



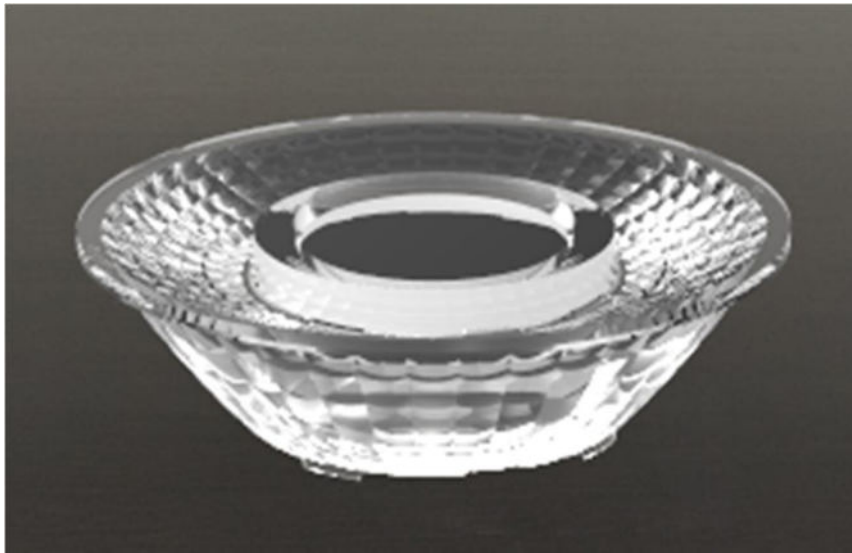
HERCULUX Chengdu HercuLux Photoelectric
 恒坤光电 Technology Co.,Ltd
Product Approval

Approval number :

Customer :

PN	Code	Product
HK-62@18-15-D9-20-1g-1	1. 01. 6900	HK 62@18-15° Lens
HK-62@18-36-D9-20-1g-1	1. 01. 6906	HK 62@18-36° Lens
HK-62@18-24-D9-20-1g-1	1. 01. 6907	HK 62@18-24° Lens
HK-62@18-60-D9-20-1g-1	1. 01. 81515	HK 62@18-60° Lens

Manufacturer : Chengdu HercuLux Photoelectric Technology Co.,Ltd



Supplier confirmation				Client confirmation			
Proposed		DATE		Qualified <input type="checkbox"/>		DATE	
Project manager		DATE		Unqualified <input type="checkbox"/>		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
恒坤光电

Product Approval

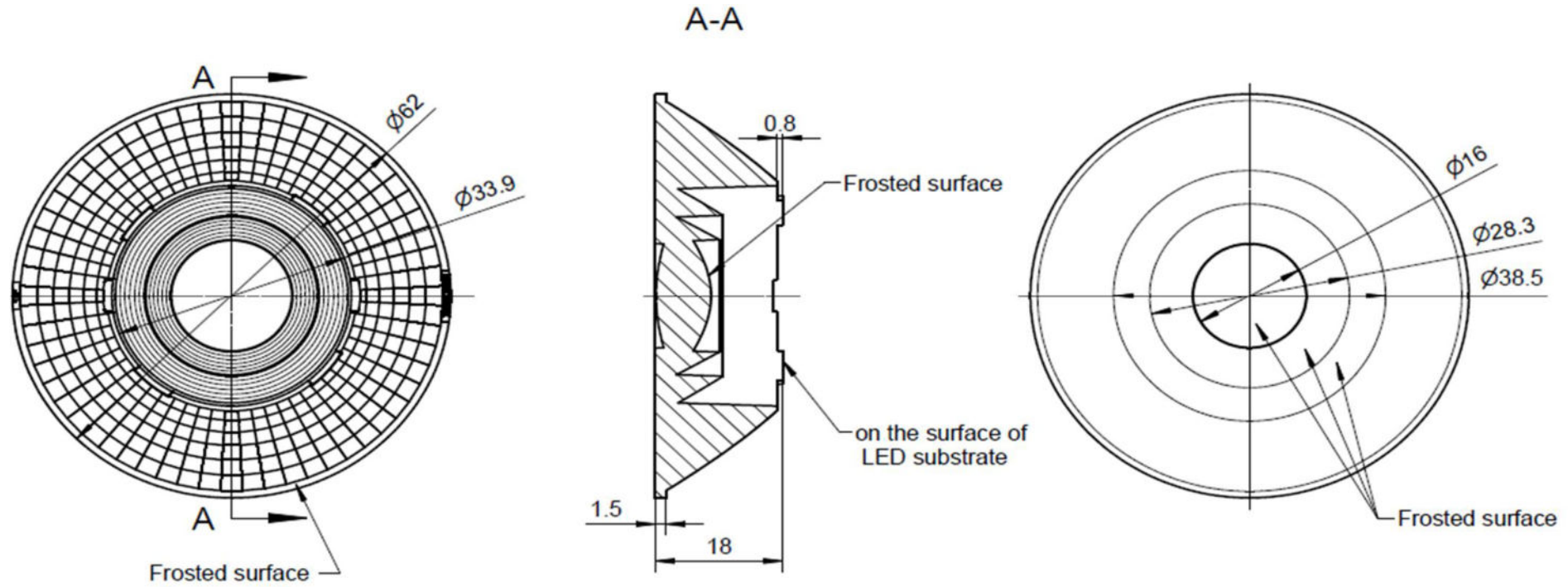
TEL: 0755-2937 1541

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www.hkoptics.com

Date updated: 2019/5/31

Product Picture:	
PN:	HK-62@18-15-D9-20-1g-1
Size(L*W*H/ Φ *H):	Φ :62mm; H:18mm
Material:	PC
Efficiency:	\
Temperature(Topr):	-40°C to +120°C
FWHM:	15°/24°/36°/60°
Matched LES:	D9

