

 Test Report
 No.:
 CANEC24021252903
 Date:
 Oct 09, 2024
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 Client Name:
 GUANGZHOU TIANXIN PHOTOELECTRIC CO.,LTD

 Client Address:
 #15-1
 JINGU ROAD SOUTH,XIUTANG,HUADONG TOWN,HUADU<br/>DISTRICT,GUANGZHOU
 District,GUANGZHOU

 Sample Name:
 Ceramic encapsulated LED

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

SGS Job No.:GZP24-031628Sample Receiving Date:Sep 24, 2024Testing Period:Sep 24, 2024 ~ Sep 29, 2024

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

J. Thona

Jany Zhong Approved Signatory



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## **Test Report**

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Date: Oct 09, 2024

## Test Result(s):

Test Part Description

SN ID	Sample No.	SGS Sample ID	Description		
SN1	A9 CAN24-0212529-0001.C009 Colorless tr		Colorless transparent soft material w/chip		
SN2	A10	CAN24-0212529-0001.C010	White sheet w/ silvery surface & chip, multi-color dot		
SN3	A11	CAN24-0212529-0001.C011	Colorless transparent soft material		
SN4	A12	CAN24-0212529-0001.C012	Light grey sheet w/ copper-colored surface & chip, multi-color dot		

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	A9	A10	A11
Lead (Pb)	1000	mg/kg	2	ND	ND	ND
Mercury (Hg)	1000	mg/kg	2	ND	ND	ND
Cadmium (Cd)	100	mg/kg	2	ND	ND	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	8	ND	ND	ND
Polybrominated biphenyls (PBB)	1000	mg/kg	-	ND	ND	ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	25	ND	ND	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	25	ND	ND	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	25	ND	ND	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	25	ND	ND	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	25	ND	ND	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	25	ND	ND	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	25	ND	ND	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	25	ND	ND	ND
Nonabrominated biphenyl (NonaBB)	-	mg/kg	25	ND	ND	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	25	ND	ND	ND



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m(s)	Limit	Unit(s)	MDL	A9	A10	A11
minated diphenyl ethe	<sup>rs</sup> 1000	mg/kg	-	ND	ND	ND
ominated diphenyl eth BDE)	er -	mg/kg	25	ND	ND	ND
inated diphenyl ether )	-	mg/kg	25	ND	ND	ND
inated diphenyl ether	-	mg/kg	25	ND	ND	ND
ominated diphenyl ethe DE)	er -	mg/kg	25	ND	ND	ND
rominated diphenyl eth 3DE)	er -	mg/kg	25	ND	ND	ND
ominated diphenyl ethe DE)	er -	mg/kg	25	ND	ND	ND
rominated diphenyl eth 3DE)	er -	mg/kg	25	ND	ND	ND
ominated diphenyl ethe DE)	-	mg/kg	25	ND	ND	ND
ominated diphenyl ethe DE)	er -	mg/kg	25	ND	ND	ND
ominated diphenyl ethe DE)	er -	mg/kg	25	ND	ND	ND
nyl Hexyl Phthalate	1000	mg/kg	50	ND	ND	ND
Butyl Phthalate (BBP)	1000	mg/kg	50	ND	ND	ND
Phthalate (DBP)	1000		50	ND	ND	ND
tyl Phthalate (DIBP)	1000	mg/kg	50	ND	ND	ND
Phthalate (DBP)	1000	mg/kg	50		ND	ND ND

Limit	Unit(s)	MDL	A12
1000	mg/kg	2	ND
1000	mg/kg	2	ND
100	mg/kg	2	ND
1000	mg/kg	8	ND
1000	mg/kg	-	ND
	1000 1000 100 1000	1000         mg/kg           1000         mg/kg           1000         mg/kg           1000         mg/kg           1000         mg/kg	1000         mg/kg         2           1000         mg/kg         2           100         mg/kg         2           100         mg/kg         8



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Test Item(s)	Limit	Unit(s)	MDL	A12
Decabrominated biphenyl (DecaBB)	-	mg/kg	25	ND
Polybrominated diphenyl ethers (PBDE)	1000	mg/kg	-	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	25	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	25	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	25	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	25	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	25	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	25	ND
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	25	ND
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	25	ND
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	25	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	25	ND
Di-2-Ethyl Hexyl Phthalate (DEHP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate (BBP)	1000	mg/kg	50	ND
Dibutyl Phthalate (DBP)	1000	mg/kg	50	ND
Diisobutyl Phthalate (DIBP)	1000	mg/kg	50	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.

