

# CABLINER SERIES CONNECTOR

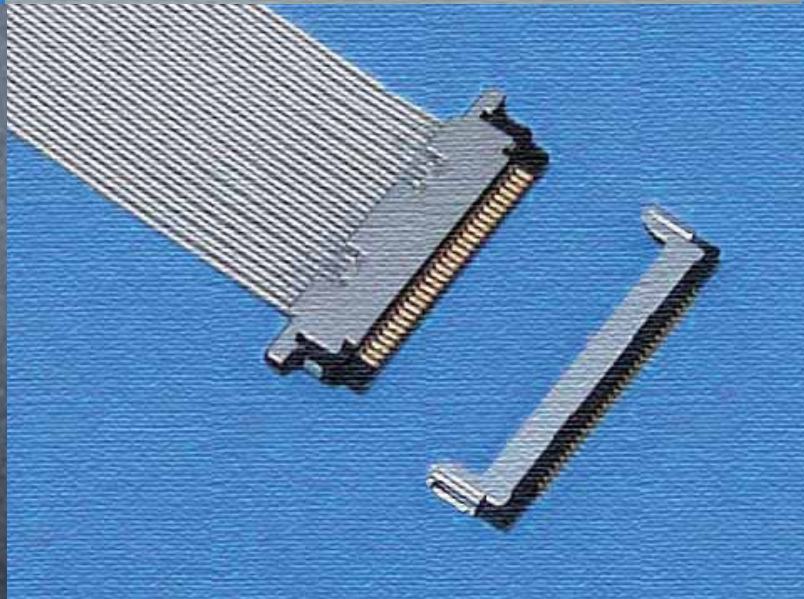
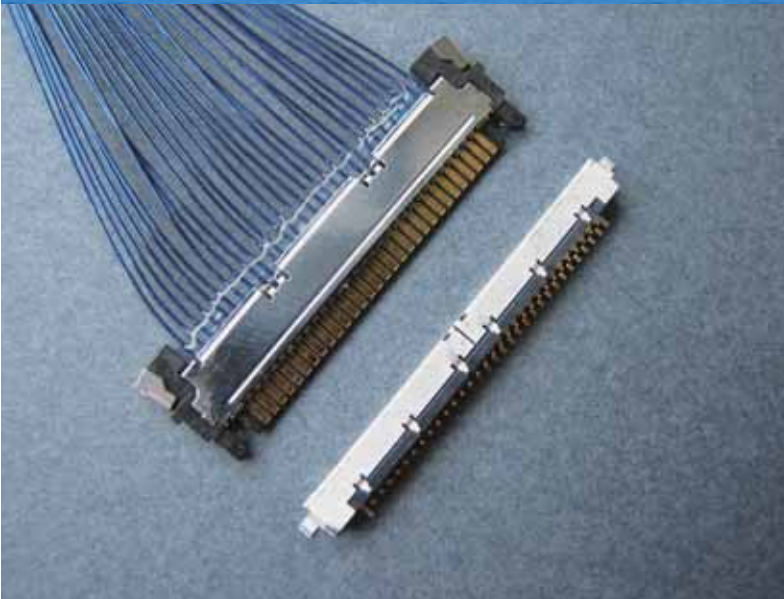
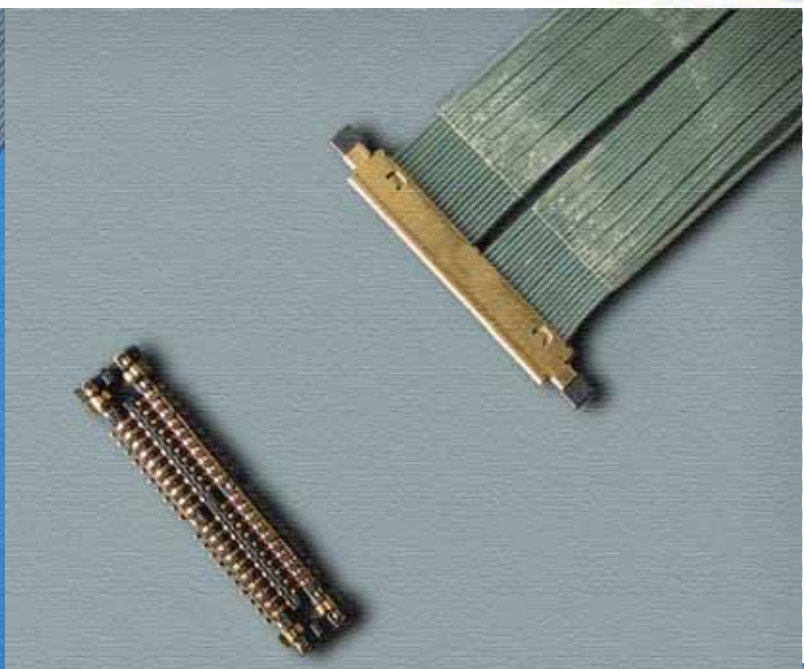
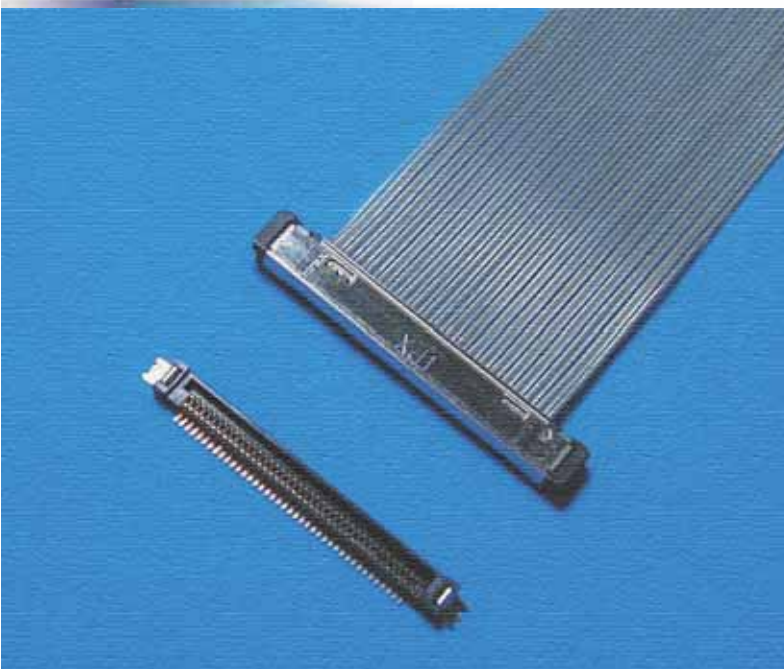
## Board-to-Cable Connector