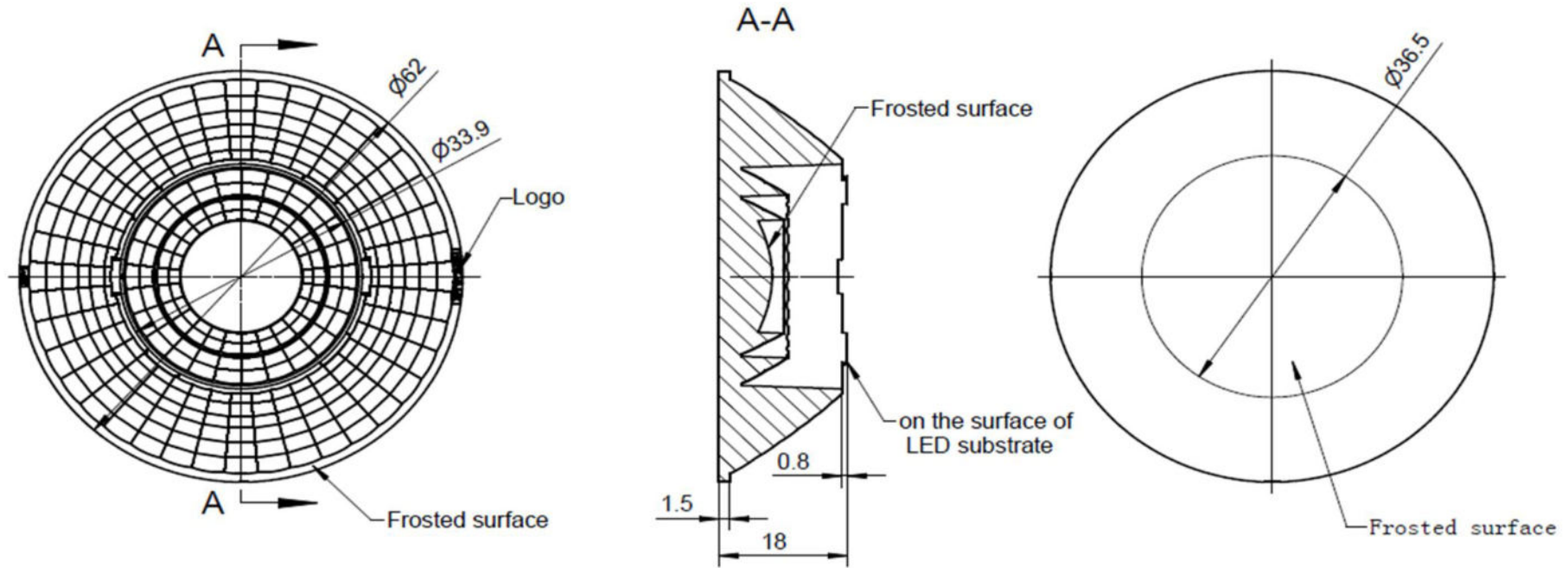


Technical remark:

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.

Optical design			HK 62@18-15°Lens		HK-62@18-15-D9-20-1g-1		
Structure design			HK 62@18-15°Lens		1.01.6900		
Review					Number of drawing	qty	weight
Validation			Material:	PC	CDHK		

MT5 Tolerance table (mm)	Basic size	<3	3~10	24~65	65~140	140~250	250~450	>450	
	olerance value	±0.1	±0.15	±0.35	±0.50	±0.80	±1.2	±2.0	

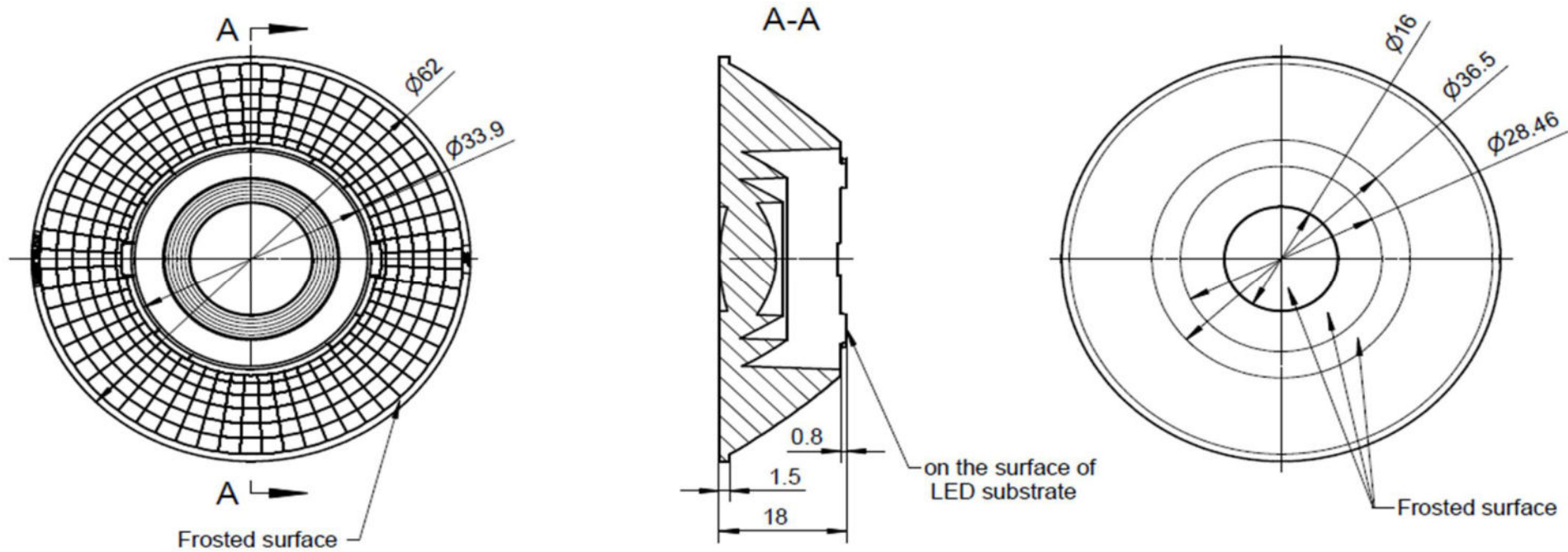


Technical remark:

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.

