

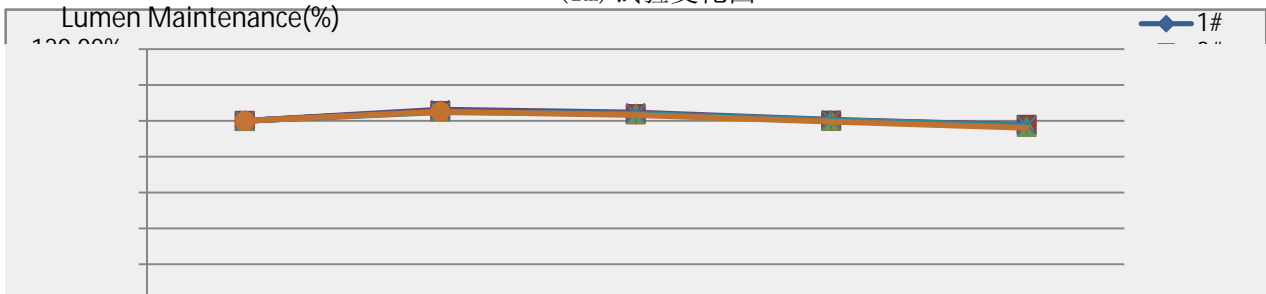
## 检测报告(内部)

报告编号: LAB0205203-12

第 1 页共 6 页

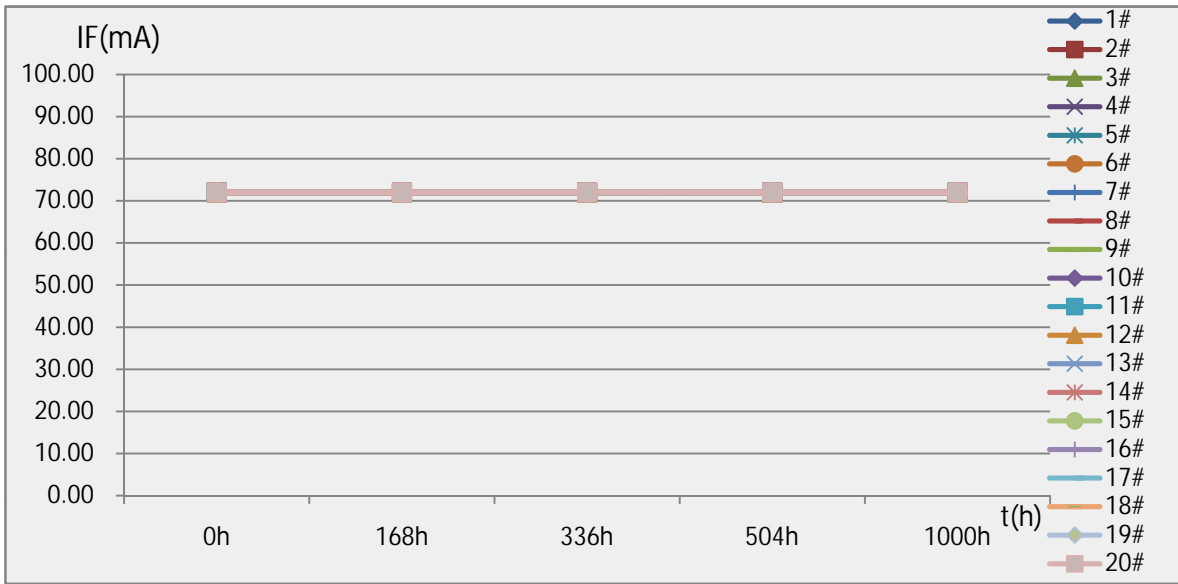
1. 客户名称:深圳瑞丰\_通用封装事业部\_照明事业部\_产品技术一部\_中小功率产品组/曹昌鹏
2. 样品编号:1#~20#
3. 产品规格(型号)/批次:RF-40QI32DS-FH-N-Y/YW20200515-01
4. 检测时间:2020. 6. 16~2020. 7. 29
5. 检测设备: 高低温交变湿热试验箱(131197); HAAS-1200快速光谱辐射计(G113724CS1321116);  
FLUKE万用表(27500021WS); 电热鼓风干燥箱(TST1005028); 回流焊炉(N0842010);  
显微镜(MT 4X); DC POWER SUPPLY (010908164)
6. 环境条件: (22~28) °C, (30~70) %RH
7. 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,  
LED的测量 CIE127: 2007
8. 检测项目: 高温高湿老化试验
9. 检测条件: 预处理: 125°C烘烤2H, 回流焊1次(参照SMT回流焊说明WI-R00-004文件)  
60°C/90%RH, 老化时间1000H, 老化电流72mA, 测试电流72mA,  
积分球2 $\pi$ 测试, 测试点: 0h, 168h, 336h, 504h, 1000h

