

浙江联和电子有限公司

ZHEJIANG LIANHE ELECTRONICS CO., LTD.

承 认 书

SPECIFICATION FOR APPROVAL

客 户 名 称 CUSTOMER	
品 名 DESCRIPTION	NH1.0压接式条形连接器
料 号 CUSERTOMER PART NO	A1002
日 期 DATE	

客 户 确 认 (APPROVED SIGNATURES)

核准 (APPROVAL)	工程 (ENGINEERING)	品管 (QC)
承认结果： <input type="checkbox"/> 承认 <input type="checkbox"/> 不承认 <input type="checkbox"/> 重新送样		



浙江联和电子有限公司
ZHEJIANG LIANHE ELECTRONICS CO., LTD.
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核准 (APPROVAL)	确认 (CHECK)	制作 (PREPARE)

壳体料号命名规则

Housing Part No. Naming Rules

A 2501 - S H B 02 X2 - * - ** - ** - **

A:Wire to Board Connectors
B:Board-in Connectors
C:Wire to Wire Connectors
D:Hard Splices Connectors
F:FFC/FPC Connectors
I:IDC

系列号 Series Number

Feature Category 特征类别(默认空)

H=壳体 Housing
产品类别 P=密封件 Water Proofing
Product Category:F=配件 Fitting

同类别多型号序号(默认空)
Same Series Different Type: B~ZZ

单列极数 The Pin Number of Single Row: 01~**

多列极数 The Pin Number of Several Row: X2~X*(无则空)

1=PA66
2=PA66=G=灼热丝增强
3=PA46
4=PA6T
5=PA9T
6=PBT
7=PP0
壳体材料 8=LCP
Housing Material:9=U=PA66-UL

V2 UL阻燃等级标准(默认不注明)
V0 UL阻燃等级标准
壳体材料特性 Z=灼热丝是按照(IEC60695/GB/T5169)标准,
Housing Material Specialty: 符合GWIT750℃, GWF1960℃

OR=橙色 Orange
P=粉色 Pink
R=红色 Red
VI=紫色 Violet
Y=黄色 Yellow
GY=灰色 Gray
BK=黑色 Black
G=绿色 Green
BL=蓝色 Blue
BR=棕色 Brown
TR=透明白 Transparent
W=白色 White
壳体颜色 EC=米色 ECRU
Housing Color: TG=透明绿 Transparent Green
壳体材料3/4/5/8默认米色
壳体材料7默认黑色
壳体材料1/2/6/9默认白色
(默认可为空)

客户专用代码
Customer Special Code:表示和常规件不同,用来代表某个客户

备注:*部分内容只在产品标签中体现

针座料号命名规则

Wafer Part No. Naming Rules

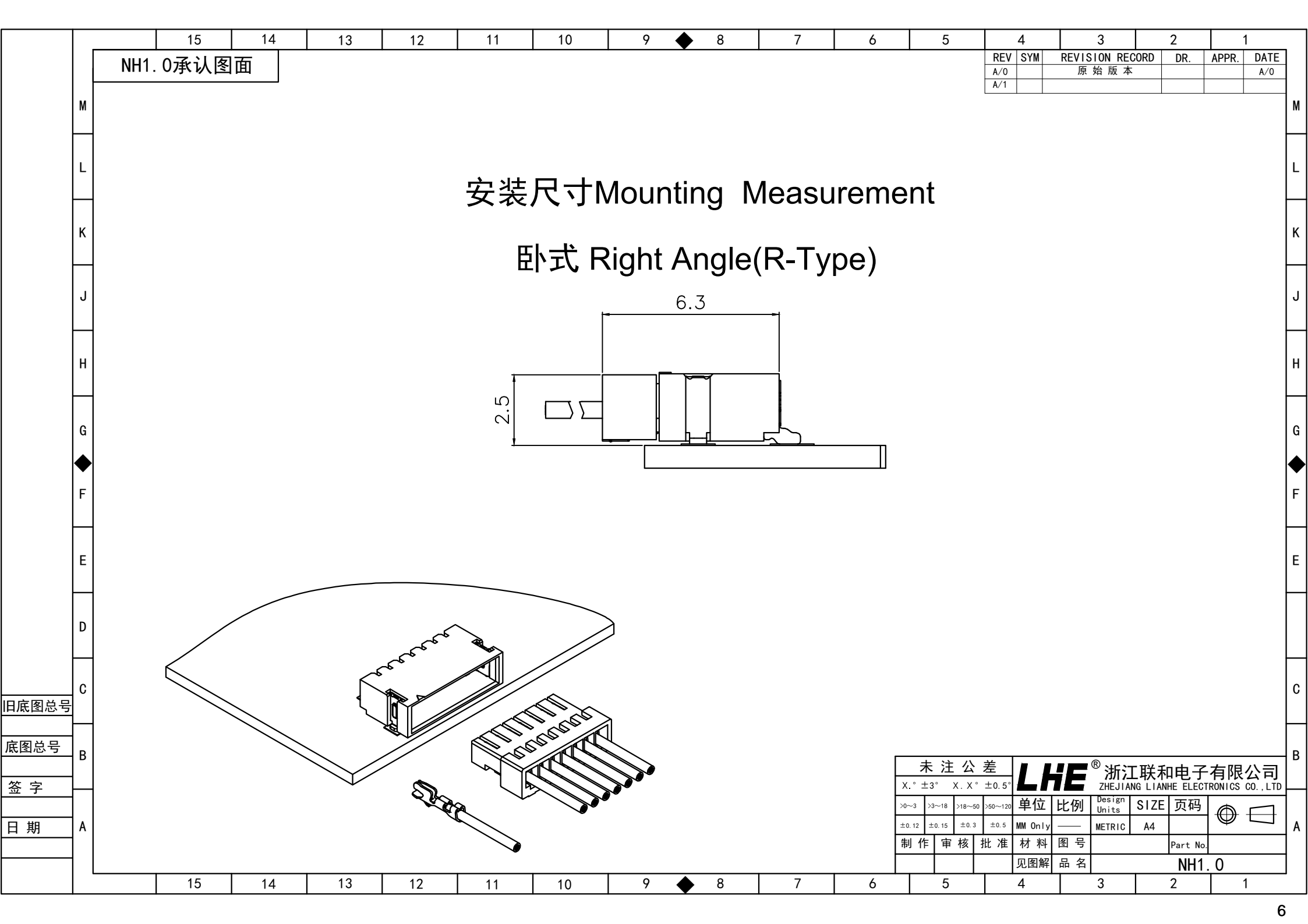
A: Wire to Board Connectors F: FFC/FPC Connectors I: IDC	A	2501	-	DH	WV	B	02	X2	-	N*	-	C*	-	**	-	**	-	*	-	**	-	**	-	**	-	**
系列号 Series Number																										
DB=防呆柱+全包 B=全包 All inclusive DH=防呆柱+高背型 特征类别(默认空) H=高背型 High box type Feature Category: D=固定防呆柱 Fixed																										
WV=直针座 Straight Angle WR=弯针座 Right Angle 产品类别 SV=立贴式 V-SMT Product Category: SR=卧贴式 R-SMT																										
同类别多型号序号(默认空) Same Series Different Type: B~ZZ																										
单列极数 The Pin Number of Single Row: 01~**																										
多列极数 The Pin Number of Several Row: X2~X*(无则空)																										
N为标准缺针, *为非标缺针序号(例N1. 2. 5) (无则空)																										
C为插针样式不同(除打点、缺针外)*为序号(无则空)																										
打点样式 Point Style: K为打点, K2. 4表示在第2枚, 第4枚针上打点. 默认打点无数字标注(无则空)																										
接触件材料 P=磷青铜 Phos. Bronze Contact Material: B=黄铜 Brass																										
0=素材酸洗 None 1=镀镍 Nickel Plating 2=镀亮锡 Tin Plating 3=镀镍镭光锡 Matt Tin-Nickel Plating 4=镀铅锡 Tin-Lead Plating 5=镀铜锡 Tin-Cu Plating 6=镀镍银 Silver-Nickel Plating 7=镀镍金 Gold-Nickel Plating 8=镀镍局部金 Half Gold-Nickel Plating 9=镀亮锡局部金 Half Gold-Tin Plating 表面处理 10=镀镍亮锡 Tin-Nickel Plating 默认B10可为空(A5001默认B3)																										
1=PA66 2=PA66-G=灼热丝增强 3=PA46 4=PA6T 5=PA9T 6=PBT 7=PP0 壳体材料 8=LCP Housing Material: 9=U=PA66-UL																										
V2 UL阻燃等级标准(默认不注明) 壳体材料特性 V0 UL阻燃等级标准 Housing Material Specialty: Z=灼热丝是按照(IEC60695/GB/T5169)标准, 符合GWIT750℃, GWF1960℃																										
其他特殊要求 Other Special Requirements: 如: SE(对固定力要求高5N)																										
OR=橙色 Orange P=粉色 Pink R=红色 Red VI=紫色 Violet Y=黄色 Yellow GY=灰色 Gray BK=黑色 Black G=绿色 Green BL=蓝色 Blue BR=棕色 Brown TR=透明白 Transparent W=白色 White EC=米色 ECRU 壳体颜色 TG=透明绿 Transparent Green 壳体材料3/4/5/8默认米色 壳体材料7默认黑色 壳体材料1/2/6/9默认白色(默认可为空)																										
客户专用代码 Customer Special Code: 表示和常规件不同, 用来代表某个客户																										

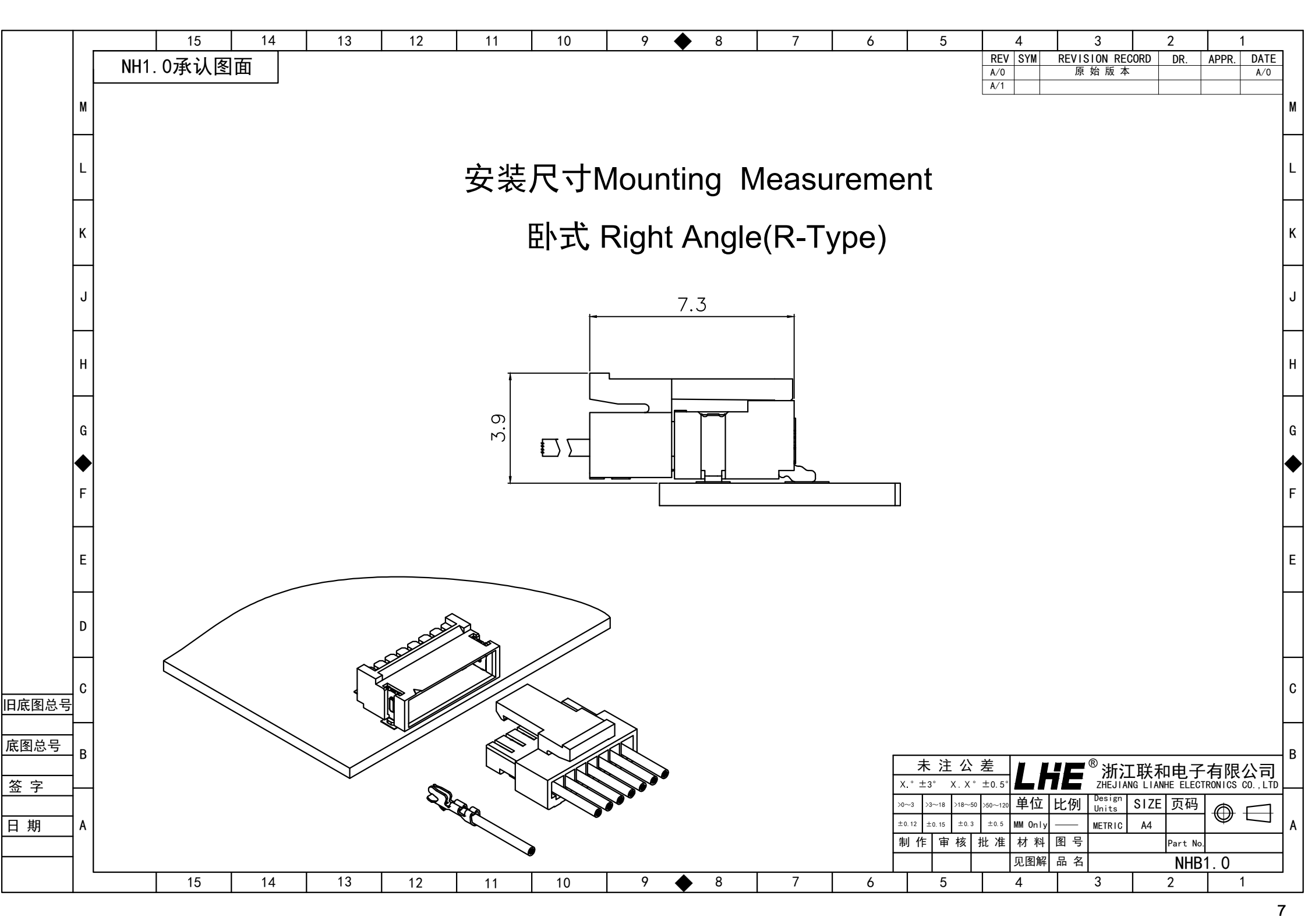
备注: *部分内容只在产品标签中体现

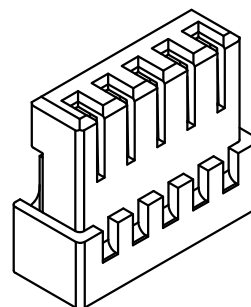
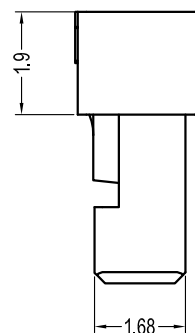
端子料号命名规则

Terminal Part No. Naming Rules

A 2501 N - T 2 2 - A 30 5 - P 2	
A:Wire to Board Connectors B:Board-in Connectors C:Wire to Wire Connectors F:FFC/FPC Connectors I:IDC D:Hard Splices Connectors	
系列号 Series Number	
K=直形带锁 N=直形 Z=旗形带锁 Q=旗形 X=横插带锁 H=横插 Y=叉形端子 J=插片 R=环形端子 C=圆形 G=接线端子 W=鲨鱼齿端子	
特征类别(默认空) B=子弹形端子 Feature Category:U=耳扒形端子	
产品类别 Product Category:T=端子 Terminal	
同类别多型号序号(默认空) Same Series Different Type: 1~9	
同型号多尺寸序号(默认空) Same Type Different size: 1~9	
适用线规(默认空) A=小脚 B=中脚 Applicable Wire:C=高脚 D=大脚	
料带厚度单位:mm X100 (0.3X100=30 默认空)	
配合厚度单位:mm X10 (0.5X10=5 默认空) 注:所有<灰色>说明,为D系列分类附加料号及说明!	
S=不锈钢 Stainless Steel 材质 P=磷青铜 Phos. Bronnze Material:B=黄铜 Brass	
0=素材酸洗 None 1=镀镍 Nickel Plating 2=镀亮锡 Tin Plating 3=镀镍氩光锡 Matt Tin-Nickel Plating 4=镀铅锡 Tin-Lead Plating 5=镀铜锡 Tin-Cu Plating 6=镀镍银 Silver-Nickel Plating 7=镀镍金 Gold-Nickel Plating 8=镀镍局部金 Half Gold-Nickel Plating 表面处理 9=镀亮锡局部金 Half Gold-Tin Plating Surface Processing: 10=镀镍亮锡 Tin-Nickel Plating	
备注:表面处理内容只在产品标签中体现	

