

(No.): ETR24301214

(Date): 15-Mar-2024

(Page): 1 of 18

(EVERLIGHT ELECTRONICS CO., LTD.)

6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

(The following sample(s) was/were submitted and identified by the applicant

as)

BASIC INFORMATION	
Type of Product	HIGH POWER LED_ELAT/FC1610
Supplier Company Name	EVERLIGHT
Address	NO.6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN
Tel / Fax / Email	TEL:886-2685-6688
	FAX:886-2685-6699
	E-MAIL: lindawang@everlight.com
Contact Person	LI LING WANG
EVERLIGHT REPORT NO	ELAT/FC1610 SERIES
	Sampling Product:
	FC1610HF13HP-B525724332939E-2T-SGS-15-Mar-2024
PRODUCT INFORMATION	·
Product/component Sample	Automotive exterior lighting
description	
Quantity (numbers or weight)	0.0044 g
EVERLIGHT P/N	ELAT/FC1610 SERIES
	Sampling Product:
	FC1610HF13HP-B525724332939E-2T
Product Lot No	Y230907A0801BA4LZP
Country of Origin	TAIWAN
TEST INFORMATION	
Sample preparation	CUTTING
Test Method	RoHS: IEC 62321, Halogen: BS EN 14582
MDL	Cd, Pb, Hg: 2 mg/kg, PBBs/PBDEs: 5 mg/kg, Halogen: 50 mg/kg
Test Method	RoHS: IEC 62321, Halogen: BS EN 14582

(Sample Submitted By) : (EVERLIGHT ELECTRONICS CO., LTD.)

(Sample Receiving Date) : 06-Mar-2024

(Testing Period) : 06-Mar-2024 to 15-Mar-2024

(Test Results) : (Please refer to following pages).





PIN CODE: 97A7D6EE



(No.): ETR24301214

(Date): 15-Mar-2024

(Page): 2 of 18

(EVERLIGHT ELECTRONICS CO., LTD.)

6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

(Test Requested) : (1) RoHS 2011/65/EU Annex II (EU) 2015/863

, DBP, BBP, DEHP, DIBP (As

specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs,

PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).)

(2) PAHs (As specified by client, to test PAHs and

other item(s).)

(Conclusion) : (1) , DBP, BBP,

DEHP, DIBP RoHS 2011/65/EU Annex II (EU) 2015/863 (Based on the performed tests on submitted sample(s),

the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863

amending Annex II to Directive 2011/65/EU.)

(A fPS) GS

PAHs 3 (Based upon the performed tests on the submitted sample(s), the test results of PAHs (15 items) comply with the limits of PAHs requirement (Category 3) Other consumer products as set by

German Committee on Product Safety (AfPS) GS PAHs.)

(Test Part Description)
No.1 : SMD C TYPE

(Test Results)

(Test Items)	(Method)	(Unit)	MDL	(Result)	(Limit)
(Cd) (Cadmium (Cd))	IEC 62321-5: 2013 (With reference to	mg/kg	2	n.d.	100
(Pb) (Lead (Pb))	IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	1000
(Hg) (Mercury (Hg))	IEC 62321-4: 2013+ AMD1: 2017 (With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	1000



(No.): ETR24301214

(Date): 15-Mar-2024

(Page): 3 of 18

(EVERLIGHT ELECTRONICS CO., LTD.)