$\Phi$  (1m) 试验变化图

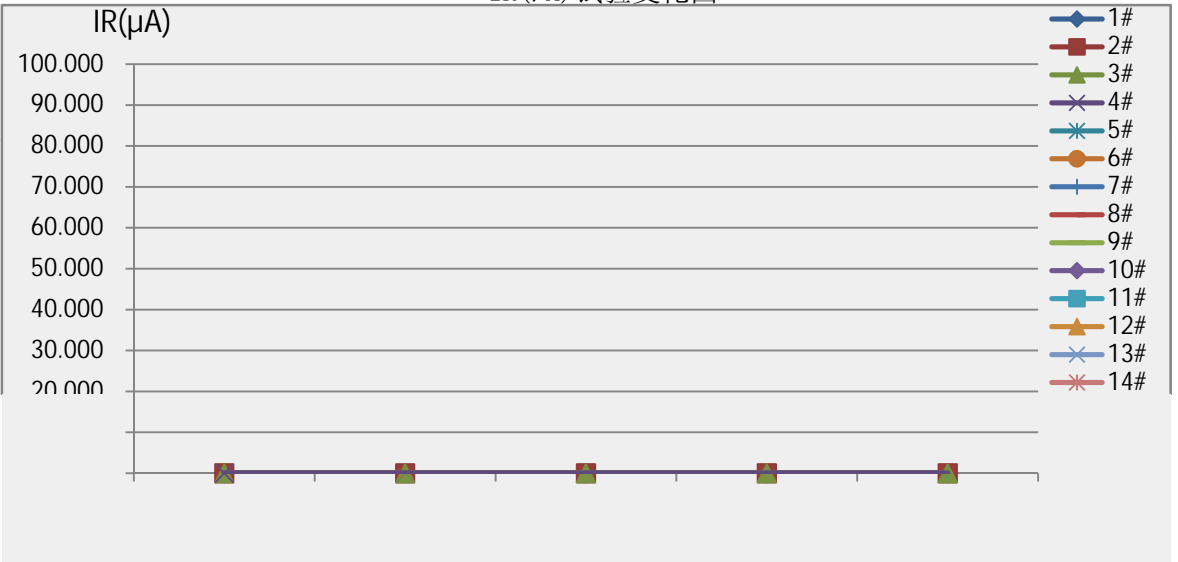


# 检测报告(内部)

实测电流变化图



IR(μA) 试验变化图



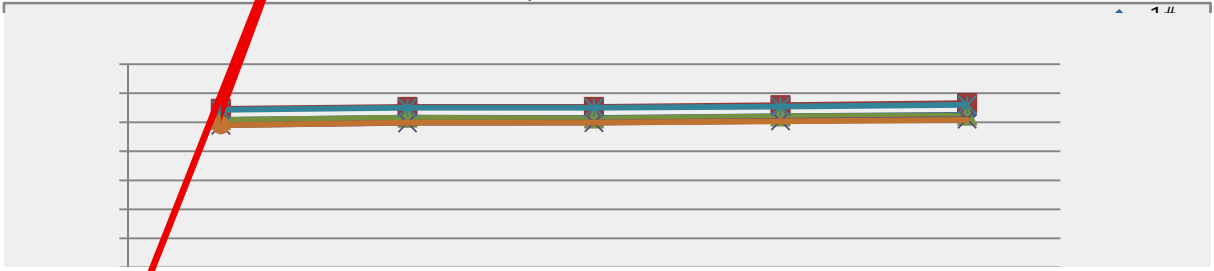
x 试验变化图

# 检测报告(内部)

报告编号: LAB0205203-12

第 3 页共 6 页

y试验变化图



# 检测报告(内部)

报告编号: LAB0205203-12

第 4 页共 6 页

| 序号  | VF (V) |       |       |       |       | △VF (V) |       |        |       |
|-----|--------|-------|-------|-------|-------|---------|-------|--------|-------|
|     | 0h     | 168h  | 336h  | 504h  | 1000h | 168h    | 336h  | 504h   | 1000h |
| 1#  | 3.031  | 3.032 | 3.032 | 3.031 | 3.032 | 0.001   | 0.001 | 0.000  | 0.001 |
| 2#  | 3.023  | 3.025 | 3.025 | 3.024 | 3.024 | 0.002   | 0.002 | 0.001  | 0.001 |
| 3#  | 3.029  | 3.030 | 3.030 | 3.028 | 3.029 | 0.001   | 0.001 | -0.001 | 0.000 |
| 4#  | 3.028  | 3.030 | 3.030 | 3.028 | 3.030 | 0.002   | 0.002 | 0.000  | 0.002 |
| 5#  | 3.030  | 3.032 | 3.032 | 3.036 | 3.032 | 0.002   | 0.002 | 0.006  | 0.002 |
| 6#  | 3.029  | 3.031 | 3.030 | 3.029 | 3.030 | 0.002   | 0.001 | 0.000  | 0.001 |
| 7#  | 3.033  | 3.033 | 3.034 | 3.033 | 3.033 | 0.000   | 0.001 | 0.000  | 0.000 |
| 8#  | 3.027  | 3.029 | 3.029 | 3.028 | 3.029 | 0.002   | 0.002 | 0.001  | 0.002 |
| 9#  | 3.028  | 3.029 | 3.029 | 3.028 | 3.029 | 0.001   | 0.001 | 0.000  | 0.001 |
| 10# | 3.030  | 3.031 | 3.032 | 3.030 | 3.032 | 0.001   | 0.002 | 0.000  | 0.002 |
| 11# | 3.026  | 3.026 | 3.027 | 3.026 | 3.027 | 0.000   | 0.001 | 0.000  | 0.001 |
| 12# | 3.035  | 3.036 | 3.035 | 3.035 | 3.036 | 0.001   | 0.000 | 0.000  | 0.001 |
| 13# | 3.027  | 3.028 | 3.028 | 3.028 | 3.029 | 0.001   | 0.001 | 0.001  | 0.002 |
| 14# | 3.025  | 3.026 | 3.027 | 3.025 | 3.026 | 0.001   | 0.002 | 0.000  | 0.001 |
