

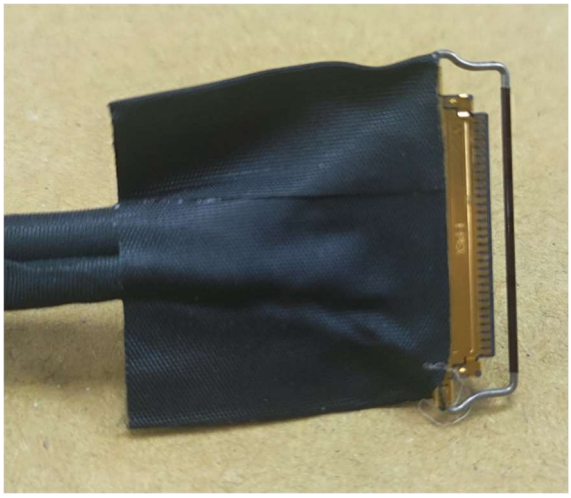

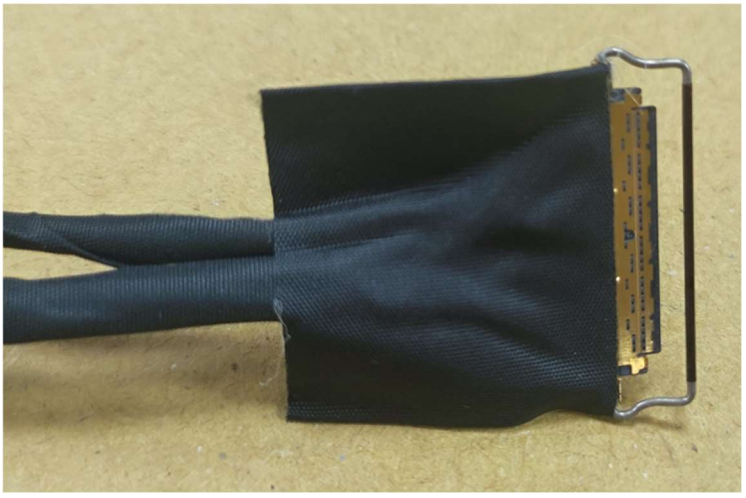

設計驗證
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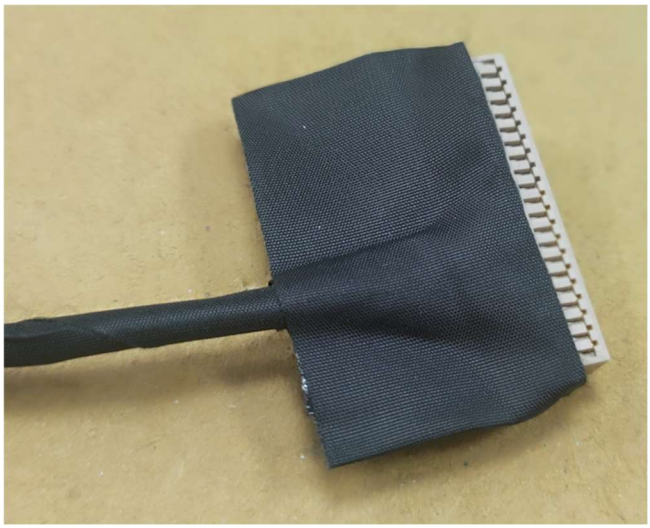
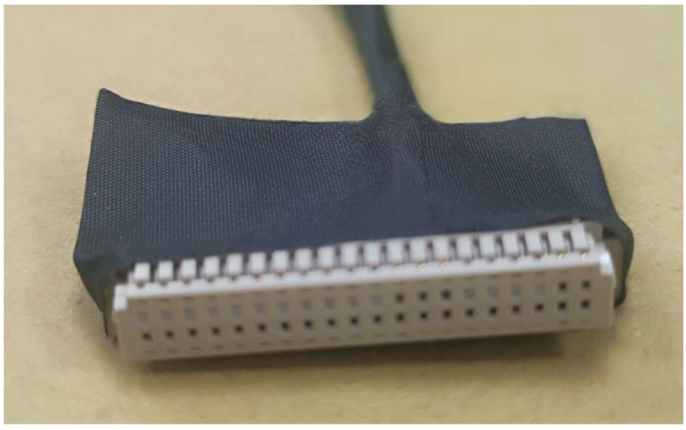
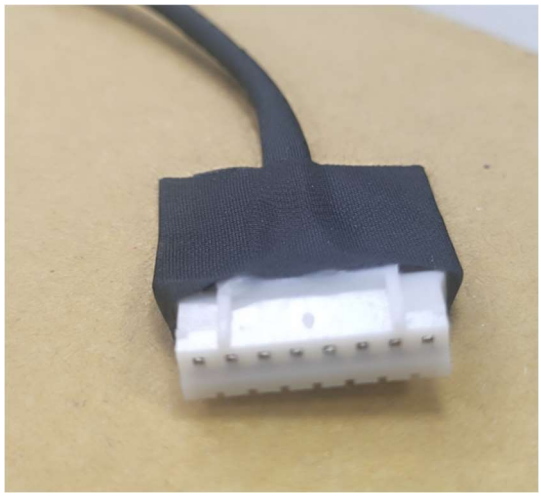
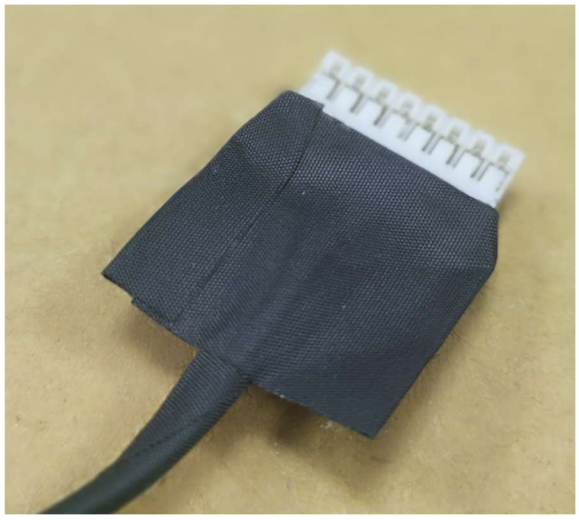
鈺樂科技開發股份有限公司













設計驗證
工程課
2024 -05- 20
發行
鈺緯科技開發股份有限公司

承　　認　　書

日期：2024.05.17

SPECIFICATION FOR APPROVAL

客戶名稱：
CUSTOMER：　鈺緯科技開發股份有限公司

料　　號：
PART NO：　**3KH00305000** (K1173)

品　　名：
ESCRIPTION：　**eDp Cable Ass'y (10.1"LH1)**

■	RoHS環保產品(無鉛)
□	一般產品(含鉛)

本承認書內容若貴公司確認無誤，
懇請於下方承認欄內簽章寄回。

Please confirm your acceptance of this approval sheet by return fax.

承　認　欄

CONFIRMATION SIGNATURE

設計驗證
工程課
2024-05-20
發行
鈺緯科技開發股份有限公司

穩惠電子工業股份限公司
WEN TE ELECTRONICS CO.,LTD.
新北市中和區中山路二段327巷19號5樓
電話： 02-2240-2482　　傳真： 02-2248-0401
E-mail:Jackie@wentek.com.tw
東莞穩德電子有限公司
DONGGUAN WEN DE ELECTRONICS CO.,LTD
廣東省東莞市虎門鎮新聯高科技工業區高科二路88號
電話： 86-769-85509740　傳真： 86-769-85504618
E-Mail：wd@dgwender.com.cn

核准	審核	品管	製作
沈燕凌 2024/5/17	林景杰 2024/5/17	溫雁琳 2024/5/17	呂宛樺 2024/5/17
APPROVAL	穩惠電子工業股份有限公司 TEL:22402482 工程確認章		

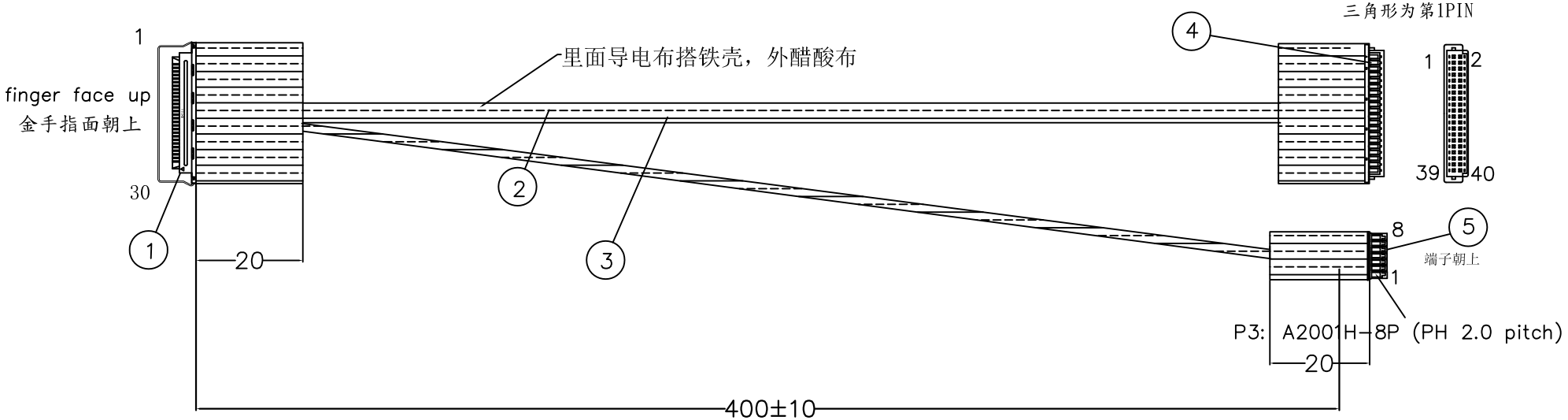
成品圖:

REV.	DATE	DCN NO.	DESCRIPTION	DRAWN
B				

P1:IPEX 20453-030T with pull bar

P2: DF13-40DS-1.25C OR EQUAL

三角形为第1PIN



																		Twist	Twist		Twist	Twist	Twist					
P1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
P2	40	38	28			39													26	37	35	33	31	24	29	27	25	23	21	19
P3									3	2	1		6	5	4	8	7													

RD
2022.07.18
彭閎熙

WEN TE Technology RoHS Compliant

3KH00305000
(K1173)

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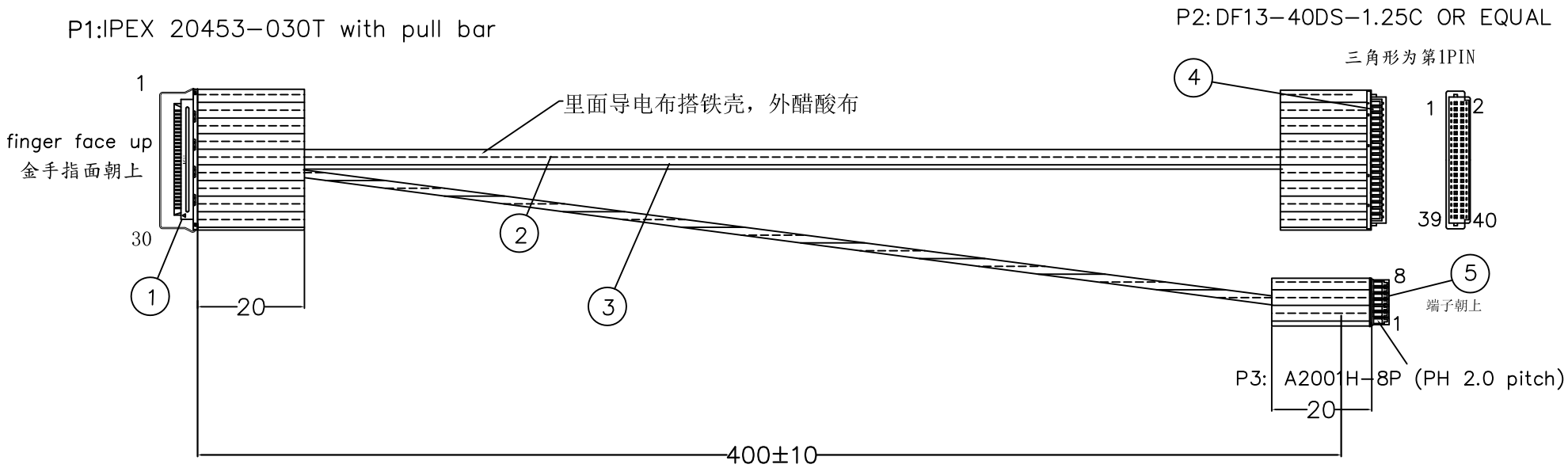
test item	test condition	do	
		YES	NO
HV test	AC=300V	V	
insulation test	DC=250V IR=20M ohm	V	
cond test	3 ohm	V	