Optical design			HK 62@18-36°Lens		HK-62@18-36-D9-20-1g-1		
Structure design			HK 62@18-36°Lens		1.01.6906		
Review					Number of drawing	qty	weight
Validation			Material:	PC	CDHK		

MT5 Tolerance table (mm)	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	

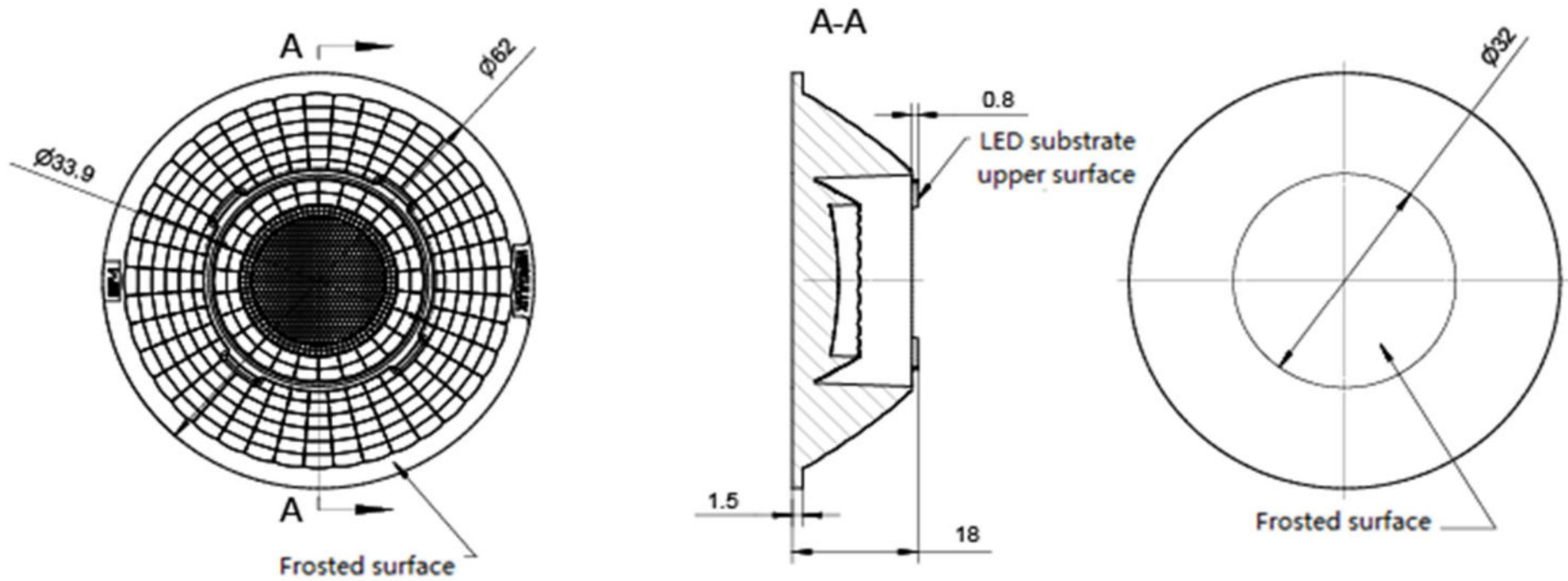


Technical remark:

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.

Optical design			HK 62@18-24°Lens		HK-62@18-24-D9-20-1g-1		
Structure design			HK 62@18-24°Lens		1.01.6907		
Review					Number of drawing	qty	weight
Validation			Material:	PC	CDHK		

MT5 Tolerance table (mm)	Basic size	<3	3~10	24~65	65~140	140~250	250~450	>450	
	olerance value	±0.1	±0.15	±0.35	±0.50	±0.80	±1.2	±2.0	

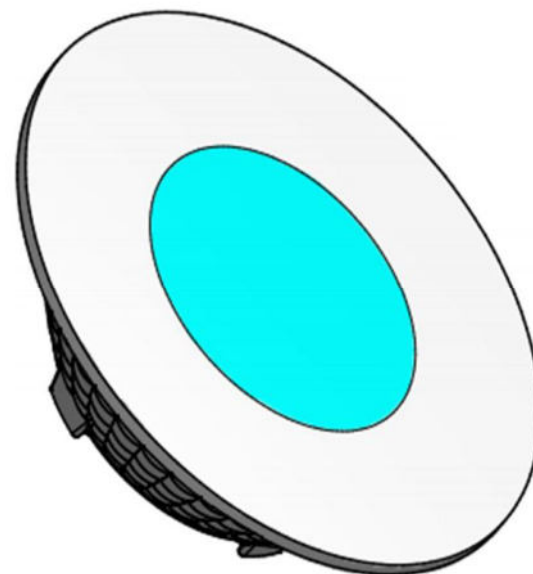
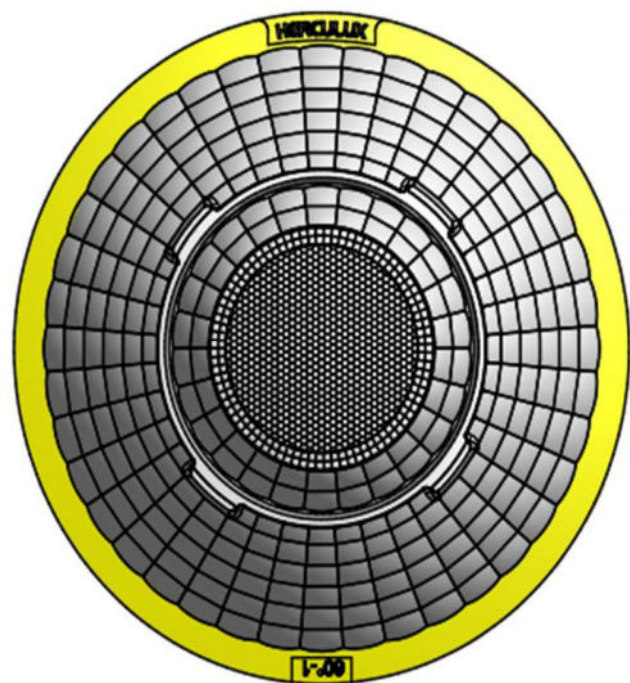