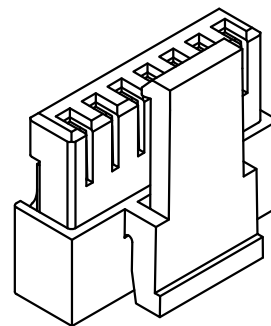
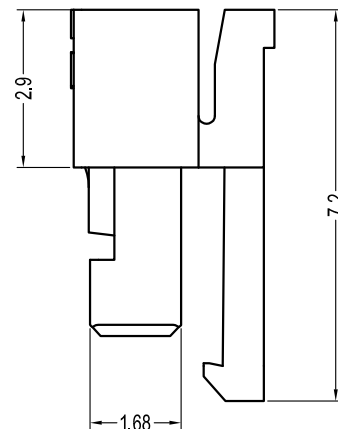






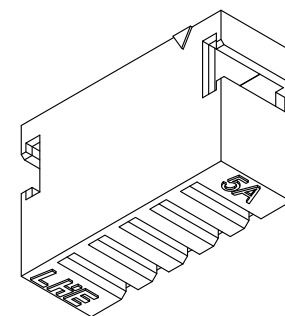
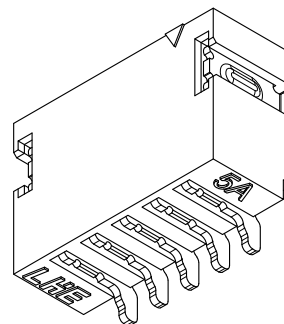
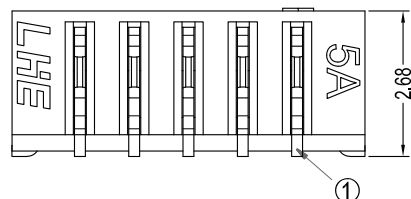
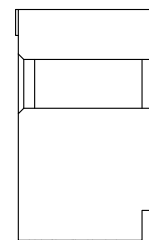
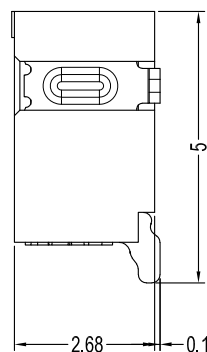
Poles	Part No.		Dimensions mm	
			A	B
2	A1002-H02	NH1. 0-2Y	1.0	3.0
3	A1002-H03	NH1. 0-3Y	2.0	4.0
4	A1002-H04	NH1. 0-4Y	3.0	5.0
5	A1002-H05	NH1. 0-5Y	4.0	6.0
6	A1002-H06	NH1. 0-6Y	5.0	7.0
7	A1002-H07	NH1. 0-7Y	6.0	8.0
8	A1002-H08	NH1. 0-8Y	7.0	9.0
9	A1002-H09	NH1. 0-9Y	8.0	10.0
10	A1002-H10	NH1. 0-10Y	9.0	11.0
11	A1002-H11	NH1. 0-11Y	10.0	12.0
12	A1002-H12	NH1. 0-12Y	11.0	13.0
13	A1002-H13	NH1. 0-13Y	12.0	14.0
14	A1002-H14	NH1. 0-14Y	13.0	15.0
15	A1002-H15	NH1. 0-15Y	14.0	16.0
16	A1002-H16	NH1. 0-16Y	15.0	17.0
17	A1002-H17	NH1. 0-17Y	16.0	18.0
18	A1002-H18	NH1. 0-18Y	17.0	19.0
19	A1002-H19	NH1. 0-19Y	18.0	20.0
20	A1002-H20	NH1. 0-20Y	19.0	21.0

1	胶壳 (HOUSING)		PBT UL94V-0	1	White (白色)	
序号	名称/料号		材 料	数量	附 注	
未 注 公 差			LHE [®] 浙江联和电子有限公司 ZHEJIANG LIANHE ELECTRONICS CO.,LTD			
X° ±3° X.X° ±0.5°						
>0~3	>3~18	>18~50	>50~120	单位	比例	Design Units
±0.12	±0.15	±0.3	±0.5	MM Only	——	METRIC
				SIZE	页码	
				A4		
制作	审核	批准	材料	图号	Part No.	
			见图解	品 名	NH1.0-NY	

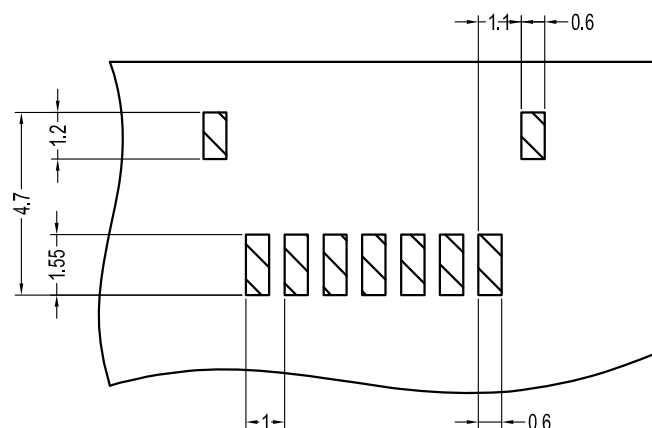


Poles	Part No.		Dimensions mm	
			A	B
2	A1002-HB02	NHB1. 0-2Y	1.0	3.0
3	A1002-HB03	NHB1. 0-3Y	2.0	4.0
4	A1002-HB04	NHB1. 0-4Y	3.0	5.0
5	A1002-HB05	NHB1. 0-5Y	4.0	6.0
6	A1002-HB06	NHB1. 0-6Y	5.0	7.0
7	A1002-HB07	NHB1. 0-7Y	6.0	8.0
8	A1002-HB08	NHB1. 0-8Y	7.0	9.0
9	A1002-HB09	NHB1. 0-9Y	8.0	10.0
10	A1002-HB10	NHB1. 0-10Y	9.0	11.0
11	A1002-HB11	NHB1. 0-11Y	10.0	12.0
12	A1002-HB12	NHB1. 0-12Y	11.0	13.0
13	A1002-HB13	NHB1. 0-13Y	12.0	14.0
14	A1002-HB14	NHB1. 0-14Y	13.0	15.0
15	A1002-HB15	NHB1. 0-15Y	14.0	16.0
16	A1002-HB16	NHB1. 0-16Y	15.0	17.0
17	A1002-HB17	NHB1. 0-17Y	16.0	18.0
18	A1002-HB18	NHB1. 0-18Y	17.0	19.0
19	A1002-HB19	NHB1. 0-19Y	18.0	20.0
20	A1002-HB20	NHB1. 0-20Y	19.0	21.0

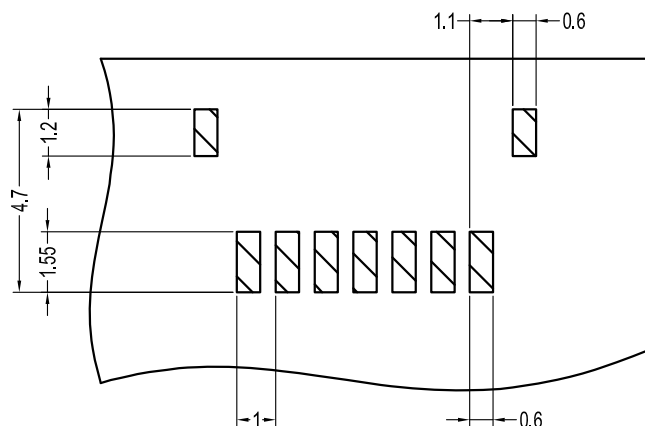
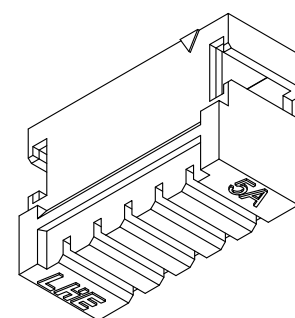
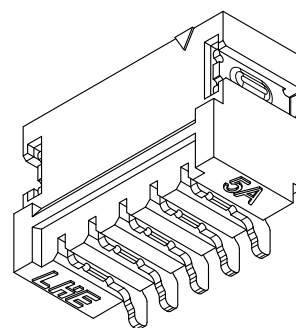
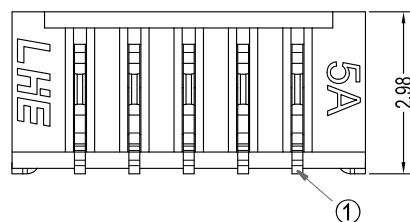
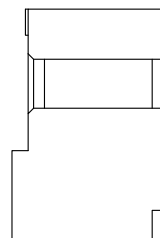
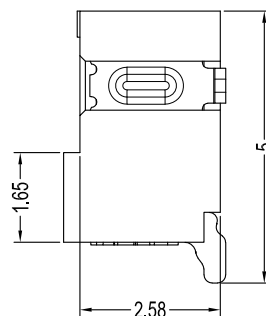
1	胶壳 (HOUSING)	PBT UL94V-0	1	White (白色)
序号	名称/料号	材 料	数量	附 注
未 注 公 差		LHE [®] 浙江联和电子有限公司 ZHEJIANG LIANHE ELECTRONICS CO., LTD.		
X°, ±3° X, X° ±0.5°				
>0~3	>3~18	>18~50	>50~120	
±0.12	±0.15	±0.3	±0.5	
单位	比例	Design Units	SIZE	页码
MM Only	——	METRIC	A4	
制作	审核	批准	材料	图号
				Part No.
			见图解	品 名
				NHB1.0-NY



Poles	Part No.	Dimensions mm		
		A	B	
2	A1002-SR02	NH1. 0-2AWB	1.0	3.5
3	A1002-SR03	NH1. 0-3AWB	2.0	4.5
4	A1002-SR04	NH1. 0-4AWB	3.0	5.5
5	A1002-SR05	NH1. 0-5AWB	4.0	6.5
6	A1002-SR06	NH1. 0-6AWB	5.0	7.5
7	A1002-SR07	NH1. 0-7AWB	6.0	8.5
8	A1002-SR08	NH1. 0-8AWB	7.0	9.5
9	A1002-SR09	NH1. 0-9AWB	8.0	10.5
10	A1002-SR10	NH1. 0-10AWB	9.0	11.5
11	A1002-SR11	NH1. 0-11AWB	10.0	12.5
12	A1002-SR12	NH1. 0-12AWB	11.0	13.5
13	A1002-SR13	NH1. 0-13AWB	12.0	14.5
14	A1002-SR14	NH1. 0-14AWB	13.0	15.5
15	A1002-SR15	NH1. 0-15AWB	14.0	16.5
16	A1002-SR16	NH1. 0-16AWB	15.0	17.5
17	A1002-SR17	NH1. 0-17AWB	16.0	18.5
18	A1002-SR18	NH1. 0-18AWB	17.0	19.5
19	A1002-SR19	NH1. 0-19AWB	18.0	20.5
20	A1002-SR20	NH1. 0-20AWB	19.0	21.5



3	焊片	Phos Bronze tin 磷青铜镀锡	2		
2	焊脚	Phos Bronze tin 磷青铜镀锡	N		
1	基座	LCP UL94V-0	1		本色
序号	名称/料号	材 料	每只用量 Each Amount	数量	附 注
未 注 公 差		LHE[®] 浙江联和电子有限公司 ZHEJIANG LIANHE ELECTRONICS CO., LTD.			
X°, ±3° X, X° ±0.5°		单位	比例	Design Units	SIZE 页码
>0~3	>3~18	>18~50	>50~120	MM Only	—
±0.12	±0.15	±0.3	±0.5	METRIC	A4
制 作	审 核	批 准	材 料	图 号	Part No.
			见图解	品 名	NH1.0-NAWB 

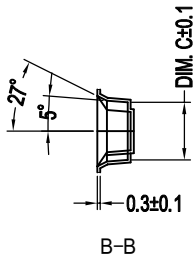
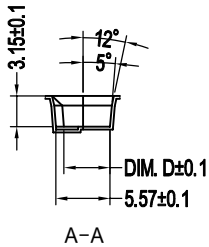
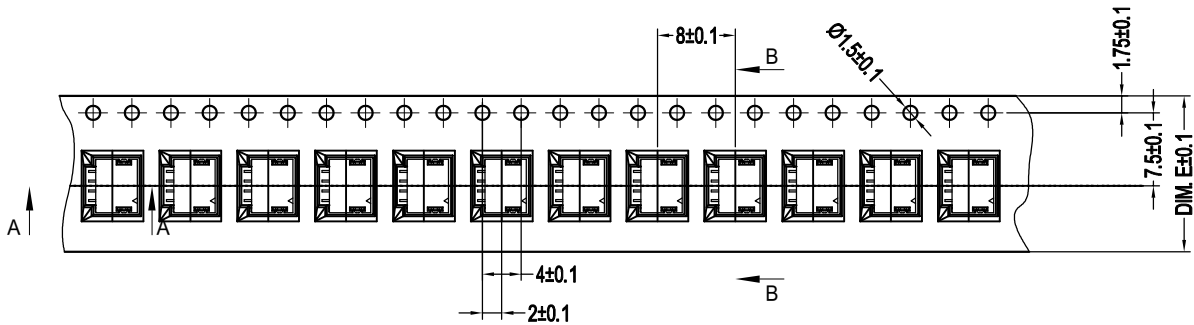


Poles	Part No.	Dimensions mm		
		A	B	
2	A1002-SRB02	NHB1.0-2AWB	1.0	3.5
3	A1002-SRB03	NHB1.0-3AWB	2.0	4.5
4	A1002-SRB04	NHB1.0-4AWB	3.0	5.5
5	A1002-SRB05	NHB1.0-5AWB	4.0	6.5
6	A1002-SRB06	NHB1.0-6AWB	5.0	7.5
7	A1002-SRB07	NHB1.0-7AWB	6.0	8.5
8	A1002-SRB08	NHB1.0-8AWB	7.0	9.5
9	A1002-SRB09	NHB1.0-9AWB	8.0	10.5
10	A1002-SRB10	NHB1.0-10AWB	9.0	11.5
11	A1002-SRB11	NHB1.0-11AWB	10.0	12.5
12	A1002-SRB12	NHB1.0-12AWB	11.0	13.5
13	A1002-SRB13	NHB1.0-13AWB	12.0	14.5
14	A1002-SRB14	NHB1.0-14AWB	13.0	15.5
15	A1002-SRB15	NHB1.0-15AWB	14.0	16.5
16	A1002-SRB16	NHB1.0-16AWB	15.0	17.5
17	A1002-SRB17	NHB1.0-17AWB	16.0	18.5
18	A1002-SRB18	NHB1.0-18AWB	17.0	9.5
19	A1002-SRB19	NHB1.0-19AWB	18.0	20.5
20	A1002-SRB20	NHB1.0-20AWB	19.0	21.5