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## Test Report ATTACHMENTS

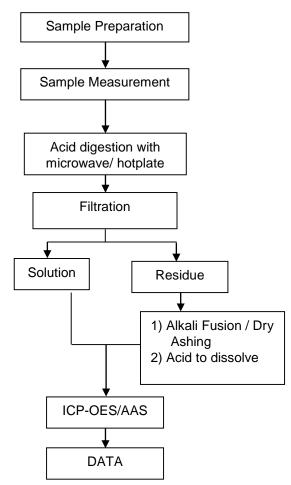
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## **Elements Testing Flow Chart**

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





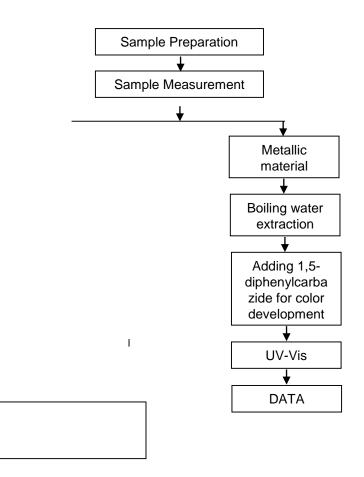


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Hexavalent Chromium (Cr(VI)) Testing Flow Chart





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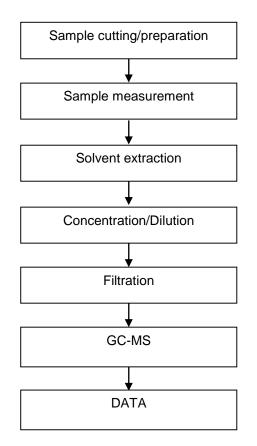


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**No.:** CANEC24021252903

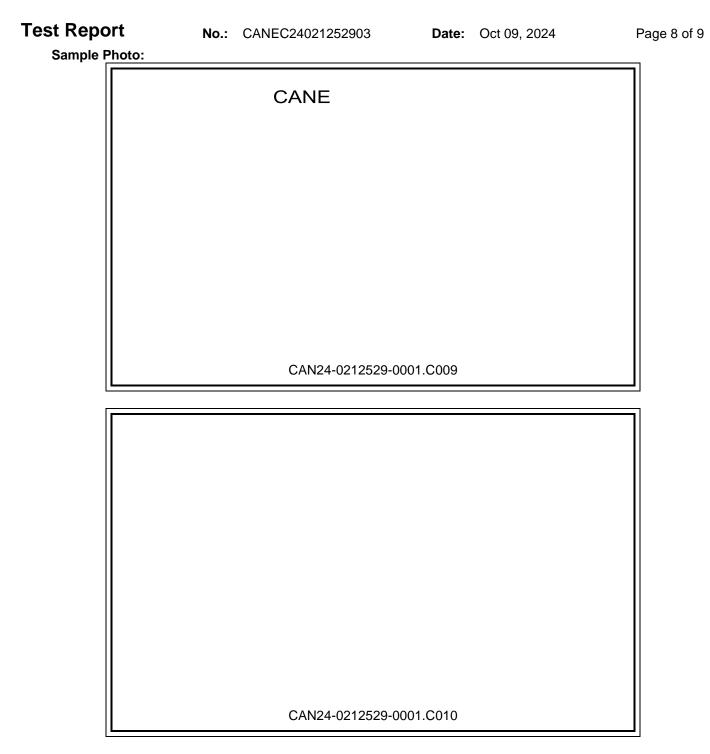
Date: Oct 09, 2024

## **PBB/PBDE/Phthalates Testing Flow Chart**

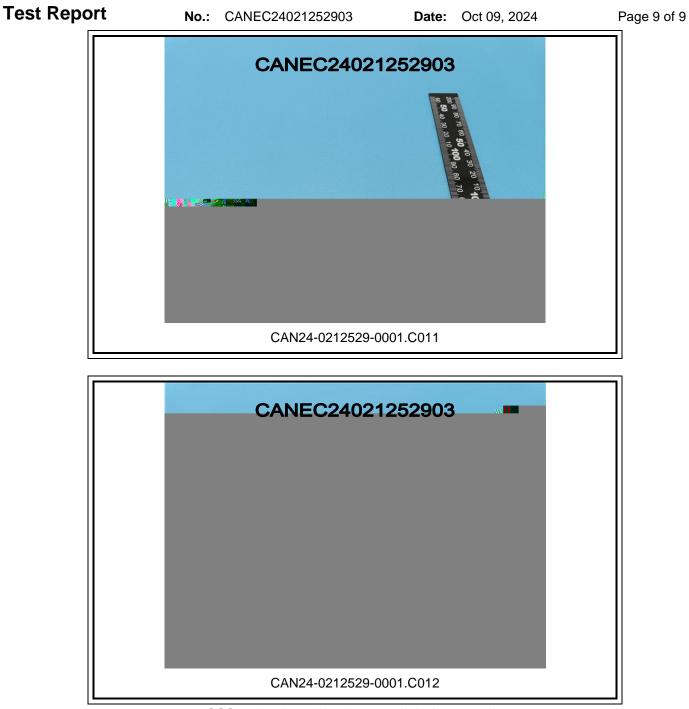


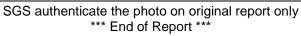














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