

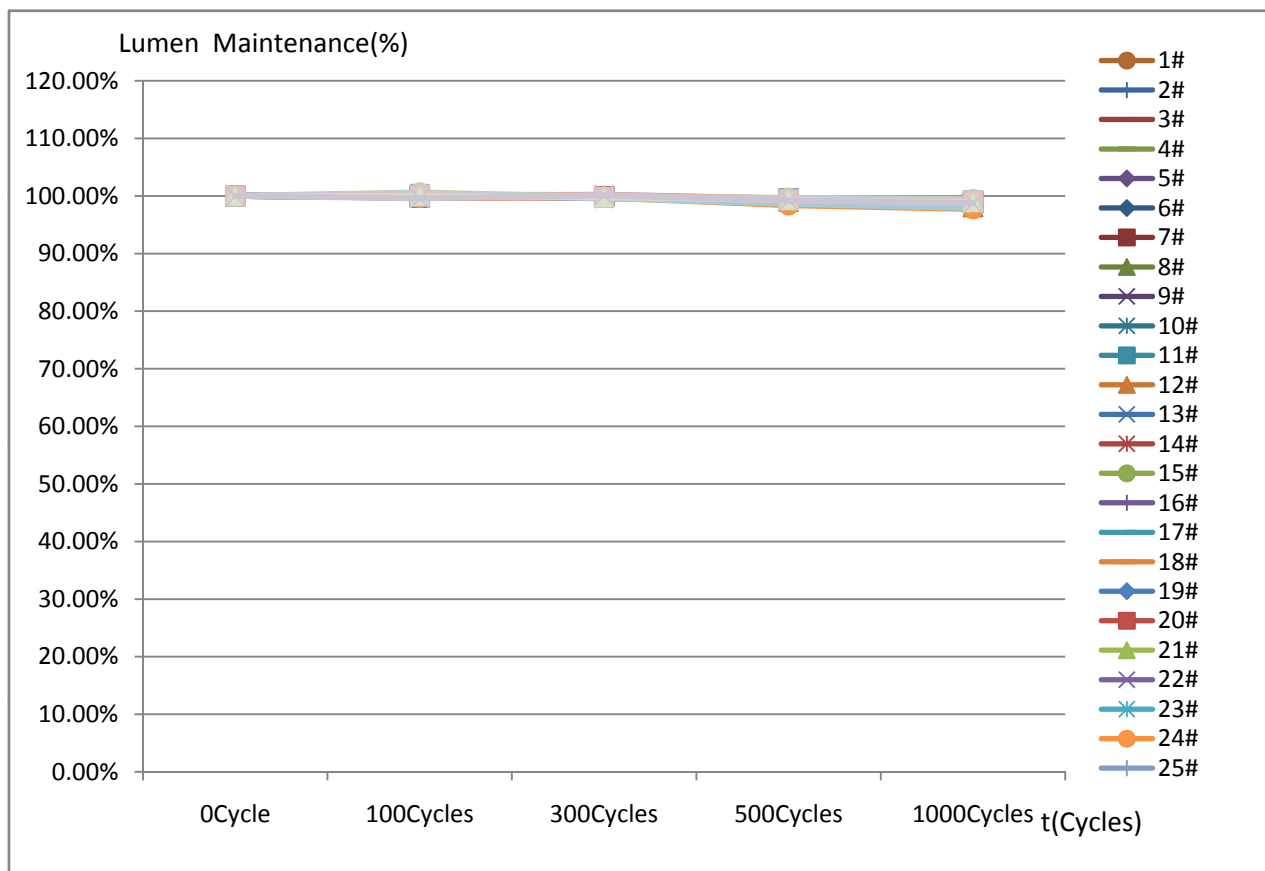
检测报告(内部)