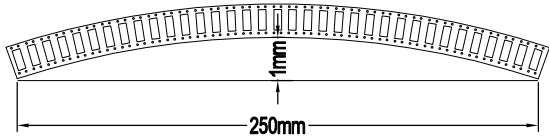
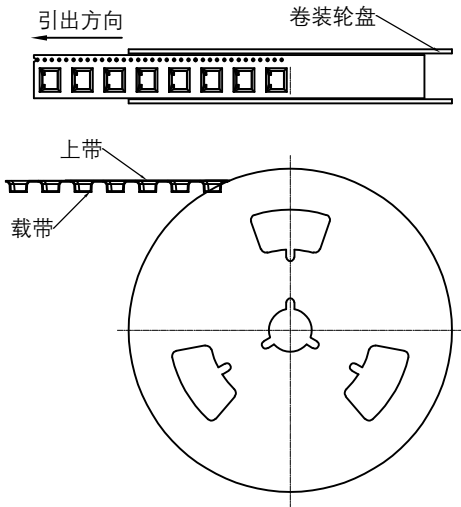
3	焊片	Phos Bronze tin 磷青铜镀锡	2		本色
2	引脚	Phos Bronze tin 磷青铜镀锡	N		
1	基座	LCP UL94V-0	1		
序号	名称/料号	材 料	每只用量 Each Amount	数量	附 注
未 注 公 差		LHE [®] 浙江联和电子有限公司 ZHEJIANG LIANHE ELECTRONICS CO., LTD.			
X°. ±3° X, X° ±0.5°					
>0~3	>3~18	>18~50	>50~120	单位	比例
±0.12	±0.15	±0.3	±0.5	MM Only	—
制作	审核	批准	材料	图号	Part No.
			见图解	品 名	NHB1.0-NAWB

REV	DESCRIPTION	DATE
A/0	原始版本	E
A/1	修订版本	

NH1.0承认图面



卷装示意图仅供参考



Poles	DIM. E	DIM. D	DIM. C	模数	颗数	卷轮	包装数
2	12	5.57	3.9	170	2040	13" / 16	2000
3	12	5.57	4.9				
4	16	5.57	5.9				
5	16	5.57	6.9				
6	16	5.57	7.9				
7	16	5.57	8.9				
8	16	5.57	9.9				
9	24	5.57	10.9				
10	24	5.57	11.9				
11	24	5.57	12.9				
12	24	5.57	13.9	170	2040	13" / 16	2000
13	24	5.57	14.9				
14	24	5.57	15.9				
15	32	5.57	16.9				
16	32	5.57	17.9				
17	32	5.57	18.9				
18	32	5.57	19.9				
19	44	5.57	20.9				
20	44	5.57	21.9				

包装说明:

- 10个边孔的累计公差不能超过 $\pm 0.2\text{mm}$.
- 材料规格: 雾透, 厚度 0.3mm .
- 13英寸卷轮卷装长度: 16.32米. (零件包装长度: 16米).
- 13英寸卷轮包装零件总颗数: 2040颗. (实际包装零件颗数: 2000颗).
- 冲边毛边公差不能超过 0.15mm .
- 所有尺寸设计参照EIA-481-D-2008.
- 产品必须符合CJNST《环境管理物质管控标准》相关规定.
- 载带在250mm长度以内最大弯曲度不超过3mm(见右图).

未注公差				LHE [®] 浙江联和电子有限公司					
X.° ±3° X.X° ±0.5°				ZHEJIANG LIANHE ELECTRONICS CO., LTD					
>0-3	>3-18	>18-50	>50-120	单位	比例	Design Units	SIZE	页码	
±0.12	±0.15	±0.3	±0.5	MM Only	——	METRIC	A4		
制作	审核	批准	材料	图号			Part No.		
			见图解	品名	NH1.0/NHB1.0盘装				

产品规格书

PRODUCT SPECIFICATION

版本号
Version Number: B产品编码
Part Number: A1002

规格 Specifications

- ◆1、极数 Poles: 2 to 20P
- ◆2、额定电流 Current rating: 1.0A AC, DC
- ◆3、额定电压 Voltage rating: 50V AC, DC
- ◆4、温度范围 Temperature range: -25°C to +105°C
- ◆5、接触电阻 Contact resistance: $\leq 20\text{m}\Omega$
- ◆6、绝缘电阻 Insulation resistance: $\geq 100\text{M}\Omega$
- ◆7、耐电压 Withstand voltage: 500V AC/minute
- ◆8、适用线规 Applicable wire: AWG #32 to #28
- ◆9、线材绝缘外径 Wire insulation O.D: 0.4 to 0.8mm

产品性能测试 Performance test			
	项目 Item	测试条件 Test Condition	规格要求 Requirement
1	外观 Appearance	目测 Visual by eye 视力 Light: >1.0 照明 Lamp: 200~300Lx 目测距离 Space: 0.3~0.5m	1. 塑料件表面应无明显疤痕、凹陷、开裂及影响使用的变形。 Plastic part: smooth and flat surface without discolor, broken, crack distortion defects is acceptable. 2. 金属件表面无锈蚀、氧化、无明显的机械损伤等缺陷。 Metal part: bright and even surface without rust, oxide, fog and obvious physical damage defects is acceptable. 3. 导线表面清洁、无破损等缺陷, 印字及标志清晰。 Wire: clearing surface without discolor, broken defects, indistinct words and mark is acceptable.
2	接触电阻 Contact Resistance	插入连接器, 用小功率电路进行测试。 Mate connectors, measure by dry circuit.	20mΩ MAX
3	绝缘电阻 Insulation Resistance	在相邻接触件之间或地线之间, 用500V DC电压进行测试。 Apply 500V DC between adjacent terminal or ground.	100MΩ MIN
4	耐电压 Dielectric Strength	相邻接触件之间或地线之间施加50Hz 500V AC(有效值), 漏电流1mA的电压作用, 时间1min。 Mate connectors, apply 500V AC for 1 minute between adjacent terminal or ground.	无击穿和飞弧现象 No Breakdown

产品规格书

PRODUCT SPECIFICATION

版本号

Version Number: B

产品编码

Part Number: A1002

产品性能测试 Performance test

	项目 Item	测试条件 Test Condition	规格要求 Requirement	
5	压着部位抗张强度 Crimping Pull Out Force	在试验装置夹头中固定测试样品，在连接的轴线方向施加张力；速度不大于25mm/min。 Fix the crimped terminal, apply axial pull out force on the wire at the speed rate of not more 25mm/min.	AWG #28 AWG #30 AWG #32	11N MIN 7N MIN 5N MIN
6	壳体/端子固定力 Terminal/Housing Retention Force	固定连接器或测力计，在连接器轴线方向施加规定的拉力；速度不大于25mm/min。 Apply axial pull out force at the speed rate of not more 25mm/min on the pin assembled in the housing.	5N MIN	
7	针的固定力 Pin Retention Force	固定连接器或测力计，在连接器轴线方向对针施加规定的推力；速度不大于25mm/min。 Apply axial push out force at the speed rate of not more 25mm/minute on the terminal assembled in the base.	2N MIN	
8	可焊性 Solderability	把测试样品需要焊接的部位浸入焊锡炉中（锡炉温度245℃±5℃）2±0.5秒钟。 Soldering time: 2±0.5 second Solder Temperature: 245℃±5℃	上锡率≥90% 90% of immersed area must show no voids, pin holes	
9	耐焊接热 Resistance to Soldering Heat	把测试样品需要焊接的部位浸入焊锡炉中（锡炉温度260℃）；2±0.5秒钟后在正常的条件下恢复1小时。 Soldering time: 2±0.5 second Solder Temperature: 260℃	外观 Appearance	无损伤 No Damage
10	耐高温 Heat Resistance	连接器配合后，于105℃±2℃的空气中放置96小时，然后再回到室温中放置1~2h小时测定 Mated connectors are exposed to a temperature of 105℃±2℃ for 96 hours.	外观 Appearance 接触电阻 LLCR	无损伤 No Damage 40mΩ Max
11	耐低温 Cold Resistance	连接器配合后，于-25℃±2℃的空气中放置96小时，然后再回到室温中放置1~2h小时测定 Mated connectors are exposed to a temperature of -25℃±2℃ for 96 hours.	外观 Appearance 接触电阻 LLCR	无损伤 No Damage 40mΩ Max
12	温度上升 Temperature Rise	插入连接器，通以最大允许电流。 Carrying rated current load.	温度最大上升 Temperature Rise	30℃ MAX

产品规格书

PRODUCT SPECIFICATION

 版本号
 Version Number: B

 产品编码
 Part Number: A1002

产品性能测试 Performance test				
	项目 Item	测试条件 Test Condition	规格要求 Requirement	
13	恒定湿热 Humidity	温度: $40 \pm 2^{\circ}\text{C}$ 相对湿度: 90%~95% 搁置时间: 96小时, 取出恢复2h后检查 Temperature: $40 \pm 2^{\circ}\text{C}$ Relative Humidity: 90%~95% Duration: 96 hours	外观 Appearance	无损伤 No Damage
			耐电压 Dielectric Strength	500V, AC /minute
			绝缘电阻 Insulation Resistance	100M Ω MIN
			接触电阻 LLCR	40m Ω MAX
14	温度循环 Temperature cycle	把测试样品放入高低温试验箱中, 按下列步骤调试温度: a) 在 $-25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 的恒温条件下放置0.5小时; b) 在 $105^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 的恒温条件下放置0.5小时; 从a)到b)为一个循环周期, 共进行5个循环。 恢复1h后检查。状态转换时间不多于1小时。 Mated connectors are exposed to 5 cycles of: a) $-25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 0.5hour b) $+105^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 0.5hour	外观 Appearance	无损伤 No Damage
			耐电压 Dielectric Strength	500V, AC /minute
			绝缘电阻 Insulation Resistance	100M Ω MIN
			接触电阻 LLCR	40m Ω MAX
15	机械振动 Vibration	插入连接器, 串联在一直流电源上, 电流100mA; 并模拟正常工作状态, 振频为10~55Hz、振幅1.5mm; 55~500Hz、加速度50m/s ² , 每一轴线扫频循环次数10次、2小时。 Frequency: 10~55Hz Amplitude: $\pm 1.5\text{mm}$ Frequency: >55~500Hz Acceleration: 50m/s ² Duration: 2 hours in each X,Y,Z axes	外观 Appearance	无损伤 No Damage
			接触电阻 Contact Resistance	40m Ω MAX
			中断 Intermittence	1 μsec MAX
16	机械寿命 Repeated insertion/ withdrawal	以每分钟插拔10次的速率, 插拔50次。 When mated up to 50 cycles repeatedly by the rate of 10 cycles per minute.	外观 Appearance	无损伤 No Damage
			耐电压 Dielectric Strength	500V, AC /minute
			绝缘电阻 Insulation	100M Ω MIN
			接触电阻 Contact Resistance	40m Ω MAX

产品规格书

PRODUCT SPECIFICATION

版本号
Version Number: B

产品编码
Part Number: A1002

产品性能测试 Performance test				
	项目 Item	测试条件 Test Condition	规格要求 Requirement	
17	盐雾 Salt Spray	把先冲后镀的测试样品从试验箱顶悬挂下来，采用浓度为5%±1(质量百分比)的氯化钠溶液，连续雾化16小时，试验后用流动的蒸馏水轻轻洗去表面沉积物。在常温常驻湿条件下恢复1~2小时。 16 hour exposure to a saltspray from the 5%±1 solution.	外观无损伤(五金件应无露出底金属的严重锈蚀；使用预镀的型材，其落料面允许有不影响其性能的轻微腐蚀。) Appearance:No Damage (No erosion with material exposed. And with plating material, slight erosion on the cutting surface acceptable)	
18	插入力与拔出力 Insertion and Withdrawal Force	相配的接触件以1mm/s~5mm/s的速度沿接插器轴线方向插入和拔出。 Insertion and withdraw contacts at the speed rate of 1mm/s~5mm/s.		插入力(最大值) Insertion (Max)
			SINGLE PIN	拔出力(最小值) Withdrawal (Min)
				5.0N
				0.5N

1	高低温环境测试从85℃，更新到105℃	根据客户要求，进行统一的测试升级	20221026	玉夫
序号	变更记录	变更原因	变更时间	责任人
变更记录				

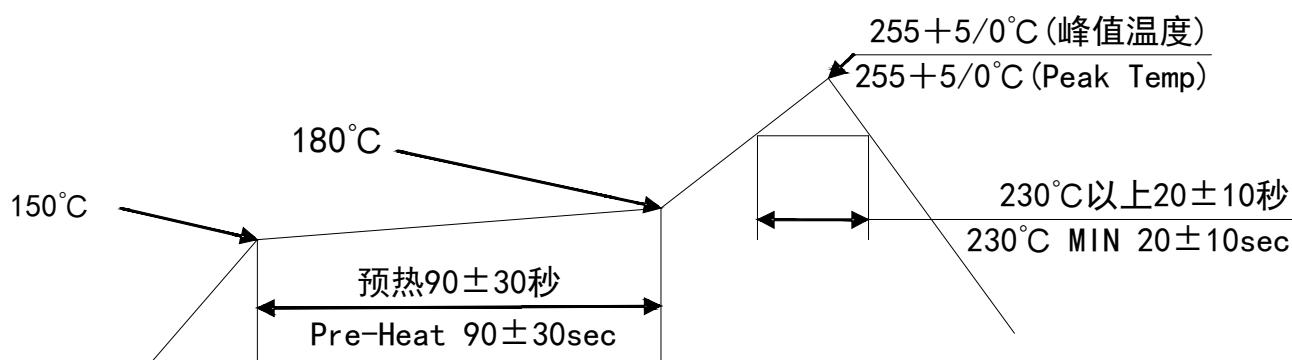
焊接条件

Conditions for soldering

版本号
Version Number: B产品编码
Part Number: A1002

Pb-free炉温要求 Pb-free reflow profile requirements

参数 Parameter	参考 Reference	规格 Specification
平均温度梯度预热 Average Temperature Gradient Preheating		2.5°C/s
浸泡时间 Soak time	tsoak 2-3	minutes
150°C以上时间 Time above 150°C	T1	60s
180°C以上时间 Time above 180°C	T2	50s
250°C以上时间 Time above 250°C	T3	2±0.5s
焊接温度 Peak temperature in reflow	Tpeak	255°C (-0/+5°C)
温度梯度的冷却 Temperature gradient in cooling		Max -5°C/s



温度条件图

TEMPERATURE CONDITION GRAPH

注：该剖面的最低要求耐热性的评价焊接部件。传热方法用于回流焊热空气对流。实际的空气温度用来实现规定的轮廓，很大程度上取决于回流装置。

Note: The minimum required heat resistance of the section is to evaluate the welded components. Heat transfer method is used for hot air convection in reflow welding. The actual air temperature used to achieve the specified profile depends largely on the reflux device.