6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

			MDL		
(Test Items)	(Method)	(Unit)	IVIDE	(Result)	(Limit)
(restriction)	(iviethed)	(OTIIT)		No.1	(2111111)
Cr(VI) (Hexavalent Chromium	IEC 62321-7-2: 2017 -	mg/kg	8	n.d.	1000
Cr(VI))	(With reference to				
	IEC 62321-7-2: 2017, analysis was				
	performed by UV-VIS.)				
(Monobromobiphenyl)		mg/kg	5	n.d.	-
(Dibromobiphenyl)		mg/kg	5	n.d.	-
(Tribromobiphenyl)		mg/kg	5	n.d.	ı
(Tetrabromobiphenyl)		mg/kg	5	n.d.	1
(Pentabromobiphenyl)		mg/kg	5	n.d.	1
(Hexabromobiphenyl)		mg/kg	5	n.d.	-
(Heptabromobiphenyl)		mg/kg	5	n.d.	-
(Octabromobiphenyl)		mg/kg	5	n.d.	-
(Nonabromobiphenyl)		mg/kg	5	n.d.	-
(Decabromobiphenyl)	IEC 62321-6: 2015 /	mg/kg	5	n.d.	-
(Sum of PBBs)	(With reference to IEC	mg/kg	-	n.d.	1000
(Monobromodiphenyl ether)	62321-6: 2015, analysis was	mg/kg	5	n.d.	-
(Dibromodiphenyl ether)	performed by GC/MS.)	mg/kg	5	n.d.	-
(Tribromodiphenyl ether)		mg/kg	5	n.d.	-
(Tetrabromodiphenyl ether)		mg/kg	5	n.d.	-
(Pentabromodiphenyl ether)		mg/kg	5	n.d.	-
(Hexabromodiphenyl ether)		mg/kg	5	n.d.	-
(Heptabromodiphenyl ether)		mg/kg	5	n.d.	-
(Octabromodiphenyl ether)		mg/kg	5	n.d.	-
(Nonabromodiphenyl ether)		mg/kg	5	n.d.	-
(Decabromodiphenyl ether)		mg/kg	5	n.d.	-
(Sum of PBD Es)		mg/kg	-	n.d.	1000
(BBP) (Butyl		mg/kg	50	n.d.	1000
benzyl phthalate (BBP))					
(DBP) (Dibutyl	IEC 62321-8: 2017 /	mg/kg	50	n.d.	1000
phthalate (DBP))	(With reference to IEC				
(2- ) (DEHP)	62321-8: 2017, analysis was	mg/kg	50	n.d.	1000
(Di-(2-ethylhexyl) phthalate (DEHP))	performed by GC/MS.)				
(DIBP) (Diisobutyl		mg/kg	50	n.d.	1000
phthalate (DIBP))					



(No.): ETR24301214

(Date): 15-Mar-2024

(Page): 4 of 18

(EVERLIGHT ELECTRONICS CO., LTD.)

6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

			MDL		
(Test Items)	(Method)	(Unit)		(Result)	(Limit)
(DIDD) (Diisadaay)		ma/ka	50	No.1	
(DIDP) (Diisodecyl phthalate (DIDP)) (CAS No.: 26761-		mg/kg	50	n.d.	-
40-0, 68515-49-1)					
(DINP)		mg/kg	50	n.d.	-
(Diisononyl phthalate (DINP)) (CAS					
No.: 28553-12-0, 68515-48-0)					
(DNOP) (Di-n-		mg/kg	50	n.d.	-
octyl phthalate (DNOP)) (CAS No.: 117-84-0)					
(DNPP) (Di-n-		mg/kg	50	n.d.	-
pentyl phthalate (DNPP)) (CAS No.:					
131-18-0)	IEC 62321-8: 2017 /	/1			
(DNHP) (Di-n-hexyl phthalate (DNHP)) (CAS No.:	(With reference to IEC 62321-8: 2017, analysis was	mg/kg	50	n.d.	-
84-75-3)	performed by GC/MS.)				
(2- ) (DMEP)	1	mg/kg	50	n.d.	-
(Bis(2-methoxyethyl) phthalate		0 0			
(DMEP)) (CAS No.: 117-82-8)					
(DMP) (Dimethyl		mg/kg	50	n.d.	-
phthalate (DMP)) (CAS No.: 131-11-3)		100 Gt /14 Gt	Γ0	n d	
(DIOP) (Diisooctyl phthalate (DIOP)) (CAS No.: 27554-		mg/kg	50	n.d.	-
26-3)					
(DNNP) (Di-n-		mg/kg	50	n.d.	-
nonyl phthalate (DNNP)) (CAS No.:					
84-76-4)					
(PFOS and its	CEN/TS 15968: 2010	mg/kg	0.01	n.d.	-
salts) (CAS No.: 1763-23-1 and its salts)	(With reference to				
(PFOA and its salts)	CEN/TS 15968: 2010, analysis was	mg/kg	0.01	n.d.	_
(CAS No.: 335-67-1 and its salts)	performed by LC/MS/MS.)	1119/109	0.01	TI.G.	
,					