报告编号:LAB0203007-21

第 1 页共 9 页

1. 客户名称:中小功率及EMC产品部/李祖俊
2. 样品编号:1#~40#
3. 产品规格/型号:RF-WMHI32DS-FF-J/SC17-200104010
4. 检测时间:2020.03.03~2020.03.28
5. 检测设备:(两箱式)高低温冲击试验箱(40023);LED阵列快速测试系统(G118471CA833115);
 FLUKE万用表(34700492WS);回流焊炉(N0842010);电热鼓风干燥箱(TST1005028)
 显微镜(MT 4X);DSX500光学电子显微镜(4B43960);
6. 环境条件:(22~28)℃,(30~70)%RH
7. 检测依据标准:环境试验 第二部分:试验方法 试验N:温度变化GB/T 2423.22-2012,
 LED的测量 CIE127:2007
8. 检测项目:冷热冲击试验
9. 检测条件:预处理:125℃烘烤2H,回流焊1次(参照SMT回流焊说明WI-R00-004文件)
 -40℃(15min)~100℃(15min),转换时间10s,试验时间1000Cycles,测试电流150mA,
 积分球2π测试,测试点:0cycles,100cycles,300cycles,500cycles,1000cycles,

Φ(1m)试验变化图



检测: 黄凯 2020.04.19

审核: 樊考辉 2020.04.19

批准: 张列祥 2020.04.20

检测报告(内部)

报告编号:LAB0203007-21

第 4 页共 9 页

序号	Φ (lm)					Lumen Maintenance (%)				
	0Cycle	100Cycles	300Cycles	500Cycles	1000Cycles	0Cycle	100Cycles	300Cycles	500Cycles	1000Cycles
1#	59.19	59.21	59.11	58.88	58.45	100.00%	100.03%	99.86%	99.48%	98.75%
2#	62.85	62.86	62.75	62.50	62.11	100.00%	100.02%	99.84%	99.44%	98.82%
3#	63.06	63.05	62.97	62.68	62.31	100.00%	99.98%	99.86%	99.40%	98.81%
4#	59.48	59.40	59.35	59.17	58.87	100.00%	99.87%	99.78%	99.48%	98.97%
5#	59.90	60.01	59.78	59.56	59.26	100.00%	100.18%	99.80%	99.43%	98.93%
6#	63.46	63.52	63.37	63.12	62.86	100.00%	100.09%	99.86%	99.46%	99.05%
7#	63.42	63.44	63.36	63.10	62.84	100.00%	100.03%	99.91%	99.50%	99.09%
8#	59.23	59.16	59.13	58.88	58.63	100.00%	99.88%	99.83%	99.41%	98.99%
9#	58.89	59.03	58.78	58.55	58.29	100.00%	100.24%	99.81%	99.42%	98.98%
10#	64.21	64.35	64.14	63.83	63.40	100.00%	100.22%	99.89%	99.41%	98.74%
11#	65.29	65.37	65.25	64.99	64.70	100.00%	100.12%	99.94%	99.54%	99.10%
12#	59.65	59.63	59.61	59.07	58.49	100.00%	99.97%	99.93%	99.03%	98.06%
13#	60.02	60.08	59.77	59.72	59.19	100.00%	100.10%	99.58%	99.50%	98.62%
14#	62.80	62.87	62.70	62.46	62.11	100.00%	100.11%	99.84%	99.46%	98.90%
15#	63.86	63.86	63.73	63.53	63.21	100.00%	100.00%	99.80%	99.48%	98.98%
16#	60.45	60.28	60.34	60.05	59.73	100.00%	99.72%	99.82%	99.34%	98.81%
