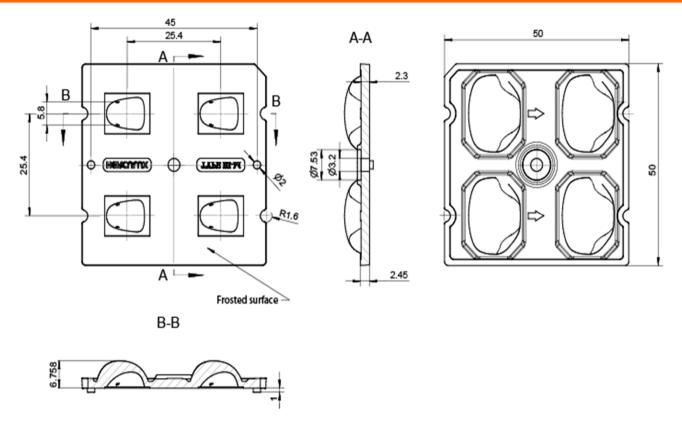


HERCULUX Product Approval

TEL: 0755-2937 1541 Date updated: 2018/6/6 FAX: 0755-2907 5140 www.hkoptics.com

Product Picture:	
PN:	HK-50@09-150X70-5050-#0-1g-4_T3M
Size(L*W*H/Φ*H):	Ф:50mm; H:7.7mm
Material:	PC
Effiency:	\
Temperature(Topr):	-40°C to +120°C
FWHM:	160°x80°
Matched LES:	LUXEON 5050



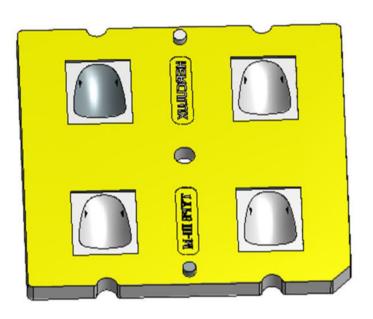


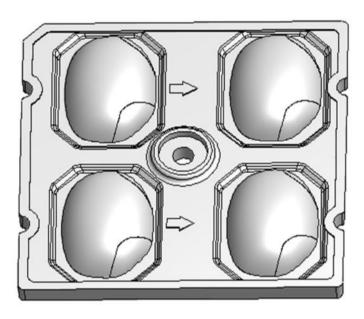
Technical Requirement:

- 1. The surface don't have any defects of flash, shrink and bubble.
- 2. The uncharted fillet and pattern draft subject to the 3D drawing.
- 3. The uncharted dimensional tolerance subject to the 3D drawing.

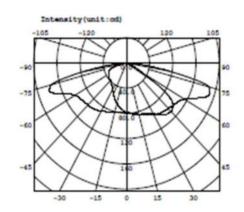
ptical Design	1		HK-50@09-150X	70-5050-#0-1g-4_T3M	1. 02. 71229
ructure Desi	gn	HK-4in 1 Road lam Lens (TYPEIII_M)	Pages	Qty	Weight
Assess			2		
Authorized		Material:PC	CDHK		