(No.): ETR24301214

(Date): 15-Mar-2024

(Page): 6 of 18

## Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)
6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

(Test Items)	(Method)	(Unit)	MDL	(Result) No.1	(Limit)
(HBCDD) ( - HBCDD, - HBCDD, - HBCDD) (Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( - HBCDD, - HBCDD, - HBCDD)) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	IEC 62321: 2008 / (With reference to IEC 62321: 2008, analysis was performed by GC/MS.)	mg/kg	5	n.d.	-
(F) (Fluorine (F)) (CAS No.: 14762- 94-8)		mg/kg	50	n.d.	-
(CI) (Chlorine (CI)) (CAS No.: 22537-15-1)	BS EN 14582: 2016 (With reference to BS EN	mg/kg	50	n.d.	-
(Br) (Bromine (Br)) (CAS No.: 10097-32-2)	14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.	-
(I) (lodine (I)) (CAS No.: 14362-44-8)		mg/kg	50	n.d.	-
(Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	US EPA 3052: 1996 (With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	-

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(Note)
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1. mg/kg = ppm 0.1wt% = 0.1% = 1000ppm

2. MDL = Method Detection Limit ( )

3. n.d. = Not Detected ( ); MDL / Less than MDL

4. "-" = Not Regulated ( )

5. ILAC-G 8:09/2019 (w=0)
```

(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. According to this rule, the judgement of conformity is based on the comparing test results with limits.)



(No.): ETR24301214 (Date): 15-Mar-2024 (Page): 7 of 18

(EVERLIGHT ELECTRONICS CO., LTD.)
(NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

PAHs Remark

(A fPS): GS PAHs

AfPS (German commission for Product Safety): GS PAHs requirements

	1 (Category 1)	2 (Cat	egory 2)	3 (Cat	egory 3)
(Parameter)	( 30 ) 2009/48/EC 3 (Materials intended to be placed in the mouth, or materials in toys (Directive 2009/48/EC) or articles for children up to 3	are not in Category intended or foreser skin contact (> 30 short-term repetitives skin)	eable long-term seconds) or	1 2 ( )(Mat covered by Catego intended or foreset term skin contact (	30 erials not ry 1 or 2, with eable short-
	years of age with intended long-term skin contact (> 30 seconds))	a. 14 (Use by children under 14)	(Other consumer		b. (Other consumer products)
Naphthalene	< 1	< 2		< 10	
Phenanthrene					
Anthracene	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum
Fluoranthene	< 1 Suiti	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum
Pyrene					
Benzo[a]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Chrysene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[b]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[j]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[k]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[a]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[e]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Indeno[1,2,3-c,d] pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Dibenzo[a,h]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[g,h,i]perylene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