17#	58.89	59.04	58.67	58.56	58.39	100.00%	100.25%	99.63%	99.44%	99.15%
18#	64.04	64.16	63.96	63.71	63.35	100.00%	100.19%	99.88%	99.48%	98.92%
19#	64.30	64.34	64.26	63.98	63.65	100.00%	100.06%	99.94%	99.50%	98.99%
20#	59.19	59.04	59.15	58.82	58.47	100.00%	99.75%	99.93%	99.37%	98.78%
21#	59.58	59.54	59.45	59.13	58.83	100.00%	99.93%	99.78%	99.24%	98.74%
22#	62.47	62.45	62.39	61.97	61.61	100.00%	99.97%	99.87%	99.20%	98.62%
23#	62.75	62.73	62.67	62.31	62.02	100.00%	99.97%	99.87%	99.30%	98.84%
24#	58.52	58.35	58.37	57.58	57.19	100.00%	99.71%	99.74%	98.39%	97.73%
25#	59.28	59.49	59.24	59.02	58.78	100.00%	100.35%	99.93%	99.56%	99.16%
26#	62.52	62.65	62.49	62.20	61.91	100.00%	100.21%	99.95%	99.49%	99.02%
27#	63.76	63.78	63.69	63.29	63.03	100.00%	100.03%	99.89%	99.26%	98.86%
28#	59.74	59.62	59.72	59.31	59.06	100.00%	99.80%	99.97%	99.28%	98.86%
29#	60.20	60.40	60.06	59.89	59.73	100.00%	100.33%	99.77%	99.49%	99.22%
30#	65.28	65.43	65.20	64.96	64.71	100.00%	100.23%	99.88%	99.51%	99.13%
31#	63.97	64.12	64.08	63.70	63.43	100.00%	100.23%	100.17%	99.58%	99.16%
32#	59.47	59.47	59.61	59.21	58.96	100.00%	100.00%	100.24%	99.56%	99.14%
33#	59.16	59.53	59.07	58.98	58.85	100.00%	100.63%	99.85%	99.70%	99.48%
34#	64.13	64.25	64.03	63.78	63.58	100.00%	100.19%	99.84%	99.45%	99.14%
35#	64.07	64.16	63.85	63.18	62.72	100.00%	100.14%	99.66%	98.61%	97.89%
36#	59.25	59.09	59.34	58.84	58.60	100.00%	99.73%	100.15%	99.31%	98.90%
37#	59.04	59.35	58.82	58.80	58.65	100.00%	100.53%	99.63%	99.59%	99.34%
38#	63.82	63.93	63.71	63.41	63.27	100.00%	100.17%	99.83%	99.36%	99.14%
39#	63.02	63.01	62.88	62.58	62.36	100.00%	99.98%	99.78%	99.30%	98.95%
40#	59.22	58.98	59.27	58.75	58.48	100.00%	99.59%	100.08%	99.21%	98.75%
Max	65.29	65.43	65.25	64.99	64.71	100.00%	100.63%	100.24%	99.70%	99.48%
Min	58.52	58.35	58.37	57.58	57.19	100.00%	99.59%	99.58%	98.39%	97.73%
Avg	61.54	61.58	61.45	61.15	60.85	100.00%	100.06%	99.87%	99.37%	98.89%