| 15# | 3.028  | 3.029 | 3.029 | 3.028 | 3.030 | 0.001   | 0.001 | 0.000  | 0.002 |
| 16# | 3.028  | 3.029 | 3.030 | 3.028 | 3.029 | 0.001   | 0.002 | 0.000  | 0.001 |
| 17# | 3.030  | 3.031 | 3.031 | 3.030 | 3.031 | 0.001   | 0.001 | 0.000  | 0.001 |
| 18# | 3.026  | 3.027 | 3.028 | 3.026 | 3.027 | 0.001   | 0.002 | 0.000  | 0.001 |
| 19# | 3.027  | 3.028 | 3.028 | 3.027 | 3.028 | 0.001   | 0.001 | 0.000  | 0.001 |
| 20# | 3.026  | 3.027 | 3.027 | 3.026 | 3.028 | 0.001   | 0.001 | 0.000  | 0.002 |

| 序号  | IF (mA) |       |       |       |       |
|-----|---------|-------|-------|-------|-------|
|     | 0h      | 168h  | 336h  | 504h  | 1000h |
| 1#  | 72.01   | 71.99 | 72.01 | 72.00 | 72.00 |
| 2#  | 72.03   | 71.98 | 72.01 | 72.00 | 72.00 |
| 3#  | 72.00   | 71.97 | 72.01 | 72.00 | 72.00 |
| 4#  | 72.00   | 71.98 | 72.01 | 72.00 | 72.00 |
| 5#  | 72.01   | 72.00 | 72.01 | 72.00 | 72.00 |
| 6#  | 72.01   | 72.00 | 72.01 | 72.00 | 72.00 |
| 7#  | 72.00   | 72.01 | 72.01 | 72.00 | 71.99 |
| 8#  | 72.00   | 72.00 | 72.01 | 72.00 | 72.00 |
| 9#  | 72.00   | 71.99 | 72.01 | 72.00 | 72.00 |
| 10# | 72.00   | 71.99 | 72.01 | 72.00 | 72.00 |
| 11# | 72.01   | 72.00 | 72.01 | 72.00 | 72.00 |
| 12# | 72.01   | 71.98 | 72.01 | 72.00 | 71.99 |
| 13# | 72.01   | 71.99 | 72.01 | 72.00 | 72.00 |
| 14# | 72.01   | 71.98 | 72.01 | 72.00 | 72.00 |
| 15# | 72.01   | 71.99 | 72.01 | 72.00 | 72.00 |
| 16# | 72.01   | 71.97 | 72.01 | 72.00 | 72.00 |
| 17# | 72.00   | 71.98 | 72.01 | 72.00 | 72.00 |
| 18# | 72.00   | 71.99 | 72.02 | 72.00 | 72.00 |
| 19# | 72.00   | 71.99 | 72.01 | 72.00 | 72.00 |
| 20# | 72.00   | 71.98 | 72.01 | 72.00 | 72.00 |