浙江联和电子有限公司

产品性能测试报告



品名 (DESCRIPTION)	NH1.0	测定者 (Inspector)	吴智原	测试条件 (Test Condition)	温度: 22℃ (Temperature)
料号 (MODEL NO.)	A1002	日期 (Date)	2019. 09. 30		湿度: 65% (Humidity)



试验项目 (Test Title)	规格 (Specification)		测定值(Data)					COM
			X1	X2	X3	X4	X5	
带线胶壳与针座插拔力 <带锁扣> (Connector assemble with cable and wafer, mating and unmating force with latch)	2 pin Unit: N Mating force 20 max. Unmating force 16 min.	插入(Mating)	5.25	6.5	6.0	5.0	6.25	ok
		拔出(Unmating)	31.5	33.0	29.5	29.0	30.5	ok
	8 pin Unit: N Mating force 50 max. Unmating force 19 min.	插入(Mating)	19.5	22.0	23.5	20.5	21	ok
		拔出(Unmating)	45.5	46	43.5	43	44.5	ok
端子和胶壳的固定力 (Terminal Retention in housing)	5N Min		8.25	9.5	8.0	11.25	10.5	ok
端子和插针单独插入力 (Single terminal and PIN insertion force)	5N Max		1.75	1.25	1.5	2.0	2.25	ok
端子和插针单独拔出力 (Single terminal and PIN withdrawal force)	0.5N Min		1.0	1.25	1.0	1.0	0.75	ok
插针和壳体的固定力 (PIN Retention in housing)	2N Min		6.5	7.75	7.5	6.75	7.0	ok
锁扣固定力 (Latch force)	15N Min (2PIN)		27	29	28	27.5	29.5	ok
盐雾试验 (Salt spray)	雾化16小时, 后镀端子不能有腐蚀现象 (Spray time:16 hours, terminals stamping then plating must not corrode)		PASS	PASS	PASS	PASS	PASS	ok
	接触电阻 (Contact Resistance)	40mΩ Max	11.7	13.2	12.4	12.9	11.5	ok
温度循环 (Temperature cycling)	外观 (Appearanc)	无损伤 (No damage)	PASS	PASS	PASS	PASS	PASS	ok
	接触电阻 (Contact Resistance)	40mΩ Max	12.8	11.9	13.4	13.9	12.4	ok
	绝缘电阻 (Insulation Resistance)	100MΩ Min	PASS	PASS	PASS	PASS	PASS	ok
	耐电压 (Dielectric Withstanding Voltage)	500V,AC/minute	PASS	PASS	PASS	PASS	PASS	ok

LHE 浙江联和电子有限公司

试 验 报 告

试验项目:针焰实验

试验日期: 2019/3/17

产品或零件名称	PBT UL94V-0 样条	生产单位	注塑
样品数量	5PCS	检验标准	GB/T5169.5-2008
检验设备	针焰试验箱	进货批号	/
标准要求	指 标	a. 试验样品无火焰和灼热, 并且规定的铺底层或包装绢纸没有起燃 b. 在移开针焰后, 试验样品和周围的零部件的火焰或灼热在 30s 之内熄灭, 即 $t_b < 30s$, 而且周围的零部件没有完全烧毁, 以及规定的铺底层或包装绢纸没有起燃	
	试 验 条 件	施加试验火焰持续时间为 12s。火焰高度 $12mm \pm 1mm$ 。	
试验结果	<div style="text-align: center;">  </div> <p>产品施焰时间 12s, 续燃时间 2.6s。无滴落物。</p>		
判定	<div style="display: flex; justify-content: space-between; align-items: center;"> 符合要 求 <div style="text-align: center;">  </div> 审核员: 熊英 </div> <p style="text-align: center;">实验员: 唐安英</p>		

表单编号: QR/LHE-PZ-019

版本: B/0

ECBT2.E364711 - Connectors for Use in Data, Signal, Control and Power Applications - Component

Connectors for Use in Data, Signal, Control and Power Applications - Component

See General Information for Connectors for Use in Data, Signal, Control and Power Applications - Component

ZHEJIANG LIANHE ELECTRONIC CO LTD

E364711

Chuangxin Road, YueQing Bay Port Zone

Yueqing, Zhejiang 325600 CHINA

Connector, Model(s) 1.58-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW., 1.58-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 1.58-LHE followed by 2, followed by 1 thru 12, followed by A(T).

Connector, Model(s) 1.58-LHE, f/b 2 thru 6 , f/b A(T), 1.58-LHE, f/b 2 thru 6, f/b Y(T), 1.58-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 2510-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 2510-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 2510-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 2510-LHE, f/b 2 thru 6 , f/b A(T), 2510-LHE, f/b 2 thru 6, f/b Y(T), 2510-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5.08-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5.08-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5.08-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5.08-LHE, f/b 2 thru 6 , f/b A(T), 5.08-LHE, f/b 2 thru 6, f/b Y(T), 5.08-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 51005-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 51005-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 51005-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 51005-LHE, f/b 2 thru 6 , f/b A(T), 51005-LHE, f/b 2 thru 6, f/b Y(T), 51005-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 51006-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 51006-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 51006-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 51006-LHE, f/b 2 thru 6 , f/b A(T), 51006-LHE, f/b 2 thru 6, f/b Y(T), 51006-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5102-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5102-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5102-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5102-LHE, f/b 2 thru 6 , f/b A(T), 5102-LHE, f/b 2 thru 6, f/b Y(T), 5102-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5240-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5240-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5240-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5240-LHE, f/b 2 thru 6 , f/b A(T), 5240-LHE, f/b 2 thru 6, f/b Y(T), 5240-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5500-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5500-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5500-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5500-LHE, f/b 2 thru 6 , f/b A(T), 5500-LHE, f/b 2 thru 6, f/b Y(T), 5500-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5557 followed by 2 thru 6, followed by A(T), 5557 followed by 2 thru 6, followed by A2 or AW, 5557 followed by 2 thru 6, followed by Y(T)

Connector, Model(s) 5557 followed by 2, followed by 1 thru 12, followed by A(T).

Connector, Model(s) 5557 followed by 2, followed by 1 thru 12, followed by A2 or AW

Connector, Model(s) 5557 followed by 2, followed by 1 thru 12, followed by Y(T)

Connector, Model(s) 5559-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5559-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5559-LHE followed by 2, followed by 1 thru 12, followed by A(T).

Connector, Model(s) 5559-LHE, f/b 2 thru 6 , f/b A(T), 5559-LHE, f/b 2 thru 6, f/b Y(T), 5559-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5566-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5566-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5566-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5566-LHE, f/b 2 thru 6 , f/b A(T), 5566-LHE, f/b 2 thru 6, f/b Y(T), 5566-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5569-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5569-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5569-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5569-LHE, f/b 2 thru 6 , f/b A(T), 5569-LHE, f/b 2 thru 6, f/b Y(T), 5569-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 5600-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 5600-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 5600-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 5600-LHE, f/b 2 thru 6 , f/b A(T), 5600-LHE, f/b 2 thru 6, f/b Y(T), 5600-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), 63080-LHE f/b 2 , f/b 1 thru 12, f/b A2 or AW, 63080-LHE f/b 2 thru 6, f/b A2 or AW

Connector, Model(s) 63080-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) 63080-LHE, f/b 2 thru 6 , f/b A(T), 63080-LHE, f/b 2 thru 6, f/b Y(T), 63080-LHE, f/b 2, f/b 1 thru 12 , f/b Y(T), B2502 followed by 2 thru 16, followed by Y(T), BH3.5-2A(T), BH3.5-2Y(T), MX3.0 followed by 2 thru 12, followed by A(T), MX3.0 followed by 2 thru 12, followed by A2 or AW, MX3.0 followed by 2 thru 12, followed by Y(T)

Connector, Model(s) MX3.0 followed by 2, followed by 1 thru 12, followed by A(T).

Connector, Model(s) MX3.0 followed by 2, followed by 1 thru 12, followed by A2 or AW

Connector, Model(s) MX3.0 followed by 2, followed by 1 thru 12, followed by Y(T)

Connector, Model(s) PA-LHE f/b 2, f/b 1 thru 12, f/b Y(T), PA-LHE followed by 2 thru 12, followed by A(T)

Connector, Model(s) PA-LHE followed by 2 thru 12, followed by A2 or AW

Connector, Model(s) PA-LHE followed by 2 thru 12, followed by Y(T)

Connector, Model(s) PA-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) PA-LHE followed by 2, followed by 1 thru 12, followed by A2 or AW

Connector, Model(s) PH, PHB, XHB, JC25, SCN followed by -2 thru -20, followed by Y(T), A, AW or AWD

Connector, Model(s) PHB followed by 2 thru 16, followed by Y(T). followed by 2 thru 16, followed by AWD, A, AW

Connector, Model(s) Series 1.25, 1254, 1255 followed by -2 thru -25, followed by Y(T), A or AW

Connector, Model(s) Series 5264 followed by -2 thru -16, followed by Y(T), A or AWD

Connector, Model(s) SM followed by -2 thru -18, followed by Y(T) or A(T)

Connector, Model(s) VH, 3.96 followed by -2 thru -16, followed by Y(T), A, AW or AWG

Connector, Model(s) XA-LHE f/b 2, f/b 1 thru 12, f/b Y(T), XA-LHE followed by 2 thru 12, followed by A(T)

Connector, Model(s) XA-LHE followed by 2 thru 12, followed by A2 or AW

Connector, Model(s) XA-LHE followed by 2 thru 12, followed by Y(T)

Connector, Model(s) XA-LHE followed by 2, followed by 1 thru 12, followed by A(T)

Connector, Model(s) XA-LHE followed by 2, followed by 1 thru 12, followed by A2 or AW

Connector, Model(s) XH followed by -2 thru -20, followed by Y(T), A, AW, AWGD, AWD or AWGDJ

Connector, Model(s) ZH followed by 2 thru 16, followed by AWD or A, ZH followed by 2 thru 16, followed by Y(T).

Model(s) 1.25, followed by -2 thru -16, followed by AB or AWB

Model(s) 51146 or FI-S, followed by -2 thru -16, followed by AB or AWB

Model(s) A5001, followed by -2 thru -7, followed by Y, Y(T), AD or AWD

Model(s) B2501-LHE, A2004-LHE, A4203-LHE, PHR-LHE, PHD-LHE, CH2.5-LHE, DF11-LHE, PHSD-LHE, A5001-LHE, 35155-LHE, 35156-LHE, 5195-LHE, 5196-LHE, followed by 2 thru 16, followed by Y(T)

Model(s) BHS-LHE, SMH250-LHE, SMH200-LHE, L6.2-LHE, 1806-LHE, 2060-LHE, 2541-LHE, JC15-LHE, XHD-LHE, followed by -2, followed by A(T), or Y(T)

Model(s) JWPF-LHE, B2541-LHE, NV-LHE, DV-LHE, SGN-LHE, SJN-LHE, SDN-LHE, SIN-LHE, 35150-LHE, 35151-LHE, 35180-LHE, 35182-LHE, 35524-LHE, 35965-LHE, RCY-LHE, LC-LHE, VR-LHE, SHJ-LHE, SHL-LHE, DF19-LHE, ACH-LHE, DF13-LHE, IL-Z-LHE, 51146-LHE, SATA-LHE, XSR-LHE, SUR-LHE, SUH-LHE, ZE-LHE, ZND-LHE, ZPD-LHE, A1502-LHE, SFH-LHE, 51004-LHE, PUD-LHE, A20010-LHE, 35507-LHE, DF3-LHE, PND-LHE, RE-LHE, RA-LHE, RF-LHE or A3963, followed by -2 thru -15, followed by Y(T), YB(T) or YC(T), A, A-K, AW, AW-K, AD, AD-K, AWGD, AWGD-K, AQ, AQ-K, AWQ, AWQ-K, AD(BH) or AD(BH)-K.

Model(s) PH, followed by -2 thru -16, followed by AB or AWB

Model(s) PHB, SZN-LHE, SAN-LHE, JC20-LHE, EH-LHE, EI-LHE, EL-LHE, S-EL-LHE, followed by 2 thru 16, followed by AWD, A, AW

Model(s) PHB, SZN-LHE, SAN-LHE, JC20-LHE, EH-LHE, EI-LHE, EL-LHE, S-EL-LHE, followed by 2 thru 16, followed by Y(T)

Model(s) PHB, XH, XHB or XHBD, followed by -2 thru -16, followed by AB or AWB.

Model(s) RAST 5-LHE TAB HEADER ASSY , TH, Vertical, Cat. Nos. 1969738-LHE, 1969740-LHE, 1971845-LHE, 1971846-LHE, 1971895-LHE, 1971896-LHE, 1971946-LHE thru 1971949-LHE, 1971954-LHE thru 1971957-LHE, 2232008-LHE thru 2232011-LHE, 2232000-LHE thru 2232003-LHE, 2232016-LHE thru 2232019-LHE, 1971962-LHE thru 1971965-LHE, 2232024-LHE thru 2232027-LHE, 2232289-LHE thru 2232292-LHE, 2232043-LHE thru 2232074-LHE, 2232298-LHE thru 2232301-LHE, 2232511-LHE, 2232532-LHE, 2232557-LHE, 2232559-LHE, 2232560-LHE, 2232562-LHE, 2232563-LHE, 2232565-LHE, 2232566-LHE, 2232568-LHE, 2232569-LHE, 2232571-LHE, 2232572-LHE, 2232574-LHE, 2232575-LHE, 2232577-LHE, 2232578-LHE, 2232580-LHE, 2232581-LHE, 2232583-LHE, 2232584-LHE, 2232586-LHE, 2232587-LHE, 2232589-LHE, 2232590-LHE, 2232592-LHE, 2232593-LHE, 2232595-LHE, 2232596-LHE, 2232598-LHE, 2232599-LHE, 2232601-LHE, 2232602-LHE, 2232604-LHE, 2232605-LHE, 2232607-LHE, 2232608-LHE, 2232611-LHE thru 2232682-LHE, 2292457-LHE, 2292458-LHE, may incorporate prefix and/or suffix number.), followed by -2 thru -7, followed by Y, Y(T), AD or AWD.

Model(s) SY, followed by -2, followed by Y, Y(T), A or A(T)

Model(s) SYP, SYR, BH4.0-LHE, A10001-LHE, A7501-LHE, A8001-LHE, C2541-LHE, C2542-LHE, D250R-LHE, D280K-LHE, D300R-LHE, D350R-LHE, D400B-LHE, D430R-LHE, D470G-LHE, D480J-LHE, D480K-LHE, D480N-LHE, D480Q-LHE, D520H-LHE, D520K-LHE, D520Q-LHE, D620G-LHE, D630J-LHE, D630N-LHE, D630Q-LHE, D700G-LHE, F001-LHE, F002-LHE, HIF3-LHE, MC100-LHE, MC100-LHE, ME020-LHE, ME010-LHE, F2541-LHE, D2301-LHE, 1719057-LHE, 1719059-1-LHE, P0011-LHE, P0012-LHE, P0013-LHE, C6001-LHE, D2201-LHE, D2202-LHE or P0001-LHE, followed by -2, followed by Y, Y(T), A or A(T).

Model(s) VL-LHE , YL-LHE, SL-LHE, FL-LHE, YHD200-LHE, HA-LHE, LGC-LHE, JR-LHE, SP-LHE, 5025-LHE, followed by 2, followed by 1 thru 12, followed by A(T), Y(T), A2 or AW



Model(s) VL-LHE, YL-LHE, SL-LHE, FL-LHE, YHD200-LHE, HA-LHE, LGC-LHE, JR-LHE, SP-LHE, 5025-LHE, followed by 2 thru 12, followed by A(T), Y(T), A2 or AW

Model(s) XHD, XHE or XHQ, followed by -2 thru -15, followed by Y(T), YB(T) or YC(T), A, A-K, AW, AW-K, AD, AD-K, AWGD, AWGD-K, AQ, AQ-K, AWQ, AWQ-K, AD(BH) or AD(BH)-K.

Model(s) ZH, followed by -2 thru -16, followed by AB or AWB

Model(s) ZHR-LHE, SH-LHE, GH-LHE, NH-LHE, C1251-LHE, DF14-LHE, 5501-LHE, 75416-LHE, 543-LHE, followed by 2 thru 16, followed by AWD or A

Model(s) ZHR-LHE, SH-LHE, GH-LHE, NH-LHE, C1251-LHE, DF14-LHE, 5501-LHE, 75416-LHE, 543-LHE, followed by 2 thru 16, followed by Y(T)

Marking: Company name or trademark  , model designation and the Recognized Component Mark,  on the device or carton.