检测报告(内部)

报告编号:LAB0203007-21

第 5 页共 9 页

序号	VF(V)					△VF			
	0Cycle	100Cycles	300Cycles	500Cycles	1000Cycles	100Cycles	300Cycles	500Cycles	1000Cycles
1#	3.280	3.239	3.247	3.246	3.235	-0.041	-0.033	-0.034	-0.045
2#	3.249	3.248	3.250	3.288	3.244	-0.001	0.001	0.039	-0.005
3#	3.269	3.268	3.266	3.308	3.264	-0.001	-0.003	0.039	-0.005
4#	3.241	3.243	3.246	3.239	3.243	0.002	0.005	-0.002	0.002
5#	3.249	3.249	3.272	3.246	3.249	0.000	0.023	-0.003	0.000
6#	3.238	3.238	3.256	3.235	3.235	0.000	0.018	-0.003	-0.003
7#	3.277	3.277	3.276	3.274	3.274	0.000	-0.001	-0.003	-0.003
8#	3.255	3.255	3.253	3.250	3.250	0.000	-0.002	-0.005	-0.005
9#	3.238	3.238	3.238	3.234	3.235	0.000	0.000	-0.004	-0.003
10#	3.236	3.238	3.237	3.232	3.232	0.002	0.001	-0.004	-0.004
11#	3.258	3.260	3.258	3.255	3.253	0.002	0.000	-0.003	-0.005
12#	3.309	3.309	3.309	3.307	3.309	0.000	0.000	-0.002	0.000
13#	3.293	3.293	3.292	3.289	3.292	0.000	-0.001	-0.004	-0.001
14#	3.286	3.285	3.284	3.281	3.281	-0.001	-0.002	-0.005	-0.005
15#	3.253	3.252	3.251	3.249	3.259	-0.001	-0.002	-0.004	0.006
16#	3.268	3.266	3.264	3.262	3.323	-0.002	-0.004	-0.006	0.055
17#	3.228	3.228	3.227	3.226	3.272	0.000	-0.001	-0.002	0.044
18#	3.248	3.247	3.246	3.244	3.244	-0.001	-0.002	-0.004	-0.004
19#	3.266	3.266	3.265	3.263	3.263	0.000	-0.001	-0.003	-0.003
20#	3.237	3.237	3.236	3.234	3.233	0.000	-0.001	-0.003	-0.004
21#	3.250	3.250	3.250	3.248	3.277	0.000	0.000	-0.002	0.027
22#	3.256	3.255	3.255	3.252	3.282	-0.001	-0.001	-0.004	0.026
23#	3.274	3.274	3.273	3.271	3.271	0.000	-0.001	-0.003	-0.003
24#	3.245	3.245	3.244	3.241	3.241	0.000	-0.001	-0.004	-0.004
25#	3.236	3.235	3.234	3.231	3.232	-0.001	-0.002	-0.005	-0.004
26#	3.252	3.251	3.250	3.247	3.248	-0.001	-0.002	-0.005	-0.004
27#	3.290	3.289	3.289	3.284	3.286	-0.001	-0.001	-0.006	-0.004
28#	3.253	3.253	3.252	3.248	3.249	0.000	-0.001	-0.005	-0.004
29#	3.248	3.248	3.247	3.244	3.245	0.000	-0.001	-0.004	-0.003
30#	3.250	3.250	3.249	3.246	3.247	0.000	-0.001	-0.004	-0.003
31#	3.272	3.273	3.272	3.269	3.269	0.001	0.000	-0.003	-0.003
32#	3.287	3.289	3.289	3.286	3.289	0.002	0.002	-0.001	0.002
33#	3.308	3.307	3.308	3.305	3.307	-0.001	0.000	-0.003	-0.001