SGC(Small Gauge Coaxial) Cable

TWINCOAX Cable

DISCRETE Cable

**Lead-Free Compliance**



*Interconnect  
and Packaging Electronics*

**I-PEX CO.,LTD.**

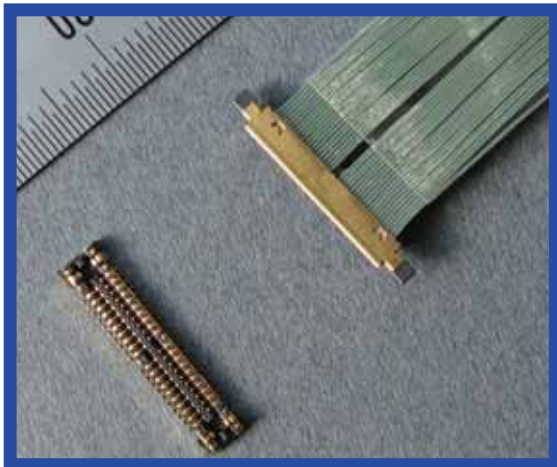
# Introduction

Multi pin count connector for Small Gauge Coaxial Cable ( here-after called SGC ) was developed first in the world by I-PEX, and it has been delivered for practical and various applications in volume production lines in the market. I-PEX's SGC connector is named CABLINE Series Connector.

During the past a couple of years, the superior properties of the connector with SGC, in terms of high speed signal transmission, EMI reduction, flexibility and bend-ability etc, have generated new applications broadly for a Cellular Phone, that LCD panel rotates around single or double hinges.

