

报告编号: Report No.	LAB2110565-02
报告版本: Report Version	V1
报告总页数: Total Pages	6

深圳市瑞丰光电子股份有限公司实验中心  
SHENZHEN REFOND OPTOELECTRONICS CO., LTD. LAB CENTER

## 检测报告 Testing Report

样品名称  
Product No. RF-A1F30-W1DD-B1

委托单位:  
Application 深圳市瑞丰光电子股份有限公司\_车用LED事业部\_工程部\_NPI课

检测项目:  
Testing Item 高温高湿老化

# 检测报告

## Testing Report

样品品名 Product No.	<u>RF-A1F30-W1DD-B1</u>	样品批次 Batch No.	<u>SC17-210800043</u>
样品外观 Sample Status	<u>外观正常</u>	样品数量 Samples Quantity	<u>10</u>
委托人 Principal	<u>李先辉</u>	联系电话 Tel	<u>15755057052</u>
是否有分包 Subcontract or not	<u>否</u>	样品接收日期 Samples Received Date	<u>2021/10/30</u>

检测依据标准 环境试验 第2部分：试验方法 试验Cab：恒定湿热试验 GB/T 2423.3-2016，  
 Test Specification: LED的测量 CIE127：2007

检测结论  [ V ]通过  [ ]不做判定  [ ]未通过  
 Test Conclusion: **Pass** **NA** **Fail**

编制 刘在权 职务 检测员 日期 2021/12/30  
 Prepared By Title Date

批准 刘琪 职务 授权签字人 日期 2021/12/31  
 Approved By Title Date

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# 检测报告 Testing Report

1. 检测项目/Test Item: 高温高湿老化

2. 样品编号/Sample No.: 1#-10#

3. 检测人/Operator: 刘斌

4. 检测日期/Test Date: 2021/11/1-2021/12/21

5. 环境条件/Lab Climate Conditions: (22~28) °C, (30~70) %RH

6. 检测条件/Test Conditions:

预处理: 125°C 烘烤24H, 85°C/60%RH吸湿168H, 回流焊3次 (参照SMT回流焊说明WI-R00-004文件) 85°C/85%RH, 老化时间1000H, 老化电流120mA, 测试电流120mA, 积分球2π 测试, 测试点: 0h, 168h, 336h, 504h, 1000h

7. 判定规则/Acceptance Criterion:

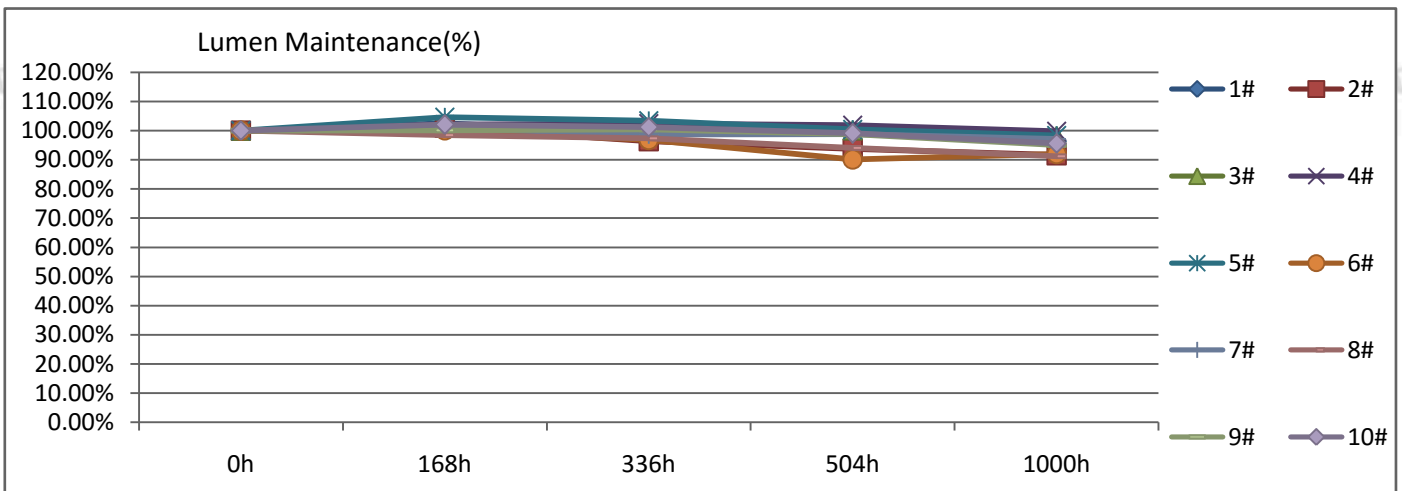
光衰20%以内, 电压±0.2V, X/Y: ±0.02, 无死灯, 接受底部轻微剥离

