

深圳市八六三新材料技术有限责任公司
Shenzhen 863 New Material and Technology Co., Ltd
分析检测报告

Test Report

报告编号(Report No.): SAC2020-06745-1

日期(Date): 2020/10/29

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客户名称: 深圳市瑞丰光电子股份有限公司
Customer: SHENZHEN REFOND OPTOELECTRONICS CO.,LTD
地址: 深圳市光明新区公明办事处田寮社区第十工业区 1 栋六楼
Address: 6th Floor, Building #1, 10th Industrial Zone, Tian Liao Community, Gong Ming Area, Guang Ming New District, Shenzhen, China

样品信息(Sample Information)

样品名称(Sample Name): SMD-LED(PCT2835)
样品描述(Sample Description): 黄色 LED(Yellow LED)
样品型号(Model/P.O. No.): SMD-LED(PCT2835)
样品批号(Item/Lot No.): /
样品材质(Material): /
客户/买家(Buyer): /
供应商(Supplier): /
制造商(Manufacturer): /
接样日期(Received Date): 2020/10/26
测试周期(Test Period): 2020/10/26~2020/10/29
测试要求: 根据客户要求, 对样品铅(Pb)、镉(Cd)、汞(Hg)、六价铬(Cr⁶⁺)、多溴联苯(PBBs)、多溴联苯醚(PBDEs)、DBP、BBP、DEHP、DIBP、氟(F)、氯(Cl)、溴(Br)、碘(I)含量进行测试。
Test Requested: As specified by customer, to determine the Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr⁶⁺), PBBs, PBDEs, DBP, BBP, DEHP, DIBP, Fluorine (F), Chlorine (Cl), Bromine (Br) and Iodine (I) content.

测试方法(Test Method): 请参见后续页(Please refer to the following pages.)

备注(Note(s)): /

测试结果(Test Results): 请参见后续页(Please refer to the following pages.)

编制: Yaqi Peng
(Edited by):

审核: Xavier
(Audited by):

签发: Yanping Xing
(Approved by):



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测试方法(Test Method):

测试项目 (Test Item(s))	测试方法 (Test Method)	测试仪器 (Equipment)
铅 Lead(Pb)、镉 Cadmium(Cd)	IEC 62321-5:2013	ICP-OES
汞 Mercury(Hg)	IEC 62321-4:2013	ICP-OES
六价铬 Hexavalent chromium(Cr ⁶⁺)	IEC 62321-7-2:2017	UV-Vis
多溴联苯、多溴联苯醚(PBBs, PBDEs)	IEC 62321-6:2015	GC-MS
邻苯二甲酸二丁酯(DBP)、邻苯二甲酸丁苄酯(BBP)、 邻苯二甲酸二(2-乙基己基)酯(DEHP)、 邻苯二甲酸二异丁酯(DIBP)	IEC 62321-8:2017	GC-MS
氟 Fluorine (F)、氯 Chlorine (Cl)、 溴 Bromine (Br)、碘 Iodine (I)	EN 14582:2016	IC

1. 测试结论(Test Conclusion):

- 1) 根据客户的要求进行检测, 本报告期内显示的样品铅(Pb)、镉(Cd)、汞(Hg)、六价铬(Cr⁶⁺)、多溴联苯(PBBs)、多溴联苯醚(PBDEs)、DBP、BBP、DEHP、DIBP 检测结果未超过欧盟 RoHS 指令 2011/65/EU 及其修订指令(EU)2015/863 要求的限值。(To test according to the requirements of the customer, the Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr⁶⁺), PBBs, PBDEs, DBP, BBP, DEHP, DIBP results of the sample shown in this report do not exceed the required limit of EU RoHS 2011/65/EU and its amendment directive (EU) 2015/863.)
- 2) 本报告期内显示的样品卤素检测结果未超过 IEC 61249-2-21 要求的限值。(The halogen results of the sample shown on this report do not exceed the required limit of IEC 61249-2-21.)