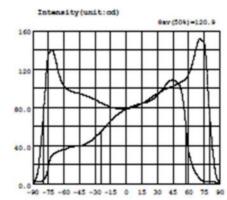












Intensity data: (deg , cd) C0-180

A	I	A	I	A	I	A	I	A	I	A	I
-90.0	2.955	-58.5	100.6	-27.0	86.34	4.5	79.43	36.0	98.32	67.5	142.8
-88.5	3.302	-57.0	99.05	-25.5	85.36	6.0	79.71	37.5	99.03	69.0	148.5
-87.0	5.329	-55.5	98.23	-24.0	84.48	7.5	80.20	39.0	99.68	70.5	151.6
-85.5	10.47	-54.0	97.53	-22.5	83.68	9.0	80.80	40.5	100.3	72.0	151.1
-84.0	21.98	-52.5	96.83	-21.0	83.01	10.5	81.50	42.0	100.9	73.5	149.5
-82.5	37.70	-51.0	96.25	-19.5	82.23	12.0	82.22	43.5	101.5	75.0	147.1
-81.0	55.25	-49.5	95.61	-18.0	81.57	13.5	83.13	45.0	102.1	76.5	134.7
-79.5	76.47	-48.0	95.16	-16.5	80.87	15.0	83.99	46.5	102.7	78.0	109.1
-78.0	99.42	-46.5	94.75	-15.0	80.24	16.5	84.77	48.0	103.5	79.5	82.56
-76.5	122.1	-45.0	94.37	-13.5	79.75	18.0	85.77	49.5	104.2	81.0	60.41
-75.0	135.0	-43.5	93.82	-12.0	79.37	19.5	86.91	51.0	105.0	82.5	41.76
-73.5	138.0	-42.0	93.42	-10.5	79.10	21.0	88.10	52.5	106.0	84.0	26.84
-72.0	139.9	-40.5	92.85	-9.0	78.87	22.5	89.20	54.0	107.0	85.5	14.02
-70.5	138.9	-39.0	92.27	-7.5	78.65	24.0	90.34	55.5	108.0	87.0	6.663
-69.0	134.0	-37.5	91.68	-6.0	78.45	25.5	91.46	57.0	109.5	88.5	3.297
-67.5	127.2	-36.0	91.11	-4.5	78.43	27.0	92.49	58.5	111.6	90.0	1.485
-66.0	120.0	-34.5	90.38	-3.0	78.43	28.5	93.52	60.0	114.6		
-64.5	113.8	-33.0	89.67	-1.5	78.48	30.0	94.56	61.5	118.6		
-63.0	108.7	-31.5	89.00	0.0	78.65	31.5	95.60	63.0	123.3		
-61.5	105.0	-30.0	88.25	1.5	78.84	33.0	96.58	64.5	129.4		
-60.0	102.3	-28.5	87.29	3.0	79.08	34.5	97.50	66.0	136.0		

Electricity Parameter:

Current I: 0.1000A Power: 1.640W Voltage V: 16.40V PF: 1.000

Optical Parameter (Distance=2.559m):

Equivalent Luminous flux: +eff = 419.11m Efficiency: Eff=255.601m/W

CO-180Plane IO= 78.65cd



			Standard size	Upper Size limit	Lower size	e limit	Test result1	Test result2	Test result3	Judg	gment
	OW		50	50.2	49.8	,	49.92	50.02	50.04	C	OK
	S of locating		45	45.1	44.9)	44.98	44.99	44.97	C	ΣK
1.Size	D of locating		of locating 2 2.0		1.95	,	1.99	1.99	1.99	C)K
	<u> </u>		2.45	2.6	2.3		2.5	2.53	2.52	C)K
				Gate shear can	not affect the	ne appe	earance of the	lamp			
	See attachment "Appearance Inspection Standards"										
2.Appeai			e attachment Appearance	F	No bu	ırr	No burr	No burr	No burr		OK.
Quality		Inspection Standards"	E	No sta	ins	No stains	No stains	No stains	3	OK	
3.Material			PC			Color	Transparent O			OK	
Testing LED						LUXEO	N 5050				
	FWHM			See light distribution curve							
4.Optica I index	Angle						160.4x84.5	159.9x85.4	4 159.9x8	2.4	OK
	Effiency						92.00%	92.00% 91.50		%	OK
	Facula	See t	the signature sa	mple		•					
	ehensive Iment					C	Qualified				
Caliper 2 Height G Microsco Thick Ga Gauge E 2、Test °C -25 °C achieve to after the temperal	Number: Number: Number: Number: Number: Number P-Needauge R-Radi-Visual. Henvironmed environment thermal equitation the furtion the furtile on the fuct refer to the series of the furtile on the furtil	tic H- pol dle T- dius ent: In ent to uilibri pient size	chang chang (mn	th 1	ct size cha	nges w	vith tempera	*	Size: 50mm Size: 100mm Size: 150mm Size: 200mm Size: 250mm Size: 300mm	m m m m	

Precautions:

- 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.

