

Test Report

No.: CANEC23009889803

Date: Sep 22, 2023

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Client Name: GUANGZHOU TIANXIN PHOTOELECTRIC CO.,LTD

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

Sample Name: Ceramic encapsulated LED

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

SGS Job No.: GZP23-013561

Sample Receiving Date: Sep 13, 2023

Testing Period: Sep 13, 2023 ~ Sep 21, 2023

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 (PBBs), Polybrominated diphenyl ethers (PBDEs), 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

Jessie Li

Jessie-JX Li
Approved Signatory

scan to see the report



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Guangzhou Branch Standards Technical Services Co., Ltd. Guangzhou Branch

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Test Result(s):

Test Part Description:

SN ID	Sample No.	SGS Sample ID	Description
SN1	A7	CAN23-0098898-0001.C007	Colorless transparent soft material
SN2	A8	CAN23-0098898-0001.C008	White sheet w/ silvery surface & chip, multi-color dot
SN3	A9	CAN23-0098898-0001.C009	Colorless transparent soft material
SN4	A10	CAN23-0098898-0001.C010	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 (PBBs), Polybrominated diphenyl ethers (PBDEs), 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, IEC 62321-6:2015 and IEC 62321-8:2017, analysis was performed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A7	A8	A9
Cadmium(Cd)	100	mg/kg	2	ND	ND	ND
Lead (Pb)	1000	mg/kg	2	ND	ND	ND
Mercury (Hg)	1000	mg/kg	2	ND	ND	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	8	ND	ND	ND
Polybromobiphenyl (PBBs)	1000	mg/kg	-	ND	ND	ND
Monobromobiphenyl (MonoBB)	-	mg/kg	5	ND	ND	ND
Dibromobiphenyl (DiBB)	-	mg/kg	5	ND	ND	ND
Tribromobiphenyl (TriBB)	-	mg/kg	5	ND	ND	ND
Tetrabromobiphenyl (TetraBB)	-	mg/kg	5	ND	ND	ND
Pentabromobiphenyl (PentaBB)	-	mg/kg	5	ND	ND	ND
Hexabromobiphenyl (HexaBB)	-	mg/kg	5	ND	ND	ND
Heptabromobiphenyl (HeptaBB)	-	mg/kg	5	ND	ND	ND
Octabromobiphenyl (OctaBB)	-	mg/kg	5	ND	ND	ND
Nonabromobiphenyl (NonaBB)	-	mg/kg	5	ND	ND	ND
Decabromobiphenyl (DecaBB)	-	mg/kg	5	ND	ND	ND
Polybromodiphenyl ether(PBDEs)	1000	mg/kg	-	ND	ND	ND
Monobromodiphenylether (MonoBDE)	-	mg/kg	5	ND	ND	ND
Dibromodiphenylether (DiBDE)	-	mg/kg	5	ND	ND	ND
Tribromodiphenylether (TriBDE)	-	mg/kg	5	ND	ND	ND
Tetrabromodiphenylether (TetraBDE)	-	mg/kg	5	ND	ND	ND
Pentabromodiphenylether (PentaBDE)	-	mg/kg	5	ND	ND	ND



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Test Item(s)	Limit	Unit(s)	MDL	A7	A8	A9
Hexabromodiphenylether (HexaBDE)	-	mg/kg	5	ND	ND	ND
Heptabromodiphenylether (HeptaBDE)	-	mg/kg	5	ND	ND	ND
Octabromodiphenylether (OctaBDE)	-	mg/kg	5	ND	ND	ND
Nonabromodiphenylether (NonaBDE)	-	mg/kg	5	ND	ND	ND
Decabromodiphenylether (DecaBDE)	-	mg/kg	5	ND	ND	ND
Dibutyl Phthalate(DBP)	1000	mg/kg	50	ND	ND	ND
Benzyl Butyl Phthalate(BBP)	1000	mg/kg	50	ND	ND	ND
Bis-(2-ethylhexyl) Phthalate(DEHP)	1000	mg/kg	50	ND	ND	ND
Diisobutyl Phthalate(DIBP)	1000	mg/kg	50	ND	ND	ND