8. 检测设备/Test Equipment:

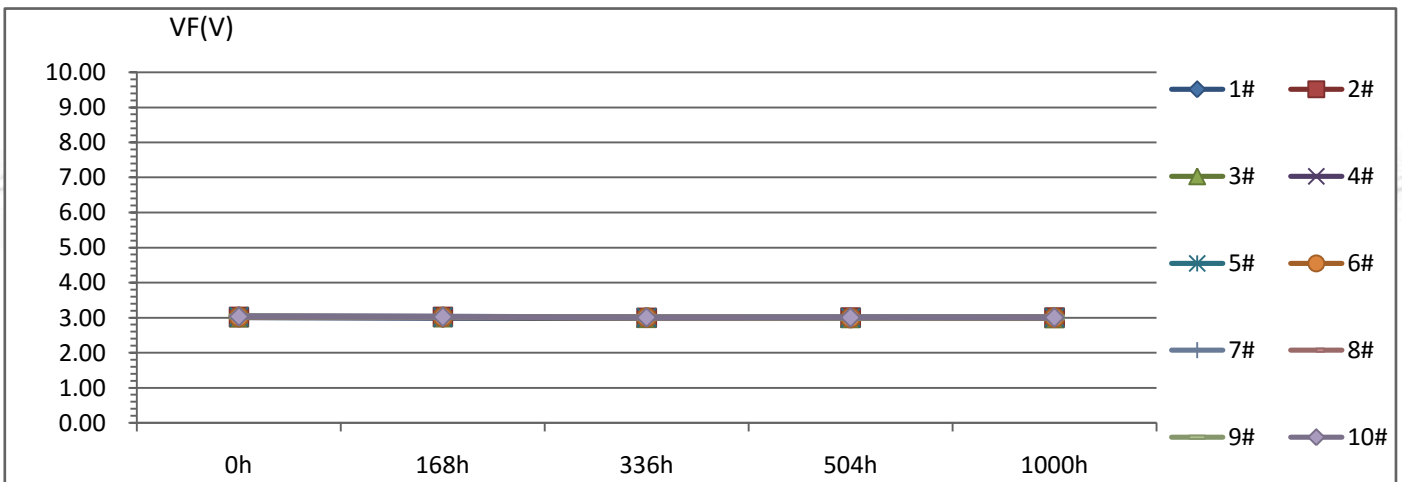
温度湿度试验箱 (191114003); 恒温恒湿试验箱 (191118003); 宏纳测试机 (/); 数字万用表 (191314001); 电热鼓风干燥箱 (191111003); 回流焊炉 (191121031); 显微镜 (191121031); LED程控电源 (191421035)

9. 测试数据/Test data:

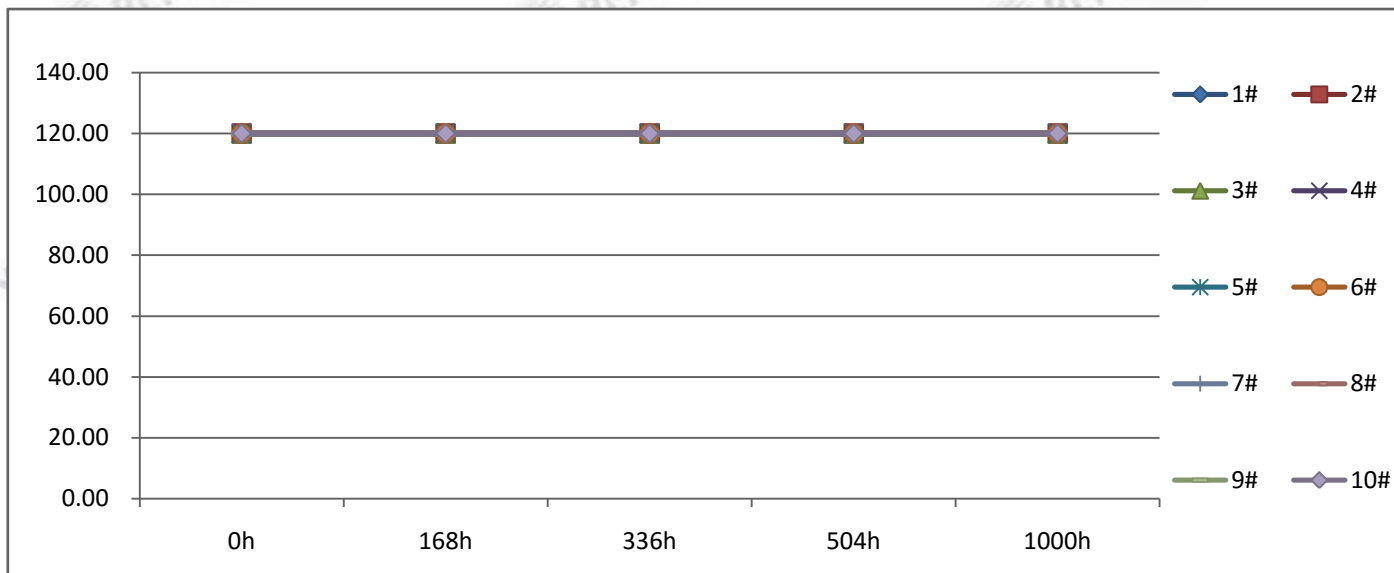
Φ (lm) 试验变化图



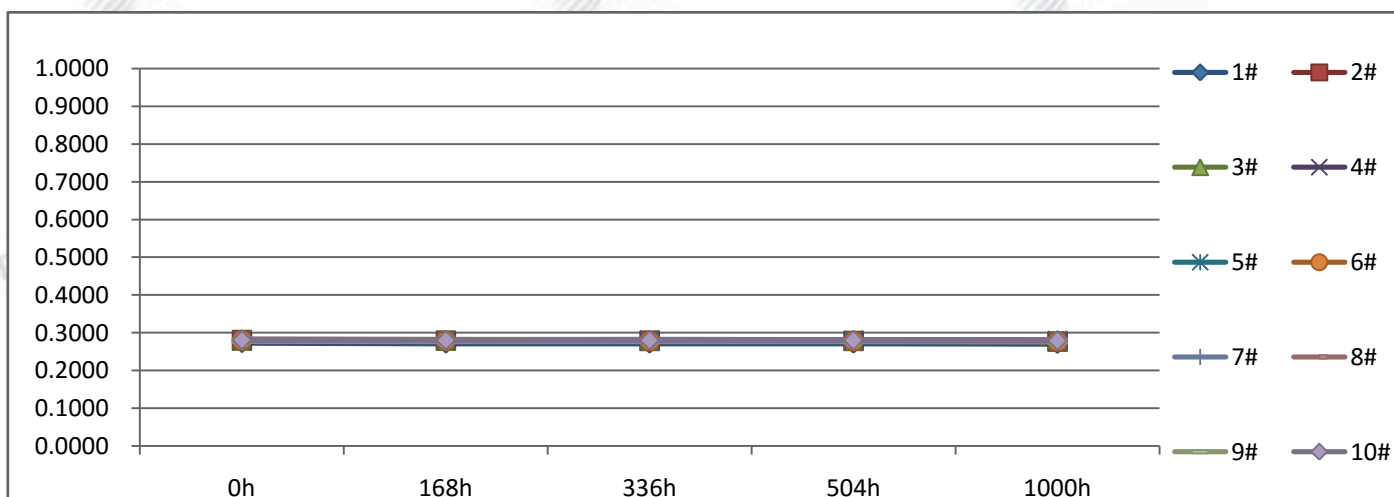
VF (V) 试验变化图



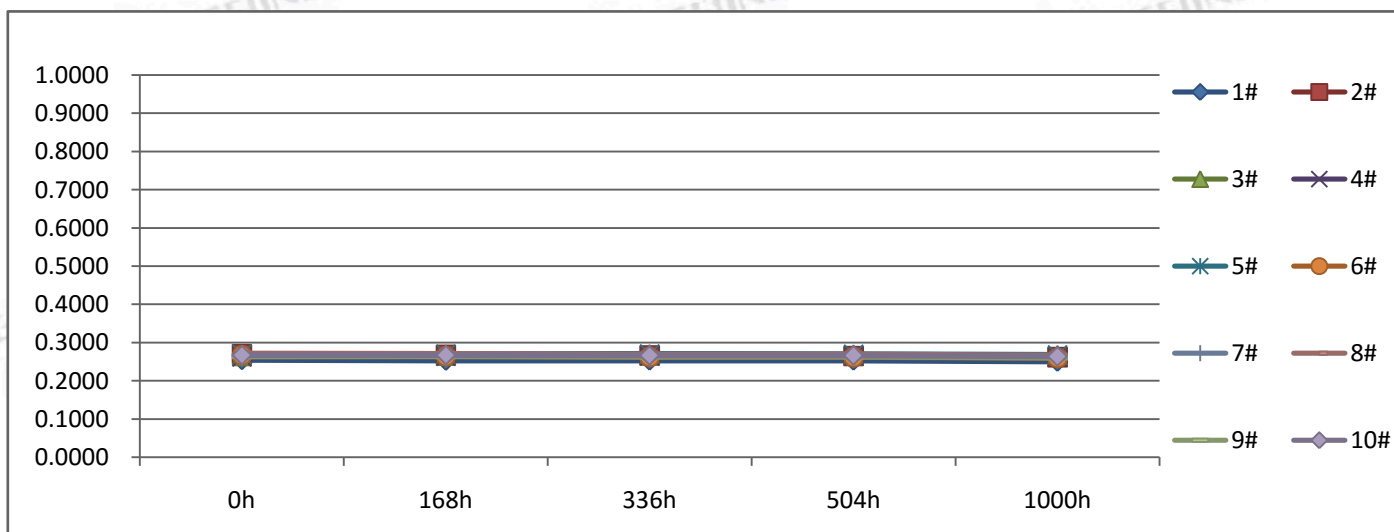
实测电流变化图



x试验变化图



y试验变化图



序号	Φ (lm)					Lumen Maintenance (%)				
	0h	168h	336h	504h	1000h	0h	168h	336h	504h	1000h
1#	44.34	45.45	43.94	44.15	42.73	100.00%	102.50%	99.10%	99.57%	96.37%
2#	43.04	43.45	41.47	40.33	39.42	100.00%	100.95%	96.35%	93.70%	91.59%
3#	44.11	44.88	44.64	44.16	43.28	100.00%	101.75%	101.20%	100.11%	98.12%
4#	40.80	41.62	41.77	41.57	40.71	100.00%	102.01%	102.38%	101.89%	99.78%
5#	44.00	46.02	45.49	44.17	43.28	100.00%	104.59%	103.39%	100.39%	98.36%
6#	41.76	41.80	40.44	37.63	38.40	100.00%	100.10%	96.84%	90.11%	91.95%
7#	44.49	44.82	43.89	43.96	43.23	100.00%	100.74%	98.65%	98.81%	97.17%
8#	42.55	41.90	41.40	40.02	38.82	100.00%	98.47%	97.30%	94.05%	91.23%