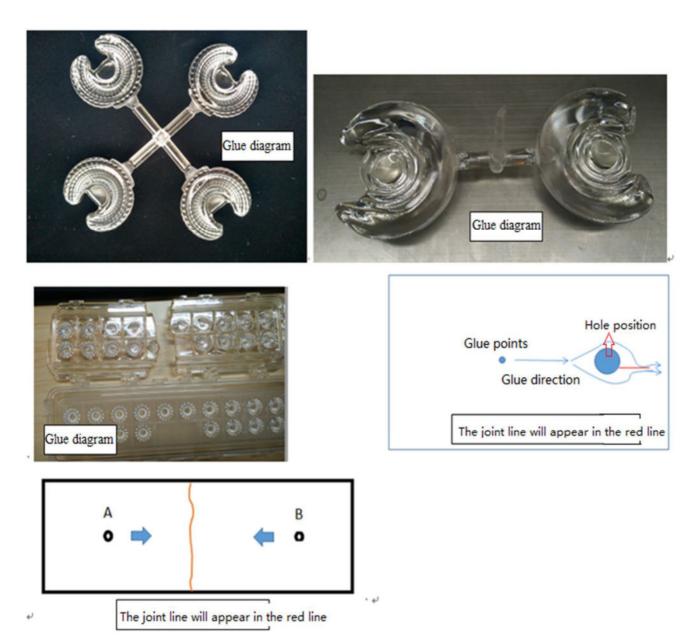


PI	V	HK-50@09-150X70-505	50-#0-1g-4_T3M	Product Name	IK-4in 1 Road lam Le	ens (TY	PEIII_M)
Product	material	PC		Customer			
Package	diagram	Single Vacu	um package	Box	package		
Draduat	n a alsin a	24	A/ Box	4	Box/Floor		
Product	packing	15	Floor/Carton	1440	A/ Carton		
	NO.	Part No	Part name	Size	Dosage	Unit	Remar ks
	1	2.07.0049	Blister box	23cm*21cm	60	BAG	
	2	2.08.0001	PE film	30cm*30cm	60	PCS	
Packagin	3	2.06.0005	Reel label	6.2cm*8cm	60	PCS	
g Materials	4	2.06.0005	paper Box label paper	6.2cm*9.2cm	1	PCS	
	5	2.06.0003	big plate	46.8cm*42.8cr		PCS	
	6	2.06.0001	big carton	46.8cm*42.8cm* cm	*36 1	PCS	
Remarks		Scattere	ed packaging is not	subject to this spe	cification		



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:



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	Ħ	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, chip should be from the lens surface 500-550mm, in order to make the bad appearance can be correctly found, the illumination should not be less than 500Lux;
 - 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	Defect 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		
	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 things, impurities	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	Visual, point card	√	
	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	√	
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	V	

Bubble	No bubbles are allowed	Visual		√	
Foreign matter、Dark 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		√	



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Product Approval

Approval number:

Customer:

Product: HK-4in1 Lens (TYPEIII_M)
Material Code: 1.02.71229

PN: HK-50@09-150X70-5050-#0-1g-4_T3M

Manufacturer: Chengdu HercuLux Photoelectric Technology Co.,Ltd



	Supplier confirmation			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

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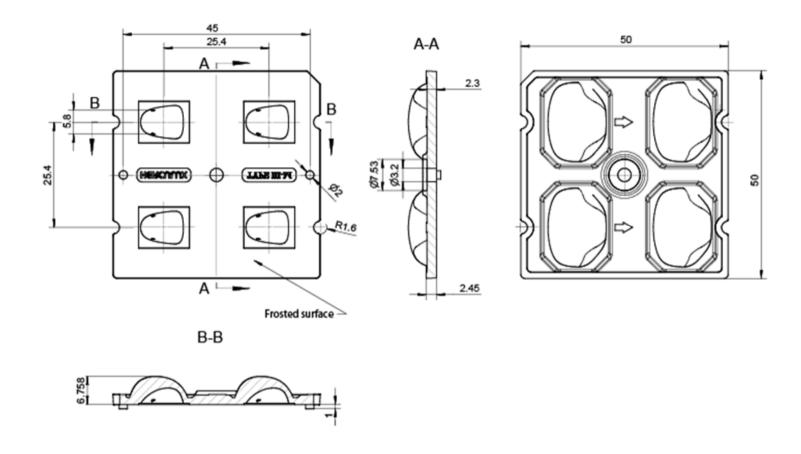