Last Updated on 2020-02-20

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产品认证证书

证书编号: CQC17134174484

申请人名称及地址

浙江联和电子有限公司
浙江省乐清市乐清湾港区乐商创业园

制造商名称及地址

浙江联和电子有限公司
浙江省乐清市乐清湾港区乐商创业园

生产企业名称及地址

浙江联和电子有限公司 (V028069)
浙江省乐清市乐清湾港区创新路8号

产品名称和系列、规格、型号

连接器聚酰胺 66 (PA66)

型号见附件, 材料名称: 聚酰胺 (PA66), 材料牌号: A63RV0, 全色, 球压: 200℃, 灼热丝可燃性指数 (GWFI): 960/0.3, 灼热丝起燃温度 (GWIT): 960/0.3, 燃烧等级: V-0@0.3mm, CTI 600, 红外光谱, 差示扫描量热和热重分析见报告 V-00601-2017134003019.

产品标准和技术要求

GB/T 5169.21-2017, GB/T 5169.12-2013, GB/T 5169.13-2013, GB/T 5169.16-2017, GB/T 4207-2012, GB/T 6040-2002, GB/T 19466.1-2004, GB/T 19466.2-2004, GB/T 19466.3-2004, ISO 11358-1:2014

认证模式

产品检测+获证后监督

上述产品符合 CQC13-036047-2009 认证规则的要求, 特发此证。

发证日期: 2019年03月22日

本证书的有效性依据发证机构的定期监督获得保持。
本证书为变更证书, 证书首次颁发日期: 2017年07月27日

主任: _____

陆梅



中国质量认证中心

中国·北京·南四环西路188号9区100070

<http://www.cqc.com.cn>

VERIFICATION OF LVD COMPLIANCE

Applicant: Zhejiang Lianhe Electrical Co., Ltd.
 Houyu village, Shifan town, Yueqing city, Zhejiang province, China.

Manufacturer: Same as applicant

Product Description: Connector Terminal

Model No: A1001, A1002, A1003, A1251, A1252, A1253, A1254, A1255, A1256, A1257, A1501, A1502, A1503, A2001, A2002, A2003, A2004, A2005, A2006, A2007, A2501, A2502, A2503, A2504, A2505, A2506, A2507, A2541, A2542, A2543, A2544, A2545, A3981, A3982, A3983, A3564, A5081, A5082, B1501, B1502, B2001, B2002, B2501, B2502, C01581, C01582, C1251, C2001, C2002, C2501, C2502, C2505, C2506, C3001, C3002, C3003, C3004, C3005, C3006, C3501, C3502, C3701, C3702, C4001, C4002, C4141, C4142, C4201, C4202, C4203, C4204, C4601, C4602, C4501, C4502, C4503, C4504, C5001, C5002, C5031, C5032, C6201, C6202, C6351, C6352, C6701, C6702, D2801, D2802, D2803, D4801, D4802, D4803, D4804, D6301, D6302, D6303

Sufficient samples of the product have been tested and found to be in conformity with

Test Standard: EN 60320-1:2001/A1:2007
 EN 60529:1991/A1:2000

As shown in the
 Test Report Number(s): TLZJ1411264692
 Date of issue: November 27, 2014

Conclusion

This Verification of LVD Compliance has been granted to the applicant based on the results of tests, performed by laboratory of Global Testing Services Co., Ltd on sample of the above-mentioned product in accordance with the provisions of the relevant specific standards and the Low Voltage Directive 2014/35/EU. The CE marking as shown below can be affixed, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives. The affixing of the CE marking presumes in addition that conditions the conditions in annexes III and IV of the Directive are fulfilled.

Approved by: Hermann Weller



For and on behalf of
 Global Testing Services Co., Ltd



Global Testing Services Co., Ltd
 E-mail: info@gts-lab.com http://www.gts-lab.com
 Room 1501-1502, No. 520 Yulin Rd., Xuhui District, Shanghai, 200235 China

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QUALITY MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 00117Q310977R2S/3302

We hereby certify that

Zhejiang LianHe Electronics Co., Ltd.

Unified Social Credit Code/ Organization Code certificate: 913303825540033504

Registration Address: Houyu Village, Shifan Town, Yueqing City, Wenzhou City, Zhejiang Province, China

Production Address: Yueshang Pioneer Park, Yueqing Bay Port Area, Yueqing City, Wenzhou City, Zhejiang Province China

by reason of its
Quality Management System
has been awarded this certificate for compliance with the standard
GB/T 19001-2016 / ISO 9001:2015

The Quality Management System Applies in the following area:

The Design, Production of Electronics Connector

Certified since: February 13, 2012 Valid from: December 11, 2017 Valid until: December 14, 2020

After a surveillance cycle, the certificate is valid only when used together with an Acceptance Notice of Surveillance Audit issued by CQC.
Please access www.cqc.com.cn for checking validity of the certificate.

This certificate and its relevant information can query in the website of Certification and Accreditation Administration of the People's Republic of China (www.cnca.gov.cn).



中国认可
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CNAS C001-M


Signed by: Wang Kejian



CHINA QUALITY CERTIFICATION CENTRE

Section 9, No.188, Nansihuan(the South Fourth Ring Road) Xilu(West Road), Beijing 100070,China
<http://www.cqc.com.cn>



THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and
CQC
hereby certify that the organization

Zhejiang LianHe Electronics Co., Ltd.

Registration Address: Houyu Village, Shifan Town, Yueqing City, Wenzhou City, Zhejiang Province, China
Production Address: Yueshang Pioneer Park, Yueqing Bay Port Area, Yueqing City, Wenzhou City, Zhejiang Province China

For the following field of activities

The Design, Production of Electronics Connector

**Has implemented and maintains a
Management System**

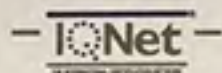
Which fulfils the requirements of the following standard

GB/T 19001-2016 / ISO 9001:2015

Issued on: December 11, 2017

Validity date: December 14, 2020

Registration Number: 00117Q310977R2S/3302



Michael Drechsel
President of IQNet

Wang Kejiao
President of CQC



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检测报告

编号: SHAEC22001501902

日期: 2022 年 09 月 16 日

第 1 页, 共 11 页

客户名称 : 浙江联和电子有限公司
客户地址 : 浙江省乐清市乐清湾港区创新路 8 号

样品名称 : PBT 连接器 白色
型号 : 17400401004136 JXZ-PA5Z-1.25mm2-A
客户参考信息 : 见附件
以上样品及信息由客户提供。

SGS 工作编号 : SP22-020837
样品接收时间 : 2022 年 09 月 09 日
检测周期 : 2022 年 09 月 09 日 ~ 2022 年 09 月 16 日
检测要求 : 根据客户要求检测
检测方法 : 见后续页。
检测结果 : 见后续页。

检测要求	结论
欧盟 RoHS 指令 2011/65/EU 附录 II 的修正指令(EU) 2015/863- 铅、汞、镉、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、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)和邻苯二甲酸二异丁酯(DIBP)	符合

通标标准技术服务(上海)有限公司
授权签名

胡敏

Dora Hu 胡敏
批准签署人

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Member of the SGS Group (SGS SA)

检测报告

编号: SHAEC22001501902

日期: 2022 年 09 月 16 日

第 2 页, 共 11 页

检测结果:

检测部件外观描述:

样品序号	样品编号	SGS 样品 ID	样品描述
SN1	A1	SHA22-0015019-0001.C001	白色塑料

备注:

- (1) 1 mg/kg = 0.0001%
- (2) MDL= 方法检测限
- (3) ND = 未检出(< MDL)
- (4) "-" = 未规定

欧盟 RoHS 指令 2011/65/EU 附录 II 的修正指令(EU) 2015/863- 铅、汞、镉、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、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)和邻苯二甲酸二异丁酯(DIBP)

检测方法: 参考 IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015 和 IEC 62321-8:2017, 采用 ICP-OES, UV-Vis 和 GC-MS 进行分析。

检测项目	限值	单位	MDL	A1
镉 (Cd)	100	mg/kg	2	ND
铅 (Pb)	1000	mg/kg	2	8
汞 (Hg)	1000	mg/kg	2	ND
六价铬(Cr(VI))	1000	mg/kg	8	ND
多溴联苯之和(PBBs)	1000	mg/kg	-	ND
一溴联苯(MonoBB)	-	mg/kg	5	ND
二溴联苯(DiBB)	-	mg/kg	5	ND
三溴联苯(TriBB)	-	mg/kg	5	ND
四溴联苯(TetraBB)	-	mg/kg	5	ND
五溴联苯(PentaBB)	-	mg/kg	5	ND
六溴联苯(HexaBB)	-	mg/kg	5	ND
七溴联苯(HeptaBB)	-	mg/kg	5	ND
八溴联苯(OctaBB)	-	mg/kg	5	ND
九溴联苯(NonaBB)	-	mg/kg	5	ND
十溴联苯(DecaBB)	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1000	mg/kg	-	ND
一溴二苯醚(MonoBDE)	-	mg/kg	5	ND
二溴二苯醚(DiBDE)	-	mg/kg	5	ND
三溴二苯醚(TriBDE)	-	mg/kg	5	ND
四溴二苯醚(TetraBDE)	-	mg/kg	5	ND
五溴二苯醚(PentaBDE)	-	mg/kg	5	ND
六溴二苯醚(HexaBDE)	-	mg/kg	5	ND
七溴二苯醚(HeptaBDE)	-	mg/kg	5	ND
八溴二苯醚(OctaBDE)	-	mg/kg	5	ND



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检测报告

编号: SHAEC22001501902

日期: 2022 年 09 月 16 日

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检测项目	限值	单位	MDL	A1
九溴二苯醚(NonaBDE)	-	mg/kg	5	ND
十溴二苯醚(DecaBDE)	-	mg/kg	5	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND
邻苯二甲酸丁苄酯 (BBP)	1000	mg/kg	50	ND
邻苯二甲酸二(2-乙基己基)酯 (DEHP)	1000	mg/kg	50	ND
邻苯二甲酸二异丁酯 (DIBP)	1000	mg/kg	50	ND

备注:

(1) 最大允许极限值引用自 RoHS 指令(EU) 2015/863。

IEC 62321 系列等同于 EN 62321 系列

(2) 2021 年 7 月 22 号开始, DEHP, BBP, DBP 和 DIBP 的限制适用于医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。

除非另有说明, 否则本检测报告中所示的检测结果仅对来样负责。本报告未经本公司书面许可, 不可部分复制。

除非另有说明, 参照 ILAC-G8:09/2019, 使用简单接受 ($w=0$) 的二元判定规则进行符合性判定。 检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。



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检测报告

编号: SHAEC22001501902

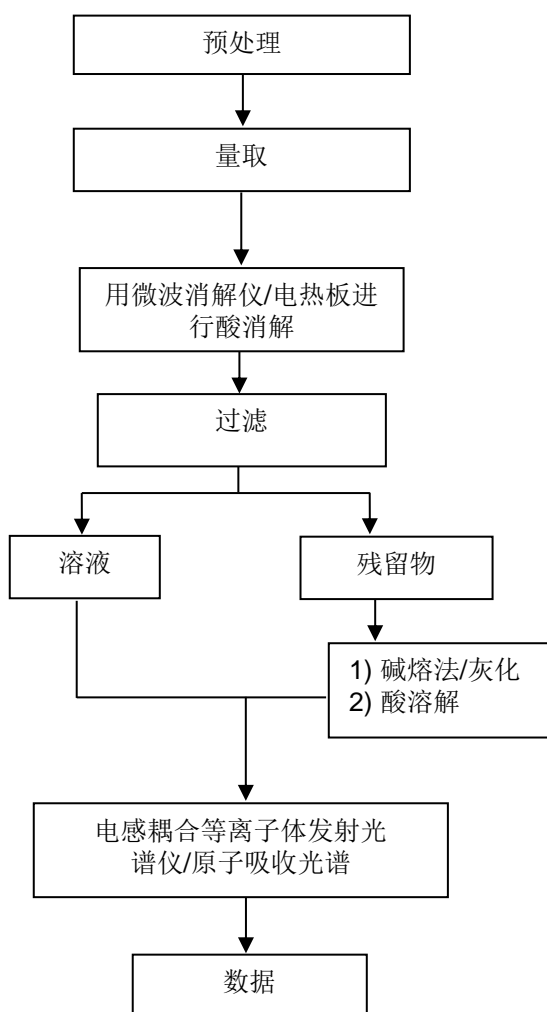
日期: 2022 年 09 月 16 日

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附件

元素(IEC62321) 检测流程图

样品按照下述流程被完全消解



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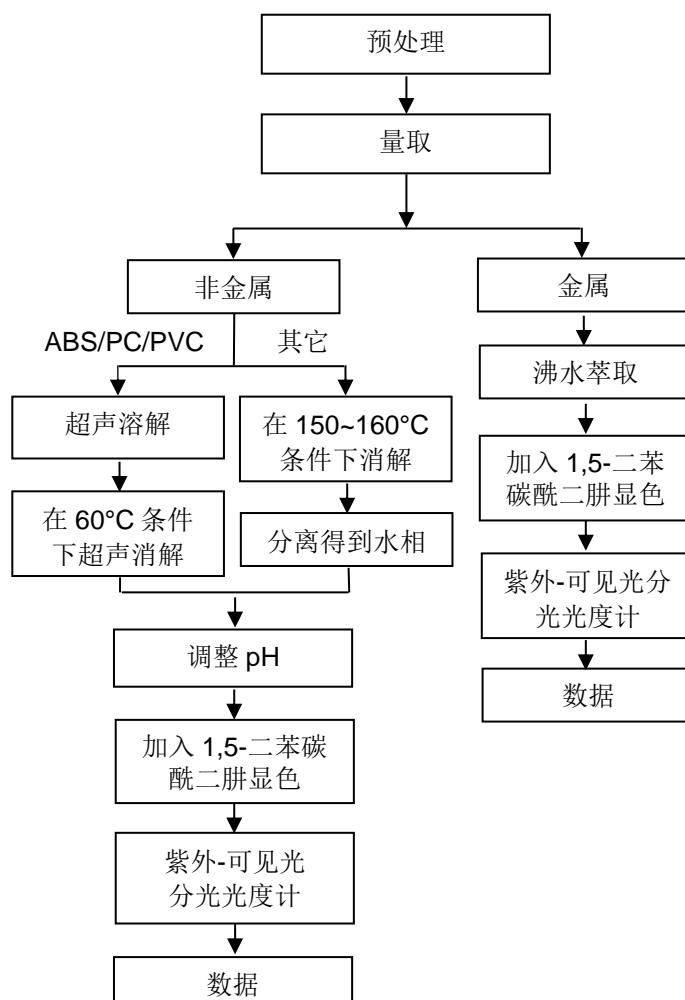
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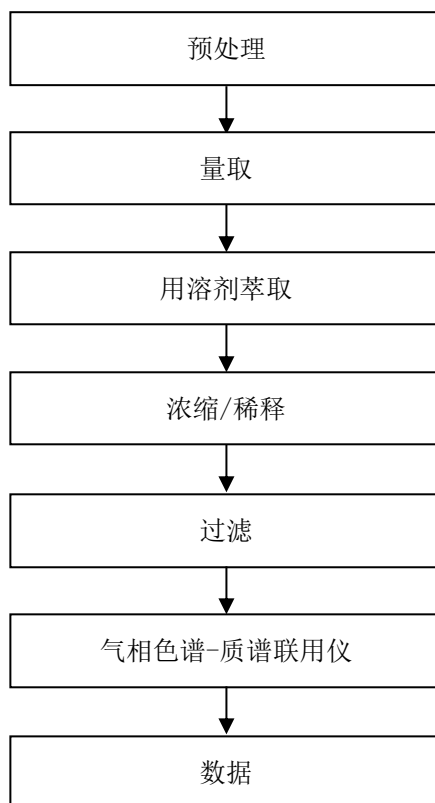
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六价铬检测流程图



