

Test Report

No.: CANEC24021252905

Date: Oct 09, 2024

Page 1 of 7

Client Name: GUANGZHOU TIANXIN PHOTOELECTRIC CO.,LTD

Client Address: #15-1, JINGU ROAD SOUTH,XIUTANG,HUADONG TOWN,HUADU DISTRICT,GUANGZHOU

Sample Name: Automotive LED with ceramic substrate

The above sample(s) and information were provided by the client.

SGS Job No.: GZP24-031628

Sample Receiving Date: Sep 24, 2024

Testing Period: Sep 24, 2024 ~ Sep 29, 2024

Test Requested: Select test(s) as requested by the client.

Test Method(s): Please refer to next page(s).

Test Result(s): Please refer to next page(s).

Test Requirement	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Jany Zhong

Jany Zhong
Approved Signatory

scan to see the report



B8823938



SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgs.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

Test Report

No.: CANEC24021252905

Date: Oct 09, 2024

Page 2 of 7

Test Result(s):

Test Part Description:

SN ID	Sample No.	SGS Sample ID	Description
SN1	A13	CAN24-0212529-0001.C013	Light grey sheet w/ copper-colored, white and yellow surfacfe
SN2	A14	CAN24-0212529-0001.C014	Light grey sheet w/ copper-colored, white and yellow surfacfe

Remarks:

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017 and IEC 62321-12:2023, analysis was performed by ICP-OES/AAS, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A13	A14
Lead (Pb)	1000	mg/kg	2	8	5
Mercury (Hg)	1000	mg/kg	2	ND	ND
Cadmium (Cd)	100	mg/kg	2	ND	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	8	ND	ND
Polybrominated biphenyls (PBB)	1000	mg/kg	-	ND	ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	25	ND	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	25	ND	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	25	ND	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	25	ND	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	25	ND	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	25	ND	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	25	ND	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	25	ND	ND
Nonabrominated biphenyl (NonaBB)	-	mg/kg	25	ND	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	25	ND	ND
Polybrominated diphenyl ethers (PBDE)	1000	mg/kg	-	ND	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	25	ND	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	25	ND	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	25	ND	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	25	ND	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	25	ND	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	25	ND	ND



SGS-CT Standards Technical Service Co., Ltd.
Guangzhou Branch Technical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

Test Report

No.: CANEC24021252905

Date: Oct 09, 2024

Page 3 of 7

Test Item(s)	Limit	Unit(s)	MDL	A13	A14
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	25	ND	ND
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	25	ND	ND
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	25	ND	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	25	ND	ND
Di-2-Ethyl Hexyl Phthalate (DEHP)	1000	mg/kg	50	ND	ND
Benzyl Butyl Phthalate (BBP)	1000	mg/kg	50	ND	ND
Dibutyl Phthalate (DBP)	1000	mg/kg	50	ND	ND
Diisobutyl Phthalate (DIBP)	1000	mg/kg	50	ND	ND

Notes:

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series.
- (3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule ($w=0$) stated in ILAC-G8:09/2019.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch / 广州分公司