This CABLINE has solved technical issues for mechanical and electrical connector between LCD panel and PCB.

Improved points with CABLINE are durability of transmission circuit-lines between LCD panel and PCB for hundreds thousands open / close operation of LCD panel, miniaturization of hinge and settlement of EMI issue, which have enabled Cellular Phone to equip more various functions. This trend of SGC application for Cellular Phone has spreaded out through world-wide market during recent years.



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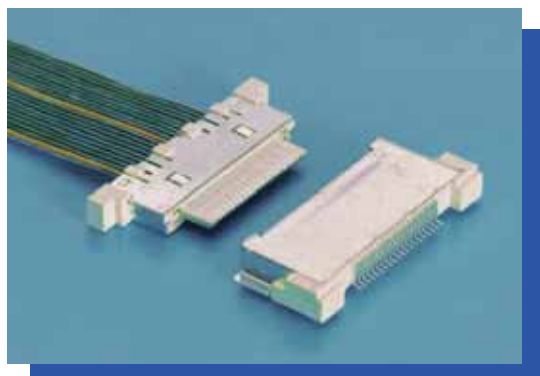
# Product Overview

Product	Pitch	Mating Type Mating Height	Applicable Cable	Pos.	View	Page
CABLINE II HT1 [i-Fit Technology]	0.5mm	Horizontal 2.3mm	SGC AWG#34,#36,#38,#40	20p 30p 40p 50p		3 · 4
CABLINE II VT3 [i-Fit Technology]	0.5mm	Vertical 7.2mm	SGC AWG#34,#36,#38,#40	30p		5 · 6
CABLINE II VT4 [i-Fit Technology]	0.5mm	Vertical 8.3mm	SGC AWG#34,#36,#38,#40 TWINCOAX AWG#40	20p 40p		7 · 8
CABLINE II VT5 [i-Fit Technology]	0.5mm	Vertical 5.5mm	SGC AWG#36,#38,#40 TWINCOAX AWG#40	20p 30p 40p		9 · 10
CABLINE III [i-Fit Technology]	0.5mm	Vertical 2.0mm	SGC AWG#32,#36,#38,#40 TWINCOAX AWG#40	16p 10s+4p		11 · 12
CABLINE IV [Various Soldeing]	0.5mm	Horizontal 1.0mm	SGC AWG#36,#40 TWINCOAX AWG#40 DISCRETE AWG#32,#36	10p 20p 30p 40p		13 · 14
CABLINE V [Various Soldeing]	0.4mm	Horizontal 1.0mm	SGC AWG#40,#42 TWINCOAX AWG#40 DISCRETE AWG#36	10p 15p 25p 35p 40p		15 · 16
CABLINE-SS [Various Soldeing]	0.4mm	Vertical 1.85mm (Max)	SGC AWG#40(30p ONLY),#42	20p 30p 32p 40p 50p		17 · 18
CABLINE-MS [Various Soldeing]	0.3mm	Vertical 1.6mm	SGC AWG#44	32p 40p		19 · 20
CABLINE-FX II [Various Soldeing]	1.0mm	Horizontal 2.35mm	SGC AWG#32,#34,#36,#40 TWINCOAX AWG#40 DISCRETE AWG#28,#32,#36 FFC	30p		21~24
CABLINE-FE [Various Soldeing]	1.0mm	Horizontal 3.2mm	TWINCOAX AWG#40	14p 17p		25 · 26
CABLINE-F [i-Fit Technology]	1.25mm	Horizontal 2.0mm	SGC AWG#36,#38,#40 TWINCOAX AWG#40	20p		27 · 28
CABLINE-G [i-Fit Technology]	1.0mm	Horizontal 1.5mm	SGC AWG#36,#38,#40 TWINCOAX AWG#40 DISCRETE AWG#36	14p 20p		29 · 30
DUALCOAX [Various Soldeing]	1.0mm	6.35mm 7.35mm 6.8mm(R/A)	P/N20281,20296 SGC AWG#36,#38,#40 TWINCOAX AWG#40 P/N20257,20383 SGC AWG#32,#34,#36,#38,#40 TWINCOAX AWG#40 DISCRETE AWG#32,#36	30p 40p 50p		31~35