# 检测报告(内部)

报告编号: LAB0205203-12

第 5 页共 6 页

| 序号  | IR(μA) |       |       |       |       |
|-----|--------|-------|-------|-------|-------|
|     | 0h     | 168h  | 336h  | 504h  | 1000h |
| 1#  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 2#  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 3#  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 4#  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 5#  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 6#  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 7#  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 8#  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 9#  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 10# | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 11# | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 12# | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 13# | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 14# | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 15# | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 16# | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 17# | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 18# | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 19# | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |
| 20# | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 |

| 序号  | x      |        |        |        |        | Δx      |         |         |         |
|-----|--------|--------|--------|--------|--------|---------|---------|---------|---------|
|     | 0h     | 168h   | 336h   | 504h   | 1000h  | 168h    | 336h    | 504h    | 1000h   |
| 1#  | 0.3783 | 0.3783 | 0.3783 | 0.3786 | 0.3789 | 0.0000  | 0.0000  | 0.0003  | 0.0006  |
| 2#  | 0.3802 | 0.3802 | 0.3801 | 0.3805 | 0.3811 | 0.0000  | -0.0001 | 0.0003  | 0.0009  |
| 3#  | 0.3777 | 0.3778 | 0.3773 | 0.3776 | 0.3778 | 0.0001  | -0.0004 | -0.0001 | 0.0001  |
| 4#  | 0.3773 | 0.3776 | 0.3776 | 0.3779 | 0.3784 | 0.0003  | 0.0003  | 0.0006  | 0.0011  |
| 5#  | 0.3791 | 0.3791 | 0.3790 | 0.3791 | 0.3797 | 0.0000  | -0.0001 | 0.0000  | 0.0006  |
| 6#  | 0.3740 | 0.3743 | 0.3741 | 0.3744 | 0.3746 | 0.0003  | 0.0001  | 0.0004  | 0.0006  |
| 7#  | 0.3742 | 0.3747 | 0.3743 | 0.3746 | 0.3751 | 0.0005  | 0.0001  | 0.0004  | 0.0009  |
| 8#  | 0.3791 | 0.3793 | 0.3791 | 0.3794 | 0.3796 | 0.0002  | 0.0000  | 0.0003  | 0.0005  |
| 9#  | 0.3780 | 0.3782 | 0.3780 | 0.3783 | 0.3785 | 0.0002  | 0.0000  | 0.0003  | 0.0005  |
| 10# | 0.3793 | 0.3793 | 0.3792 | 0.3793 | 0.3795 | 0.0000  | -0.0001 | 0.0000  | 0.0002  |
| 11# | 0.3807 | 0.3807 | 0.3803 | 0.3803 | 0.3809 | 0.0000  | -0.0004 | -0.0004 | 0.0002  |
| 12# | 0.3781 | 0.3783 | 0.3781 | 0.3784 | 0.3789 | 0.0002  | 0.0000  | 0.0003  | 0.0008  |
| 13# | 0.3752 | 0.3757 | 0.3753 | 0.3755 | 0.3760 | 0.0005  | 0.0001  | 0.0003  | 0.0008  |
| 14# | 0.3776 | 0.3774 | 0.3772 | 0.3773 | 0.3778 | -0.0002 | -0.0004 | -0.0003 | 0.0002  |
| 15# | 0.3781 | 0.3785 | 0.3781 | 0.3783 | 0.3787 | 0.0004  | 0.0000  | 0.0002  | 0.0006  |
| 16# | 0.3756 | 0.3763 | 0.3761 | 0.3763 | 0.3768 | 0.0007  | 0.0005  | 0.0007  | 0.0012  |
| 17# | 0.3768 | 0.3768 | 0.3764 | 0.3763 | 0.3766 | 0.0000  | -0.0004 | -0.0005 | -0.0002 |
| 18# | 0.3738 | 0.3744 | 0.3743 | 0.3745 | 0.3749 | 0.0006  | 0.0005  | 0.0007  | 0.0011  |
| 19# | 0.3757 | 0.3760 | 0.3759 | 0.3762 | 0.3766 | 0.0003  | 0.0002  | 0.0005  | 0.0009  |
| 20# | 0.3754 | 0.3755 | 0.3751 | 0.3754 | 0.3758 | 0.0001  | -0.0003 | 0.0000  | 0.0004  |