9#	45.54	45.59	45.75	44.97	43.30	100.00%	100.11%	100.46%	98.75%	95.08%
10#	43.98	44.87	44.50	43.60	42.03	100.00%	102.02%	101.18%	99.14%	95.57%
Min	40.80	41.62	40.44	37.63	38.40	100.00%	98.47%	96.35%	90.11%	91.23%
Max	45.54	46.02	45.75	44.97	43.30	100.00%	104.59%	103.39%	101.89%	99.78%
Avg	43.46	44.04	43.33	42.46	41.52	100.00%	101.32%	99.68%	97.65%	95.52%
Spec	NA					80%~120%				

序号	VF (V)					ΔVF (V)			
	0h	168h	336h	504h	1000h	168h	336h	504h	1000h
1#	3.01	3.00	2.98	2.99	2.99	-0.01	-0.03	-0.02	-0.02
2#	3.02	3.02	3.00	3.00	3.01	0.00	-0.02	-0.02	-0.01
3#	3.01	3.01	3.00	2.99	2.99	0.00	-0.02	-0.02	-0.02
4#	3.02	3.01	3.00	3.00	3.00	-0.01	-0.02	-0.02	-0.02
5#	3.03	3.02	3.01	3.00	3.01	-0.01	-0.02	-0.03	-0.03
6#	3.02	3.02	3.00	2.99	3.00	0.00	-0.02	-0.03	-0.02
7#	3.04	3.03	3.01	3.01	3.01	-0.01	-0.03	-0.03	-0.03
8#	3.03	3.02	3.01	3.00	3.00	-0.01	-0.03	-0.04	-0.03