Test Item(s)	Limit	Unit(s)	MDL	A10
Cadmium(Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	8	ND
Polybromobiphenyl (PBBs)	1000	mg/kg	-	ND
Monobromobiphenyl (MonoBB)	-	mg/kg	5	ND
Dibromobiphenyl (DiBB)	-	mg/kg	5	ND
Tribromobiphenyl (TriBB)	-	mg/kg	5	ND
Tetrabromobiphenyl (TetraBB)	-	mg/kg	5	ND
Pentabromobiphenyl (PentaBB)	-	mg/kg	5	ND
Hexabromobiphenyl (HexaBB)	-	mg/kg	5	ND
Heptabromobiphenyl (HeptaBB)	-	mg/kg	5	ND
Octabromobiphenyl (OctaBB)	-	mg/kg	5	ND
Nonabromobiphenyl (NonaBB)	-	mg/kg	5	ND
Decabromobiphenyl (DecaBB)	-	mg/kg	5	ND
Polybromodiphenyl ether(PBDEs)	1000	mg/kg	-	ND
Monobromodiphenylether (MonoBDE)	-	mg/kg	5	ND
Dibromodiphenylether (DiBDE)	-	mg/kg	5	ND
Tribromodiphenylether (TriBDE)	-	mg/kg	5	ND
Tetrabromodiphenylether (TetraBDE)	-	mg/kg	5	ND
Pentabromodiphenylether (PentaBDE)	-	mg/kg	5	ND
Hexabromodiphenylether (HexaBDE)	-	mg/kg	5	ND
Heptabromodiphenylether (HeptaBDE)	-	mg/kg	5	ND
Octabromodiphenylether (OctaBDE)	-	mg/kg	5	ND
Nonabromodiphenylether (NonaBDE)	-	mg/kg	5	ND



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Test Item(s)	Limit	Unit(s)	MDL	A10
Decabromodiphenylether (DecaBDE)	-	mg/kg	5	ND
Dibutyl Phthalate(DBP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate(BBP)	1000	mg/kg	50	ND
Bis-(2-ethylhexyl) Phthalate(DEHP)	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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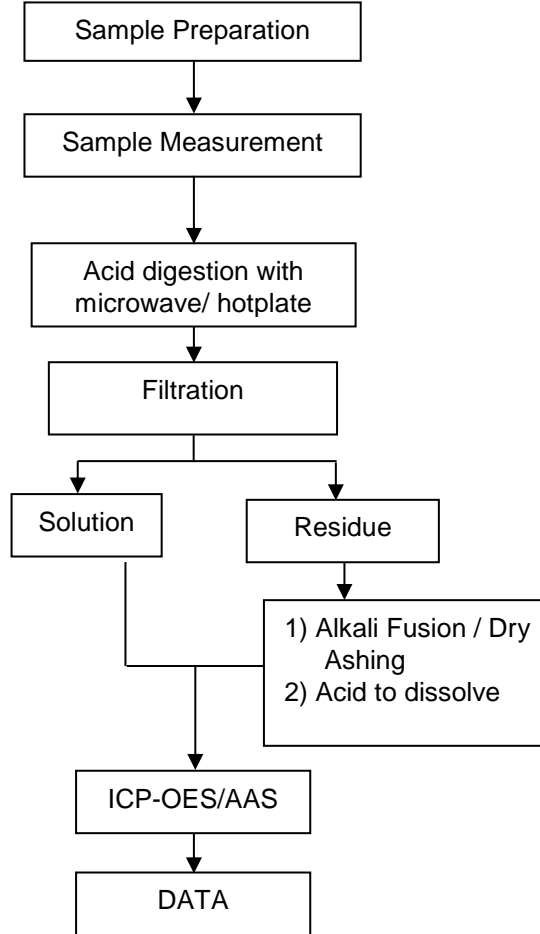
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ATTACHMENTS