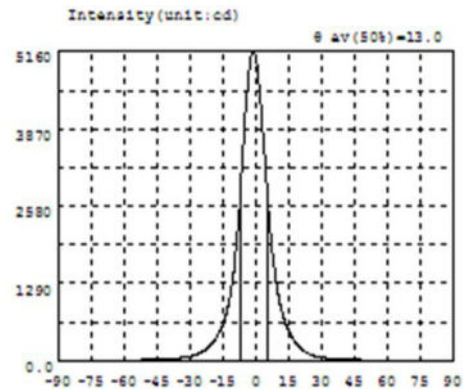
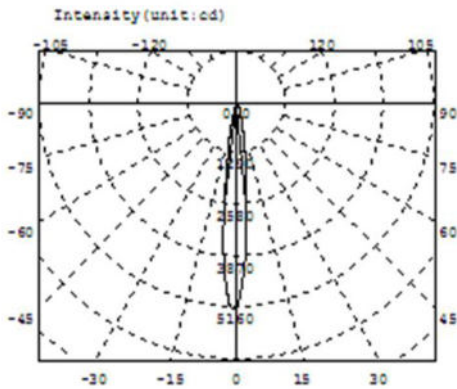
Technical remark:

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.

Optical design			HK 62@18-60°Lens		HK-62@18-60-D9-20-1g-1		
structure design					1.01.81515		
Review					number of drawing	qty	weight
Validation			Material:	PC	CDHK		

MT5 Tolerance table (mm)	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	





Intensity data: (deg , cd) CO-180

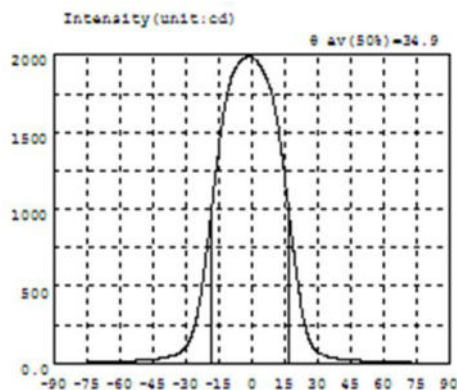
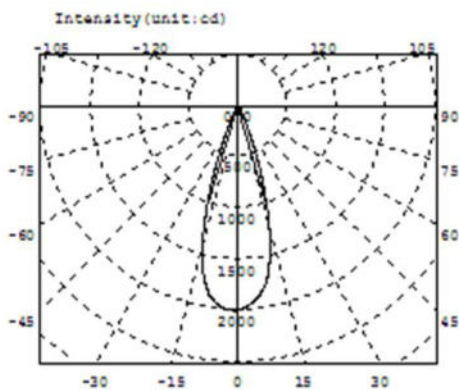
A	I	A	I	A	I	A	I	A	I	A	I
-90.0	0.3503	-58.5	9.000	-27.0	104.1	4.5	3219	36.0	29.76	67.5	4.959
-88.5	0.4186	-57.0	9.850	-25.5	128.1	6.0	2452	37.5	26.23	69.0	4.551
-87.0	0.6110	-55.5	10.79	-24.0	158.6	7.5	1840	39.0	23.34	70.5	4.161
-85.5	0.9175	-54.0	11.80	-22.5	195.1	9.0	1397	40.5	20.99	72.0	3.769
-84.0	1.234	-52.5	12.92	-21.0	243.0	10.5	1060	42.0	18.97	73.5	3.354
-82.5	1.574	-51.0	14.08	-19.5	305.7	12.0	812.7	43.5	17.23	75.0	2.927
-81.0	1.960	-49.5	15.49	-18.0	383.7	13.5	632.3	45.0	15.72	76.5	2.558
-79.5	2.300	-48.0	17.04	-16.5	483.1	15.0	499.2	46.5	14.37	78.0	2.200
-78.0	2.662	-46.5	18.78	-15.0	611.1	16.5	394.9	48.0	13.21	79.5	1.826
-76.5	3.072	-45.0	20.71	-13.5	781.3	18.0	302.1	49.5	12.13	81.0	1.493
-75.0	3.513	-43.5	22.77	-12.0	1017	19.5	237.8	51.0	11.22	82.5	1.167
-73.5	3.908	-42.0	25.09	-10.5	1354	21.0	188.0	52.5	10.36	84.0	0.8616
-72.0	4.316	-40.5	27.80	-9.0	1838	22.5	149.2	54.0	9.624	85.5	0.5871
-70.5	4.733	-39.0	31.00	-7.5	2511	24.0	119.2	55.5	8.904	87.0	0.4445
-69.0	5.121	-37.5	34.84	-6.0	3403	25.5	95.93	57.0	8.281	88.5	0.3562
-67.5	5.540	-36.0	39.36	-4.5	4203	27.0	78.41	58.5	7.692	90.0	0.3627
-66.0	5.949	-34.5	45.03	-3.0	4829	28.5	64.95	60.0	7.160		
-64.5	6.437	-33.0	52.05	-1.5	5143	30.0	54.48	61.5	6.667		
-63.0	6.976	-31.5	60.64	0.0	5073	31.5	46.03	63.0	6.199		
-61.5	7.578	-30.0	71.76	1.5	4612	33.0	39.40	64.5	5.773		
-60.0	8.238	-28.5	85.84	3.0	3953	34.5	34.14	66.0	5.353		

Electricity Parameter:

Current I: 0.1000A Power: 3.380W
Voltage V: 33.79V PF: 1.000

Optical Parameter(Distance=2.410m):

Equivalent Luminous flux: # eff= 533.3lm Efficiency: Eff=157.78lm/W
Diffuse angle: @ (25%): 20.1deg @ (50%): 13.0deg @ (75%): 8.2deg @ (50%): 13.0deg
Diffuse angle: @ (25%): 20.3deg @ (50%): 13.2deg @ (75%): 8.5deg @ (50%): 13.2deg
Imax=5155cd (C=0.0deg,G=-1.0deg) CO-180Plane Imax= 5155cd(G=-1.0deg)
CO-180Plane IO= 5073cd