34#	3.250	3.249	3.248	3.246	3.246	-0.001	-0.002	-0.004	-0.004
35#	3.256	3.255	3.255	3.250	3.251	-0.001	-0.001	-0.006	-0.005
36#	3.262	3.262	3.262	3.258	3.258	0.000	0.000	-0.004	-0.004
37#	3.234	3.233	3.233	3.229	3.229	-0.001	-0.001	-0.005	-0.005
38#	3.372	3.246	3.245	3.241	3.244	-0.126	-0.127	-0.131	-0.128
39#	3.373	3.235	3.235	3.232	3.233	-0.138	-0.138	-0.141	-0.140
40#	3.234	3.234	3.236	3.232	3.231	0.000	0.002	-0.002	-0.003

检测报告(内部)

报告编号:LAB0203007-21

第 6 页共 9 页

序号	IF(mA)				
	0Cycle	100Cycles	300Cycles	500Cycles	1000Cycles
1#	149.98	149.97	149.95	149.97	149.95
2#	149.97	149.95	149.97	149.95	149.97
3#	149.97	149.95	149.97	149.97	149.97
4#	149.97	149.95	149.97	149.95	149.97
5#	149.97	149.95	149.97	149.95	149.97
6#	149.97	149.95	149.97	149.95	149.97
7#	149.97	149.95	149.97	149.97	149.97
8#	149.97	149.95	149.97	149.97	149.94
9#	149.97	149.95	149.97	149.95	149.95
10#	149.97	149.95	149.95	149.95	149.97
11#	149.97	149.95	149.97	149.95	149.97
12#	149.97	149.97	149.97	149.95	149.97
13#	149.97	149.95	149.97	149.97	149.97
14#	149.97	149.95	149.97	149.97	149.97
15#	149.97	149.95	149.97	149.95	149.95
16#	149.97	149.95	149.97	149.95	149.95
17#	149.97	149.97	149.97	149.95	149.95
18#	149.97	149.95	149.97	149.95	149.97
19#	149.97	149.97	149.97	149.97	149.97
20#	149.97	149.95	149.97	149.95	149.97
21#	149.97	149.95	149.95	149.97	149.95
22#	149.97	149.95	149.97	149.95	149.97
23#	149.97	149.97	149.95	149.95	149.97
24#	149.97	149.95	149.97	149.97	149.97
25#	149.97	149.95	149.97	149.95	149.95
26#	149.97	149.97	149.97	149.95	149.97
27#	149.97	149.97	149.97	149.95	149.97
28#	149.97	149.97	149.97	149.95	149.97
29#	149.97	149.97	149.95	149.97	149.97
30#	149.97	149.95	149.95	149.97	149.98
31#	149.97	149.95	149.95	149.95	149.98
32#	149.97	149.97	149.95	149.95	149.97
33#	149.95	149.97	149.97	149.97	149.97
34#	149.97	149.97	149.97	149.95	149.97
35#	149.97	149.97	149.95	149.95	149.97
36#	149.97	149.97	149.97	149.95	149.95
37#	149.97	149.97	149.97	149.95	149.97
38#	149.97	149.97	149.97	149.97	149.97
39#	149.97	149.97	149.97	149.95	149.98
40#	149.97	149.97	149.97	149.95	149.97