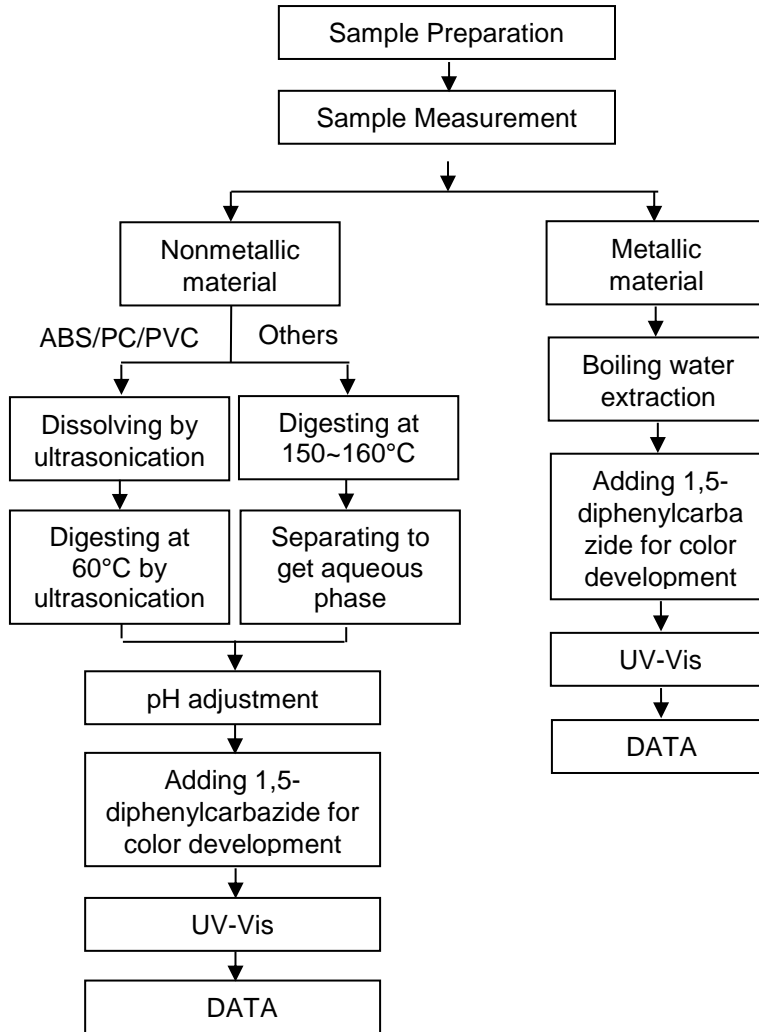
Elements Testing Flow Chart

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



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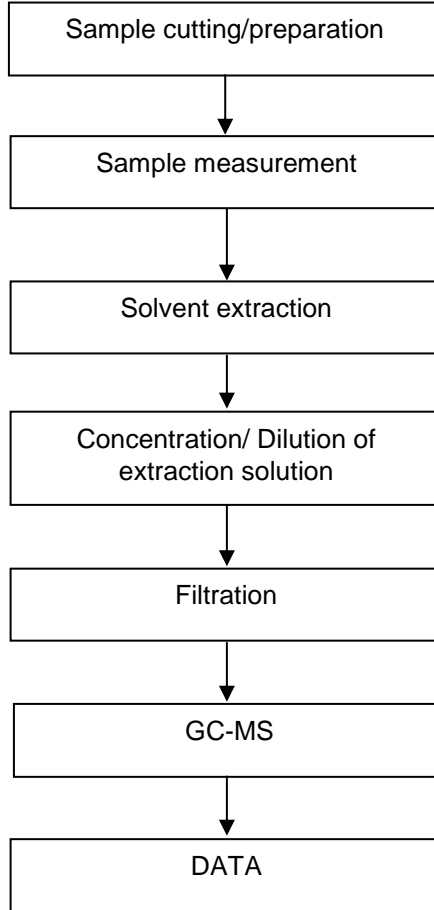
Hexavalent Chromium (Cr(VI)) Testing Flow Chart



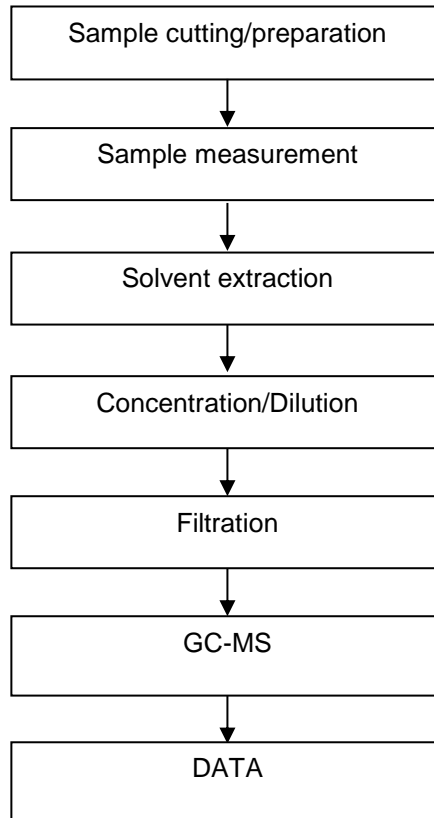
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PBBs/PBDEs Testing Flow Chart