Intensity data: (deg , cd) CO-180

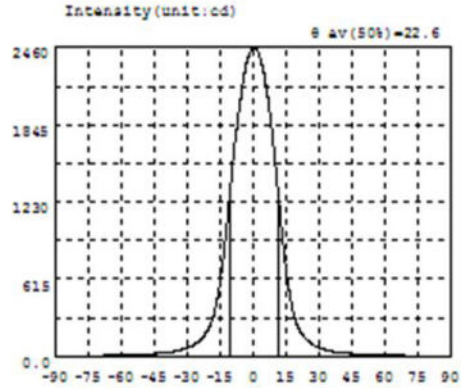
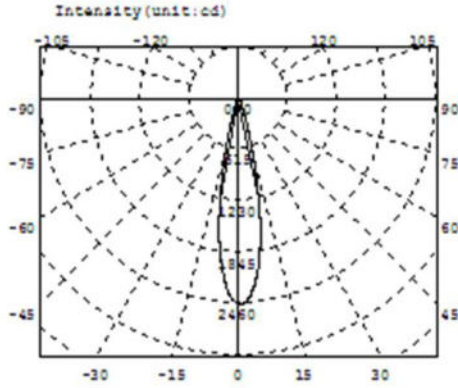
A	I	A	I	A	I	A	I	A	I	A	I
-90.0	0.7261	-88.5	0.8159	-87.0	1.071	-85.5	1.391	-84.0	1.839	-82.5	2.324
-81.0	2.797	-79.5	3.283	-78.0	3.808	-76.5	4.327	-75.0	4.803	-73.5	5.353
-72.0	5.914	-70.5	6.502	-69.0	7.098	-67.5	7.813	-66.0	8.589	-64.5	9.352
-63.0	10.06	-61.5	10.81	-60.0	11.63	-58.5	12.56	-57.0	13.65	-55.5	14.78
-54.0	16.09	-52.5	17.65	-51.0	19.58	-49.5	21.74	-48.0	23.85	-46.5	26.02
-45.0	28.13	-43.5	30.32	-42.0	32.77	-40.5	35.80	-39.0	39.66	-37.5	44.28
-36.0	49.72	-34.5	56.83	-33.0	66.49	-31.5	80.62	-30.0	102.6	-28.5	140.0
-27.0	194.6	-25.5	270.4	-24.0	376.2	-22.5	511.6	-21.0	668.6	-20.0	1024
-18.0	1208	-16.5	1534	-15.0	2026	-14.0	2577.8	-13.0	3239	-12.0	4116
-11.0	5119.6	-10.5	6777.8	-10.0	9199.6	-9.0	12419.6	-8.0	16619.6	-7.5	20819.6
-7.5	25719.6	-7.0	34319.6	-6.5	45619.6	-6.0	60819.6	-5.5	81919.6	-5.0	109919.6
-4.5	149919.6	-4.0	199919.6	-3.5	269919.6	-3.0	369919.6	-2.5	499919.6	-2.0	679919.6
-1.5	1990	-1.0	1988	-0.5	1986	0.0	1984	0.5	1982	1.0	1980
1.5	1978	2.0	1976	2.5	1974	3.0	1972	3.5	1970	4.0	1968
4.5	1966	5.0	1964	5.5	1962	6.0	1960	6.5	1958	7.0	1956
7.5	1954	8.0	1952	8.5	1950	9.0	1948	9.5	1946	10.0	1944
10.5	1942	11.0	1940	11.5	1938	12.0	1936	12.5	1934	13.0	1932
13.5	1930	14.0	1928	14.5	1926	15.0	1924	15.5	1922	16.0	1920
16.5	1918	17.0	1916	17.5	1914	18.0	1912	18.5	1910	19.0	1908
19.5	1906	20.0	1904	20.5	1902	21.0	1900	21.5	1898	22.0	1896
22.5	1894	23.0	1892	23.5	1890	24.0	1888	24.5	1886	25.0	1884
25.5	1882	26.0	1880	26.5	1878	27.0	1876	27.5	1874	28.0	1872
28.5	1870	29.0	1868	29.5	1866	30.0	1864	30.5	1862	31.0	1860
31.5	1858	32.0	1856	32.5	1854	33.0	1852	33.5	1850	34.0	1848
34.5	1846	35.0	1844	35.5	1842	36.0	1840	36.5	1838	37.0	1836
37.5	1834	38.0	1832	38.5	1830	39.0	1828	39.5	1826	40.0	1824
40.5	1822	41.0	1820	41.5	1818	42.0	1816	42.5	1814	43.0	1812
43.5	1810	44.0	1808	44.5	1806	45.0	1804	45.5	1802	46.0	1800
46.5	1798	47.0	1796	47.5	1794	48.0	1792	48.5	1790	49.0	1788
49.5	1786	50.0	1784	50.5	1782	51.0	1780	51.5	1778	52.0	1776
52.5	1774	53.0	1772	53.5	1770	54.0	1768	54.5	1766	55.0	1764
55.5	1762	56.0	1760	56.5	1758	57.0	1756	57.5	1754	58.0	1752
58.5	1750	59.0	1748	59.5	1746	60.0	1744	60.5	1742	61.0	1740
61.5	1738	62.0	1736	62.5	1734	63.0	1732	63.5	1730	64.0	1728
64.5	1726	65.0	1724	65.5	1722	66.0	1720	66.5	1718	67.0	1716
67.5	1714	68.0	1712	68.5	1710	69.0	1708	69.5	1706	70.0	1704
70.5	1702	71.0	1700	71.5	1698	72.0	1696	72.5	1694	73.0	1692
73.5	1690	74.0	1688	74.5	1686	75.0	1684	75.5	1682	76.0	1680
76.5	1678	77.0	1676	77.5	1674	78.0	1672	78.5	1670	79.0	1668
79.5	1666	80.0	1664	80.5	1662	81.0	1660	81.5	1658	82.0	1656
82.5	1654	83.0	1652	83.5	1650	84.0	1648	84.5	1646	85.0	1644
85.5	1642	86.0	1640	86.5	1638	87.0	1636	87.5	1634	88.0	1632
88.5	1630	89.0	1628	89.5	1626	90.0	1624				

Electricity Parameter:

Current I: 0.1000A Power: 3.450W
Voltage V: 34.50V PF: 0.000

Optical Parameter(Distance=2.559m):