HERCULUX 恒坤光电 Product Approval

TEL: 0755-2937 1541 Date updated: 2018/12/6 FAX: 0755-2907 5140 www.hkoptics.com

Product Picture:	
PN:	HK-50@09-150X70-5050-#0-1g-4_T3M
Size(L*W*H/Φ*H):	L:50mm*W:50mm*H:6.76mm
1.07.81418_HK-166@03-0223-S	PMMA
Effiency:	\
Temperature(Topr):	-40°C to +80°C
FWHM:	150°X70°



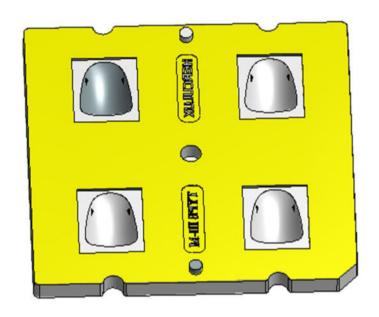


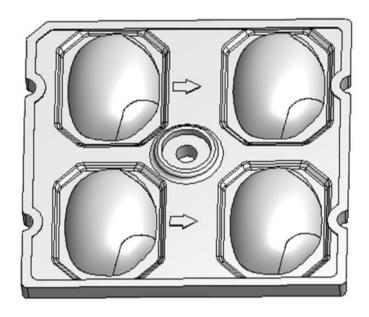
Technical Requirement:

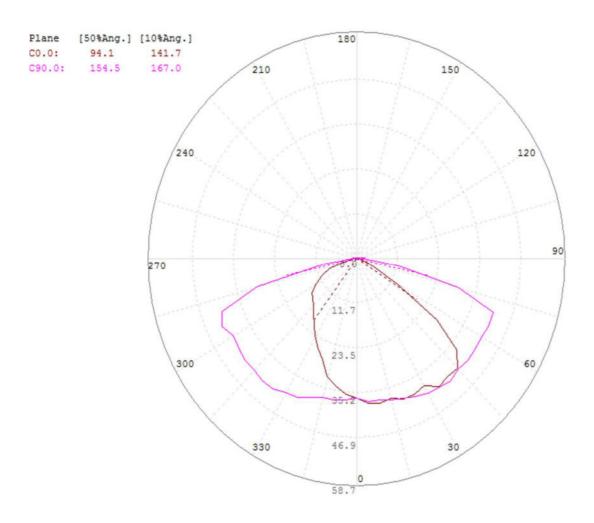
- 1. The surface don't have any defects of flash, shrink and bubble.
- 2. The uncharted fillet and pattern draft subject to the 3D drawing.
- 3. The uncharted dimensional tolerance subject to the 3D drawing.

Optical Design				HK-50@09-150	770-5050-#0-1g-4_T3M	1. 02. 71229
Structure Design		HK-4in1 Lens (TYPEIII_M) Material: PMMA		Pages	Qty	Weight
Assess				2		
Authorized					CDHK	