NO.	PART NO.	Q'TY	MATERIAL	VENDOR
5	P 3	1	PHR-8PIN(A2001H-8P (2.0 pitch))	Local
4	P 2	1	DF13-40DS-1.25 EQUAL	Local
3	TAPE	1	Conductive tape / Black TAPE	Local
2	CABLE	25	UL 10064 32# cable	Local
1	P 1	1	I-PEX 20453-030T with pull bar	IPEX

WEN TE Electronics CO.,LTD.	jerry gao	jackie	chen ping tao	(CUST ACCEPT.)	GENERL TOLERANCE		PART NO.	TITLE	New Cable 10.1_LH1	REV.	1
					X.±0.50	X.°±3°	CUTM.NO.	CUSTOMER	鈺緯科技	SHEET	1/1
					.X±0.30	.X°±1°	SCALE: FREE	(OR.D.)	2022.7.14	UNITS	MM

成品圖:

REV.	DATE	DCN NO.	DESCRIPTION	DRAWN
B				



Twist Twist Twist Twist Twist

P1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
P2	40	38	28			39													26	37	35	33	31	24	29	27	25	23	21	19
P3									3	2	1		6	5	4	8	7													

NO.	PART NO.	Q'TY	MATERIAL	VENDOR
5	P 3	1	PHR-8PIN(A2001H-8P (2.0 pitch))	Local
4	P 2	1	DF13-40DS-1.25 EQUAL	Local
3	TAPE	1	Conductive tape / Black TAPE	Local
2	CABLE	25	UL 10064 32# cable	Local
1	P 1	1	I-PEX 20453-030T with pull bar	IPEX

test item	test condition	do YES	do NO
HV test	AC=300V	V	
insulation test	DC=250V IR=20M ohm	V	
cond test	3 ohm	V	

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WEN TE Electronics CO.,LTD.

jerry gao	jackie	chen ping tao

(CUST ACCEPT.)

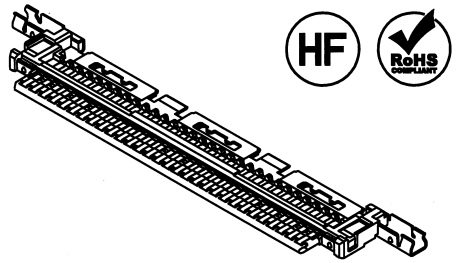
GENERL TOLERANCE	
X.±0.50	X.°±3°
.X±0.30	.X°±1°

PART NO.	3KH00305000	TITLE	New Cable 10.1_LH1	REV.	1
CUTM.NO.	(K1173)	CUSTOMER	鈺緯科技	SHEET	1/1
SCALE: FREE		(OR.D.)	2022.7.14	UNITS	MM

Recommended P/N	20454-3**T

PART NO.	Pos.	A	B	C	D	E	F	G	H
20454-#20T	20	9.50	10.30	12.56	10.20	10.55	11.00	16.00	–
20454-#30T	30	14.50	15.30	17.56	15.20	15.55	16.00	21.00	5.40
20454-#40T	40	19.50	20.30	22.56	20.20	20.55	21.00	26.00	10.40

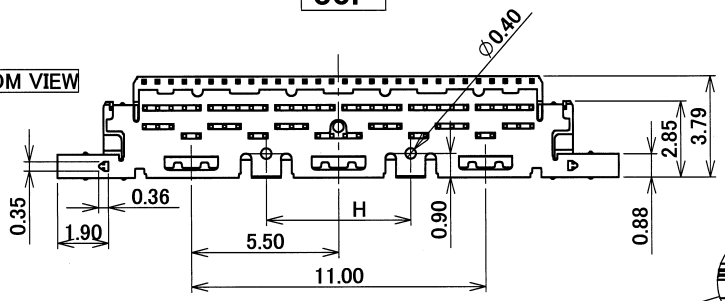
20454-#**T : STANDARD

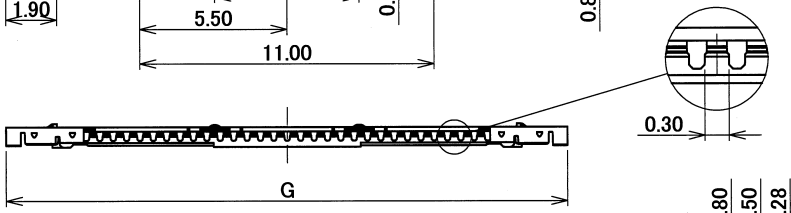


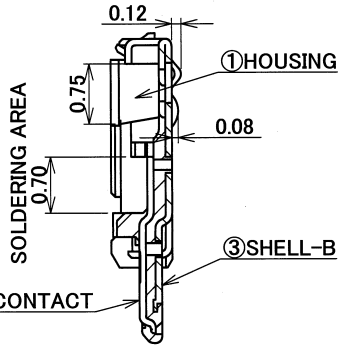
P/N:20454-# ** T
Pos.
SEE TABLE.1

30P

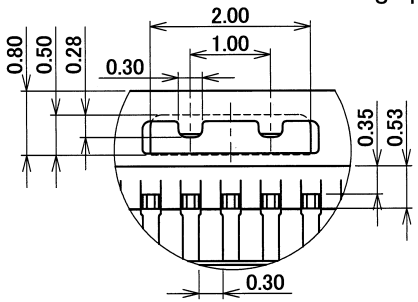
BOTTOM VIEW



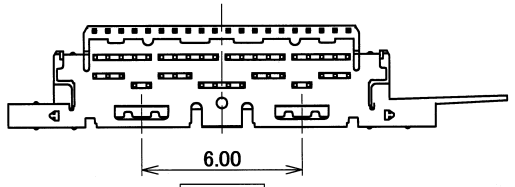




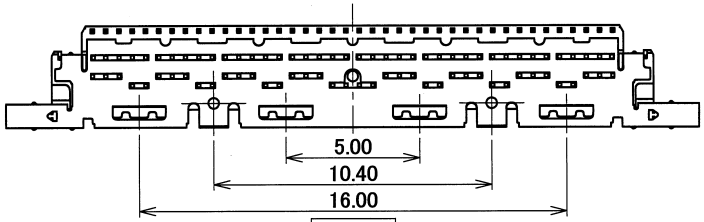
SECT. X-X
S =15 : 1



DETAIL L
S= 15 : 1



20P



40P

TOP VIEW

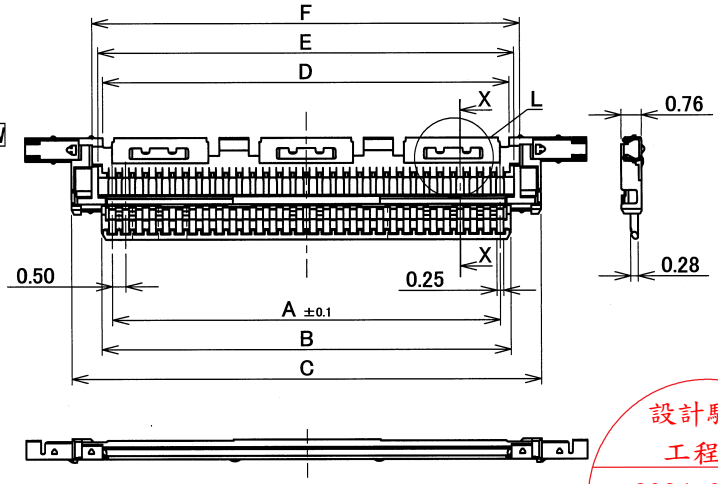


TABLE.1

PART NO.	CONTACT FINISH	SHELL-B FINISH
20454-0**T	CONTACT AREA : Au 0.1 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.05 μm MIN. OVER Ni 1.00 μm MIN.	TOP SIDE : Au 0.015 μm MIN. OVER Ni 1.00 μm MIN. BOTTOM SIDE : Au 0.05 μm MIN. OVER Ni 1.00 μm MIN.
20454-2**T	CONTACT AREA : Au 0.1 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.05 μm MIN. OVER Ni 1.00 μm MIN.	TOP SIDE : Ni 1.00 μm MIN. (THERE IS THE POSSIBILITY THAT Au ATTACHES RANDOMLY) BOTTOM SIDE : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
20454-3**T	CONTACT AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	SHELL B	PHOSPHOR BRONZE	SEE ABOVE TABLE.1
2	CONTACT	PHOSPHOR BRONZE	SEE ABOVE TABLE.1
1	HOUSING	LCP	UL94V-0, BLACK

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NOTES.
1.THIS PART IS ASSEMBLED WITH SHELL-A(P/N:2574-#**) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N:20453-#**T-#**.
THIS PART IS ASSEMBLED WITH SHELL-A type-H(P/N:2699-#40) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N:20508-040T-#*.
THIS PART IS ASSEMBLED WITH SHELL-A(P/N:2574-#**) AND ALIGNMENT COVER(P/N:2658-0**) AFTER SOLDERED THE CABLE, AND IT BECOMES P/N:20492-1**T.

PATENT REGISTERED

REV.	ECN	BY	DATE	APP.
17	Z180796	A.K	June/20/'18	Y.S
16	Z151047	H.I	Sept./23/'15	Y.S
15	Z150428	H.I	Apr./15/'15	E.K
14	Z141346	K.T	Nov./25/'14	E.K
13	Z12065	H.I	Jan./27/'12	T.H
12	Z11445	T.D	Sept./12/'11	Y.H

REVISION RECORD

ANGLE	±2°	6 OVER 30 MAX.	±0.3
6 MAX.	±0.2	30 OVER 120 MAX.	±0.5

GENERAL TOLERANCE.