9#	3.03	3.02	3.00	3.00	3.01	-0.02	-0.03	-0.04	-0.03
10#	3.03	3.02	3.01	3.00	3.00	-0.01	-0.02	-0.03	-0.03
Min	3.01	3.00	2.98	2.99	2.99	-0.02	-0.03	-0.04	-0.03
Max	3.04	3.03	3.01	3.01	3.01	0.00	-0.02	-0.02	-0.01
Avg	3.02	3.02	3.00	3.00	3.00	-0.01	-0.02	-0.03	-0.02
Spec	NA					-0.2~0.2			

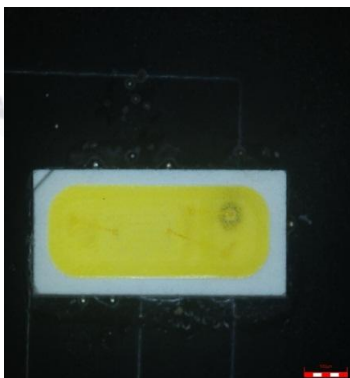
序号	IF (mA)				
	0h	168h	336h	504h	1000h
1#	120.00	120.00	120.00	120.00	120.00
2#	120.00	120.00	120.00	120.00	120.00
3#	120.00	120.00	120.00	120.00	120.00
4#	120.00	120.00	120.00	120.00	120.00
5#	120.00	120.00	120.00	120.00	120.00
6#	120.00	120.00	120.00	120.00	120.00
7#	120.00	120.00	120.00	120.00	120.00
8#	120.00	120.00	120.00	120.00	120.00
9#	120.00	120.00	120.00	120.00	120.00
10#	120.00	120.00	120.00	120.00	120.00
Min	120.00	120.00	120.00	120.00	120.00
Max	120.00	120.00	120.00	120.00	120.00
Avg	120.00	120.00	120.00	120.00	120.00
Spec	NA				