Phthalates 检测流程图



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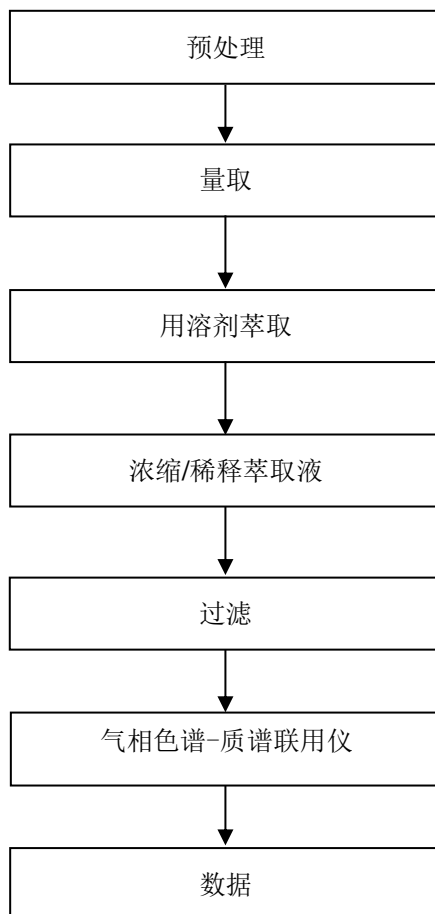
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PBBs/PBDEs 检测流程图



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检测报告

编号: SHAEC22001501902

日期: 2022 年 09 月 16 日

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1.0, SH, SHD, 1.25, 51021, DF14, DF13, GH, ZH, PH, PHB, PA, PHSD, DF11, C1251, 51047, 51146, FI-S, PHD, YHD200, PA, SMP, SMW, SMH, SMH200, SMH200-H, YH200, 20039WR, 杜邦 2.0, XH/TJC3, XA, HA, XHB, XHD, XHE, EH, EI, 小四 P, 5263, 5264, 5267, 5268, SZN, SAN, SCN, SCND, JC15, JC20, JC25, 5102, 5240, SMH250, SMP250, SMW250, 25048HS, 25045HP, SM, TJC8, 杜邦 2.54, TJC8A, 杜邦带锁, TJC8B, TJC8H, 5051, 2510, 美尚美, 43640, 43645, 43020, 43025, 5500, 5600, VH, VHR, YH396, VHR, 35156, 2139, 3.96, 90331, 5195, 5196, 39612, FL, 5557, 5559, 5566, 5569, SL, RV42, EL, YL, 小 EL, 8981, 大四 P, 5058, 5.08, L6.2, VL, VLP/VLR, TJC2, TJC2A, TJC2B, TJC4, TJC1, 1806, MX3.0, 1.58, 51005, 51006, BH3.5, BH4.0, 63080, 51004, TJC15, A4203, CL014, OTP, MKH, SMF, Cy-X201, 35108, 35150, 35151, 35224, 35180, 35965, 42021, 42022, 42002, 35955, SA, SCS, 35189, 35196, CH10, CH2.5, 543, SLP, SLR, YHL500, YWL500, FFC, FPC, 20030, 250, LGC, S11, YH025, 35155, 25415, 5197, 5198, 110, 2.8, 6.3, SCS

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A2001	A2002	A2003	A2004	A2005	A2006	A2007	A2008	A2009
A2010	A2011	A2012	A2013	A2014	A2015	A2016	A2017	A2018
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A2541	A2542	A2543	A2544	A2545	A2546	A2547	A2548	A2549



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检测报告

编号: SHAEC22001501902

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D2201	D2202	D2203	D2204	D2205	D2206	D2207	D2208	D2209



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检测报告

编号: SHAEC22001501902

日期: 2022 年 09 月 16 日

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检测报告

编号: NGBEC2200904704

日期: 2022年05月17日

第1页,共7页

客户名称: 浙江联和电子有限公司

客户地址: 浙江省乐清市乐清湾港区创新路8号

样品名称: 端子 针

客户参考信息: 见附件

以上样品及信息由客户提供。

SGS工作编号: NP22-002236 - NB

样品接收日期: 2022年05月07日

检测周期: 2022年05月07日 - 2022年05月17日

检测要求: 根据客户要求检测

检测方法: 请参见下一页

检测结果: 请参见下一页

结论: 基于所送样品进行的检测, 镉、铅、汞、六价铬的检测结果显示符合欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求。

通标标准技术服务有限公司宁波分公司
授权签名

张倩倩

Ashley Zhang 张倩倩
批准签署人

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检测报告

编号: NGBEC2200904704

日期: 2022年05月17日

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检测结果:

检测样品描述:

样品编号	SGS样品ID	描述
SN1	NGB22-009047.001	银色金属

备注:

- (1) 1 mg/kg = 0.0001%
- (2) MDL = 方法检测限
- (3) ND = 未检出 (< MDL)
- (4) "-" = 未规定

RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863

检测方法: 参考IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013 和 IEC 62321-7-1:2015, 采用ICP-OES和UV-Vis 进行分析。

检测项目	限值	单位	MDL	001
镉 (Cd)	100	mg/kg	2	ND
铅(Pb)	1000	mg/kg	2	5
汞 (Hg)	1000	mg/kg	2	ND
六价铬(Cr(VI))▼	-	µg/cm ²	0.10	ND

备注:

(1) 最大允许极限值引用自RoHS指令(EU) 2015/863。

(2) IEC 62321 系列等同于 EN 62321 系列

https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25

(3) ▼ = a. 当六价铬的浓度高于0.13 µg/cm²时, 样品为阳性, 即含有六价铬;b. 当六价铬的浓度为ND(低于0.10 µg/cm²)时, 样品为阴性, 即未检测到六价铬;c. 当六价铬的浓度介于0.10 µg/cm²与0.13 µg/cm²之间时, 无法直接判定是否检测到六价铬, 因不同个体的样品表面差异可能会影响测定结果;

由于未获知样品的存储条件和生产日期, 样品的六价铬测试结果仅代表测试时样品含六价铬的状态。

除非另有说明, 参照ILAC-G8:09/2019, 使用简单接受 ($w=0$) 的二元判定规则进行符合性判定。

除非另有说明, 此报告结果仅对检测的样品负责。本报告未经本公司书面许可, 不可部分复制。

检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。



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检测报告

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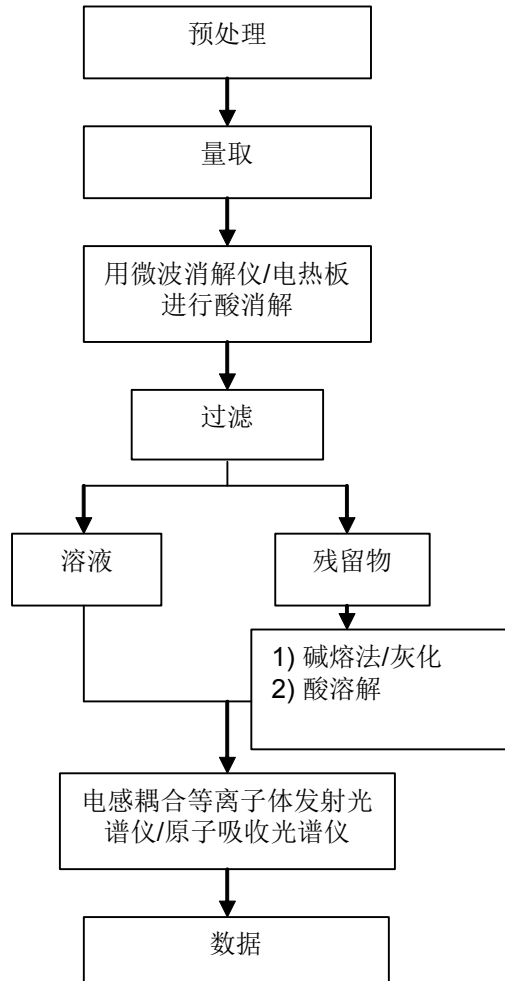
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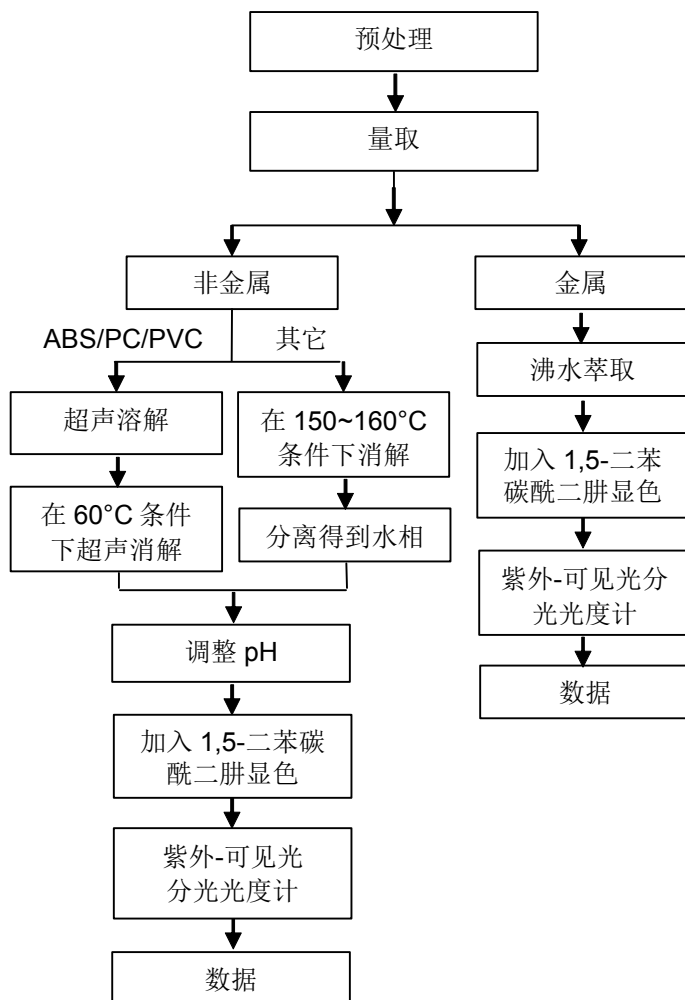
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元素(IEC62321) 测试流程图

1)样品按照下述流程被完全消解



六价铬测试流程图



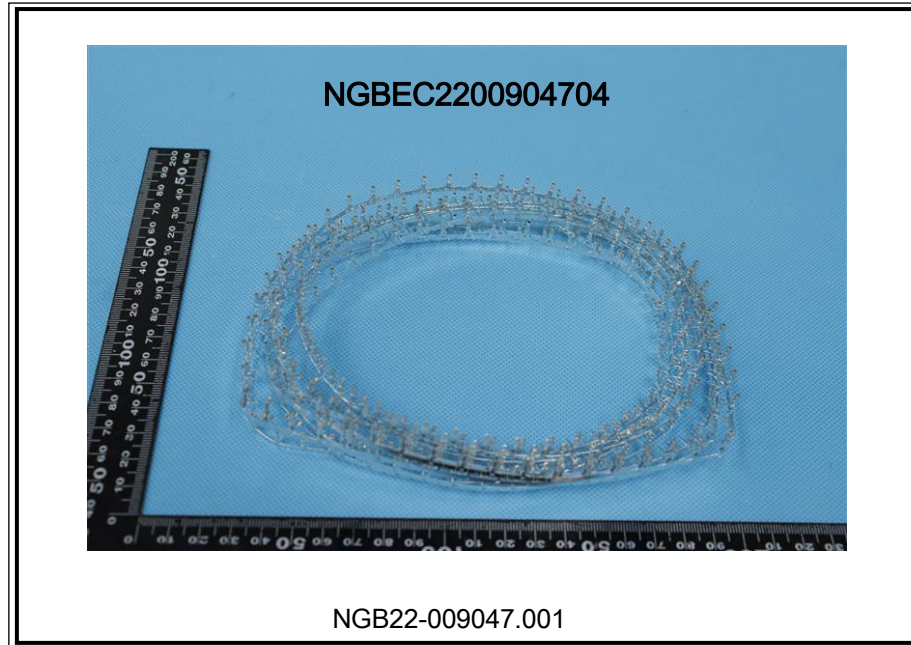
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日期: 2022年04月27日

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客户名称: 浙江联和电子有限公司
客户地址: 浙江省乐清市乐清湾港区乐商创业园

样品名称: LCP 连接器
型号: 1.25-4AB
客户参考信息: 见附件
以上样品及信息由客户提供。

SGS工作编号: NP22-001952 - NB
样品接收日期: 2022年04月21日
检测周期: 2022年04月21日 - 2022年04月27日
检测要求: 根据客户要求检测
检测方法: 请参见下一页
检测结果: 请参见下一页
结论:

基于所送样品的指定部位进行的检测, 镉、铅、汞、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、邻苯二甲酸酯(如邻苯二甲酸二丁酯(DBP)、邻苯二甲酸丁苄酯(BBP)、邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP))的检测结果显示符合欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求。

通标标准技术服务有限公司宁波分公司
授权签名

张倩倩

Ashley Zhang 张倩倩
批准签署人



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检测报告

编号: NGBEC2200697436

日期: 2022年04月27日

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检测结果:

检测样品描述:

样品编号	SGS样品ID	描述
SN1	NGB22-006974.010	米黄色塑料部分

备注:

- (1) 1 mg/kg = 0.0001%
- (2) MDL = 方法检测限
- (3) ND = 未检出 (< MDL)
- (4) "-" = 未规定

RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863

检测方法: 参考IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015和IEC 62321-8:2017, 采用ICP-OES,UV-Vis和GC-MS进行分析。

检测项目	限值	单位	MDL	010
镉(Cd)	100	mg/kg	2	ND
铅(Pb)	1000	mg/kg	2	ND
汞(Hg)	1000	mg/kg	2	ND
六价铬 (Cr(VI))	1000	mg/kg	8	ND
多溴联苯(PBBs)之和	1000	mg/kg	-	ND
一溴联苯	-	mg/kg	5	ND
二溴联苯	-	mg/kg	5	ND
三溴联苯	-	mg/kg	5	ND
四溴联苯	-	mg/kg	5	ND
五溴联苯	-	mg/kg	5	ND
六溴联苯	-	mg/kg	5	ND
七溴联苯	-	mg/kg	5	ND
八溴联苯	-	mg/kg	5	ND
九溴联苯	-	mg/kg	5	ND
十溴联苯	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1000	mg/kg	-	ND
一溴二苯醚	-	mg/kg	5	ND
二溴二苯醚	-	mg/kg	5	ND
三溴二苯醚	-	mg/kg	5	ND
四溴二苯醚	-	mg/kg	5	ND
五溴二苯醚	-	mg/kg	5	ND
六溴二苯醚	-	mg/kg	5	ND



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检测项目	限值	单位	MDL	010
七溴二苯醚	-	mg/kg	5	ND
八溴二苯醚	-	mg/kg	5	ND
九溴二苯醚	-	mg/kg	5	ND
十溴二苯醚	-	mg/kg	5	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND
邻苯二甲酸丁苄酯(BBP)	1000	mg/kg	50	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	1000	mg/kg	50	ND
邻苯二甲酸二异丁酯(DIBP)	1000	mg/kg	50	ND