DWG.	H.Ikari	DATE Apr./16/'08
CHK.		DATE
APP.	E.Kawabe	DATE Apr./17/'08

PROJECTION

SERIES No. R11

CUSTOMER COPY

TITLE
CABLINE®-VS
PLUG HOUSING ASS'Y

DWG. No. 20454

SCALE 5:1
UNIT mm
SIZE A3
SHEET 1/4
REV. 17

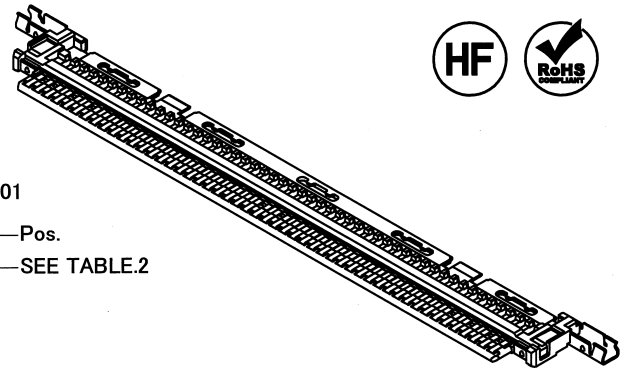
I-PEX connectors

Confidential C

Recommended P/N	20454-350T-01

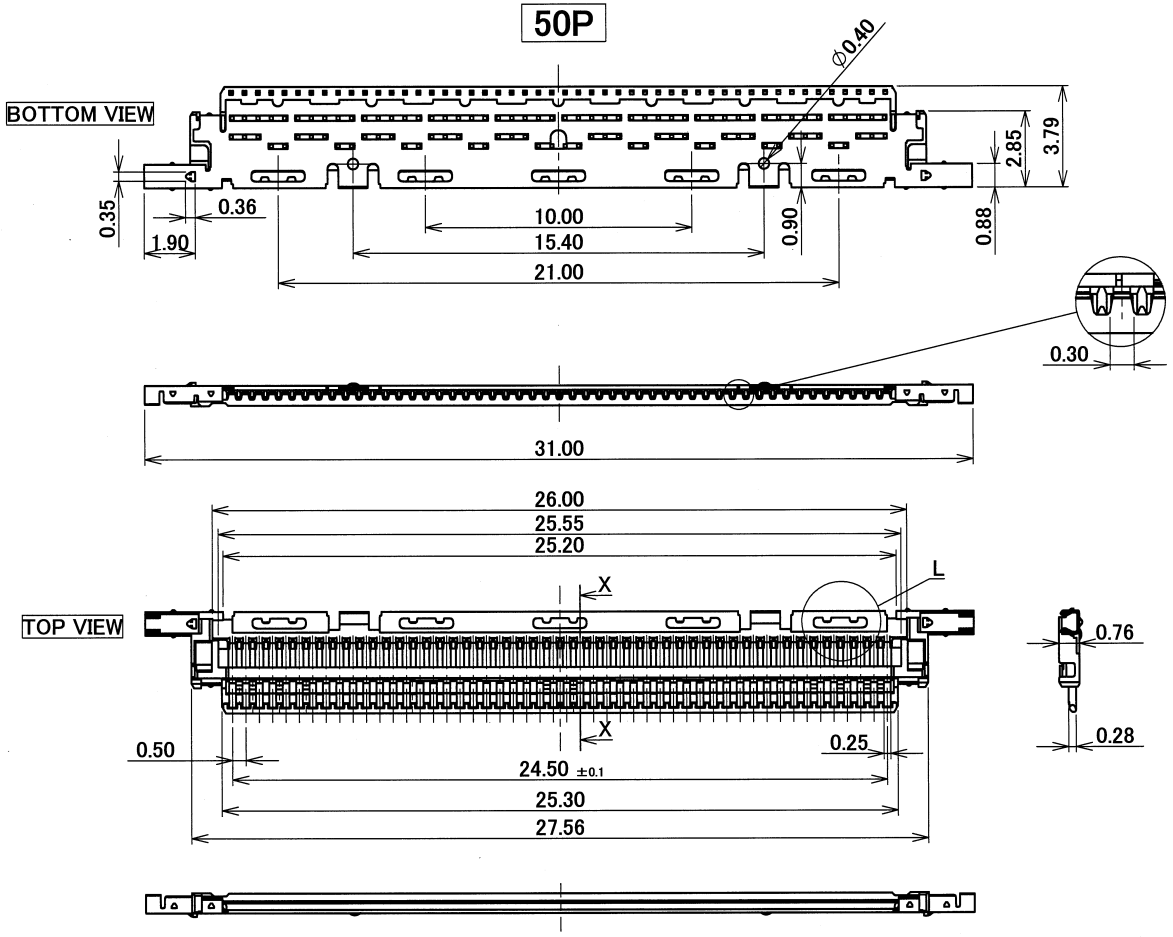
PART NO.	Pos.
20454-#50T-01	50

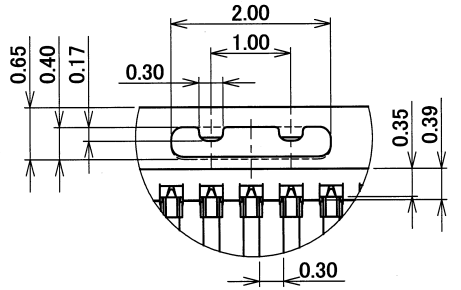
20454-#50T-01 : TYPE-i



P/N:20454- # 50 T-01
- Pos.
- SEE TABLE.2

50P





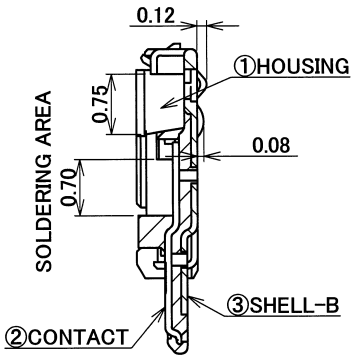


TABLE.2

PART NO.	CONTACT FINISH	SHELL-B FINISH
20454-0**T-01	CONTACT AREA : Au 0.1 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.05 μm MIN. OVER Ni 1.00 μm MIN.	TOP SIDE : Au 0.015 μm MIN. OVER Ni 1.00 μm MIN. BOTTOM SIDE : Au 0.05 μm MIN. OVER Ni 1.00 μm MIN.
20454-2**T-01	CONTACT AREA : Au 0.1 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.05 μm MIN. OVER Ni 1.00 μm MIN.	TOP SIDE : Ni 1.00 μm MIN. (THERE IS THE POSSIBILITY THAT Au ATTACHES RANDOMLY) BOTTOM SIDE : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
20454-3**T-01	CONTACT AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	SHELL B	PHOSPHOR BRONZE	SEE ABOVE TABLE.2
2	CONTACT	PHOSPHOR BRONZE	SEE ABOVE TABLE.2
1	HOUSING	LCP	UL94V-0, BLACK

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PATENT REGISTERED

REV.	ECN	BY	DATE	APP.
REVISION RECORD				

ANGLE ±2° | 6 OVER 30 MAX. ±0.3 | 6 MAX. ±0.2 | 30 OVER 120 MAX. ±0.5
GENERAL TOLERANCE.
DWG. DATE
CHK. DATE
APP. DATE

PROJECTION | SERIES No. R11

CUSTOMER COPY

TITLE: CABLINE®-VS PLUG HOUSING ASS'Y

DWG. No. 20454

SCALE 5:1 | UNIT mm | SIZE A3 | SHEET 2/4 | REV. 17

I-PEX connectors

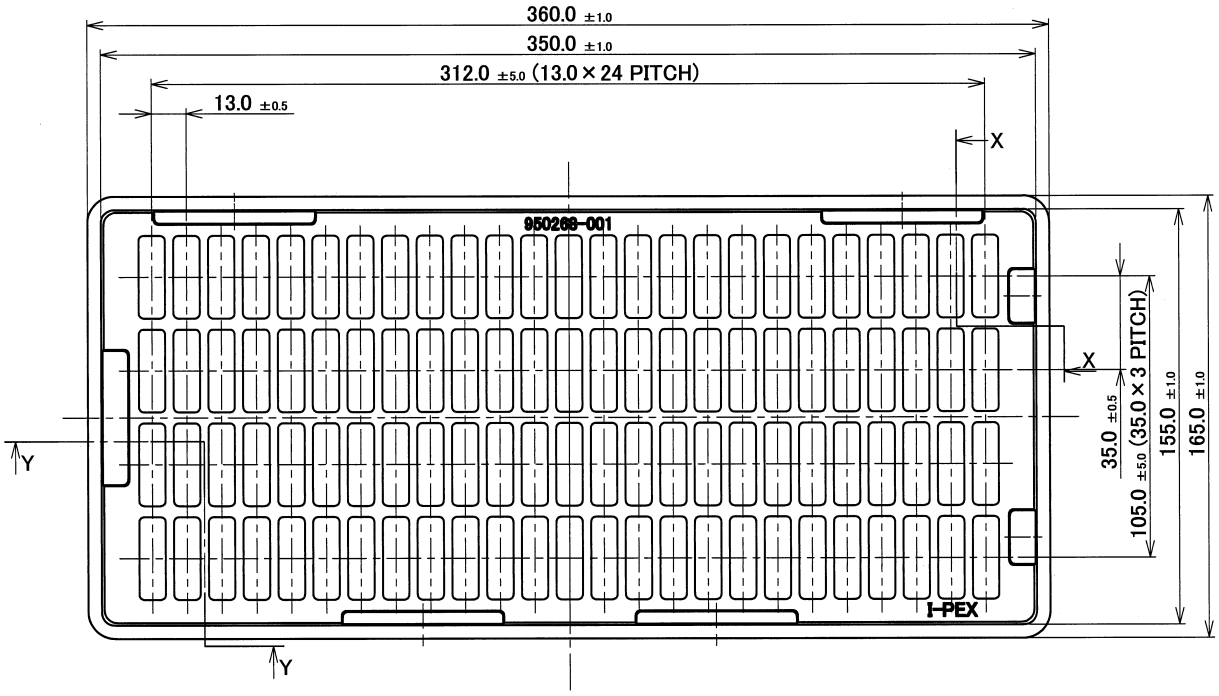
Confidential C

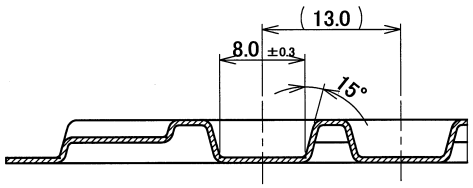
DAI-ICHI SEIKO CO., LTD.

QKE-DFFDE06-02 REV.11

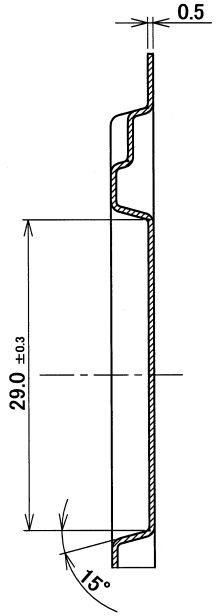
PART NO.	QTY. IN DITCH (PIECES / DITCH)	QTY. IN TRAY (PIECES / TRAY)	QTY. PER SHIPPING CARTON (TRAYS / CARTON)	QTY. PER PACKING CARTON (TRAYS / CARTON)
20454-#20T	1	100	20 / CARTON = 2000	8000 (4BOXES)
20454-#30T				
20454-#40T				

FOR 20, 30, 40P





SECT. Y-Y
(S=2/1)



SECT. X-X
(S=2/1)

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NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
4	TRAY	PP	ANTI-STATIC TYPE

ANGLE	±2°	6 OVER 30 MAX.	±0.3	PROJECTION	SERIES No. R11
6 MAX.	±0.2	30 OVER 120 MAX.	±0.5		CUSTOMER COPY

GENERAL TOLERANCE.

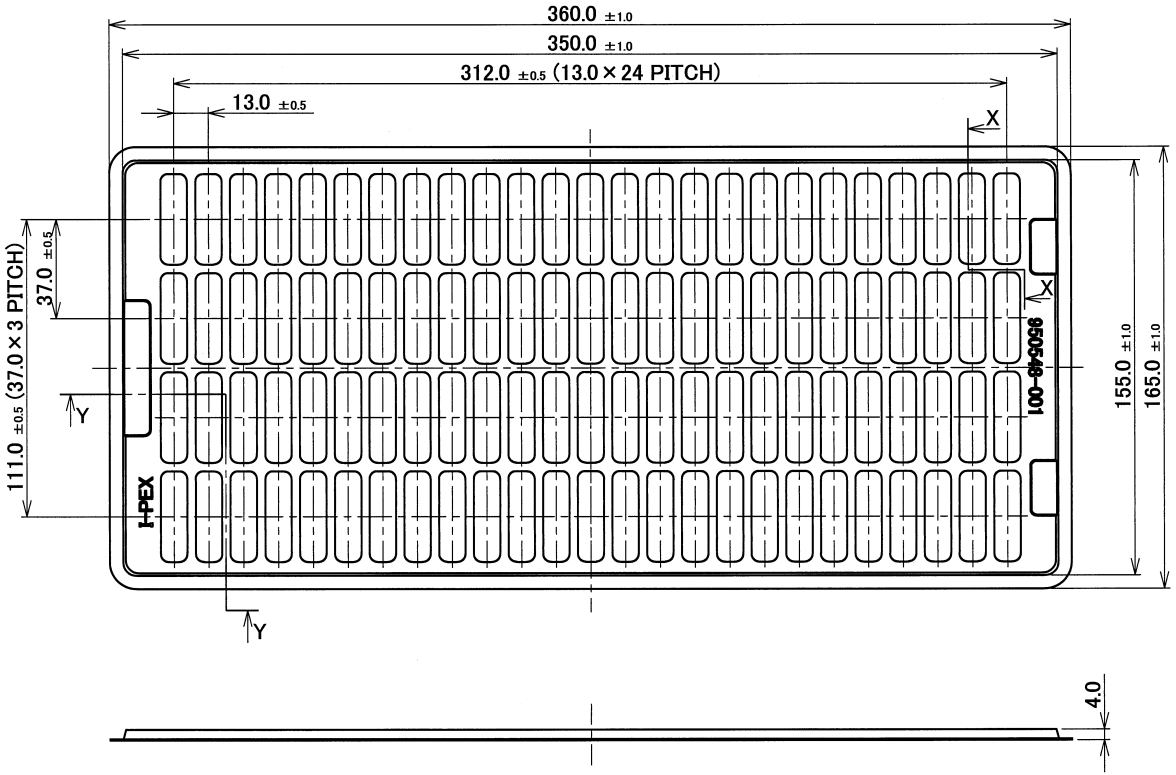
DWG.	DATE	TITLE: CABLINE®-VS PLUG HOUSING ASS'Y	SCALE 1:2
CHK.	DATE		UNIT mm
APP.	DATE	DWG. No. 20454	SIZE A3

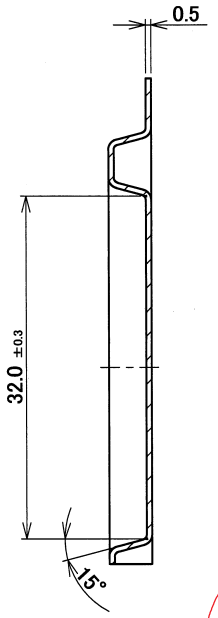
I-PEX connectors

SHEET 3/4 REV. 17

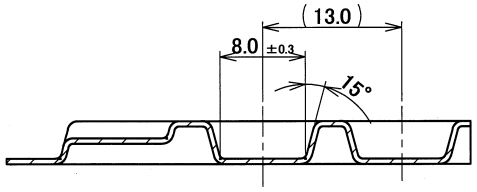
PART NO.	QTY. IN DITCH (PIECES / DITCH)	QTY. IN TRAY (PIECES / TRAY)	QTY. PER SHIPPING CARTON (TRAYS / CARTON)	QTY. PER PACKING CARTON (TRAYS / CARTON)
20454-#50T-01	1	100	20 / CARTON = 2000	8000 (4BOXES)

FOR 50P





SECT. X-X
(S=2/1)



SECT. Y-Y
(S=2/1)

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5	TRAY	PS	ANTI-STATIC TYPE
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

ANGLE	±2°	6 OVER 30 MAX.	±0.3	PROJECTION	SERIES No. R11
6 MAX.	±0.2	30 OVER 120 MAX.	±0.5		CUSTOMER COPY

GENERAL TOLERANCE.