	S	Standard size	Upper Size limit	Lower size limit	Test result1	Test result2	Test result3	Test result4	Jud gme nt	Remarks	
OW		50			49.92	50.02	50.04	50.02		Test environment:	
S of locating		45			44.98	44.99	44.97	44.99		In 20 ℃ -25 ℃ environment	
D of loca	iting	2			1.99	1.99	1.99	1.99		to achieve thermal	
TH		2.45			2.5	2.53	2.52	2.53		equilibrium after the test.	
			Gate she	ar can not	affect the a	ppearance	of the lamp)			
			See atta	chment "Ar	pearance	Inspection (Standards"				
2 Appearance attach		chment	nment		lo burr	No burr	No burr	No bu	rr	OK	
	Insp	ection	tion		No stains		No stains No stains		ns	O.V.	
al			PMMA			Color	Color Transparent OK			OK	
Testing I	_ED		LUXEON 5050								
	M		See light distribution curve								
angle	9										
Efficie	ncy										
	See the	e signatuı	re sample		`						
						Qı	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			Length changes (mm)			table	40	Size: 5 Size: 100mm Size: 150mm Size: 200mm	50mm n		
	S of loca D of loca TH Tance Testing I FWHI angle Facula Phensive ment S: Number: V D-Quadra auge M-To pe P-Need auge R-Rai -Visual. ient tempe of the prod	OW S of locating D of locating TH TH TH TH TH TH TH TH TH T	OW 50 S of locating 45 D of locating 2 TH 2.45 TH 2.45 TH 2.45 Testing LED FWHM angle Efficiency Facula See the signature chensive ment See Number: V-Vernier (D-Quadratic Hauge M-Tool pe P-Needle T-lauge R-Radius described in the product refer content of the product refer content co	Size Size limit OW 50 S of locating 45 D of locating 2 TH 2.45 Gate sheat See attachment "Appearance Inspection Standards" All PMMA Testing LED FWHM angle Efficiency Facula See the signature sample enensive ment See the signature sample enensive ment Length changes (mm) Composition of the product refer on of the product reference of the product reference content of the product r	See attachment "Appearance Inspection Standards" Testing LED FWHM angle Efficiency Facula See the signature sample Ehensive ment PMMA Length changes (mm) 0.8 PMMA Length changes (mm) 0.8 PMMA Length changes (mm) 0.8 O.6 O.7 O.7 O.7 O.8 O.7 O.8 O.7 O.7	Size limit size limit result1 OW 50 49.92 S of locating 45 44.98 D of locating 2 1.99 TH 2.45 2.5 Gate shear can not affect the a See attachment "Appearance Inspection Standards" Testing LED No stains Al PMMA Testing LED LUX FWHM See light angle Efficiency Facula See the signature sample See the signature sample Chensive ment PMMA product s Length changes (mm) 0.8 O.6 O.7 O.8 O.8 O.9 O.9 O.9 O.9 O.9 O.9	Size limit size limit result1 result2 OW 50 49.92 50.02 S of locating 45 44.98 44.99 D of locating 2 1.99 1.99 TH 2.45 2.5 2.53 Gate shear can not affect the appearance see attachment "Appearance Inspection Standards" No burr No burr No burr No burr No stains No stains All PMMA Color Testing LED LUXEON 5050 FWHM See light distribution angle enensive ment PAGE 1.50 Enensive ment PMMA product size change table Changes (mm) 0.8 Length changes Change R-Radius - V-Vernier D-Quadratic H-auge M-Tool ppe P-Needle T-uge R-Radius - Visual. ient temperature on of the product refer	Size Size limit size limit result1 result2 result3 OW 50 49.92 50.02 50.04 S of locating 45 44.98 44.99 44.97 D of locating 2 1.99 1.99 1.99 TH 2.45 2.5 2.53 2.52 Gate shear can not affect the appearance of the lamp See attachment "Appearance Inspection Standards" No burr No burr No burr No burr No burr No burr See attachment "Appearance Inspection Standards" Testing LED LUXEON 5050 FWHM See light distribution curve angle Efficiency Facula See the signature sample Chensive ment PMMA product size changes with terms table changes (mm) 0.8 O.6 O.7 O.8 O.8 O.8 O.9 O.9 O.9 O.9 O.9	Size Size limit result1 result2 result3 result4 OW 50 49.92 50.02 50.04 50.02 S of locating 45 44.98 44.99 44.97 44.99 TH 2.45 2.5 2.53 2.52 2.53 Gate shear can not affect the appearance of the lamp See attachment "Appearance Inspection Standards" No burr Appearance Inspection Standards" No stains No stains No stains No stains No stains Testing LED LUXEON 5050 FWHM See light distribution curve angle Efficiency Facula See the signature sample PMIMA product size changes with temperature table Changes Color Color Facula See the signature sample Length Changes O.6 O.6 O.7 O.8 O.8 O.9 O.9 O.	Standard Size Size limit size limit result1 result2 result3 result4 nt result4 result2 result3 result4 nt result4 result2 result3 result4 nt result4 nt result4 result2 result3 result4 nt result4 nt result4 nt result4 result2 result3 result4 nt result4 nt result4 nt result4 result2 result3 result4 nt result4 nt result4 nt result4 result2 result3 result4 nt result4 nt result4 nt result4 nt result4 result5 result4 nt result6 result6 result6 result6 result6 result6 result7 result8 result8 result8 result8 result8 result8 result8 result9 nt result9 r	