# CABLIN II HT1

## 0.5mm pitch Horizontal Type



- 0.5mm Pitch SGC Connector
- High impedance matching and EMI performance with METAL SHELL
- Easy Cable mechanical termination with “i-Fit” Technology

### 【Number of Position】

20p,30p,40p,50p

### 【Applicable Cable】

SGC	AWG #34,#36,#38,#40
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### 【Ordering Code】

PLUG Connector Set (for Cable)

**20142- \* \*\* U- \*\*\***  
 ① ② ③ ④

①	Cable Type	<b>0</b>	SGC
		<b>T</b>	TWINCOAX
②	POS.	<b>20</b> :20pos. <b>30</b> :30pos. <b>40</b> :40pos. <b>50</b> :50pos.	
③	Packaging	<b>U</b>	Tube
④	Cable Size	<b>01F</b>	POS.1&2 : AWG#34 OTHER POS. : AWG#36,#38,#40
		<b>20F</b>	ALL POS. : AWG#36,#38,#40

RECEPTACLE Connector Set (for PC Board)

**20143-0 \*\* E- \*\*\***  
 ① ② ③

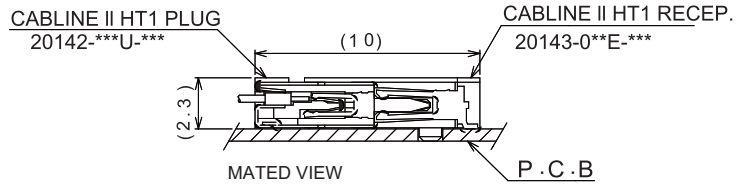
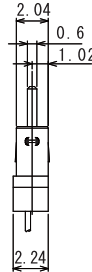
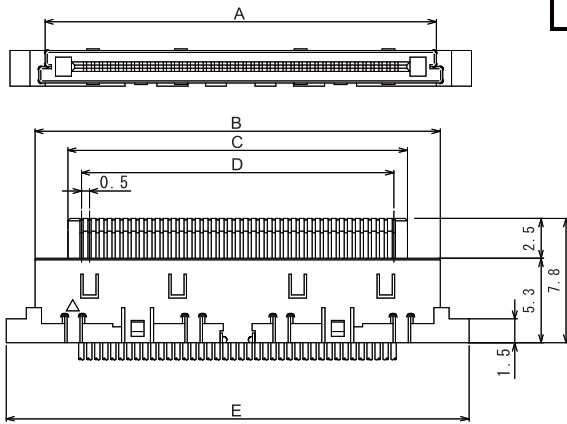
①	POS.	<b>20</b> :20pos. <b>30</b> :30pos. <b>40</b> :40pos. <b>50</b> :50pos.	
②	Packaging	<b>E</b>	Emboss Tape
③	BOSS	<b>20F</b>	With
		<b>21F</b>	Without

### 【Material & Finish】

Product	Parts	Material	Plating/Color
PLUG	HOUSING	LCP UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au (Mating Area) & Sn
	METAL COVER	COPPER ALLOY	Sn
RECEPTACLE	HOUSING	LCP UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au
	METAL COVER	COPPER ALLOY	Sn