DWG.	DATE	TITLE: CABLINE®-VS PLUG HOUSING ASS'Y	SCALE 1:2
CHK.	DATE		UNIT mm
APP.	DATE	DWG. No. 20454	SIZE A3

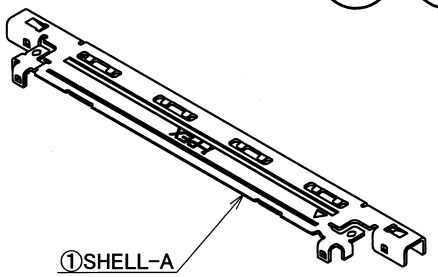
I-PEX connectors

SHEET 4/4 REV. 17

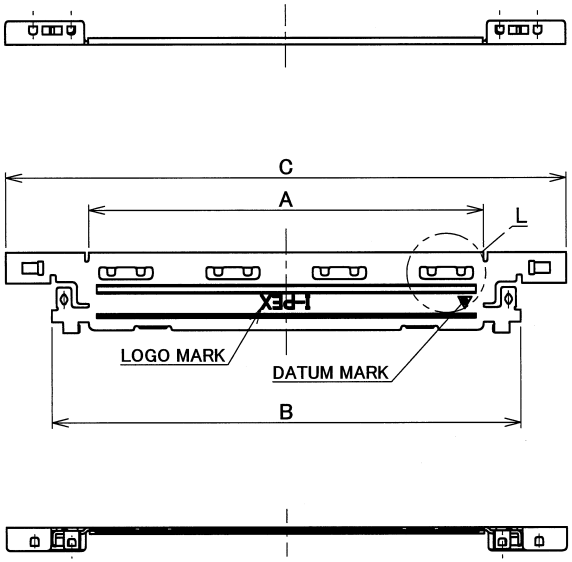
Recommended P/N	2574-1**3

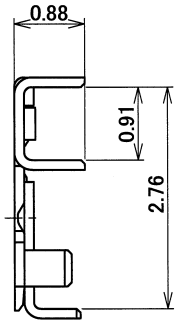
PART NO.	Pos.	A	B	C	D
2574-#20#	20	9.78	12.56	16.00	8.00 {= 4.0 × (3-1)}
2574-#30#	30	14.78	17.56	21.00	12.00 {= 4.0 × (4-1)}
2574-#40#	40	19.78	22.56	26.00	16.00 {= 4.0 × (5-1)}
2574-#50#	50	24.78	27.56	31.00	20.00 {= 4.0 × (6-1)}

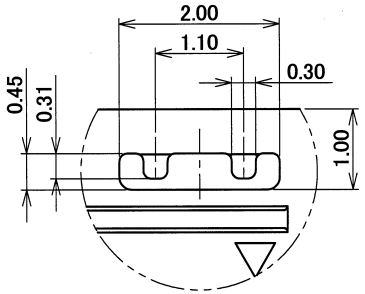
P/N:2574-# * * #
- SEE TABLE.1
- Pos.
- 0 : WITH DATUM MARK
- 1 : WITHOUT DATUM MARK



TOP VIEW







DETAIL L
S= 15 : 1

BOTTOM VIEW

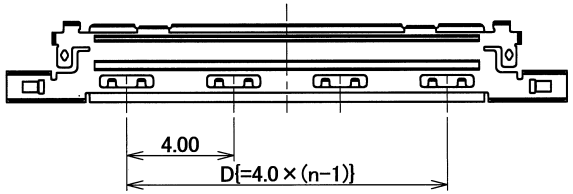


TABLE.1

PART NO.	SHELL-A FINISH
2574-***	TOP SIDE : Au 0.05 μm MIN. OVER Ni 1.00 μm MIN. BOTTOM SIDE : Au 0.015 μm MIN. OVER Ni 1.00 μm MIN.
2574-***2	TOP SIDE : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN. BOTTOM SIDE : Ni 1.00 μm MIN. (THERE IS THE POSSIBILITY THAT Au ATTACHES RANDOMLY)
2574-***3	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
1	SHELL A	PHOSPHOR BRONZE	SEE ABOVE TABLE.1

REV.	ECN	BY	DATE	APP.
12	Z180941	A.K	July/18/'18	H.I
11	Z180796	A.K	June/20/'18	H.I
10	Z151047	H.I	Sept./23.'15	Y.S
9	Z141346	K.T	Nov./25/'14	E.K
8	Z13076	H.I	Feb./18/'13	T.H
7	Z12660	Y.N	Aug./03/'12	T.H

REVISION RECORD

ANGLE	±2°	6 OVER 30 MAX.	±0.3
6 MAX.	±0.2	30 OVER 120 MAX.	±0.5

GENERAL TOLERANCE.

DWG.	H.Ikari	DATE Apr./16/'08
CHK.		DATE
APP.	E.Kawabe	DATE Apr./17/'08

PROJECTION | SERIES No. R3 | CUSTOMER COPY

TITLE: CABLINE®-VS PLUG SHELL-A

DWG. No. 2574

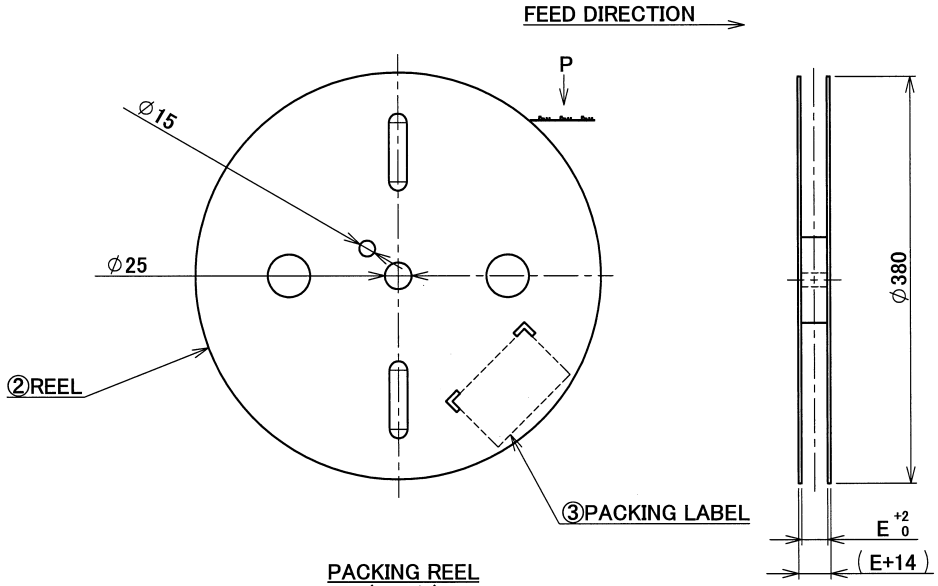
SCALE 5:1 | UNIT mm | SIZE A3 | SHEET 1/2 | REV. 12

I-PEX connectors

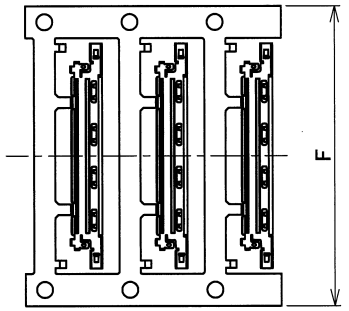
設計驗證 工程課 2024-05-20 發行 佳鋒科技開發股份有限公司

PATENT REGISTERED

PART NO.	E	F	QTY. PER EMBOSS REEL (PIECES / REEL)	QTY. PER PACKING CARTON (REELS / CARTON)
2574-#20#	30	23	5000 PIECES / REEL	3 REELS / CARTON = 15000
2574-#30#	35	28		
2574-#40#	40	33		
2574-#50#	45	38		



PACKING REEL
(S=1/5)



VIEW P

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NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	PACKING LABEL	–	–
2	REEL	CARDBOARD	–

ANGLE	±2°	6 OVER 30 MAX.	±0.3	PROJECTION	SERIES No.	CUSTOMER COPY	
6 MAX.	±0.2	30 OVER 120 MAX.	±0.5		R3		
GENERAL TOLERANCE.				TITLE		SCALE	
DWG.	DATE			CABLINE®-VS PLUG SHELL-A		5:1	I-PEX connectors
CHK.	DATE					UNIT	
APP.	DATE			DWG. No.		mm	
				2574		SIZE A3	SHEET 2/2 REV. 12

WELL-LIN ENTERPRISE CO., LTD.

TERMINALS & CONNECTORS

PRODUCT SPECIFICATION

維林企業有限公司

台北縣新店市寶橋路235巷12號8F

8F, No. 12 Lane 235, Pao Chiao Rd.,

Hsin-Tien City, Taipei Hsien, Taiwan R.O.C.

TEL : 886-2-29120863　886-2-291471888

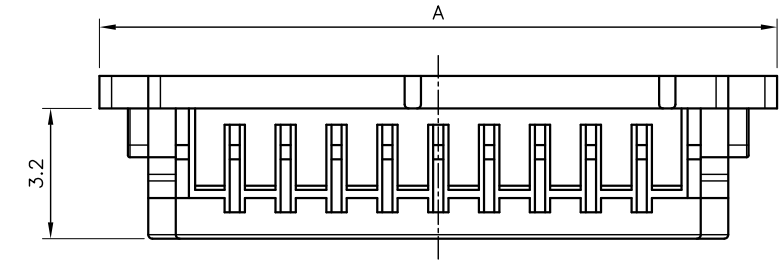
FAX : 886-2-29142702

SPEC. No. : SPEC-1255-XXXX　　**REV. :** J

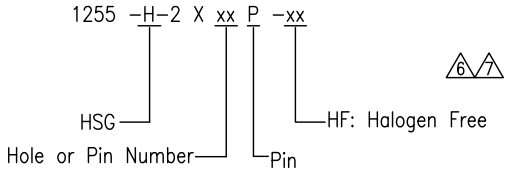
PRODUCT NAME : 1.25 mm Pitch SMT Wire to Board Connector.