检测报告(内部)

报告编号:LAB0203007-21

第 7 页共 9 页

序号	x					△x			
	0Cycle	100Cycles	300Cycles	500Cycles	1000Cycles	100Cycles	300Cycles	500Cycles	1000Cycles
1#	0.3292	0.3296	0.3291	0.3292	0.3288	0.0004	-0.0001	0.0000	-0.0004
2#	0.3278	0.3273	0.3274	0.3271	0.3272	-0.0005	-0.0004	-0.0007	-0.0006
3#	0.3265	0.3265	0.3263	0.3260	0.3259	0.0000	-0.0002	-0.0005	-0.0006
4#	0.3266	0.3266	0.3263	0.3261	0.3258	0.0000	-0.0003	-0.0005	-0.0008
5#	0.3272	0.3274	0.3270	0.3269	0.3269	0.0002	-0.0002	-0.0003	-0.0003
6#	0.3274	0.3276	0.3274	0.3272	0.3272	0.0002	0.0000	-0.0002	-0.0002
7#	0.3242	0.3243	0.3240	0.3239	0.3238	0.0001	-0.0002	-0.0003	-0.0004
8#	0.3268	0.3269	0.3267	0.3265	0.3264	0.0001	-0.0001	-0.0003	-0.0004
9#	0.3271	0.3271	0.3269	0.3267	0.3266	0.0000	-0.0002	-0.0004	-0.0005
10#	0.3266	0.3267	0.3263	0.3259	0.3256	0.0001	-0.0003	-0.0007	-0.0010
11#	0.3278	0.3280	0.3278	0.3276	0.3275	0.0002	0.0000	-0.0002	-0.0003
12#	0.3269	0.3270	0.3266	0.3260	0.3246	0.0001	-0.0003	-0.0009	-0.0023
13#	0.3271	0.3270	0.3267	0.3266	0.3252	-0.0001	-0.0004	-0.0005	-0.0019
14#	0.3283	0.3284	0.3282	0.3279	0.3275	0.0001	-0.0001	-0.0004	-0.0008
15#	0.3278	0.3278	0.3275	0.3274	0.3273	0.0000	-0.0003	-0.0004	-0.0005
16#	0.3271	0.3270	0.3268	0.3266	0.3265	-0.0001	-0.0003	-0.0005	-0.0006
17#	0.3259	0.3259	0.3256	0.3254	0.3252	0.0000	-0.0003	-0.0005	-0.0007
18#	0.3288	0.3289	0.3286	0.3283	0.3280	0.0001	-0.0002	-0.0005	-0.0008
19#	0.3253	0.3255	0.3253	0.3251	0.3249	0.0002	0.0000	-0.0002	-0.0004
20#	0.3273	0.3273	0.3270	0.3269	0.3269	0.0000	-0.0003	-0.0004	-0.0004
21#	0.3259	0.3261	0.3257	0.3252	0.3255	0.0002	-0.0002	-0.0007	-0.0004
22#	0.3286	0.3287	0.3285	0.3279	0.3281	0.0001	-0.0001	-0.0007	-0.0005
23#	0.3288	0.3288	0.3287	0.3282	0.3285	0.0000	-0.0001	-0.0006	-0.0003
24#	0.3272	0.3273	0.3269	0.3255	0.3247	0.0001	-0.0003	-0.0017	-0.0025
25#	0.3271	0.3272	0.3269	0.3264	0.3266	0.0001	-0.0002	-0.0007	-0.0005
26#	0.3289	0.3292	0.3289	0.3283	0.3285	0.0003	0.0000	-0.0006	-0.0004
27#	0.3276	0.3278	0.3276	0.3271	0.3272	0.0002	0.0000	-0.0005	-0.0004
28#	0.3252	0.3254	0.3250	0.3247	0.3248	0.0002	-0.0002	-0.0005	-0.0004
29#	0.3294	0.3295	0.3293	0.3287	0.3290	0.0001	-0.0001	-0.0007	-0.0004
30#	0.3275	0.3277	0.3274	0.3269	0.3271	0.0002	-0.0001	-0.0006	-0.0004
31#	0.3264	0.3267	0.3264	0.3258	0.3258	0.0003	0.0000	-0.0006	-0.0006
32#	0.3270	0.3272	0.3270	0.3266	0.3266	0.0002	0.0000	-0.0004	-0.0004
33#	0.3279	0.3281	0.3278	0.3274	0.3278	0.0002	-0.0001	-0.0005	-0.0001
34#	0.3252	0.3255	0.3251	0.3249	0.3251	0.0003	-0.0001	-0.0003	-0.0001
35#	0.3289	0.3290	0.3283	0.3269	0.3262	0.0001	-0.0006	-0.0020	-0.0027
36#	0.3260	0.3262	0.3261	0.3256	0.3259	0.0002	0.0001	-0.0004	-0.0001
37#	0.3259	0.3259	0.3256	0.3253	0.3256	0.0000	-0.0003	-0.0006	-0.0003
38#	0.3254	0.3256	0.3253	0.3248	0.3251	0.0002	-0.0001	-0.0006	-0.0003
39#	0.3231	0.3231	0.3228	0.3223	0.3226	0.0000	-0.0003	-0.0008	-0.0005
40#	0.3264	0.3266	0.3263	0.3258	0.3260	0.0002	-0.0001	-0.0006	-0.0004