Phthalates Testing Flow Chart



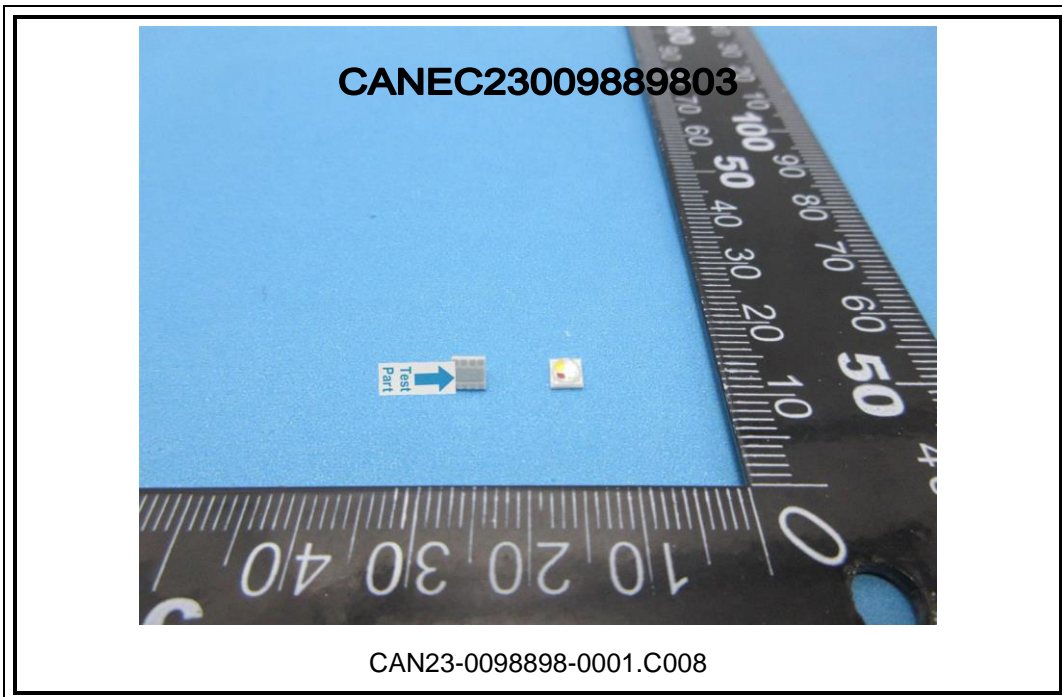
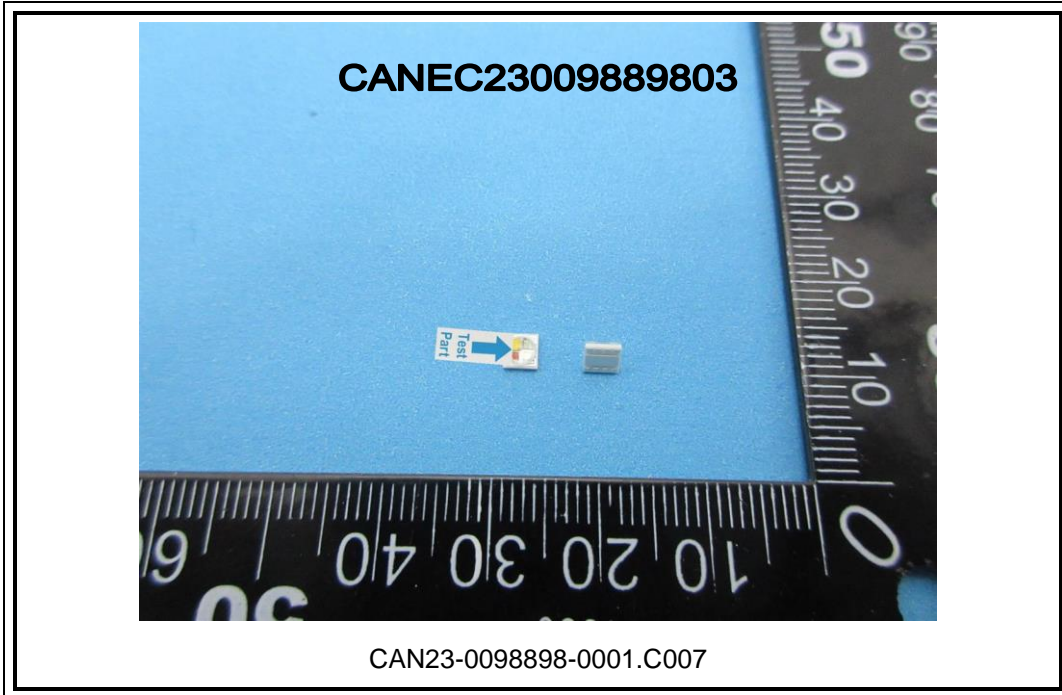
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Sample Photo:



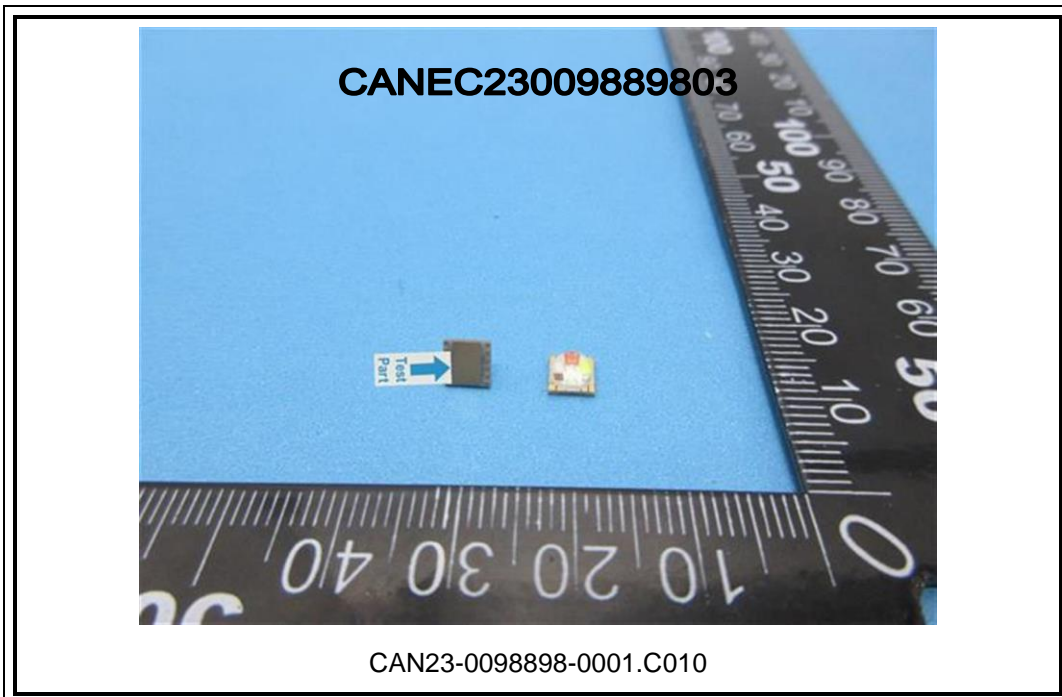
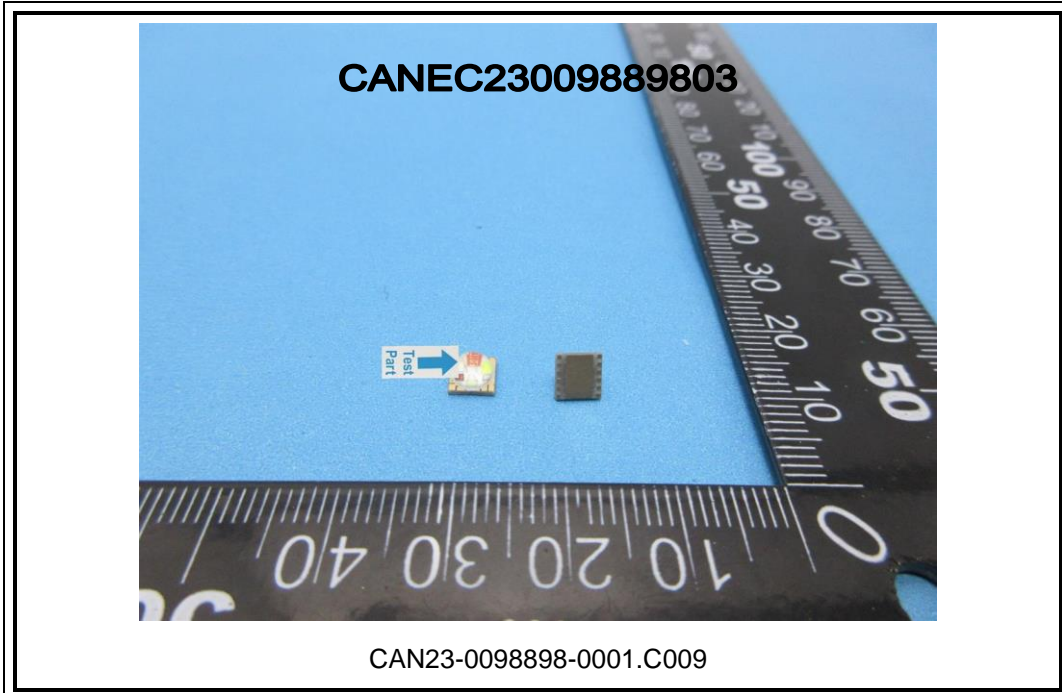
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