备注:

(1) 最大允许极限值引用自RoHS指令(EU) 2015/863。

(2) IEC 62321 系列等同于 EN 62321 系列

https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25。

(3) 2021年7月22号开始, DEHP, BBP, DBP 和 DIBP的限制适用于医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。

除非另有说明, 参照ILAC-G8:09/2019, 使用简单接受 ($w=0$) 的二元判定规则进行符合性判定。

除非另有说明, 此报告结果仅对检测的样品负责。本报告未经本公司书面许可, 不可部分复制。

检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。



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附件:

XH, 1.0, SH, SHD, 1.25, 51021, DF14, DF13, GH, ZH, PH, PHB, PA, PHSD, DF11, C1251, 51047, 51146, FI-S, PHD, YHD200, PA, SMP, SMW, SMH, SMH200, SMH200-H, YH200, 20039WR, 杜邦2.0, XH/TJC3, XA, HA, XHB, XHD, XHE, EH, EI, 小四P, 5263, 5264, 5267, 5268, SZN, SAN, SCN, SCND, JC15, JC20, JC25, 5102, 5240, SMH250, SMP250, SMW250, 25048HS, 25045HP, SM, TJC8, 杜邦2.54, TJC8A, 杜邦带锁, TJC8B, TJC8H, 5051, 2510, 美尚美, 43640, 43645, 43020, 43025, 5500, 5600, VH, VHRR, YH396, VHR, 35156, 2139, 3.96, 90331, 5195, 5196, 39612, FL, 5557, 5559, 5566, 5569, SL, RV42, EL, YL, 小EL, 8981, 大四P, 5058, 5.08, L6.2, VL, VLP/VLR, TJC2, TJC2A, TJC2B, TJC4, TJC1, 1806, MX3.0, 1.58, 51005, 51006, BH3.5, BH4.0, 63080, 51004, TJC15, A4203, CL014, OTP, MKH, SMF, Cy-X201, 35108, 35150, 35151, 35224, 35180, 35965, 42021, 42022, 42002, 35955, SA, SCS, 35189, 35196, CH10, CH2.5, 543, SLP, SLR, YHL500, YWL500, FFC, FPC, 20030, 250, LGC, S11, YH025, 35155, 25415, 5197, 5198, 110, 2.8, 6.3, SCS

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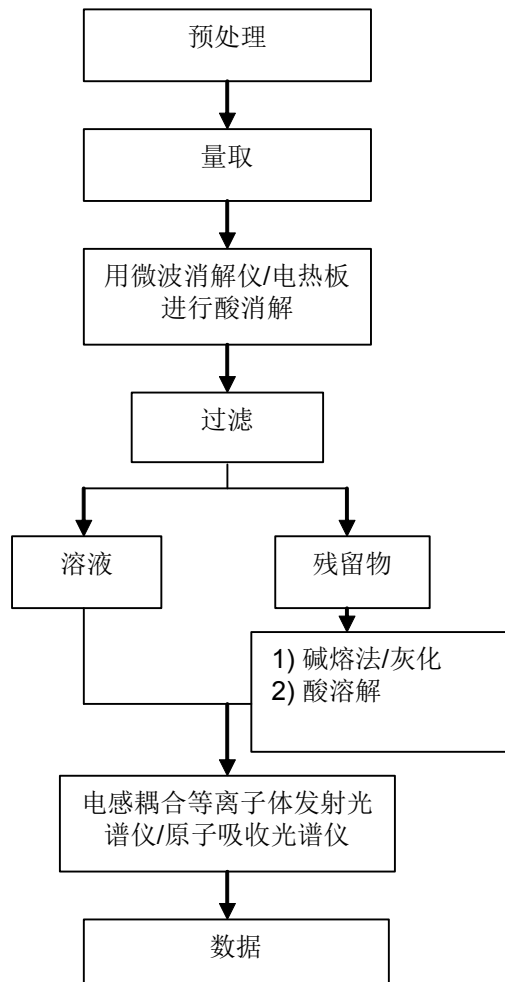
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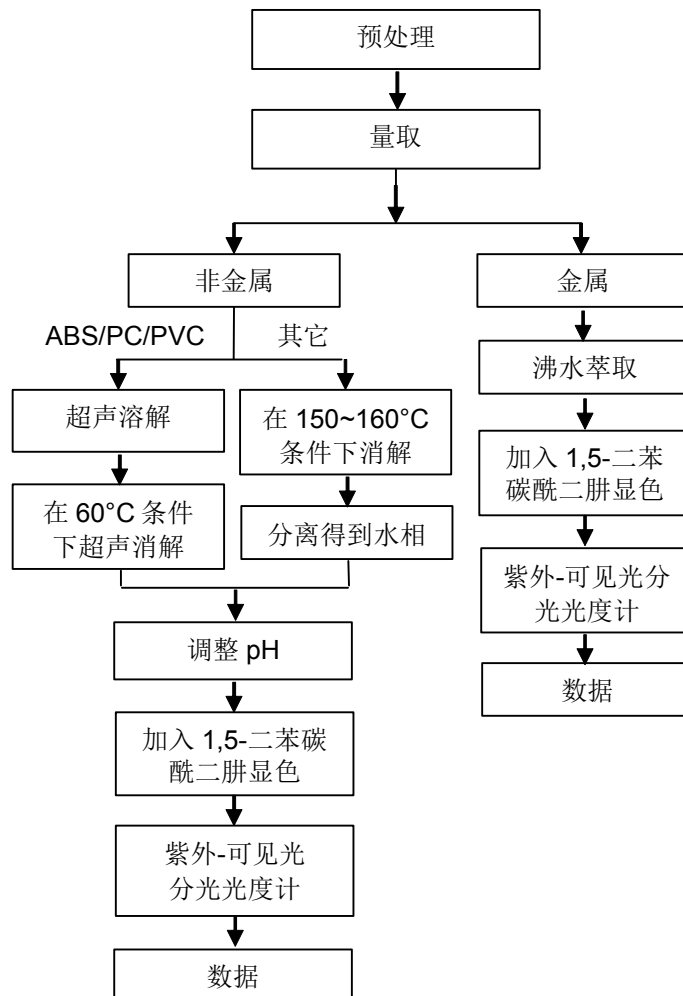
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元素(IEC62321) 测试流程图

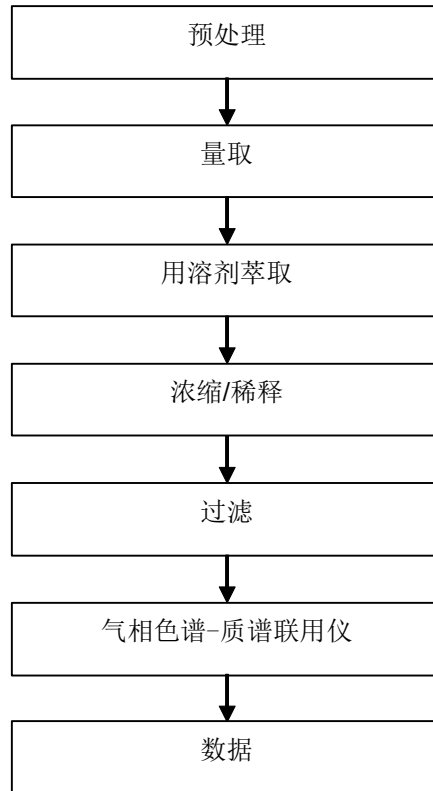
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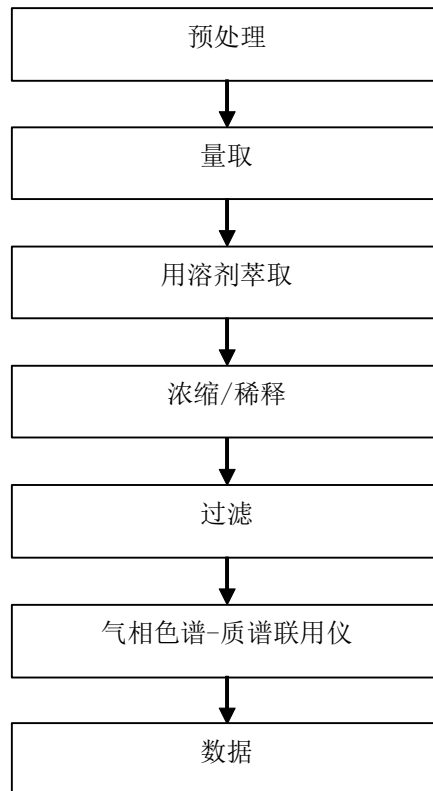
六价铬测试流程图



PBBs/PBDEs 测试流程图



Phthalates 测试流程图



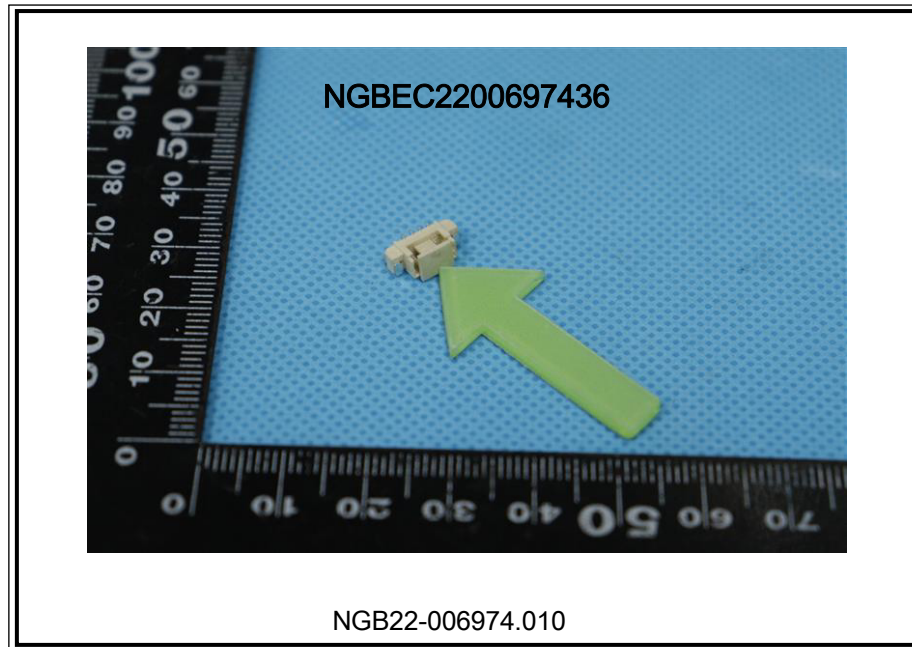
检测报告

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物質安全資料表

一、物品與廠商資料

物品名稱：CCP PBT 複合材料
其他名稱：1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000 系列
建議用途及限制使用：
製造商或供應商名稱、地址及電話：長春人造樹脂廠股份有限公司/台北市松江路301號7樓/(02)25001800
緊急聯絡電話/傳真電話：(07)3711301/(07)3710819

二、危害辨識資料

物品危害分類：NA
標示內容：NA 象徵符號： 警 示 語： 危害警告訊息：無 危害防範措施：無
其他危害：

三、成分辨識資料

混合物	
化學性質	
危害物質成分之中英文名稱	濃度或濃度範圍（成分百分比）
Polybutylene Terephthalate	40~99
Glass Fiber	10~50
Additives	0.4~40

四、急救措施

不同暴露途徑之急救方法： <ul style="list-style-type: none">• 吸入：當吸入加熱所產生之氣體時，應立即移至通風良好之處，如有必要則送醫治療。• 皮膚接觸：若被高溫的液體產物濺到皮膚，應立即沖水，冷卻後變硬之固體不可從傷處任意移走，經一段時間後會自行脫落，若情況危急應送醫治療。• 眼睛接觸：若被高溫的液體產物濺到眼睛，立即送醫並以大量的冷水沖洗。• 食入：無
最重要症狀及危害效應：無
對急救人員之防護：無
對醫師之提示：無

五、滅火措施

適用滅火劑：水、乾粉、泡沫、二氧化碳
滅火時可能遭遇之特殊危害：無
特殊滅火程序：依B級火災處理
消防人員之特殊防護設備：穿著個人防護裝備

六、洩漏處理方法

個人應注意事項：處理時應穿著個人防護裝備
環境注意事項：包裝袋洩露會造成環境污染

清理方法：直接以掃帚清理作為回收料使用

七、安全處置與儲存方法

處置：作業時配戴防護手套,及防塵口罩,避免粉塵由口鼻吸入

儲存：應存放於乾燥及通風良好之處

八、暴露預防措施

工程控制：ND			
控制參數			
八小時日時量平均 容許濃度 TWA	短時間時量平均 容許濃度 STEL	最高容許 濃度 CEILING	生物指標
依無毒粉塵標準 8HR 容許量 10mg/m3			ND
個人防護設備： <ul style="list-style-type: none">•呼吸防護：防粉塵用防護面罩•手部防護：隔熱手套•眼睛防護：安全防護鏡•皮膚及身體防護：長袖工作服及安全鞋			
衛生措施：工作後應徹底洗淨雙手			

九、物理及化學性質

外觀：固體	氣味：無臭
嗅覺閾值：	熔點：225℃
Ph值：ND	沸點/沸點範圍：>350
易燃性(固體,氣體)：	閃火點：>355℃
分解溫度：>300℃	測試方法：
自燃溫度：>420℃	爆炸界限：無可獲得的數據
蒸氣壓：ND	蒸氣密度：ND
密度：1.3-1.7	溶解度：不溶於水
辛醇／水分配係數(log Kow)：ND	揮發速率：ND

十、安定性及反應性

安定性：安定
特殊狀況下可能之危害反應：粉塵危害
應避免之狀況：加熱至300℃以上
應避免之物質：強鹼,強氧化劑
危害分解物：ND

十一、毒性資料

暴露途徑：無
症狀：無
急毒性：無
慢毒性或長期毒性：無

十二、生態資料

生態毒性：NA
持久性及降解性：持久性

生物蓄積性：NA
土壤中之流動性：NA
其他不良效應：NA

十三、廢棄處置方法

廢棄處置方法：PBT複合材料料頭外售,交由回收料廠商粉碎回收

十四、運送資料

聯合國編號：Not regulated
聯合國運輸名稱：Not regulated
運輸危害分類：Not regulated
包裝類別：SEA BULK,太空包,紙袋
海洋污染物（是／否）：否
特殊運送方法及注意事項：運送過程保持貨品乾燥

十五、法規資料

適用法規：Not regulated

十六、其他資料

參考文獻	
製表單位	名稱：長春人造樹脂廠股份有限公司高雄廠 地址/電話：高雄縣仁武鄉仁武村工業一路14號/(07)3711301
製表人	職稱：副課長 姓名：吳福利
製表日期	2008/09/16 04:35:39 PM 修改日期：2008/09/16 04:35:39 PM
備註	

编号: LHES006

MSDS

1. 物品成分与厂商资料

厂商名称: 浙江联和电子有限公司	物品编号: QSN6.5-0.1
	物品名称: 磷铜端子
	纯物质:
	危害物质成分 (%) 无

2. 成份辨识资料

成份名称	化学文摘社登记号码 (CAS No.)	浓度范围 (成分百分比 Percentage %)
铜 (Cu)	7440-50-8	余量
磷 (P)	7723-14-0	0.0026-0.005%
锌 (Zn)	7440-66-6	0.03-0.04%
镍 (Ni)	7440-02-0	0.054-0.063%
锑 (Sb)	7440-36-0	0.00015%
铅 (Pb)	7439-92-1	<0.005%
铁 (Fe)	7439-89-6	0.005-0.0059%
纯镍 (Ni)	7440-02-0	0.054-0.063%
纯锡 (Sn)	7440-31-5	6.2 %