检测报告(内部)

报告编号:LAB0203007-21

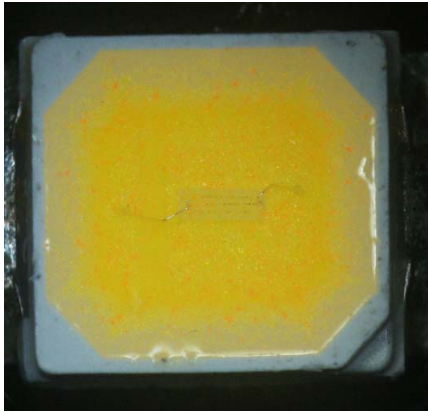
第 8 页共 9 页

序号	y					Δy			
	0Cycle	100Cycles	300Cycles	500Cycles	1000Cycles	100Cycles	300Cycles	500Cycles	1000Cycles
1#	0.3457	0.3462	0.3453	0.3456	0.3450	0.0005	-0.0004	-0.0001	-0.0007
2#	0.3423	0.3418	0.3419	0.3415	0.3413	-0.0005	-0.0004	-0.0008	-0.0010
3#	0.3434	0.3433	0.3430	0.3425	0.3420	-0.0001	-0.0004	-0.0009	-0.0014
4#	0.3437	0.3435	0.3431	0.3426	0.3419	-0.0002	-0.0006	-0.0011	-0.0018
5#	0.3444	0.3445	0.3440	0.3437	0.3435	0.0001	-0.0004	-0.0007	-0.0009
6#	0.3420	0.3423	0.3421	0.3416	0.3416	0.0003	0.0001	-0.0004	-0.0004
7#	0.3404	0.3404	0.3401	0.3399	0.3395	0.0000	-0.0003	-0.0005	-0.0009
8#	0.3427	0.3428	0.3425	0.3423	0.3420	0.0001	-0.0002	-0.0004	-0.0007
9#	0.3421	0.3422	0.3418	0.3413	0.3410	0.0001	-0.0003	-0.0008	-0.0011
10#	0.3433	0.3437	0.3432	0.3423	0.3415	0.0004	-0.0001	-0.0010	-0.0018
11#	0.3465	0.3469	0.3464	0.3460	0.3458	0.0004	-0.0001	-0.0005	-0.0007
12#	0.3406	0.3404	0.3397	0.3380	0.3357	-0.0002	-0.0009	-0.0026	-0.0049
13#	0.3439	0.3436	0.3432	0.3429	0.3412	-0.0003	-0.0007	-0.0010	-0.0027
14#	0.3420	0.3421	0.3418	0.3412	0.3405	0.0001	-0.0002	-0.0008	-0.0015
15#	0.3462	0.3460	0.3456	0.3454	0.3451	-0.0002	-0.0006	-0.0008	-0.0011
16#	0.3451	0.3448	0.3445	0.3441	0.3437	-0.0003	-0.0006	-0.0010	-0.0014
17#	0.3460	0.3460	0.3453	0.3450	0.3446	0.0000	-0.0007	-0.0010	-0.0014
18#	0.3468	0.3470	0.3465	0.3457	0.3452	0.0002	-0.0003	-0.0011	-0.0016
19#	0.3418	0.3419	0.3416	0.3412	0.3407	0.0001	-0.0002	-0.0006	-0.0011
20#	0.3418	0.3418	0.3415	0.3411	0.3410	0.0000	-0.0003	-0.0007	-0.0008
21#	0.3435	0.3436	0.3432	0.3425	0.3426	0.0001	-0.0003	-0.0010	-0.0009
22#	0.3388	0.3389	0.3388	0.3377	0.3378	0.0001	0.0000	-0.0011	-0.0010
23#	0.3420	0.3421	0.3419	0.3409	0.3413	0.0001	-0.0001	-0.0011	-0.0007
24#	0.3406	0.3405	0.3402	0.3373	0.3359	-0.0001	-0.0004	-0.0033	-0.0047
25#	0.3421	0.3423	0.3417	0.3408	0.3408	0.0002	-0.0004	-0.0013	-0.0013
26#	0.3427	0.3432	0.3430	0.3420	0.3422	0.0005	0.0003	-0.0007	-0.0005
27#	0.3442	0.3443	0.3439	0.3431	0.3431	0.0001	-0.0003	-0.0011	-0.0011
28#	0.3422	0.3423	0.3419	0.3411	0.3410	0.0001	-0.0003	-0.0011	-0.0012
29#	0.3450	0.3451	0.3447	0.3440	0.3441	0.0001	-0.0003	-0.0010	-0.0009
30#	0.3474	0.3477	0.3471	0.3463	0.3462	0.0003	-0.0003	-0.0011	-0.0012
31#	0.3402	0.3404	0.3401	0.3390	0.3387	0.0002	-0.0001	-0.0012	-0.0015
32#	0.3392	0.3394	0.3389	0.3383	0.3383	0.0002	-0.0003	-0.0009	-0.0009
33#	0.3431	0.3434	0.3430	0.3422	0.3426	0.0003	-0.0001	-0.0009	-0.0005
34#	0.3433	0.3436	0.3431	0.3426	0.3428	0.0003	-0.0002	-0.0007	-0.0005
35#	0.3427	0.3428	0.3413	0.3388	0.3374	0.0001	-0.0014	-0.0039	-0.0053
36#	0.3439	0.3441	0.3441	0.3431	0.3434	0.0002	0.0002	-0.0008	-0.0005
37#	0.3446	0.3445	0.3442	0.3434	0.3436	-0.0001	-0.0004	-0.0012	-0.0010
38#	0.3441	0.3444	0.3440	0.3431	0.3433	0.0003	-0.0001	-0.0010	-0.0008
39#	0.3366	0.3368	0.3362	0.3356	0.3356	0.0002	-0.0004	-0.0010	-0.0010
40#	0.3415	0.3416	0.3412	0.3404	0.3402	0.0001	-0.0003	-0.0011	-0.0013

单颗LED判定基准:

项目	min	max
Lumen Maintenance (%)	90%	110%
ΔVF	-0.5	0.5
Δx	-0.01	0.01
Δy	-0.015	0.015
外观无胶裂, 变黄, 发黑等现象		

经过1000cycles冷热冲击试验, 全部样品各项参数均在标准范围内。
外观描述: 样品外观正常, 如下图所示



试验结果: 合格

备注: 检测结果只对本次样品负责;

.....结束.....