PRODUCT No. : 1255-H-XXP-XX、1255-T-T-S、1255-G-P-XX、1255-H-2xXXP-XX、1255-SMTR-XXP、1255-SMTS-XXP、1255-WR-XXP、1255-WS-XXP、1255-SMTR-2xXXP、1255-SMTS-2xXXP

WRITTEN BY	CHECK BY	APPROVED BY	DCC　ISSUE
Joan Wu	**Da - Lin**	**Eddie Lin**	
2019 / 02 / 14	2019 / 02 / 14	2019 / 02 / 14	

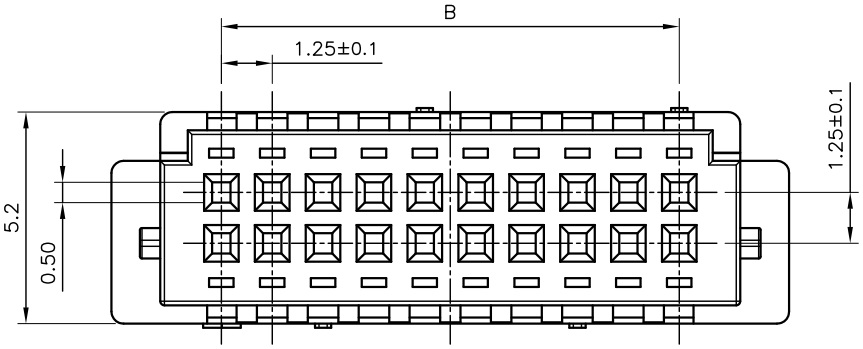


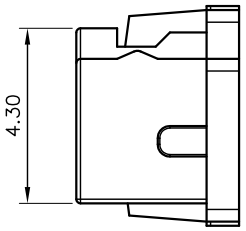
P/N LEGEND

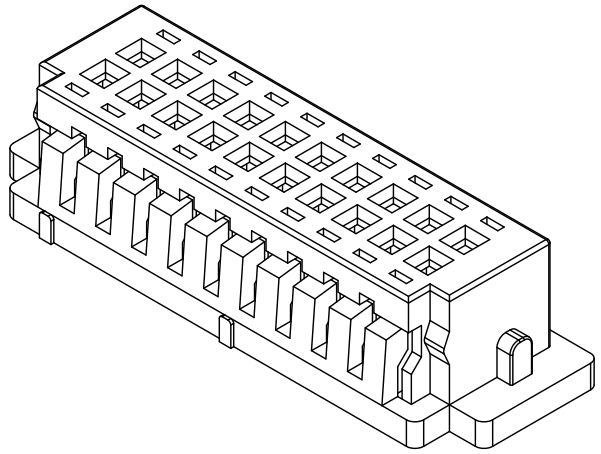


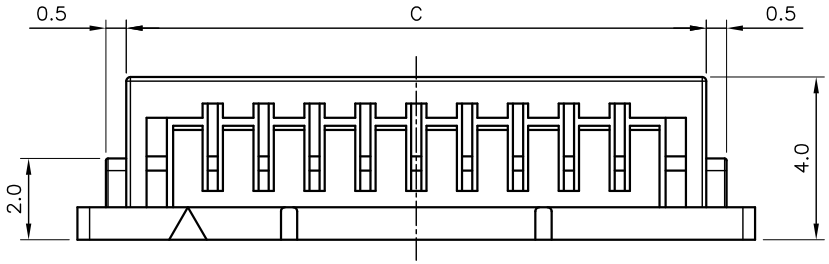
■ HOUSING

- Part No: 1255-H-2×xxP-xx
- Material: Nylon 66, UL 94V-0
  Color: Brown
- Pitch: 1.25mm (.049")
- Poles: 10, 20, 30, 40, 50
- Accepts terminals : 1255-G-P
  1255-T-T-S









CIRCUITS	PART NO.	DIMENSION		
		A	B	C
10	1255-H-2X5P-xx	10.40	5.00	8.00
20	1255-H-2X10P-xx	16.65	11.25	14.25
30	1255-H-2X15P-xx	22.90	17.50	20.50
40	1255-H-2X20P-xx	29.15	23.75	26.75
50	1255-H-2X25P-xx	35.40	30.00	33.00

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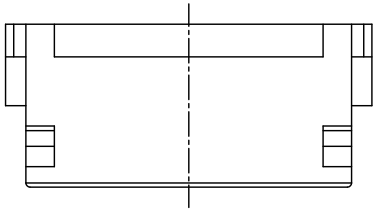
LTR	DESCRIPTION	DATE	BY	CHKD
REVISIONS				
7 x1	Gray ==> Brown	2021.04.29	JOHNSON	ANGEL
6 x1	ADD	2019.12.03	JOHNSON	Da-Lin

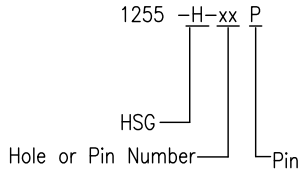
TOLERANCES UNLESS NOTED				
LINEAR ±	.x ±0.3 .xx ±0.15 .xxx±0.08	DWN	JOHNSON	2011.05.16
ANGLES ±	2°	DSND	JOHNSON	2011.05.16
		CHKD	M.Y.WU	2011.05.18
		APVD	Da-Lin	2011.05.18

WELL-LIN ENTERPRISE CO., LTD.

PROJECTION		PART NO.	1255-H-2XxxP-xx
SCALE 5/1	UNIT mm	TITLE	1.25mm Wire to Board Connector
SIZE A4	SHEET 1/1	DWN. NO.	A-1255-H-2
		REV.	H

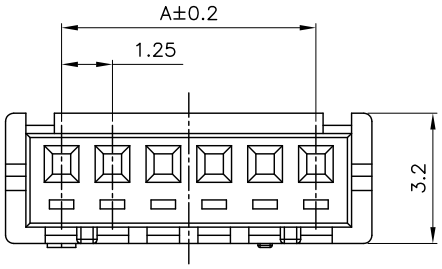


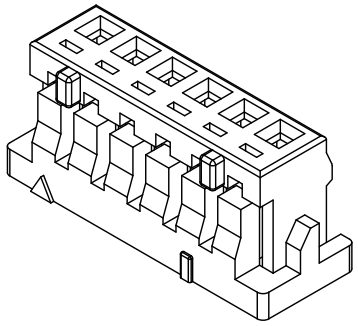
P/N LEGEND

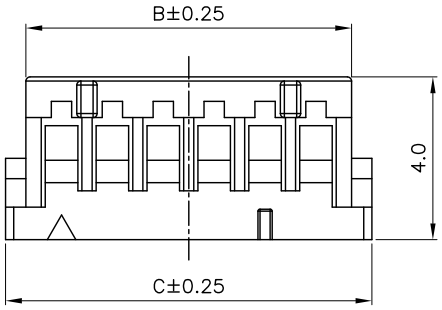


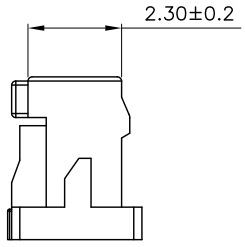
■ HOUSING

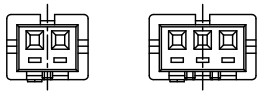
- Part No: 1255-H-xxP
- Material: Nylon 66, UL94V-0
- Pitch: 1.25mm (.049")
- Poles: 2~15
- Accepts terminals : 1255-G-P
  1255-T-T-S











1255-H-02P 1255-H-03P

CIRCUITS	PART NO.	DIMENSION		
		A	B	C
2	1255-H-02P	1.25	3.00	4.00
3	1255-H-03P	2.50	4.25	5.25
4	1255-H-04P	3.75	5.50	6.50
5	1255-H-05P	5.00	6.75	7.75
6	1255-H-06P	6.25	8.00	9.00
7	1255-H-07P	7.50	9.25	10.25
8	1255-H-08P	8.75	10.50	11.50
9	1255-H-09P	10.00	11.75	12.75
10	1255-H-10P	11.25	13.00	14.00
11	1255-H-11P	12.50	14.25	15.25
12	1255-H-12P	13.75	15.50	16.50
13	1255-H-13P	15.00	16.75	17.75
14	1255-H-14P	16.25	18.00	19.00
15	1255-H-15P	17.50	19.25	20.25

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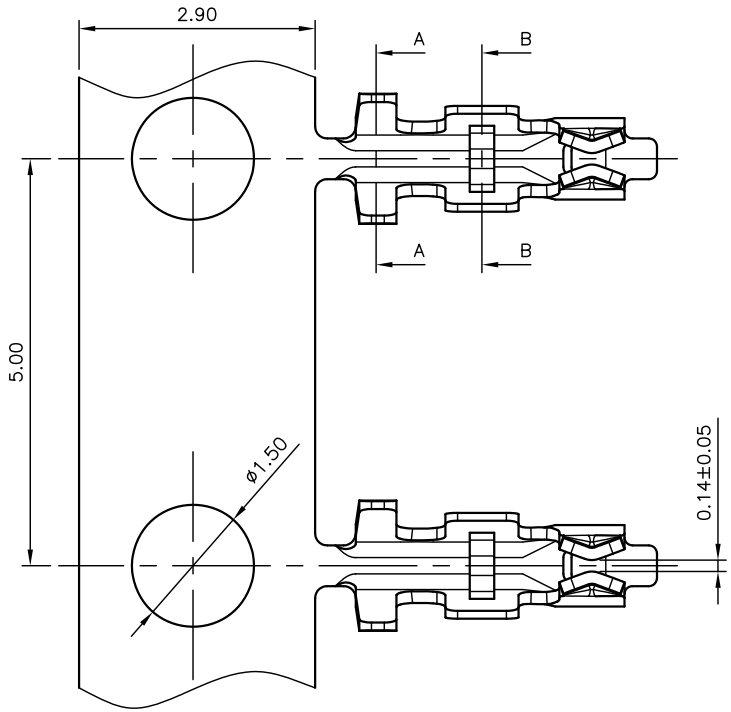
LTR	DESCRIPTION	DATE	BY	CHKD

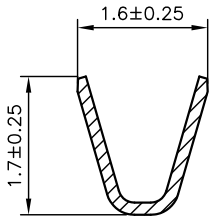
REVISIONS

TOLERANCES UNLESS NOTED				
LINEAR ±	.x ±0.3 .xx ±0.15 .xxx±0.08	DWN	JOHNSON	2020.04.01
ANGLES ±	2°	DSND	JOHNSON	2020.04.01
		CHKD	JELUNG	2020.04.06
		APVD	Da-Lin	2020.04.06

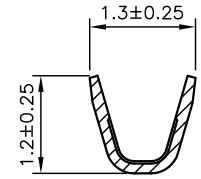
WELL-LIN ENTERPRISE CO., LTD.

PROJECTION		PART NO.	1255-H-xxP
SCALE	5/1	UNIT	mm
SIZE	A4	SHEET	1/1
TITLE	1.25mm Wire to Board Connector		
DWN. NO.	A-1255-H	REV.	A

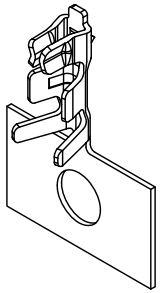




A–A SECTION
(INSULATION BARREL)



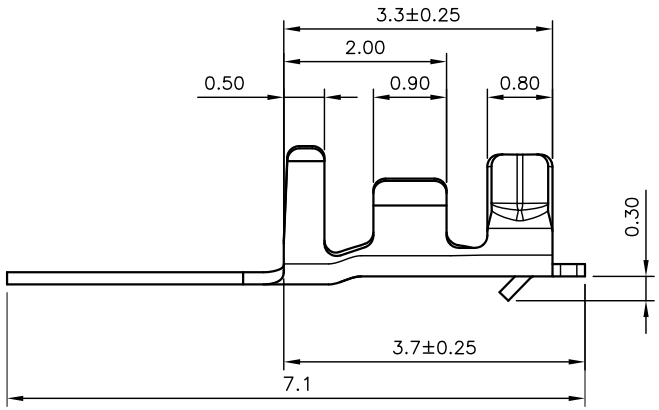
B–B SECTION
(WIRE BARREL)

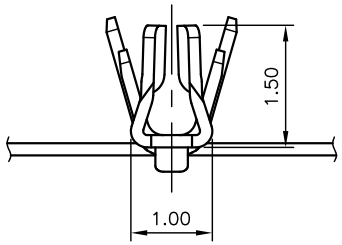


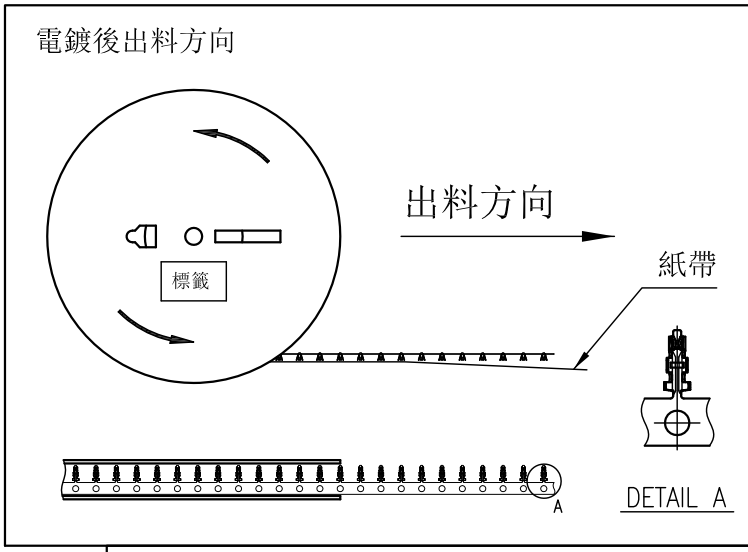
■ TERMINAL

- Part No: 1255-G-P
- Material : Phosphor bronze
- Thickness : 0.15mm
- Plating : Gold plated

- Wire Range : Suitable for AWG#28~32
- Insulation O.D : 1.00mm (max)
- Q'TY : 10,000pcs/reel
- Accepts housing : 1255-H







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LTR	DESCRIPTION	DATE	BY	CHKD
1 x1	ADD	2015.11.05	JOHNSON	Da-Lin

REVISIONS

TOLERANCES UNLESS NOTED		
LINEAR ±	.x ±0.3 .xx ±0.15 .xxx±0.08	
ANGLES ±	2°	

DWN	JOHNSON	2012.04.16
DSND	JOHNSON	2012.04.16
CHKD	JELUNG	2012.04.17
APVD	Da-Lin	2012.04.17

WELL-LIN ENTERPRISE CO., LTD.