15 PAH (Sum of 15 PAH)	< 1	< 5	< 10	< 20	< 50

(Unit) mg/kg



(No.): ETR24301214

(Date): 15-Mar-2024

(Page): 8 of 18

(EVERLIGHT ELECTRONICS CO., LTD.)

6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

PFAS Remark						
PFAS	PFA S			PFAS		
				PFAS		PFA S
		(	PFAS		PFAS	)

(The quantitative technology of PFAS is to analyze the specific structure of PFAS substances. However, PFAS acid and its salts with the same carbon number group have the same specific structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished to identify the contribution from PFAS acid or its salts. Therefore, the tested results display the sum of concentrations of PFAS acids and its salts with the same carbon number group. The concentration of PFAS substances in the below table have been included in the tested results, please refer to the table for relevant information: (The listed PFAS substances are examples only, it do not include all PFAS salts with the same carbon number group.))

(Crawa Nama)	(Substance Name)	CAS No.
(Group Name)	· · · · · · · · · · · · · · · · · · ·	
	(Perfluorooctane sulfonates) (PFOS)	1763-23-1
	(PFOS-K)	2795-39-3
	Potassium perfluorooctanesulfonate (PFOS-K)	
	(PFO S-Li)	29457-72-5
	Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	
		29081-56-9
	(PFOS-NH <sub>4</sub> )	
	Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH <sub>4</sub> )	
	(PFO S-N H (O H) <sub>2</sub> )	70225-14-8
	Perfluorooctane sulfonate diethanolamine salt (PFOS-	, 3223 3
	NH(OH) <sub>2</sub> )	
PFOS, &		56773-42-3
(PFOS, its salts & derivatives)	$(PFOS-N(C_2H_5)_4)$	30773-42-3
	Perfluorooctanesulfonic acid,tetraethylammonium	
	salt (PFOS-N(C <sub>2</sub> H <sub>5</sub> ) <sub>4</sub> )	
	(PFOS-DDA)	251099-16-8
	N-decyl-N,N-dimethyldecan-1-aminium	
	1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-	
	heptadecafluorooctane-1-sulfonate (PFOS-DDA)	
	(POSF)	307-35-7
	Perfluorooctane sulfonyl fluoride (POSF)	
	(PFOS-Mg)	91036-71-4
	Perfluorooctanesulfonic acid, magnesium salt (PFOS-	
	Mg)	



(No.): ETR24301214

(Date): 15-Mar-2024

(Page): 9 of 18

(EVERLIGHT ELECTRONICS CO., LTD.)

6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

(Group Name)	(Substance Name)	CAS No.
PFOS, & (PFOS, its salts & derivatives)	(PFO S-N a) Perfluorooctanesulfonic acid, sodium salt (PFOS-Na)	4021-47-0
	Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctanesulfonate	71463-74-6
	(Perfluorooctanoic acid) (PFOA)	335-67-1
PFOA, & (PFOA, its salts & derivatives)	(PFOA-Na) Sodium perfluorooctanoate (PFOA-Na)	335-95-5
	(PFOA-K) Potassium perfluorooctanoate (PFOA-K)	2395-00-8
	(PFOA-Ag) Silver perfluorooctanote (PFOA-Ag)	335-93-3
	(PFOA-F) Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