序号	x					Δx			
	0h	168h	336h	504h	1000h	168h	336h	504h	1000h
1#	0.2732	0.2716	0.2718	0.2720	0.2708	-0.0016	-0.0014	-0.0012	-0.0024
2#	0.2809	0.2796	0.2791	0.2785	0.2770	-0.0013	-0.0018	-0.0024	-0.0039
3#	0.2798	0.2794	0.2800	0.2800	0.2800	-0.0004	0.0002	0.0002	0.0002
4#	0.2788	0.2786	0.2791	0.2794	0.2787	-0.0002	0.0003	0.0006	-0.0001
5#	0.2818	0.2812	0.2816	0.2814	0.2805	-0.0006	-0.0002	-0.0004	-0.0013
6#	0.2807	0.2795	0.2788	0.2787	0.2775	-0.0012	-0.0019	-0.0020	-0.0032
7#	0.2791	0.2783	0.2787	0.2790	0.2788	-0.0008	-0.0004	-0.0001	-0.0003
8#	0.2828	0.2818	0.2814	0.2813	0.2802	-0.0010	-0.0014	-0.0015	-0.0026
9#	0.2784	0.2778	0.2778	0.2777	0.2767	-0.0006	-0.0006	-0.0007	-0.0017
10#	0.2812	0.2804	0.2803	0.2803	0.2793	-0.0008	-0.0009	-0.0009	-0.0019
Min	0.2732	0.2716	0.2718	0.2720	0.2708	-0.0016	-0.0019	-0.0024	-0.0039
Max	0.2828	0.2818	0.2816	0.2814	0.2805	-0.0002	0.0003	0.0006	0.0002
Avg	0.2797	0.2788	0.2789	0.2788	0.2780	-0.0008	-0.0008	-0.0008	-0.0017
Spec	NA					-0.02~0.02			

序号	y					Δy			
	0h	168h	336h	504h	1000h	168h	336h	504h	1000h
1#	0.2546	0.2530	0.2533	0.2532	0.2504	-0.0016	-0.0013	-0.0014	-0.0042
2#	0.2701	0.2683	0.2666	0.2652	0.2620	-0.0018	-0.0035	-0.0049	-0.0081
3#	0.2653	0.2661	0.2670	0.2671	0.2667	0.0008	0.0017	0.0018	0.0014
4#	0.2629	0.2642	0.2648	0.2651	0.2636	0.0013	0.0019	0.0022	0.0007
5#	0.2700	0.2702	0.2705	0.2700	0.2679	0.0002	0.0005	0.0000	-0.0021
6#	0.2670	0.2647	0.2627	0.2621	0.2598	-0.0023	-0.0043	-0.0049	-0.0072
7#	0.2643	0.2646	0.2649	0.2654	0.2649	0.0003	0.0006	0.0011	0.0006
8#	0.2717	0.2708	0.2693	0.2689	0.2665	-0.0009	-0.0024	-0.0028	-0.0052
9#	0.2637	0.2639	0.2633	0.2629	0.2603	0.0002	-0.0004	-0.0008	-0.0034
10#	0.2676	0.2676	0.2666	0.2667	0.2644	0.0000	-0.0010	-0.0009	-0.0032
Min	0.2546	0.2530	0.2533	0.2532	0.2504	-0.0023	-0.0043	-0.0049	-0.0081
Max	0.2717	0.2708	0.2705	0.2700	0.2679	0.0013	0.0019	0.0022	0.0014
Avg	0.2657	0.2653	0.2649	0.2647	0.2627	-0.0004	-0.0008	-0.0011	-0.0031
Spec	NA					-0.02~0.02			

10. 试验结果/Test Result:

全部样品各项参数均在判定标准范围内。  
外观描述: 全部样品外观正常。



11. 试验结论/Test conclusion: 合格

12. 备注/Remark: N/A

.....报告结束/END.....