PROJECTION		PART NO.	1255-G-P
SCALE	10/1	UNIT	mm
SIZE	A4	SHEET	1/1

TITLE
1.25mm Wire to Board Connector

DWN. NO.	REV.
A-1255-G-P	B

1. SCOPE

This specification is applied to the requirements for 1.25 mm Pitch SMT Wire to Board Connector.
This specification covers the materials, ratings, electrical, mechanical and environmental performance of the applicable product description and test method

2. PRODUCT NAME AND PART NUMBER

Product Name	Part No.
Housing	1255-H-XXP-XX、1255-H-2xXXP-XX
Terminal	1255-G-P-XX、1255-T-T-S
WAF	1255-SMTR-XXP、1255-SMTS-XXP、1255-WR-XXP、1255-WS-XXP、1255-SMTR-2xXXP、1255-SMTS-2xXXP

＊＊：Refer To The Drawing

3. MATERIAL AND FINISH

Description		Material	Finish
HSG		PA66 UL94V-0	-
Terminal		phos bronze	Gold plated over Nickel Tin plated over Nickel
WAF (SMT)	Terminal	Brass	Gold -plated
	FITTING	Brass	
	HSG	Nylon 6T UL94V-0	/

Title: 1.25 mm Pitch SMT Wire to Board Connector.				PART No. **1255-XXXX**	
REV. / Date	**J**/ 19-2/14	WRITTEN BY	CHECKED BY	APPROVED BY	DATE
ECN No.		Jelung	Da-Lin	Eddie	**2019/02/14**

4. GENERAL SPECIFICATION

Item	Standard	
Voltage Rating	100 V	【AC/DC】
Current Rating	1A	
Ambient Temperature Range	-25°C~+85°C	
Contact Resistance	30 mΩ max	
Insulation Resistance	500 MΩ (Min)	
Withstanding Voltage	500 V AC	

5. PERFORMANCE REQUIREMENTS AND PROCEDURES SUMMARY

5-1 Electrical Performance

Item		Condition	Standard
5-1-1	Contact Resistance	Mated connector, 20mV max. Open circuit at 10mA max.EIA 364-23B	Initial : 30 mΩ max. resistance: 60mΩ(Max)
5-1-2	Insulation Resistance	100V DC for 1 Minute. Test between adjacent circuits and contact EIA 364-21C	500 MΩ min.
5-1-3	Dielectric Withstanding Voltage	500 V AC 1 minute. Test between adjacent circuits and contact. EIA 364-20B	No flashover or insulation breakdown

5-2 Mechanical Performance

Item		Condition	Standard
5-2-1	Terminal / Housing Retention Force	Measure by tensile tester ; Speed: 25mm/min	0.5 kgf min
5-2-2	Pin head Retention Force	Measure by tensile tester ; Speed: 25mm/min	0.5 kgf min
5-2-3	Total Mating and Unmating Force	The test method complies with EIA-364-13 The speed at 25±3 mm/minute	See table
5-2-4	Terminal conductorcrimp width and height:		

Wire Size (AWG)	Conductor (mm)		Insulation (PVC) (mm)		Crimp Tensile Strength (kgf) (min)
	Crimp Width	Crimp Height	Crimp Width	Crimp Height	
#28	0.85±0.05	0.70±0.1.	0.95 Ref.	1.10 Ref.	1.1
#30		0.65±0.1.		1.03 Ref.	0.60
#32		0.50±0.1.		0.95 Ref.	0.45

NOTE:
1. Strip Length:1.35m/m (1.2mm~11.9mm)
2. Insulation OD:0.8mm(MAX)
3. 鉚線後請檢查端子間距是否有變化

Item	Condition	Standard

5-2-5	Crimped conditions reference data

Item	Require ment
Bend up	4° MAx
Bend down	4° MAx
Twisting	3° MAx
Rolling	8° Max
Conductor barrel seam	There shall no gap and no wire out of crimping area

INSERTION & WITHDRAWAL FORCE(Mating / Unmating Forces)

Number of Circuits	At initial		At 30th
	I.F.(max)	W.F.(min)	W.F.(min)
2	1.60	0.40	0.36
3	1.90	0.46	0.40
4	2.20	0.52	0.44
5	2.50	0.58	0.48
6	2.80	0.64	0.52
7	3.10	0.70	0.56
8	3.40	0.76	0.60
9	3.70	0.82	0.64
10	4.00	0.88	0.68
11	4.30	0.94	0.72
12	4.60	1.00	0.76
13	4.90	1.06	0.80
14	5.20	1.12	0.84
15	5.50	1.18	0.88
2X5	4.00	0.88	0.68
2X10	7.00	1.48	1.08
2X15	10.00	2.08	1.48
2X20	13.00	2.68	1.88
2x25	16.00	3.28	2.28

UNIT: (kgf)

5-3 ENVIRONMENTAL

Item		Condition	Standard
5-3-1	Salt spray	Mated connector shall be subjected to salt spray test of the temperature :35℃ Salt solution:5% Period:24 hours condition. After the test. specimen shall be washed with running water and dried naturally	Appearance:No damage Contact resistance: 60mΩ(Max) Gold plated only
5-3-2	Humidity	Mated connectors expose in a humidity chamber of the temperature :40℃ Humidity:90%-95%(RH) Period:96 hours condition continuously after the test. There shall be no breakdown nor flashover on dielectric withstanding voltage test	Appearance:No damage Contact resistance: 60mΩ(Max) Insulation resistance: 500MΩ(Min)
5-3-3	Solderability	Fluxed soldering section of shrouded header shall be dipped in solder on the conditions of solder temperature :250℃ Immersion period :3 seconds 0.5mm from terminal tip and fitting nail tip.	95% of immersed area must show no volds or pin holes

5-4 OTHERS

Item		Condition	Standard
5-4-1	Vibration	Mated connector shall be mounted on a PCB and subjected to a vibration test of the conditions: Frequency:10~55~10 HZ/minAmplitude:1.5mm Shock direction:±X±Y±Z 1hours During the test current continutity shall be checked. After the test contanct resistance shall be measured	Discontinuity < 1microsecond Contact resistance: 60mΩ(Max)
5-4-2	Durability	Operation speed:25±3 mm/min. Durability cycles : 30 cycles.	Contact resistance: 60mΩ(Max)

6.PRODUCT SHAPE , DIMENSIONS AND MATERIALS

Refer to The Drawing.

7. REVISION HISTORY

REV.	ECN NO.	DESCRIPTION	AUTHER	DATE
A	-	NEW RELEASE	H.Y Wu	2010/03/31
B	-	新增料號	-	-
C	-	新增料號	-	-
D	-	新增無鹵料號	-	-
E	-	新增 WAF 材質	JELUNG	2012/05/10
F	-	新增 waf 料號	JELUNG	2013/4/12
G	-	新增插拔力標準	JELUNG	2016/4/29
H	-	REV. WAF 資料	JELUNG	2017/6/19
I	-	REV. 5-3-1/5-3-3	JELUNG	2018/7/20
J	-	新增單排無鹵料號	JELUNG	2019/2/14

Need more information? Click Here to go to the iQ™ for Plastics database

Component - Plastics E238882

SHANGHAI NYTEX COMPOSITE PRODUCTS CO LTD

5388 CAOAN RD, ANTING TOWN, JIADING DISTRICT, SHANGHAI 201805 CN

MG-8015N-V

Polyamide 66 (PA66), mineral reinforced, flame retardant, furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
BK	0.8	V-0	-	-	65	65	65
ALL	1.6	V-0	-	-	65	65	65
	3.0	V-0	-	-	65	65	65

Comparative Tracking Index (CTI): -

High-Voltage Arc Tracking Rate (HVTR): -

Dielectric Strength (kV/mm): -

Dimensional Stability (%): -

High Volt, Low Current Arc Resis (D495): -

Volume Resistivity (10^X ohm-cm): -

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Safety Data Sheet

MSDS C5111、C5102、C5191、C5210、C5240

Safety data sheet No: MCL001	Date of revision: 01-08-2018
Version: 7	Previous revision: 01-01-2018

Supplier/Manufacturer Information:

Product Name:	PHOSPHOR BRONZE ALLOYS
Material code:	JIS C5111 ,C5102,C5191,C5210,C5240
Chemical name:	Cu, Sn Alloy
Classification:	Copper Alloy
Supplier Name:	FUJIAN ZIJIN COPPER CO.,LTD
Address	Nangang Industrial Development Zone, Shanghang, Fujian, China 364200
TEL:	TEL:0597-3960633 FAX : 0597-3833128
Vendor URL:	www.fjzjty.com
Information in case of emergency:	0597-3960600

2、Semi-finished products out of copper tin alloys:

CAS NO:	Chemical	C5111	C5102	C5191	C5210	C5240
7440-50-8	Cu	≥94.5	≥93.65	≥92.15	≥90	≥90
7440-31-5	Sn	3.5-4.5	4.5-5.5	5.5-7	7.0-9.0	9.0-11.0
7723-14-0	P	0.03-0.35	0.03-0.35	0.03-0.35	0.03-0.35	0.03-0.35
7440-66-6	Zn	≤0.2	≤0.2	≤0.2	≤0.2	≤0.2
7439-92-1	Pb	≤0.02	≤0.02	≤0.02	≤0.02	≤0.02
7439-89-6	Fe	≤0. 1	≤0.1	≤0.1	≤0.1	≤0.1
7440-02-0	Ni	≤0.06	≤0.06	≤0.06	≤0.06	≤0.06
7429-90-5	铝（Al）	≤0.002	≤0.002	≤0.002	≤0.002	≤0.002
7440-21-3	硅（Si）	≤0.003	≤0.003	≤0.003	≤0.003	≤0.003

3、OSHA Management Status： Not hazardous in solid state. It'S dust and smoke are carcinogenic and irritating to lungs, blood, and kidneys. Repeated toxic and neurotoxic toxins

Hazardous Materials Identification System(HMIS)

POSSIBLE HAZARDS
Exposure to dust and smoke in the working environment could cause irritation to the eyes, respiratory system, and skin. Its presence of metals may have recurrent and neurological effects on blood and kidneys, and may also possibly cause cancer.Keep adequate ventilation to avoid contact with eyes, skin and clothing directly. Wear protective gear, including goggles, appropriate clothing.

Chemical characterization：	PHOSPHOR BRONZE ALLOYS
Harmful Identification：	Metal dust and smoke will be irritating to the skin, eyes, and toxic to the lungs.
HMIS Harmful Level:	Healty: 2 Flammability: 0 (0=low, 4=high) Physical hazards: none
IDLH Value of immediate harmful effects to life or health:	IDLH(3/1/95): None BRONZE ALLOYS dust and smoking, Pb ,Sn,:100mg/ m^3 P: 5mg/ m^3 Fe dust and smoking: 2500mg/ m^3 Zinc oxide: 500mg/ m^3

Possible Hazards

Eye protection: Metal dust and smoke in the working environment could cause redness and pain, Conjunctivitis.

Skin protection: This substance does not seep into the body through the skin and is absorbed. But could couse pain.

Inhalation protection: Inhalation is harmful to the human body. Severe breathing, irritation, coughing, breathing difficulties.also could couse flu-like,but this kind of symptom could disappear within 24 hours, Probably longer. Eating Protection: Inhalate amount of dust, may Spud, diarrhea, stomachache.