	(A PFO ) Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
	(PFOA-Li) Lithium perfluorooctanoate (PFOA-Li)	17125-58-5



(No.): ETR24301214

(Date): 15-Mar-2024

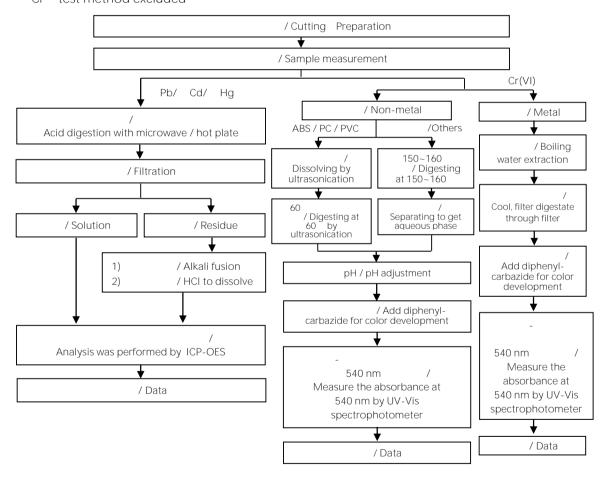
(Page): 10 of 18

(EVERLIGHT ELECTRONICS CO., LTD.)
8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

/ Analytical flow chart of heavy metal

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

Cr<sup>6+</sup> test method excluded





(No.): ETR24301214

(Date): 15-Mar-2024

(Page): 11 of 18

(EVERLIGHT ELECTRONICS CO., LTD.)
8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

/ Analytical flow chart - PBBs/PBDEs

/ First testing process
/ Optional screen process
/ Confirmation process

/ Sample pretreatment

/ Screen analysis

/ Sample extraction
/ Soxhlet method

/
Concentrate/Dilute extracted solution

/ Filter

/ GC/MS

/ Data



(No.): ETR24301214

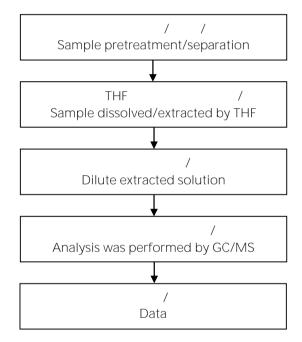
(Date): 15-Mar-2024

(Page): 12 of 18

(EVERLIGHT ELECTRONICS CO., LTD.)
6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

/ Analytical flow chart - Phthalate

/Test method: IEC 62321-8





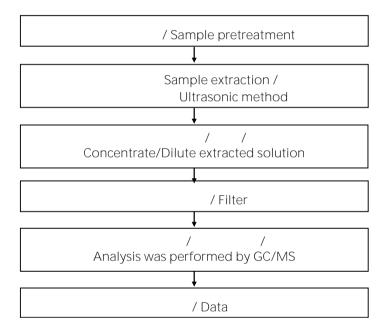
(No.): ETR24301214

(Date): 15-Mar-2024

(Page): 13 of 18

(EVERLIGHT ELECTRONICS CO., LTD.)
(NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

#### / Analytical flow chart - HBCDD





(No.): ETR24301214

(Date): 15-Mar-2024

(Page): 14 of 18

(EVERLIGHT ELECTRONICS CO., LTD.)
6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

/ Analytical flow chart - Halogen

Sample	/ / pretreatment / Separation	
	/	



(No.): ETR24301214 (Date): 15-Mar-2024 (Page): 15 of 18

(EVERLIGHT ELECTRONICS CO., LTD.) b-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

( / / / ) / Analytical flow chart - PFAS (including PFOA/PFOS/its related compound, etc.)

/ Sample pretreatment

/
Sample extraction by ultrasonic extraction

/
/
Concentrate/Dilute extracted solution



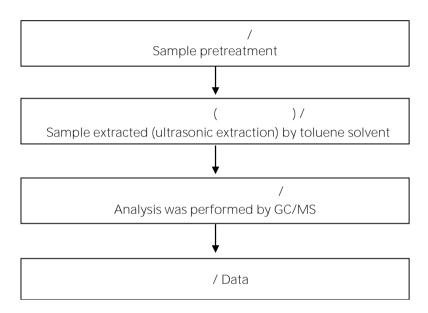
(No.): ETR24301214

(Date): 15-Mar-2024

(Page): 16 of 18

(EVERLIGHT ELECTRONICS CO., LTD.)
6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

Analytical flow chart - PAHs (Polycyclic Aromatic Hydrocarbons)





(No.): ETR24301214

(Date): 15-Mar-2024

(Page): 17 of 18

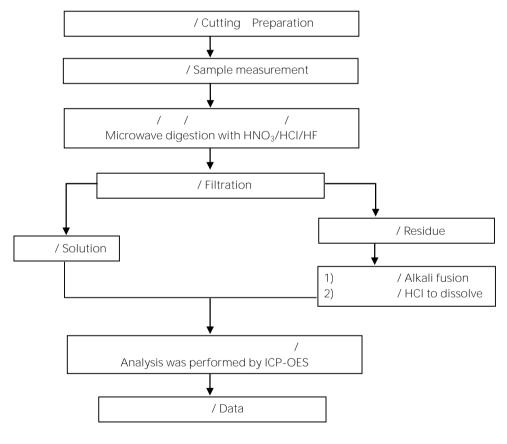
(EVERLIGHT ELECTRONICS CO., LTD.)

6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

( ) / Analytical flow chart of elements (Heavy metal included)

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

/Reference method US EPA 3051A US EPA 3052



\* US EPA 3051A

/ US EPA 3051A method does not add HF.



(No.): ETR24301214

(Date): 15-Mar-2024

(Page): 18 of 18

(EVERLIGHT ELECTRONICS CO., LTD.) 6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

(The tested sample / part is marked by an arrow if it's shown on the photo.)

## ETR24301214



(End of Report) \*\*