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2. 测试结果(Test Result(s))
2.1 铅(Pb)、镉(Cd)、汞(Hg)、六价铬(Cr⁶⁺)、多溴联苯(PBBs)、多溴联苯醚(PBDEs)、DBP、BBP、DEHP、DIBP (Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr⁶⁺), PBBs, PBDEs, DBP, BBP, DEHP, DIBP):

测试项目 (Test Item(s))	方法检出限(MDL) (mg/kg)	测试结果(Result(s)) (mg/kg)	限值# ¹ (Limit) (mg/kg)
铅 Lead(Pb)	2	N.D.	1000
镉 Cadmium(Cd)	2	N.D.	100
汞 Mercury(Hg)	2	N.D.	1000
六价铬 Hexavalent chromium(Cr ⁶⁺)	2	N.D.	1000
一溴联苯 Monobromobiphenyl	5	N.D.	—
二溴联苯 Dibromobiphenyl	5	N.D.	—
三溴联苯 Tribromobiphenyl	5	N.D.	—
四溴联苯 Tetrabromobiphenyl	5	N.D.	—
五溴联苯 Pentabromobiphenyl	5	N.D.	—
六溴联苯 Hexabromobiphenyl	5	N.D.	—
七溴联苯 Heptabromobiphenyl	5	N.D.	—
八溴联苯 Octabromobiphenyl	5	N.D.	—
九溴联苯 Nonabromobiphenyl	5	N.D.	—
十溴联苯 Decabromodiphenyl	5	N.D.	—
总多溴联苯 Polybromobiphenyl(PBBs)	—	N.D.	1000
一溴联苯醚 Monobromobiphenyl ether	5	N.D.	—
二溴联苯醚 Bibromobiphenyl ether	5	N.D.	—
三溴联苯醚 Tribromobiphenyl ether	5	N.D.	—
四溴联苯醚 Tetrabromobiphenyl ether	5	N.D.	—
五溴联苯醚 Pentabromobiphenyl ether	5	N.D.	—
六溴联苯醚 Hexabromobiphenyl ether	5	N.D.	—
七溴联苯醚 Heptabromobiphenyl ether	5	N.D.	—
八溴联苯醚 Octabromobiphenyl ether	5	N.D.	—
九溴联苯醚 Nonabromobiphenyl ether	5	N.D.	—
十溴联苯醚 Decabromodiphenyl ether	5	N.D.	—

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测试项目 (Test Item(s))	方法检出限(MDL) (mg/kg)	测试结果(Result(s)) (mg/kg)	限值# ¹ (Limit) (mg/kg)
总多溴联苯醚 Polybromodiphenyl ether(PBDEs)	—	N.D.	1000
邻苯二甲酸二丁酯(DBP)	10	N.D.	1000
邻苯二甲酸丁苄酯(BBP)	10	N.D.	1000
邻苯二甲酸二(2-乙基己基)酯(DEHP)	10	N.D.	1000
邻苯二甲酸二异丁酯(DIBP)	10	N.D.	1000

2.2 氟(F)、氯(Cl)、溴(Br)、碘(I) (Fluorine (F), Chlorine (Cl), Bromine (Br) and Iodine (I)):

测试项目 (Test Item(s))	方法检出限(MDL) (mg/kg)	测试结果(Result(s)) (mg/kg)	限值(Limit)# ² (mg/kg)
氟 Fluorine (F)	50	N.D.	—
氯 Chlorine (Cl)	50	N.D.	900
溴 Bromine (Br)	50	N.D.	900
碘 Iodine (I)	50	N.D.	1500

备注(Remark): mg/kg=ppm=parts per million

MDL=method detection limit 方法检出限

N.D.=Not Detected 未检出 (低于方法检出限)

#¹: 限值来自欧盟 RoHS 指令 2011/65/EU 及 2015/863/EU 中的技术指标要求(The Limit is(are) from EU RoHS 2011/65/EU and its amendment directive (EU) 2015/863)。