Chronic effects: exposure to lead can cause human kidney damage, anemia, recurrent and developmental effects, permanent neurological damage

4、First aid measures

For dusts and smoke hazards

After eye contact：	A lot of water washed the interior of the eyes (15 minutes) Serious to the hospital
After skin contact：	A lot of water washed clothes contact area. Must clean it thoroughly Serious to the hospital
After inhalation:	Ventilation is good for rest, keep warm with towels Serious to the hospital
After swallowing:	Drink plenty of water and induce vomiting. Serious to the hospital

Medical tips : There is no special antidote for the constituent elements of this product. Apply medicine according to indications

5、Fire and esplosion hazards

Flame data

Esplosion：	None
Flame：	None
Flash point:	None
Self-ignite:	None

Firefighting measures:

When the material powder in the small area caught fire, Dry sand, lime powder, salt or soda powder to be extinguished . In the event of fire in other situations, use it to properly extinguish the fire

Accidental and esplosure measures

Attention that dust can cause explosions or produce flammable gases

6、Accidental release measures

When dust is arised during processing, the product may explode and the fire source must be removed

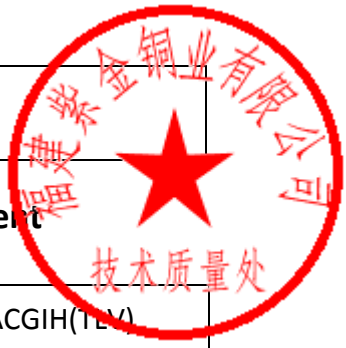
7、Handling and storage

Information for safe handling

Semi-finished product of a cylinder-shaped could cuts hand easily. Personal protective equipment,attention eyes,skin and breathing.dust must not release to the inviroment.The product is in danger of falling down. Transport must take care.When the package belt is removed,Pay attention to the end will bounce. Eyes,skin and body would be cuted if bounced. Dust must washed over or HEPA, could not Slapping or other handling

Storage provisions

Maximum temperature in storage: None
Avoid placement in moist or acidic or alkaline conditions



8、Exposure restriction and control/personal protective equipment

CAS NO:	Esposure Lev	OSHA(PEL)	ACGIH(TLV)
7440-50-8(CU)	Smoke	0.1mg/m³	0.2mg/m³
7440-50-8(CU)	Smoke	1mg/m³	1mg/m³
7440-31-5(Sn)	dust	2mg/m³	2mg/m³
7723-14-0(P)		0.1mg/m³	0.1mg/m³
7440-66-6(Zn)		none	none
7439-92-1(Pn)	Smoke and dust	0.05mg/m³	0.05mg/m³
7439-89-6(FE)		none	none
This product will be heated to produce smoke, zinc oxide smoke may form OSHA(PEL) and ACGIH(TLV) Limit value for zinc oxide smoke 5mg/ m³			
Ihalation protection	Do not wear a mask under normal circumstances But Over ceiling PEL/TLV must wear mask NIOSH		
Ventilation protection	In the work area, if smoke and dust are produced, ventilation equipment and dust collection devices must be provided, and no food and smoking should be allowed at work.		
Eye and face protection	Need wear goggles		
Skin protection	Wear work clothes, safety shoes and protective gloves Avoid direct contact with skin or material and prevent cuts		

OSHA (Occupational Safety and Health Administration)
NIOSH (National Institute for Occupational Safety and Health)
IDLH (Immediately Dangerous to Life or Health)
TWA (Time Weighted Average) PEL (Permissible Exposure Limit)

9、Physical environmental measure:

Appearance:	Light red sheen solid metal
Melting Point：	C5100(950~1060℃)，C5191(900~1045℃) C5210(870~1030℃)，C5240(840~1020℃)
Boiling point:	none
Proportion:	C5100(8.86),C5191(8.83),C5210(8.80),C5240(8.7)
Steam pressure:	none
solubility:	none
PH 25℃:	none

10、Stability and Activity Data

Stability:	Stable substances at normal normal temperature and atmosphere, inactive substances
Avoiding conditions：	There is no biochemical reaction when subjected to mechanical impact or electricity.
Avoidance of materials:	Chlorine: With metal brass, copper subdivision should form a violent or explosive reaction Acetylene: To form explosive compounds with brass
Hazard decomposer:	When heated to decomposition temperature, metal oxides and smoke are produced
Polymerization of hazards:	Metal smoke fever that may cause symptoms like a flu-like

11、Toxicological information

Potential exposure

Dust: Ingestion, skin contact, inhalation, eye contact
Smoke: inhalation, eye contact
Semi-finished product not toxicgical

Animal Acute Toxicity Data: half lethal dose(LD_{50}) concentration(LC_{50})

Alloy dust and smoke :	CU	SN	P	ZN	Pb	Fe
take orally(LD_{50})	3.5mg/kg(mouse at abdomen	none	none	none	none	30mg/kg(mouse)
Skin(LD_{50})	375mg/kg(rabbit	none	none	none	none	none

Inhalation (LC_{50})	none	none	none	none	none	none

12、Enviromental information

Ecological toxicity of this alloy product： none

The toxicity of the single component is described below：

Ecotoxicity: Solubility in Water， in 0.1-1mg/lThe range has been proven by many researchers to be non-toxic to most fish。But concentration in 0.015-3mg/l, especially in soft water, it can be toxic to many types of fish, crustaceans, mollusks, and plankton。

Lead is 2-5 mg / l for large sunfish / Lansiyu. Lead is toxic to aquatic fish。

Liquidity: Decomposition of lead into the soil 。

Persistence / decomposability: Lead is persistent and redundant in the environment 。

Ecological burden： none

13、Waste Disposal

The alloy product is not hazardous waste： Local recyclers can be commissioned to recycle when discarded 。

14、Transport Information

USA DOT: NONE。
This product should not be in direct contact with water during transportation, and it should be noted that it will slip and fall into danger.

15、 Information on regulations

There are usually no specific regulations, but in places where dust can be generated, the labor safety and health laws must be followed.
USA/OHSA:Occupational Safety Heaith Administration
USA/ACGIH Guide to protective Clothing.Cincinnati,OH:American Conference of Government Industrial Hygienists,1987
USA/SARA313

产 品 质 量 证 明 书

流水号：紫金

执行标准：**JISH3130:2012**　　合同号:

客户	产品名称	规格	状态	重量 (Kg)
元太金	C5210	0.15*8	EH	319.6

1.化学成分（%）

分析元素	Sn	P	Fe	Sb	Ni	Pb	Al	Si	Zn	Cu
含量标准	**7.0-9.0**	**0.03-0.35**	**≤0.1**	—	**≤0.2**	**≤0.02**	—	—	**≤0.2**	—
分析数据	7.9	0.15	0.008	-	0.071	0.006	0.0005	-	0.059	91.73

2.性能指标:

批号	抗拉强度(N/mm)	延伸率（%）	硬度值（HV）			
	685-785	**≥11**	标准值	实测值		
Q1810191106	685	20	210-230	215	215	216

3.尺寸偏差:

厚度规格	0.15 (+/-0.01)	0.147	0.145	0.146
宽度规格	8 (+0/+0.1)	7.96	7.98	7.95

生产企业	吴江市金盛铜业有限公司				
地址	吴江市震泽镇镇南路 555 号				
签证部门	品质科	签证人：	俞长保	日期：	2018-12-8

吴江市金盛铜业有限公司 产品检验专用章

物质安全资料表

MSDS C5100,C5191,C5210,C5240

物质安全资料表编号： MCL001	改版日期：02-15-2015
版次：4	前次改版：02-20-2008

1. 物质供应商资料

物品中（英）文名称：	磷青銅(PHOSPHOR BRONZE ALLOYS)		
物品代码：	JIS C5100,C5191,C5210,C5240		
化学名称：	铜(Cu)－锡(Sn)金属合金		
类别：	铜金属合金		
制造商或供应商名称：	福建紫金铜业有限公司		
制造商或供应商地址：	福建省龙岩市上杭县南岗开发区		
制造商或供应商电话：	0597-3960633	传真：	0597-3833128
制造商或供应商网址:	www.fjzjty.com		
紧急联络电话：	0597-3960600		

2.成品成分

	CAS编号	化学名称	重量比例%
C5100	**7440-50-8**	铜(Cu)	>93.65
	7440-31-5	锡(Sn)	4.5~5.5
	7723-14-0	磷(P)	0.03~0.35

	CAS 编号	化学名称	重量比例%
C5191	**7440-50-8**	铜(Cu)	>92.15
	7440-31-5	锡(Sn)	5.5~7.0
	7723-14-0	磷(P)	0.03~0.35

	CAS 编号	化学名称	重量比例%
C5210	**7440-50-8**	铜(Cu)	>90.0
	7440-31-5	锡(Sn)	7.0~9.0
	7723-14-0	磷(P)	0.03~0.35
	7440-66-6	锌(Zn)	<0.20
	7439-92-1	铅(Pb)	<0.05
	7439-89-6	铁(Fe)	<0.10

	CAS 编号	化学名称	重量比例%
C5240	**7440-50-8**	铜(Cu)	>90.15
	7440-31-5	锡(Sn)	9 ~11
	7723-14-0	磷(P)	0.03~0.35

OSHA管理状态 ：在固体时不具危害性。其粉尘及燻烟对肺脏、血液、肾脏具有致癌、刺激性。反复产生之毒性及神经性毒素

OHSA：本合金产品在固体时不具危害性。其粉尘及燻烟具有危害性。

（美国）职业安全卫生署OSHA

3. 危害辨识资料

警告！ 暴露于粉尘及燻烟的工作环境下，对于眼睛、呼吸系统、皮肤会造成刺激伤害。其含有金属可能对血液、肾脏产生反复性及神经性之影响，也可能致癌。必须保持足够且良好之通风。避免直接接触眼睛、皮肤及衣物。佩戴保护器具，包括护目镜、适当衣物，必须要保证全部身体。身体及衣物被接触之部位，必须彻底清洗干净。	
种类的名称：	铜、锡之金属混合物。
危险标识类别：	金属粉尘或燻烟将对皮肤、眼睛造成刺激性且对肺具有毒性，但金属合金本身不具危害性。
HMIS危害级数（粉尘及燻烟）：	健康 ：2 ；可燃性：0 （0=低 、4=极高）； 物性危害：无
IDLH对生命或健康有立即性危害浓度值	IDLH(3/1/95)无本金属立即性危险浓度数值 。 铜(Cu)粉尘或燻烟、铅(Pb)、锡(Sn)：100 mg / m^3 磷(P)：5 mg/m^3 氧化铁（Fe）粉尘或燻烟 ：2500 mg / m^3 氧化锌 ：500 mg / m^3

Hazardous Materials Identification System (HMIS)

严重症状：

眼睛：其粉尘或燻烟皆具刺激性，会引起红肿及疼痛。经常暴露于此环境时，可能导致结膜炎。

皮肤：此物质不会经由皮肤渗入体内被吸收。但接触其粉尘时，皮肤有可能会引起轻微刺激而出现红肿现象。

吸入：吸入人体是有害的。吸入高浓度粉尘或燻烟可能会导致剧烈呼吸、鼻刺激、咳嗽、呼吸困难。吸入高浓度铜金属粉尘或燻烟也可能出现呕心、呕吐及胃痛现象。金属燻烟可能引起类似流行性感冒（flu-like)症状之金属燻烟热；其症状包括喉咙不适、呼吸困难、咳嗽、哮喘、呕吐、头痛、发冷、发热、肌痛、虚弱、昏睡、流汗、关节痛。这些症状通常会在24小时后消失，但也有可能更长时间。

食入 ：大量食入粉尘时，可能引起呕心、腹泻及胃痛现象。

慢性影响：皮肤长期或者重复性接触其粉尘时可能引起剧烈刺激或皮肤炎。长期或者重复性吸入其粉尘或燻烟会导致更剧烈刺激。慢性暴露于铅中会引起人体肾脏损害、贫血症、复发性及成长性影响、永久性神经系统损害。

4.急救措施

对于粉尘及燻烟危害：

眼睛接触：	以大量清净水冲洗上下眼睛内部（至少15分钟），若眼睛被刺激不适者，立即送医院检查
皮肤接触：	以清水清洗干净。衣物被接触之部位，必须彻底清洗干净后才能再穿戴。若仍有皮肤发生刺激、出疹现象或情况持续、复发时送至医院诊疗。
吸入时：	送至通风良好较阴凉处休息，以毛巾保暖，严重者迅速送医院检查诊断。
食入时：	大量喝水并催吐，迅速送医院检查

医疗提示：对于本产品组成之元素物质并无特殊解毒剂可供使用。必须视不同症状给予适当治疗 。

5.火炎及爆炸危害资料

燃烧性资料 ：

爆炸性：	无
可燃性：	无
燃烧性：	无
闪火点：	不适用
自燃性：	不适用

灭火剂 ：

小区域之材料粉末起火时，可适用干沙、干石灰粉、食盐或苏打粉给予关熄。其他周边处起火时需以适当灭火器灭火。

意外及爆炸危害：

注意粉尘可能导致爆炸或产生可燃性气体。

6.泄露的处置

本产品在加工中产生粉尘时，有可能产生爆炸危害，必须将火源移除。也惟有粉尘型态时才可能产生泄露，所以必须装设通风设备及集尘装置过滤空气中之粉尘，以降低其粉尘浓度。

7.取用及储运方式

取用注意事项：

板带产品之端面易割伤皮肤应小心取用。
切削加工时会产生粉尘应小心眼睛、皮肤及呼吸应佩戴保护器具。
小心粉尘不可泄露至空气中。
需注意产品有翻到之危险性易造成压伤，吊运时要十分注意。
打包带切除时，小心其末端会弹起，对人员之身体、皮肤及眼睛造成割伤。
衣物或器具上之粉尘以水洗或HEPA吸入器清沏，不可用拍打或其他方式处理。