2. 危害辨认资料

严重危害效应	健康危害效应: 本产品在不具健康危害及危害
	环境影响: 本产品在不具影响
	物理性及化学性危害: 固体/无味/多色
	特殊危害: 固体时 (防火或高温) 无特殊危害

主要症状: 无

3. 急救措施

急救方法	吸入: 无吸入
	皮肤接触: 接触无危害
	食入: 无食入

主要症状及危害效应: 无

4. 灭火措施

通用灭火器: 二氧化碳, 泡沫, 干粉化学灭火器, 水雾等
灭火时可能遭遇之特殊危害: 会引起火灾
消防人员之特殊防护装备: 使用从氧式吸防护具

5. 泄漏处理方法

个人应注意事项: 注意工作台面清洁, 作业时及时清洗手
环境注意事项: 将泄漏之物料以容器盛装以便回收或废弃
清理方式: 工作台面每天作业前/后须擦拭干净, 建议可以戴手套或手指套作业

6. 安全处置与储存方法

处置: 废弃物可送到政府许可的废弃物处理中心进行处理

储存：空调仓，23±5℃，湿度 65%以下，仓库里面安装灭火器	
7. 暴露预防措施	
个人防护设备	呼吸防护：口罩，一般无此要求，可以建议采用
	手部防护设备：手套火手指套，一般无此要求，可以建议采用
	眼睛防护：安全目镜或眼镜
	皮肤及身体防护：穿工作服，经常勤洗
卫生措施：建议使用安全目镜，进食前应洗手及脸部，平时多运动，保持健康体力	
8. 物料及化学性质	
物质状态：固体	形状：连接器
颜色：多色	气味：无味
PH 值：未测定	沸点：未测定
分解温度：未测定	爆炸介限：无
自然温度：固体无	溶解度：固体无
9. 安全性及反应性	
安全性：正常状态下安全	
特殊状况下可能之危害反应：无	
应避免之状况：避免接触火源和太阳光直照射	
应避免之物质：火和酸碱性物质	
危害分解物：无	
10. 毒性资料	
急毒性	吸入：无
	皮肤接触：无
	眼睛：无
局部效应：无	特殊效应：无
11. 废弃物处理方法：废弃物可送到政府许可的废弃物处理中心进行处理	
12. 运送资料	
联合国编号：无	运输规定：并无危险分类
运送方法及注意事项：勿重压，轻拿轻放	
13. 适用法规：1.劳工安全卫生设施规划；2.危害物及有害物通讯规划；3.索尼环境通用规定；4 劳工用业环境空气中有害物容许溶度标准；5 道路交通安全规划	
14. 其他资料：	
15.法规资料	
适用法规	1.劳工安全卫生设施规则 2.RoHS 法规及有害物通识规则
16.其它资料	
参考文献	有害化学物质中文资料库，环保局
制表单位	浙江联和电子有限公司
制造商及供应商地址	浙江省乐清市石帆镇后屿工业区
电话	0577-62383699
制表者	季育文
制表日期	2012-3-23

SAFETY DATA SHEET(SDS)

Issued: December 3, 2015

Revised: March 9, 2016

FileNo. 4052-1

1. Chemical Product & Company Identification

CHEMICAL PRODUCT NAME:	LAPEROS®	E130i VF2201
NAME OF COMPANY:	Polyplastics Co., Ltd.	
ADDRESS:	2-18-1 Konan, Minato-ku, Tokyo, 108-8280 Japan	
SECTION IN CHARGE:	Quality Assurance Dept.	
TELEPHONE NUMBER:	03-6711-8605	
FACSIMILE NUMBER	03-6711-8616	

2. Hazards identification

[GHS CLASSIFICATION]

Physical and Chemical Hazards	:	· Flammable solids : Classification not possible · Self-reactive substances and mixtures : Not applicable · Pyrophoric solids : Not classified · Self-heating substances and mixtures : Not classified · Substances and mixtures, which in contact with water, emit flammable gases : Not classified · Oxidizing solids : Not classified · Corrosive to metal : Not classified
Health Hazards	:	· Carcinogeneses : No hazard · Specific target organ/systemic toxicity (Repeated exposure) : No hazard

[GHS CLASSIFICATION]

Environmental Hazards	:	No hazard
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[SYMBOL]

	:	None
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[SIGNAL WORD]

	:	None
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[HAZARD STATEMENT]

	:	None
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[PRECAUTIONARY STATEMENTS]

Prevention	:	· Wash hands thoroughly after handling. · Wear protective gloves.
Response	:	—
Storage	:	Avoid direct sunlight and store in a well-ventilated place.
Disposal	:	Dispose of contents/container in accordance with local & national regulations.

3. Composition/information on ingredients

SUBSTANCE/PREPARATION	:	Preparation
COMMON CHEMICAL NAME	:	Aromatic Liquid Crystal Polymer
SYNONYMS	:	Aromatic Liquid Crystal Polymer(LCP)
INGREDIENTS AND COMPOSITION	:	LCP $\geq 69\%$, Glass fiber 30%, Others $\leq 1\%$
CHEMICAL FORMULA	:	not open
SERIAL No. IN OFFICIAL GAZETTE	:	7-2577(base resin) (Law Concerning Examination and Regulation of Manufacture, etc., of Chemical Substances)
CAS No.	:	147310-94-9(base resin)
INGREDIENTS CONTRIBUTING TO THE HAZARD	:	Cadmium, lead, hexavalent chromium and mercury are not used in this grade.

4. First-aid measures

INGESTION	:	When a gas generated from the molten polymer has been inhaled, move to area of fresh air without delay and wait until the victim is recovered. If sick feeling continues, ask a physician for advice.
SKIN CONTACT	:	Cool the contacted skin with clean water without delay, if a contact with the polymer in a molten form. Do not force to remove the solid resin on the skin. If any burns are observed on

EYE CONTACT	the skin, ask a physician for advice. : Cool and rinse the eye with clean water for at least 15 minutes when the eyes had contact with molten polymer. In case of wearing contact lenses, remove the lenses as soon as possible, and ask a physician for advice. When the eye had contact with the polymer in an ordinary solid form, rinse the eye with clean water without delay. If the discomfort persists, ask a physician for advice.
SWALLOW	: Help to vomit as much as possible. If sick feeling continues, and ask a physician for advice.
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5. Fire-fighting measures	
EXTINGUISHING MEDIA	: Water, foam fire-extinguishing agent, powder fire-extinguishing agent, and carbon dioxide gas.
SPECIFIC METHODS	: Extinguish the fire with water. A method of extinguishing an ordinary fire may be applied. Do not apply water directly to processing machines.
SPECIFIC HAZARDS	: Incomplete combustion leads to generation of toxic gases such as carbon monoxide or phenol, in addition to carbonic acid gas and water.
SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS	: In case the fire gained force, use a gas mask or other protective equipment.
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6. Accidental release measures	
PERSONAL PRECAUTIONS	: When pellets were spilled on the road or floor, wipe them off with a besom or cleaner not to cause slipping.
ENVIRONMENTAL PRECAUTION	: Handle the spillage in accordance with provisions given in the "Resin pellet spillage preventive manual", in order to prevent intakes by marine animals and birds.
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7. Handling and storage	
HANDLING	: LCP polymer in a pellet form will neither ignite nor explode at room temperatures.
HANDLING 2	: This pellets spilled on the floor are likely to cause slipping. Remove such spillage at any times.
HANDLING 3	: For molding work, effective means for local exhaust are required to discharge gases generated by melt processing.
HANDLING 4	: Avoid inhaling of gases generated in molding work. Do not directly touch resin of high temperature.
HANDLING 5	: Avoid retaining hot resin in the processing machines for many hours.
HANDLING 6	: Glass fibers are not generally exposed in a single substance under normal processing and handling conditions as they are compounded in pellets. However, the following measures will be necessary to minimize the exposure to glass fibers or dusts containing glass fibers, when pellets or molded parts containing glass fibers are cut, ground or burnt, depending on environmental and operational conditions. ·Those who are sensitive in skin to glass fiber should wear suitable(protective) clothes to minimize the exposure of their skin. ·Wash working clothes apart from other laundry, so that the latter will not cause contamination with glass fibers. ·Provide the workshop with partitions to prevent diffusion of glass fiber dusts. ·Pay precautions not to rub face, neck or arms with hands. Wash hands and gargle after working without fail. ·Keep dust sources totally enclosed.

	<ul style="list-style-type: none"> ·Provide local air exhausters and implement periodical inspections and adjustments at least once a year. ·Reduce cutting and grinding processes to the possible minimum, and devise working procedures to minimize dust generation. ·Provide dust-preventive masks, protective glasses and gloves for personal hygiene. ·Determine the operational environment at indoor working places and confirm the effects of environmental improvement. <p>Note) Glass fibers are, like road dusts, told to be least hazardous to human bodies, but proper measures are required to avoid useless inhaling.</p>
STORAGE	: Keep the substance away from any fire or heat sources for the sake of safe storage.
STORAGE 2	: Handle in accordance with municipal rules and regulations.
RECOMMENDED PACKAGING MATERIALS	: No information.
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8. Exposure controls/ personal protection	
CONTROL CONCENTRATION	: None at present
PERMISSIBLE CONCENTRATION	: OSHA PEL/1985 Max. permissible concentration of inactive powder 15mg/m ³ – ditto – (Aspiration) 5 mg/m ³ ACGIH TLV/1992 1993 Exposure limit of the powder TWA 10 mg/m ³
ENGINEERING MEASURE	: ·When handling dust: Use totally enclosed containers resisting dust explosion. ·When heat melted in molding: Effective local ventilation must be provided.
PERSONAL PROTECTIVE EQUIPMENT	
RESPIRATORY PROTECTION	: Wear a dust-proof mask.
HAND PROTECTION	: Wear heat-resisting gloves against burns, when handling molten polymer.
EYE PROTECTION	: Wear protective glasses or goggles.
SKIN & BODY PROTECTION	: Wear long sleeve clothes against burns, when handling molten polymer.
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9. Physical and chemical properties	
APPEARANCE etc.	: Pellet
BOILING POINT	: Not applicable
VAPOUR PRESSURE	: Not applicable
VOLATILITY	: Not applicable
INITIAL BOILING POINT	: Not applicable
SUBLIMATION	: None
MELTING POINT	: 335°C~345°C
DENSITY	: 1.61
SOLUBILITY	: Insoluble in water
FLASH POINT	: No finding
IGNITION POINT	: 540°C or higher
EXPLOSION PROPERTY	: Not applicable
INFLAMMABILITY	: It is flammable, but shows self-fire extinguishing characteristics when kept away from flame.
REACTIVITY WITH WATER	: None
OXIDIZABILITY	: None
SELF-REACTIVITY	: None
DUST EXPLOSIVENESS	: No finding
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10. Stability and reactivity	
STABILITY AND REACTIVITY	: Stable for normal storage or handling.
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11. Toxicological information

SKIN CORROSION/IRRITATION	: No finding.
SERIOUS EYE DAMAGE/IRRITATION	: Gas generated in drying or melting is irritating eyes and skins.
RESPIRATORY OR SKIN SENSITISATION	: No finding
ACUTE TOXICITY(INCLUDING LD50)	: No finding.
SUBACUTE TOXICITY	: No finding.
CHRONIC TOXICITY	: No finding.
CARCINOGENECITY	: No finding.
MUTAGENECITY(Micro organisms, chromosomal aberration)	: No finding.
REPRODUCTIVE TOXICITY	: No finding.
TERATOGENICITY	: No finding.
OTHERS(Including generation of hazardous gases by reaction with water, for example)	: No finding in this report means that there will be no hazard in general, but no proving data available at the time of reporting.
OTHER CAUTIONS	: With regard to dust, the maximum permissible concentration and limits are fixed by OSHA and ACGIH.
OTHER CAUTIONS 2	: Information on hazards of glass fibers as filler.

〈Effects on Human Bodies〉

(1) Effects on skin

Stimulation to the skin with glass fibers may be caused when glass fibers diameter is larger than $4.5 \sim 5 \mu\text{m}$. They give mechanical stimulation followed by itchiness to the skin, but further continuous exposure reportedly results in extinction of stimulation. It may sometimes leads to irritable dermatitis complicated with urticaria or eczema-like reaction. It is, however reported that such dermatitis is not so serious in general and does not last too long. Therefore, skin stimulation can be prevented by proper use of glass fibers.

(2) Effects on Tumor

Investigations made on glass fibers till today reveal that there is neither increase in mortality of glass fiber production workers due to lung cancer or mesothelioma nor such cases reported.

〈Animal Test Report〉

It is suggested that carcinogenicity of mineral fibers is dependent on their shapes rather than on their constituents. According to a report on experiments using 17 kinds of artificial mineral fibers in various sizes prepared by Dr.Stanton of National Cancer Institute, in USA, statistical studies on correlations between the diameter and length of fibers and the coincidence of mesothelioma have revealed that mineral fibers having a diameter smaller than $0.25 \mu\text{m}$ and a length larger than $8 \mu\text{m}$ are closely related to the coincidence of cancers. Since these experiments were performed by artificially dosing the subject animals with a large quantity of glass fibers and consequently they are quite different from the actual exposures to human bodies, it is told to be problematic to make a conclusion that mineral fibers are hazardous to human health, basing on the results obtained from these experiments. Up to the present time, there is no result obtainable to demonstrate a mechanism of glass fibers causing lung cancers in spite of experiment by long exposure to glass fibers with high concentration.

12. Ecological information	
BIODEGRADABILITY	: No finding.
BIOACCUMULATION	: No finding.
FISH TOXICITY	: No finding.
HAZARDS TO OZONE LAYER	: None
13. Disposal considerations	
WASTE FROM RESIDUES	: This is designated as waste plastics among industrial wastes by the Wastes Disposal Law. Disposal waste pellets through licensed wastes handlers or local autonomous bodies if they are handling wastes disposal.
WASTE FROM RESIDUES 2	: When disposed by incineration, use the well controlled incinerators in accordance with the Wastes Disposal Law, Air Pollution Control Law and Water Pollution Prevention Law.
14. Transport information	
UN CLASSIFICATION NUMBER	: Not applicable
OTHER CAUTIONS	: Handle with care so as not to give damages to containers or not to be subjected to wetting.
OTHER CAUTIONS 2	: Secure the containers firmly so as not to cause collapsing.
15. Regulatory information	
WASTE DISPOSAL LAW	: Waste plastics among industrial wastes.
16. Other information	
HANDLING OF THE DETAILS GIVEN ABOVE	: This SDS is the English version translated from the Japanese SDS which is prepared for domestic use. Details given above are based on references, information and data available at this moment, but no warranty can be made on exactness of these details. They are also prepared on the assumption that the product will be handled in a normal way. For special handling, adequate safety and environmental measures should be taken in respect to its applications. Our products are not specifically intended for implants for medical and dental applications, and therefore they are not recommended for such applications. "No finding" in this report means that there will be no hazard in general, but no proving data is available at the time of reporting.
WHERE TO CALL FOR FURTHER INFORMATION	: Polyplastics Co., Ltd. Quality Assurance Dept. Tel. No 03-6711-8605

*LAPEROS® is a registered trademark of Polyplastics Co., Ltd. in Japan and other countries.

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