- 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.



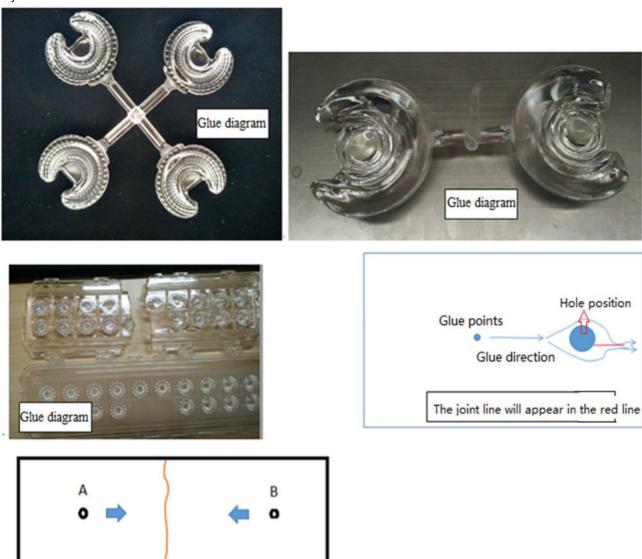
Pl	PN HK-50@09-150X70-5050-#0-1g-4_T3M		-1g-4_T3M	Product Name	HK-4in1 Lens (TYPEIII_M)		_M)
Product	Product material PMMA		Customer				
Package diagram Single Vacuum package Box package							
Product	packing	24	A/ Box	4	Box/Layer		
	, · · · · · · · · · · · · · · · · · · ·	15	Layer/Box	1440	A/ Carton		
	NO.	Part No	Part name	Size	Dosage	Unit	Remarks
	1	2.07.0049	Blister box	23cm*21cm	60	BAG	
Deekeein	2	2.08.0001	PE film	30cm*30cm	60	PCS	
Packagin g	3	2.06.0005	Reel label paper	6.2cm*8cm	60	PCS	
Materials	4	2.06.0005	Box label paper	6.2cm*9.2cm	1	PCS	
	5	2.06.0003	big plate	46.8cm*42.8cm	16	PCS	
	6	2.06.0001	big carton	46.8cm*42.8cm*36c m	1	PCS	
Remarks		packing is not subject to this spo 4 bags for each layer and 5 bag			shall prevail (The	re are th	nree



Special notice

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

Syntneti



Please note:

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

The joint line will appear in the red line



Appearance inspection standards

1 Operating procedures

1.1.1Sampling standards, sampling plan and AQL

Test level : GB/T2828.1-2012The first part is according to the acceptance quality limit (AQL) retrieval batch inspection sampling plan, general inspection level Π level, CR class defect coefficient 0, MA defect rejection level AQL = 0.65, MI class defect rejection level AQL = 1.0; defect level please see 5.4.

2 Code table

Code	Code	Unit	Code	Code	Unit
	description			description	
N	Amount/pcs	pcs	D	Diameter	mm
L	Length	mm	Ħ	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

T		Inspection equipment	Defect level			
Test items	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			√	

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	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		√	