#²: 限值来自标准 IEC 61249-2-21 中的技术指标要求(The Limit is(are) from IEC 61249-2-21.)。

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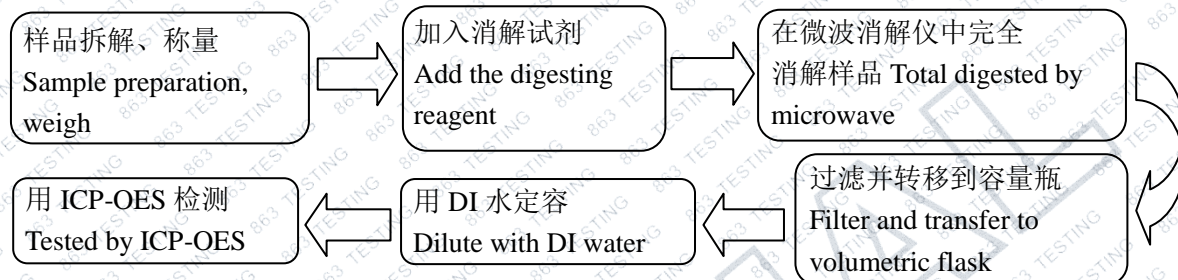
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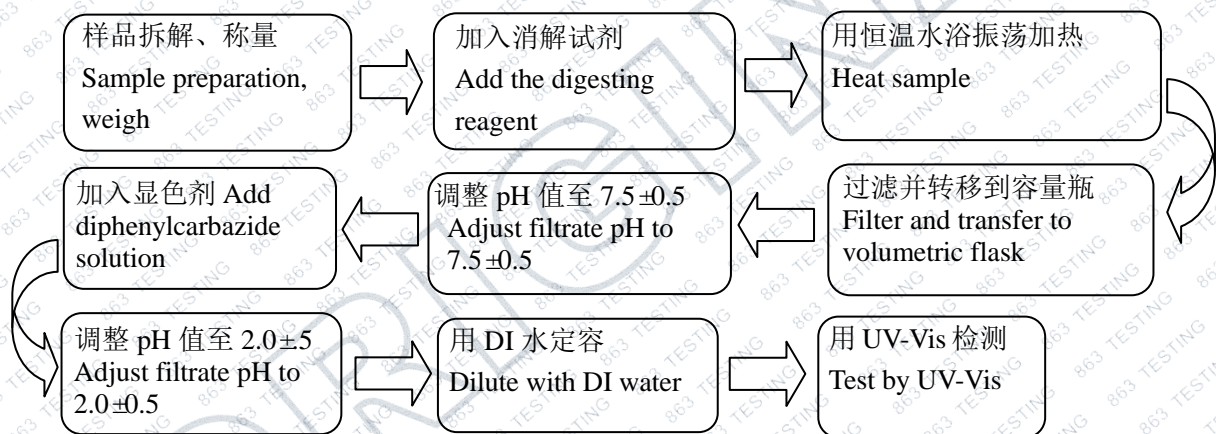
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测试流程(Test Process):

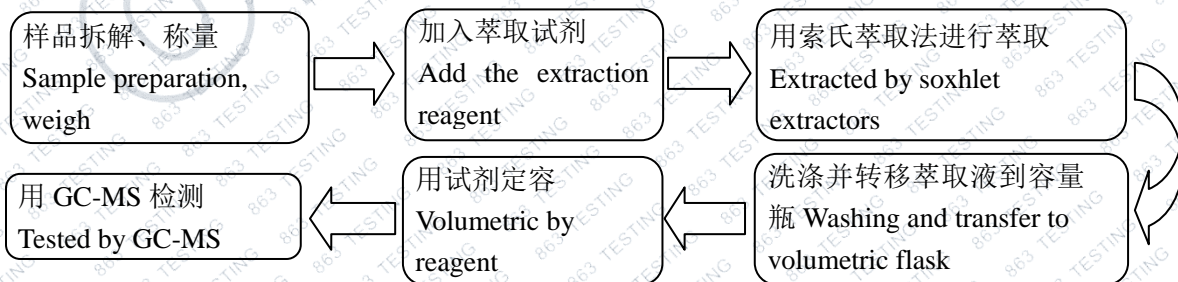
1. 检测铅(Pb)、镉(Cd)、汞(Hg)含量(Test Lead(Pb), Cadmium(Cd), Mercury(Hg) concentration):