# 检测报告(内部)

报告编号: LAB0205203-12

第 6 页共 6 页

| 序号  | y      |        |        |        |        | Δy     |        |        |        |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|     | 0h     | 168h   | 336h   | 504h   | 1000h  | 168h   | 336h   | 504h   | 1000h  |
| 1#  | 0.3808 | 0.3816 | 0.3815 | 0.3821 | 0.3826 | 0.0008 | 0.0007 | 0.0013 | 0.0018 |
| 2#  | 0.3846 | 0.3853 | 0.3853 | 0.3859 | 0.3866 | 0.0007 | 0.0007 | 0.0013 | 0.0020 |
| 3#  | 0.3808 | 0.3816 | 0.3813 | 0.3820 | 0.3823 | 0.0008 | 0.0005 | 0.0012 | 0.0015 |
| 4#  | 0.3790 | 0.3798 | 0.3799 | 0.3805 | 0.3811 | 0.0008 | 0.0009 | 0.0015 | 0.0021 |
| 5#  | 0.3843 | 0.3850 | 0.3850 | 0.3854 | 0.3860 | 0.0007 | 0.0007 | 0.0011 | 0.0017 |
| 6#  | 0.3790 | 0.3799 | 0.3799 | 0.3803 | 0.3808 | 0.0009 | 0.0009 | 0.0013 | 0.0018 |
| 7#  | 0.3743 | 0.3755 | 0.3753 | 0.3759 | 0.3764 | 0.0012 | 0.0010 | 0.0016 | 0.0021 |
| 8#  | 0.3815 | 0.3823 | 0.3823 | 0.3827 | 0.3832 | 0.0008 | 0.0008 | 0.0012 | 0.0017 |
| 9#  | 0.3828 | 0.3836 | 0.3836 | 0.3840 | 0.3844 | 0.0008 | 0.0008 | 0.0012 | 0.0016 |
| 10# | 0.3823 | 0.3831 | 0.3831 | 0.3834 | 0.3838 | 0.0008 | 0.0008 | 0.0011 | 0.0015 |
| 11# | 0.3833 | 0.3840 | 0.3838 | 0.3839 | 0.3848 | 0.0007 | 0.0005 | 0.0006 | 0.0015 |
| 12# | 0.3776 | 0.3783 | 0.3782 | 0.3788 | 0.3793 | 0.0007 | 0.0006 | 0.0012 | 0.0017 |
| 13# | 0.3788 | 0.3797 | 0.3795 | 0.3800 | 0.3806 | 0.0009 | 0.0007 | 0.0012 | 0.0018 |
| 14# | 0.3811 | 0.3816 | 0.3816 | 0.3818 | 0.3825 | 0.0005 | 0.0005 | 0.0007 | 0.0014 |
| 15# | 0.3812 | 0.3822 | 0.3820 | 0.3824 | 0.3830 | 0.0010 | 0.0008 | 0.0012 | 0.0018 |
| 16# | 0.3779 | 0.3791 | 0.3790 | 0.3795 | 0.3802 | 0.0012 | 0.0011 | 0.0016 | 0.0023 |
| 17# | 0.3791 | 0.3797 | 0.3795 | 0.3796 | 0.3801 | 0.0006 | 0.0004 | 0.0005 | 0.0010 |
| 18# | 0.3763 | 0.3771 | 0.3772 | 0.3776 | 0.3781 | 0.0008 | 0.0009 | 0.0013 | 0.0018 |
| 19# | 0.3817 | 0.3825 | 0.3824 | 0.3829 | 0.3836 | 0.0008 | 0.0007 | 0.0012 | 0.0019 |
| 20# | 0.3832 | 0.3840 | 0.3838 | 0.3843 | 0.3847 | 0.0008 | 0.0006 | 0.0011 | 0.0015 |

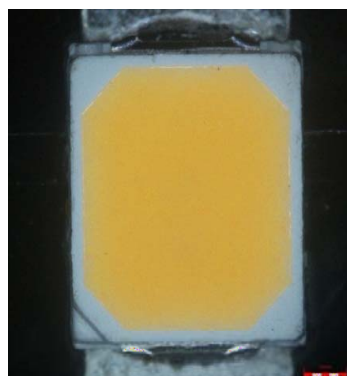
单颗LED判定基准:

| 项目                    | min    | max   |
|-----------------------|--------|-------|
| Lumen Maintenance (%) | 90%    | 110%  |
| ΔVF                   | -0.5   | 0.5   |
| Δx                    | -0.01  | 0.01  |
| Δy                    | -0.015 | 0.015 |
| IR (μA)               | /      | 10    |

外观无胶裂, 变黄, 发黑等现象

经过1000h高温高湿老化试验, 全部样品各项参数均在标准标准范围内。

外观描述: 全部样品外观正常。



试验结果: 合格。

检测结果只对本次样品负责。

.....结束.....