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

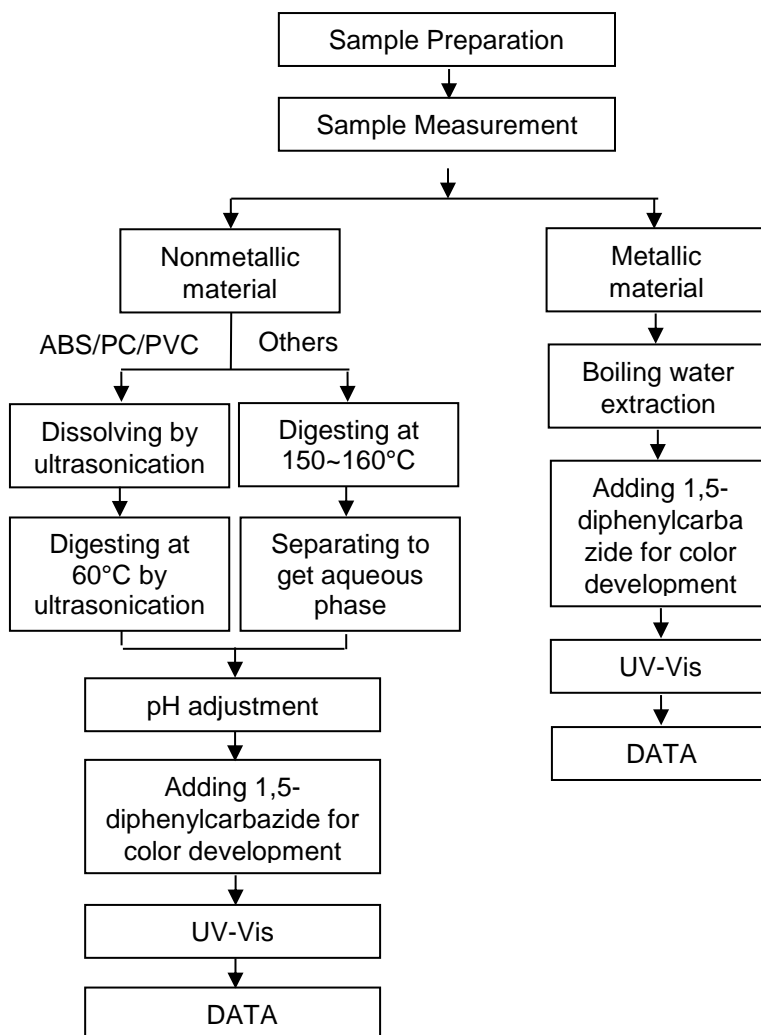
t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Elements Testing Flow Chart

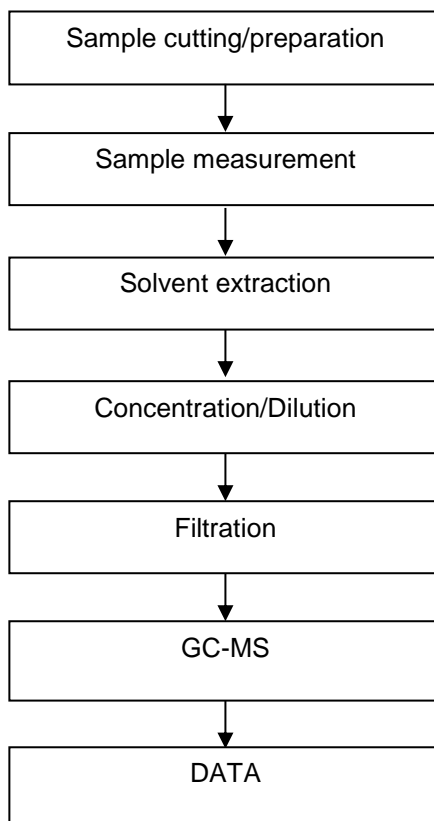
These samples were dissolved totally by pre-conditioning method according to below flow chart.



Hexavalent Chromium (Cr(VI)) Testing Flow Chart



PBB/PBDE/Phthalates Testing Flow Chart



SGS-CSI Standards Technical Services Co., Ltd.
Guangzhou Branch Technical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