储存条件 ：

食储最高容许温度：无 避免放置于潮湿或酸/碱性物质或酸/碱性气体之场所

8. 人员暴露防设措施

CAS 编号	暴露标准：	OSHA(PEL)	ACGIH(TLV)
铜(Cu) 7440-50-8	燻烟	0.1 mg/m^3	0.2 mg/m^3
	粉尘及雾状	1 mg/m^3	1 mg/m^3
锡(Sn) 7440-31-5	粉状	2 mg/m^3	2 mg/m^3
磷(P) 7723-14-0	-	0.1 mg/m^3	0.1 mg/m^3
锌(Zn) 7440-66-6	-	无资料	无资料
铅(Pb) 7439-92-1	粉尘及燻烟	0.05 mg/m^3	0.05 mg/m^3
铁(Fe) 7439-89-6	-	无资料	无资料
本产品材料若经加热会产生燻烟，氧化锌燻烟可能形成。 OSHA(PEL)以及 ACGIH(TLV)对氧化锌燻烟之限制值为 5 mg/m^3			
呼吸防设：	一般情况下不需佩戴口罩。但当超过上述PEL/TLV标准值时必须佩戴NIOSH认证之全罩或半罩式HEPA滤心防口罩。		
通风防设：	工作场所中，若是会产生燻烟及粉尘时，必须要有通风设备装置及集尘装置，且工作中不可饮食及抽烟		
眼睛及脸部防设：	需要佩戴护目镜。		
皮肤防设：	作业时应穿着适当之工作服，安全鞋及防护手套，以避免皮肤与材料直接接触并防止割伤。		

（美国）职业安全卫生署OSHA(Occupational Safety and Health Administration)

（美国）国家职业安全卫生研究所NIOSH(National Institute for Occupational Safety and Health)

立即对生命或健康有危险 IDLH(Immediately Dangerous to Life or Health)

时量平均浓度 TWA(Time Weighted Average)；

容许暴露浓度值PEL(Permissible Exposure Limit)

9. 物理及化学性质

外观：	浅红色光泽的固态金属
熔点：	C5100(950~1060℃),C5191(900~1045℃), C5210(870~1030℃),C5240(840~1020℃)
沸点：	无资料
比重：	C5100(8.86),C5191(8.83), C5210(8.80),C5240(8.7)
蒸气压：	不适用
溶解度：	不适用
PH 值25℃：	不适用

10.稳定性及活性资料

稳定性	在正常一般室温及大气下为稳定性物质，非活性物质。
应避免之状况	遭受机械撞击或通电时并不会产生化性反应。
应避免之材料	氯 ：与金属黄铜、铜细分应形成剧烈或爆炸性反应。 乙炔 ：与黄铜形成爆炸性化合物。
危害之分解物	当加热至分解温度时，会产生金属氧化物和金属燻烟。有可能引起类似流行性感冒（flu-like）症状之金属燻烟热。
危害之聚合反应	无。

11.毒性资料

潜在之暴露途径：

粉尘：食入、皮肤接触、吸入、眼睛接触。
烟燻：吸入、眼睛接触。
本合金产品不具毒性。

动物急毒性资料：动物半致死剂量 (LD_{50})及浓度(LC_{50})

针对本合金产品之粉尘或燻烟	铜（Cu）	锡（Sn）	磷（P）	锌（Zn）	铅（Pb）	铁（Fe）
口服 (LD_{50})	3.5mg/Kg(鼠，腹腔内)	无资料	无资料	无资料	无资料	30mg/Kg(鼠)
皮肤 (LD_{50})	375mg/Kg(兔，皮下注射)	无资料	无资料	无资料	无资料	无资料
吸入 (LC_{50})	无资料	无资料	无资料	无资料	无资料	无资料

亚慢性及慢性毒性：本合金产品不具毒性。铅对实验室中动物之血液、肾脏及神经系统会造成损害。

致癌性：本合金产品尚未被报告具致癌性。铅被 IARC(International Agency for Research on Cancer) 列入对人头可能致癌，属2B类

致基因突变型:本合金产品尚未被报告具致基因突变性。铅则在数项细胞体外试验中显示有致基因突变性。

复发性及成长性影响：本合金产品不具复发性及成长性影响。铅会导致实验室中动物之脱臼发育，包括天生畸形缺陷及影响雄性生殖能力。

神经性影响：本合金产品尚未被报告具有神经性影响。铅会导致实验室中动物之中枢、末稍神经系统损伤及行为影响。

12.生态资料

本合金产品对生态之毒性：无资料

其单一成分之毒性说明如下：

生态毒性 ecotoxicity：水中的溶解度，在 0.1～1.0mg/l 范围内已被许多研究者证实对大多数鱼类不具有毒性。但浓度在 0.015-3.0mg/l 时，尤其在软水中，会有报告会对许多种类的鱼、甲头类的动物及软体动物、浮游生物具有毒性。

铅对大翻车鱼(Bluegill)/蓝思鱼(Lepomis macrochirus)LC_{50}(48Hrs)资料为 2~5mg/l。铅对水鸟类皆具毒性。

流动性：分解的铅会对转移入土壤内。

持续性/可分解性：铅在环境中会持续且赘存。

生态累赘性（Bioaccumulation)：无资料。

13.废弃处理

本合金产品不属于危害性废弃物：须丢弃时可以委托当地回收商予以回收再生利用。

14.运输资料

USA DOT：未被列入。

运输时本产品不要直接与水接触，并且要注意会滑落、翻落得危险发生

15.法规资料

通常无特定法令规定，但是在会产生粉尘的场所必须遵守劳工安全卫生法劳工工作业环境空气中有害物质容许浓度标准
USA／OHSA：Occupational Safety & Health Administration
USA／ACGIH Guide to protective Clothing. Cincinnati, OH:American Conference of Government Industrial Hygienists,1987
USA／SARA313

16.其他资料

初版：04-28-2008

制表单位：福建紫金铜业有限公司

注意：本MSDS内容资料应被所有使用、运送、储存或暴露于本合金产品之公司/人员充分了解与接受并将其应用于使用、加工、制造或管理与本合金产品有关之相关作业规定上；使用者请依应用需求，自行判断其可用性。本MSDS资料内容在编订时已经可能将最新 之资料纳入，但对所有内容并不予以任何保证。

Material Safety Data Sheet
According to 91/155 EC

Printing date 13.11.2002 Reviewed on 06.09.2002

*
1 Identification of substance:

. **Product details:**

. **Trade name: GRILON AS V0 NATUR**

. **Article number:** 196690
. **Application of the substance / the preparation** Plastics processing industry
. **Manufacturer/Supplier:**
EMS-GRIVORY CH-7013 Domat/Ems
Tel.++41(0)81 - 632-7888, Fax:++41(0)81 - 632-7401
. **Emergency information:**
EMS-CHEMIE AG CH-7013 Domat/Ems,
Tel.++41(0)81 - 632-6111, Fax ++41(0)81 - 632-7661
Toxikologisches Informationszentrum Schweiz, Tel. ++41(0)1 - 2 51 51 51

2 Composition/Data on components:

. **Chemical characterization**
. **Description:**
Polyamide 66
Additives/modificators
. **Dangerous components:** Void
. **Additional information** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

. **Hazard designation:** void
. **Information pertaining to particular dangers for man and environment**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

4 First aid measures

. **General information** No special measures required.
. **After inhalation** Seek medical treatment in case of complaints.
. **After skin contact**
The product is not skin irritating.
Do not pull solidified product away from the skin.
. **After eye contact**
Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
. **After swallowing** In case of persistent symptoms consult doctor.

5 Fire fighting measures

. **Suitable extinguishing agents**
CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
. **Special hazards caused by the material, its products of combustion or flue gases:**
Carbon monoxide (CO)
Hydrogen cyanide (HCN)
. **Protective equipment:** No special measures required.

(Contd. on page 2)

Material Safety Data Sheet
According to 91/155 EC

Printing date 13.11.2002 Reviewed on 06.09.2002

Trade name: GRILON AS V0 NATUR

(Contd. of page 1)

6 Accidental release measures

. **Person-related safety precautions:** Particular danger of slipping on leaked/spilled product.
. **Measures for environmental protection:** No special measures required.
. **Measures for cleaning/collecting:** Collect mechanically.
. **Additional information:** No dangerous materials are released.

7 Handling and storage

. **Handling**
. **Information for safe handling:**
Extractors are required on all machines used for thermal processing or metal removal processes.
Any deposit of dust which cannot be avoided must be removed regularly.
. **Information about protection against explosions and fires:**
Dust can combine with air to form an explosive mixture.

. **Storage**
. **Requirements to be met by storerooms and containers:** No special requirements.
. **Information about storage in one common storage facility:** Not required.
. **Further information about storage conditions:** None.

*
8 Exposure controls and personal protection

. **Additional information about design of technical systems:** No further data; see item 7.

. **Components with critical values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

. **Personal protective equipment**
. **General protective and hygienic measures**
The usual precautionary measures should be adhered to in handling the chemicals.
. **Breathing equipment:** Not required.
. **Protection of hands:** Protective gloves.
. **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
. **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
. **Eye protection:** Safety glasses

9 Physical and chemical properties:

. **General Information**	
Form:	Granulate
Colour:	Different according to colour
Smell:	Nearly odourless
. **Change in condition**	
Melting point/Melting range:	ca. 260°C
Boiling point/Boiling range:	Not determined
. **Flash point:**	Not applicable
. **Self-inflammability:**	Product is not selfigniting.
. **Danger of explosion:**	Product is not explosive.

(Contd. on page 3)

Material Safety Data Sheet
According to 91/155 EC

Printing date 13.11.2002 Reviewed on 06.09.2002

Trade name: GRILON AS V0 NATUR

(Contd. of page 2)

. **Density at 20°C**	> 1 g/cm³
. **Settled apparent density at 20°C**	600 - 700 kg/m3
. **Solubility in / Miscibility with Water:**	Insoluble

10 Stability and reactivity

. **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
. **Dangerous reactions** Reacts with strong acids and oxidizing agents
. **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

. **Acute toxicity:**
. **Primary irritant effect:**
. **on the skin:** No irritant effect.
. **on the eye:** No irritant effect.
. **Sensitization:** No sensitizing effect known.
. **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information:

. **General notes:** Generally not hazardous for water.

*
13 Disposal considerations

. **Product:**
. **Recommendation**
On the basis of the necessary technical regulations and after consultation with the disposal agent and the relevant authorities, can be deposited with domestic waste or incinerated with domestic waste.

. **European waste catalogue**	
07 02 13	waste plastic

. **Uncleaned packagings:**
. **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

. **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulatory information

. **Designation according to EC guidelines:**
The product is not subject to identification regulations under EC Directives.

(Contd. on page 4)

Material Safety Data Sheet
According to 91/155 EC

Printing date 13.11.2002 Reviewed on 06.09.2002

Trade name: GRILON AS V0 NATUR

(Contd. of page 3)

. **National regulations**

. **Water hazard class:** Generally not hazardous for water.

16 Other information:

The information contained herein is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

. **Department issuing data specification sheet:** Environment and safety department (U+S)
. **Contact:**
Norbert Jäkel, product safety manager,
Phone: ++41(0)81 - 632-6526, Fax: ++41(0)81 - 632-7470
. *** Data compared to the previous version altered.**

塑膠材質 證明

NYLON 66 UL94V-0

CERTIFICATES OF ANALYSIS

UL-RECOGNITION UL-YELLOW CARDS (FILE E 53898)

V O

Material	Colour	Thick	UL-94	Rel	Temp	Index (℃)		HWI	HAI	HVTR	D495	CTI	IEC	ISO
		ness		Elec		Mechanical							**707**	**1210**
		(min)		tricl		with without							mm/min	
		(mm)	Class			impact	inpacl	class	class	class	class	class	class	class
Grilon	all	0.75	VO	**115**		**105**	**120**	**4**	**0**	**0**			FVO	FV-O
		0.85	VO	**115**		**105**	**120**	**4**	**0**	**0**			FVO	FV-O
AS VO		**1.5**	VO	**115**		**105**	**120**	**2**	**0**	**0**			FVO	FV-O
		3	VO	**115**		**105**	**120**	**1**	**0**	**0**	**5**	**0**	FVO	FV-O