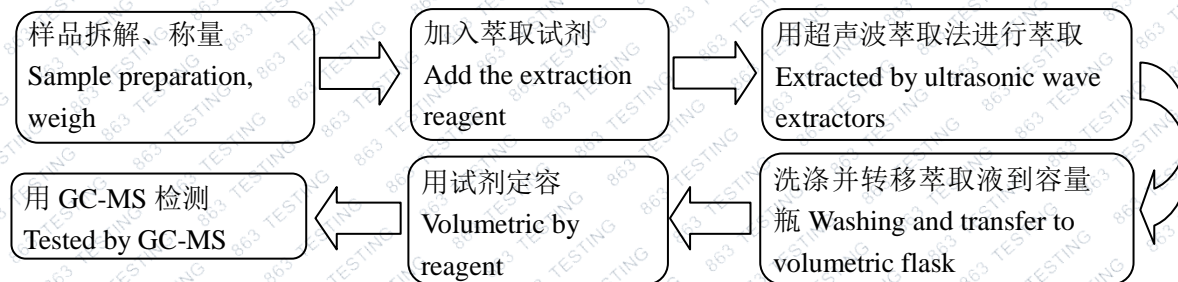
2. 检测六价铬(Cr⁶⁺)含量(Test Hexavalent Chromium(Cr⁶⁺) concentration):



3. 检测多溴联苯(PBBs)、多溴联苯醚(PBDEs)含量(Test PBBs, PBDEs concentration):



4. 检测 DBP、BBP、DEHP、DIBP 含量(Test DBP, BBP, DEHP, DIBP concentration):



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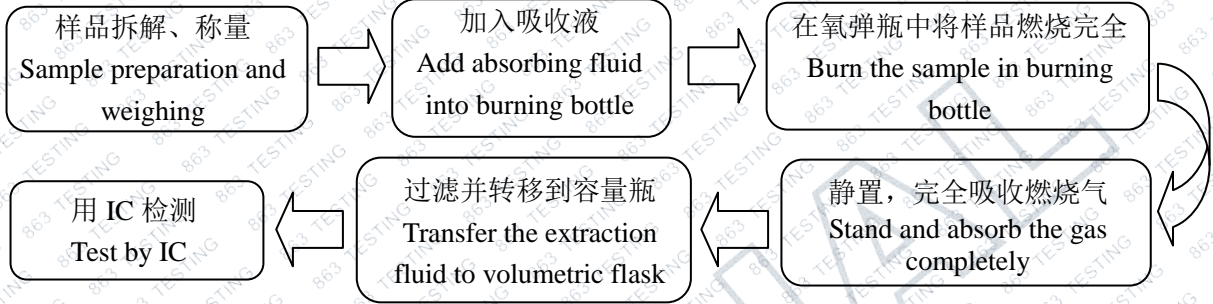
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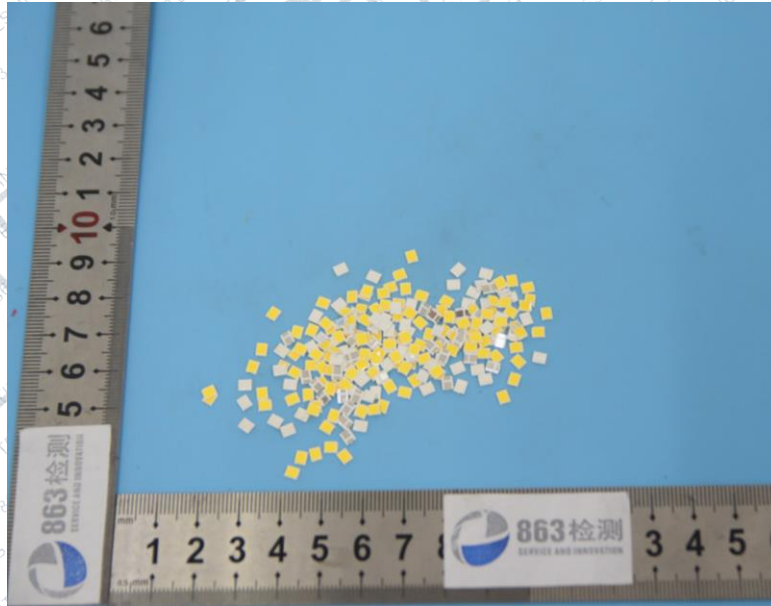
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5. 检测氟(F)、氯(Cl)、溴(Br)、碘(I)含量

(Test Fluorine(F), Chlorine(Cl), Bromine(Br), Iodine (I) concentration):



样品照片(Photo of the sample)



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