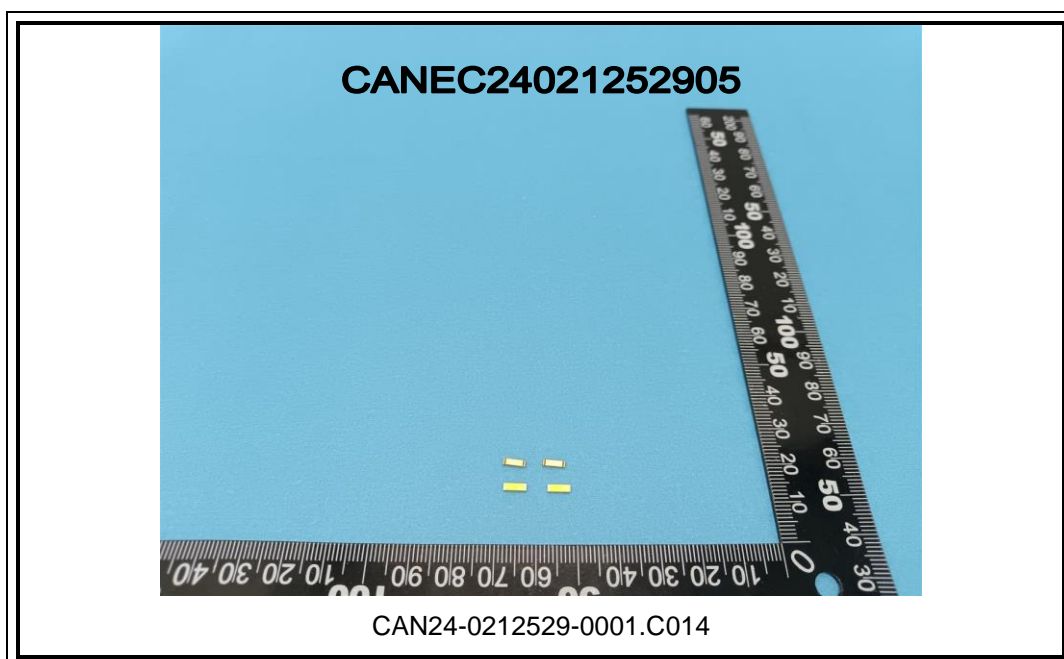
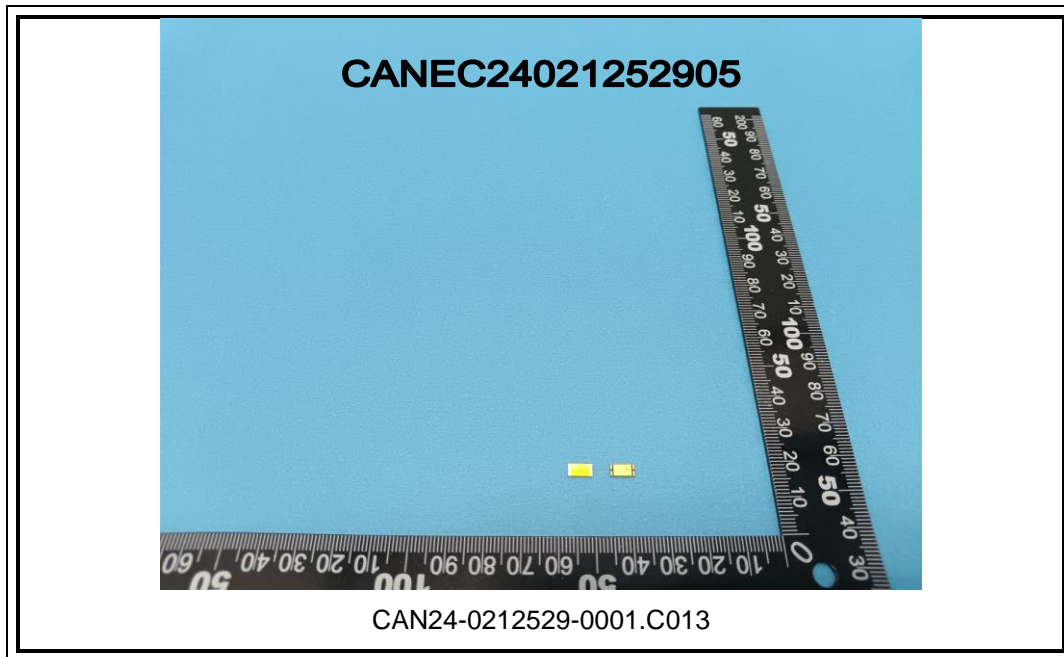
Test Report

No.: CANEC24021252905

Date: Oct 09, 2024

Page 7 of 7

Sample Photo:



SGS authenticate the photo on original report only

*** End of Report ***



SGS-CSI Standards Technical Services Co., Ltd.
Guangzhou Branch Technical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Member of the SGS Group (SGS SA)