Equivalent Luminous flux: $\Phi_{\text{eff}}=735.41\text{lm}$ Efficiency: $\text{Eff}=213.17\text{lm/W}$
Diffuse angle: @ (25%): 43.8deg @ (50%): 34.9deg @ (75%): 26.4deg @ (50%): 34.9deg
Diffuse angle: @ (25%): 43.8deg @ (50%): 34.9deg @ (75%): 26.5deg @ (50%): 34.9deg
 $I_{\text{max}}=1990\text{cd}$ (C=0.0deg,G=-1.0deg) CO-180Plane $I_{\text{max}}=1990\text{cd}$ (G=-1.0deg)
CO-180Plane $I_{0}=1988\text{cd}$



Intensity data:(deg , cd) C0-180

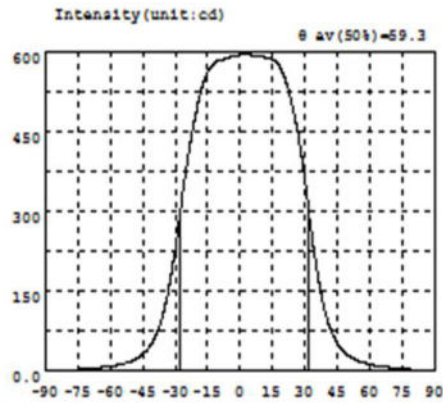
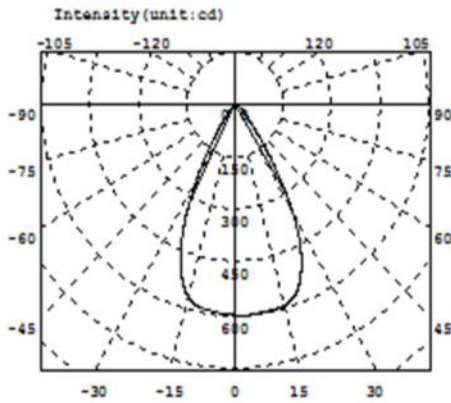
A	I	A	I	A	I	A	I	A	I	A	I
-90.0	0.1145	-58.5	10.40	-27.0	92.09	4.5	2293	36.0	40.21	67.5	6.936
-88.5	0.1271	-57.0	11.34	-25.5	108.4	6.0	2148	37.5	35.42	69.0	6.364
-87.0	0.1268	-55.5	12.29	-24.0	130.0	7.5	1972	39.0	31.37	70.5	5.898
-85.5	0.1393	-54.0	13.22	-22.5	159.3	9.0	1733	40.5	28.22	72.0	5.722
-84.0	0.1283	-52.5	14.09	-21.0	197.5	10.5	1476	42.0	25.40	73.5	5.341
-82.5	1.705	-51.0	15.02	-19.5	247.2	12.0	1202	43.5	22.99	75.0	4.768
-81.0	2.396	-49.5	16.25	-18.0	318.5	13.5	932.4	45.0	20.88	76.5	4.059
-79.5	2.741	-48.0	17.68	-16.5	427.6	15.0	690.9	46.5	19.18	78.0	3.445
-78.0	3.191	-46.5	19.18	-15.0	590.4	16.5	512.7	48.0	17.73	79.5	2.924
-76.5	3.819	-45.0	20.93	-13.5	789.7	18.0	371.2	49.5	16.35	81.0	2.501
-75.0	4.519	-43.5	22.92	-12.0	1027	19.5	276.7	51.0	15.11	82.5	2.052
-73.5	5.151	-42.0	25.32	-10.5	1299	21.0	214.6	52.5	14.09	84.0	1.563
-72.0	5.603	-40.5	28.18	-9.0	1575	22.5	172.4	54.0	13.14	85.5	1.002
-70.5	5.807	-39.0	31.45	-7.5	1804	24.0	140.4	55.5	12.26	87.0	0.5965
-69.0	6.175	-37.5	34.98	-6.0	2007	25.5	115.4	57.0	11.39	88.5	0.4605
-67.5	6.685	-36.0	39.15	-4.5	2187	27.0	95.85	58.5	10.66	90.0	0.3980
-66.0	7.226	-34.5	44.56	-3.0	2333	28.5	81.59	60.0	10.01		
-64.5	7.827	-33.0	51.09	-1.5	2413	30.0	69.96	61.5	9.397		
-63.0	8.474	-31.5	58.39	0.0	2452	31.5	60.21	63.0	8.785		
-61.5	9.086	-30.0	67.18	1.5	2452	33.0	52.05	64.5	8.192		
-60.0	9.709	-28.5	78.11	3.0	2393	34.5	45.75	66.0	7.538		

Electricity Parameter:

Current I: 0.1000A Power: 3.420W
 Voltage V: 34.20V PF: 0.000

Optical Parameter(Distance=2.559m):

Equivalent Luminous flux: $\Phi_{eff}= 498.4lm$ Efficiency: $Eff=145.75lm/W$
 Diffuse angle: $\theta(25\%): 30.3deg$ $\theta(50\%): 22.6deg$ $\theta(75\%): 15.4deg$ $\theta(50\%): 22.6deg$
 Diffuse angle: $\theta(25\%): 30.3deg$ $\theta(50\%): 22.6deg$ $\theta(75\%): 15.5deg$ $\theta(50\%): 22.6deg$
 $I_{max}=2459cd$ (C=0.0deg, G=1.0deg) C0-180Plane $I_{max}= 2459cd$ (C=1.0deg)
 C0-180Plane $I_0= 2452cd$



Intensity data: (deg , cd) C0-180

A	I	A	I	A	I	A	I	A	I	A	I
-90.0	0.4180	-58.5	10.70	-27.0	320.7	4.5	594.0	36.0	174.1	67.5	7.974
-88.5	0.4180	-57.0	11.78	-25.5	365.2	6.0	592.2	37.5	141.5	69.0	7.234
-87.0	0.4752	-55.5	12.99	-24.0	404.7	7.5	590.9	39.0	114.9	70.5	6.552
-85.5	0.6789	-54.0	14.40	-22.5	441.2	9.0	590.2	40.5	93.55	72.0	5.922
-84.0	0.8850	-52.5	16.09	-21.0	473.0	10.5	590.2	42.0	76.67	73.5	5.344
-82.5	1.214	-51.0	18.10	-19.5	501.2	12.0	589.0	43.5	63.15	75.0	4.771
-81.0	1.564	-49.5	20.55	-18.0	526.8	13.5	587.2	45.0	52.45	76.5	4.264
-79.5	1.916	-48.0	23.61	-16.5	546.4	15.0	585.2	46.5	44.03	78.0	3.776
-78.0	2.313	-46.5	27.36	-15.0	561.0	16.5	581.1	48.0	37.15	79.5	3.306
-76.5	2.732	-45.0	32.08	-13.5	571.5	18.0	572.8	49.5	31.54	81.0	2.856
-75.0	3.210	-43.5	38.02	-12.0	578.5	19.5	561.0	51.0	27.11	82.5	2.449
-73.5	3.697	-42.0	45.43	-10.5	582.6	21.0	545.1	52.5	23.49	84.0	2.107
-72.0	4.196	-40.5	54.83	-9.0	584.5	22.5	524.4	54.0	20.55	85.5	1.786
-70.5	4.731	-39.0	66.61	-7.5	585.8	24.0	498.5	55.5	18.09	87.0	1.435
-69.0	5.297	-37.5	81.85	-6.0	587.7	25.5	469.9	57.0	16.12	88.5	1.168
-67.5	5.888	-36.0	101.1	-4.5	589.3	27.0	437.2	58.5	14.47	90.0	0.9455
-66.0	6.515	-34.5	125.4	-3.0	590.6	28.5	399.1	60.0	13.03		
-64.5	7.228	-33.0	155.5	-1.5	592.0	30.0	354.7	61.5	11.78		
-63.0	7.979	-31.5	190.5	0.0	593.9	31.5	302.4	63.0	10.67		
-61.5	8.809	-30.0	229.8	1.5	594.9	33.0	256.1	64.5	9.711		
-60.0	9.698	-28.5	274.8	3.0	595.0	34.5	212.4	66.0	8.809		

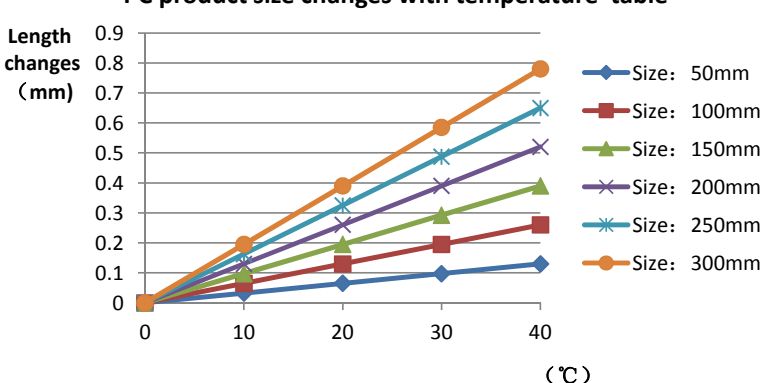
Electricity Parameter:

Current I: 0.1000A Power: 3.370W
Voltage V: 33.70V PF: 1.000

Optical Parameter (Distance=2.410m) :

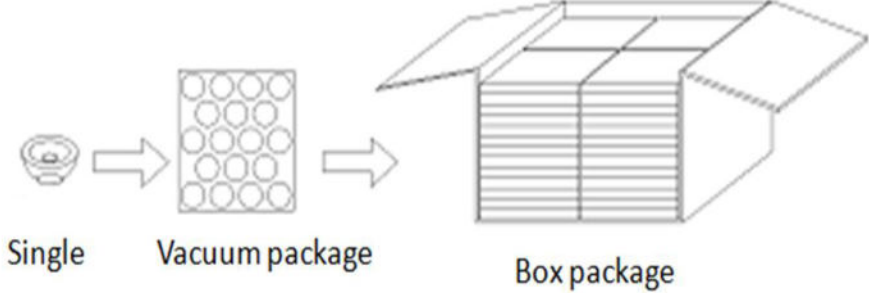
Equivalent Luminous flux: $\Phi_{eff}= 574.2lm$ Efficiency: $Eff=170.41lm/W$
Diffuse angle: @ (25%): 70.4deg @ (50%): 59.3deg @ (75%): 48.8deg @ (50%): 59.3deg
Diffuse angle: @ (25%): 70.4deg @ (50%): 59.3deg @ (75%): 48.9deg @ (50%): 59.3deg
Imax=595.1cd (C=0.0deg,G=2.0deg) C0-180Plane Imax= 595.1cd(G=2.0deg)
C0-180Plane IO= 593.9cd

		Standard size	Upper Size limit	Lower size limit	Test result1	Test result2	Test result3	Test result4	Judgment	Remarks																																										
1.Size	diameter	62			61.86	61.88	61.88			Test environment: In 20 °C -25 °C environment to achieve thermal equilibrium after the test.																																										
	thickness	1.5			1.45	1.46	1.53																																													
	height	18			18.07	18.07	18.06																																													
	Gate shear can not affect the appearance of the lamp																																																			
See attachment "Appearance Inspection Standards"																																																				
2.Appearance Quality	See attachment "Appearance Inspection Standards"	E	No burr	No burr	No burr	No burr	OK																																													
			No stains	No stains	No stains	No stains																																														
3.Material	PC				Color	Transparent			OK																																											
4.Optical index	Testing LED	D9																																																		
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	FWHM	See light distribution curve																																																		
	angle		13°	12.7°	13.2																																															
	K-value		9.66	10.37	9.86																																															
	Efficiency		86.30%	85.24%	84.91%																																															
Facula	See the signature sample																																																			
Comprehensive judgment	Qualified																																																			
Remarks:	<p>1、 Tool Number: V-Vernier Caliper 2D-Quadratic H-Height Gauge M-Tool Microscope P-Needle T-Thick Gauge R-Radius Gauge E-Visual.</p> <p>2、 Ambient temperature on the size of the product refer to the table on the right</p>																																																			
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	thickness	1.5	/	/	1.55	1.54	1.51	/	/																																											
	height	18	/	/	18.1	18.08	18.1	/	/																																											
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	FWHM	See light distribution curve																																																		
	angle	/	34.9°	35.2°	36.2°	/	/																																													
	K-value	/	2.70	2.78	2.56	/	/																																													
	Efficiency	/	88.90%	83.40%	87.48%	/	/																																													
Facula	See the signature sample																																																			
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Remarks:	<p>1、 Tool Number: V-Vernier Caliper 2D-Quadratic H-Height Gauge M-Tool Microscope P-Needle T-Thick Gauge R-Radius Gauge E-Visual.</p> <p>2、 Ambient temperature on the size of the product refer to the table on the right</p>																																																			
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1.Size	diameter	62		61.81	61.78	61.81			Test environment: In 20 °C -25 °C environment to achieve thermal equilibrium after the test.																																										
	thickness	1.5		1.47	1.54	1.51																																													
	height	18		18.18	18.15	18.22																																													
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	FWHM	See light distribution curve																																																	
	angle		22.6°	22.9°	24.2°																																														
	K-value		4.93	4.82	4.46																																														
	Efficiency		85.84%	85.73%	86.18%																																														
Facula	See the signature sample																																																		
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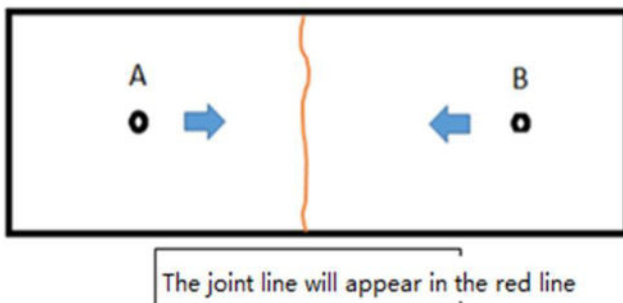
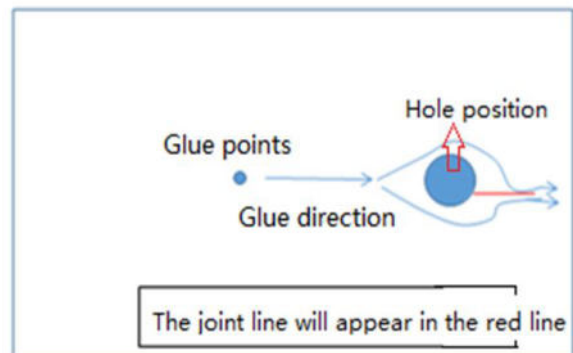
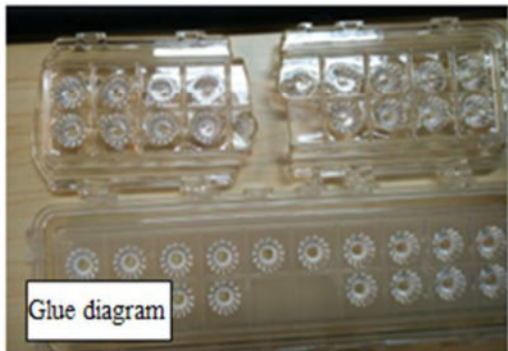
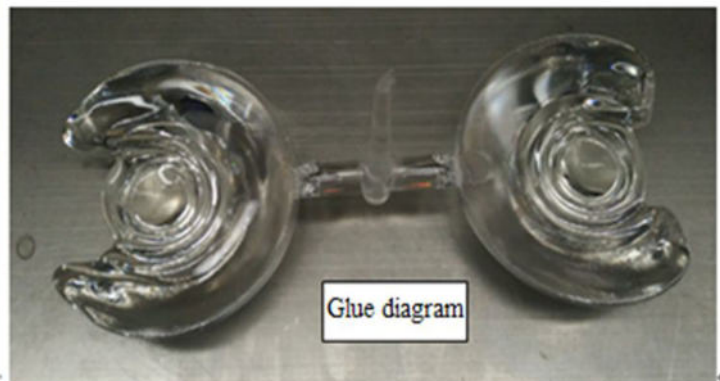
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1.Size	diameter	62		62.02	62.04	61.97			Test environment: In 20 °C -25 °C environment to achieve thermal equilibrium after the test.																																										
	thickness	1.5		1.58	1.6	1.57																																													
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	angle		58.9°	58.1°	57.4°	58.5°																																													
	K-value																																																		
	Efficiency		88.15%	88.24%	97.94%	85.44%																																													
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PN		HK-62@18-15-D9-20-1g-1		Product Name		HK 62@18-15°Lens	
Product material		PC		Customer			
Package diagram		 <p style="text-align: center;">Single Vacuum package Box package</p>					
Product packing		10	A/ Box	4	Box/Layer		
		12	Layer/Box	480	A/ Carton		
Packaging Materials	NO.	Part No	Part name	Size	Dosage	Unit	Remarks
	1	2.07.0019	Blister box	23cm*21cm	48	BAG	
	2	2.08.0001	PE film	30cm*30cm	48	PCS	
	3	2.06.0005	Reel label paper	6.2cm*8cm	48	PCS	
	4	2.06.0005	Box label paper	6.2cm*9.2cm	1	PCS	
	5	2.06.0003	big plate	46.8cm*42.8cm	13	PCS	
	6	2.06.0015	big flat carton	48cm*44cm*19cm	1	PCS	
Remarks	The loose packing is not subject to this specification. Customer's requirements shall prevail						

Special notice

When glue 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:

Syntner



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

1.1.1 Sampling standards, sampling plan and AQL

Test level : GB/T2828.1-2012 The first part is according to the acceptance quality limit (AQL) retrieval batch inspection sampling plan, general inspection level II 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	H		Depth	mm
W	Width	mm	DS		Distance	mm
S	Proportion	mm ²	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		
		Testing method	MI	MA	CR
Check the sample	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.	Sample comparison , visual			
	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;				

	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		√	
	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		√	
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;	Visual		√	
	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 $D \leq 0.3\text{mm}$ 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	√		
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	√		
Bad incision	1: Do not affect the product size, shall not penetrate the optical surface, the cut should be smooth;	Visual			√
	2: Laser cutting products, the optical surface burns shall not occur after the processing is completed. Beading must not affect product installation				
	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 $D \leq 1\text{ mm}$ and no more than 1 area within a 50x50 mm area	Visual		√	