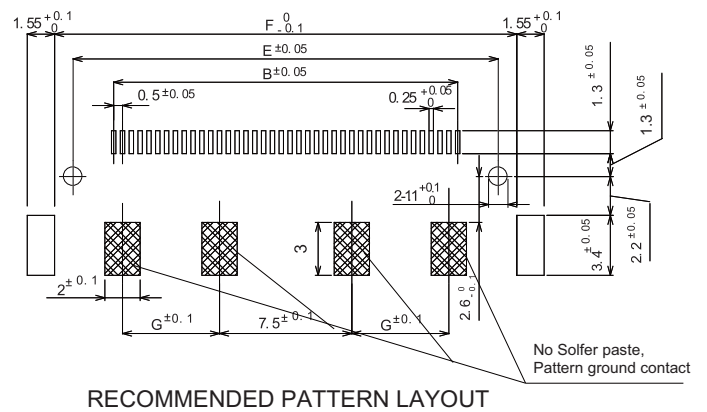
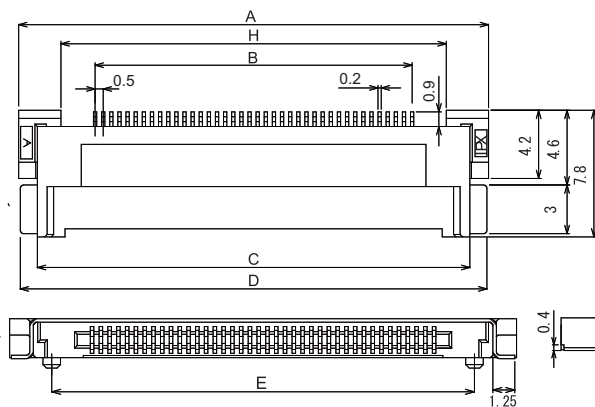
**PLUG**

POS.	PART NO.	A	B	C	D	E
20p	20142-*20U-***	14.5	15.3	11.2	9.5	18.9
30p	20142-*30U-***	19.5	20.3	16.2	14.5	23.9
40p	20142-*40U-***	24.5	25.3	21.2	19.5	28.9
50p	20142-*50U-***	29.5	30.3	26.2	24.5	33.9



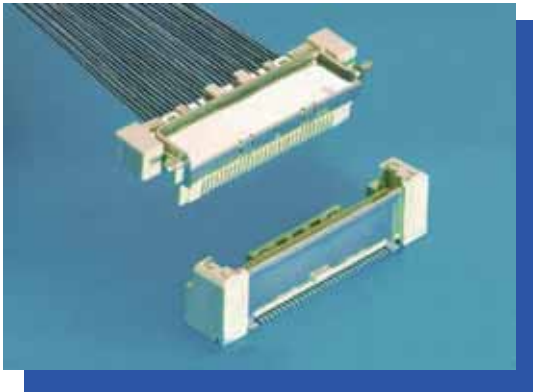
**RECEPTACLE**

POS.	PART NO.	A	B	C	D	E	F	G	H
20p	20143-020E-***	18.9	9.5	16.6	18.7	14.1	16.2	-	13.7
30p	20143-030E-***	23.9	14.5	21.6	23.7	19.1	21.2	-	18.7
40p	20143-040E-***	28.9	19.5	26.6	28.7	24.1	26.2	5.5	23.7
50p	20143-050E-***	33.9	24.5	31.6	33.7	29.1	31.2	5.5	28.7



# CABLIN II VT3

## 0.5mm pitch Right Angle Type



- 0.5mm Pitch SGC Connector
- High impedance matching and EMI performance with METAL SHELL
- Pull Bar with tab to remove the PLUG from RECEPTACLE without damage
- Easy Cable mechanical termination with “i-Fit” Technology

### 【Number of Position】

30p

### 【Applicable Cable】

SGC	AWG #34,#36,#38,#40
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### 【Ordering Code】

PLUG Connector Set (for Cable)

**20177-030U-F**

Packaging:Tube

RECEPTACLE Connector Set (for PC Board)

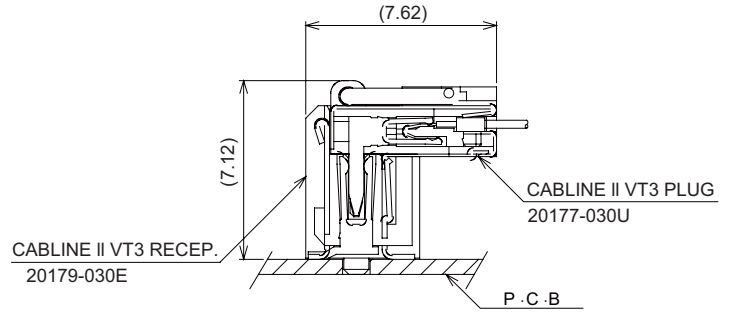
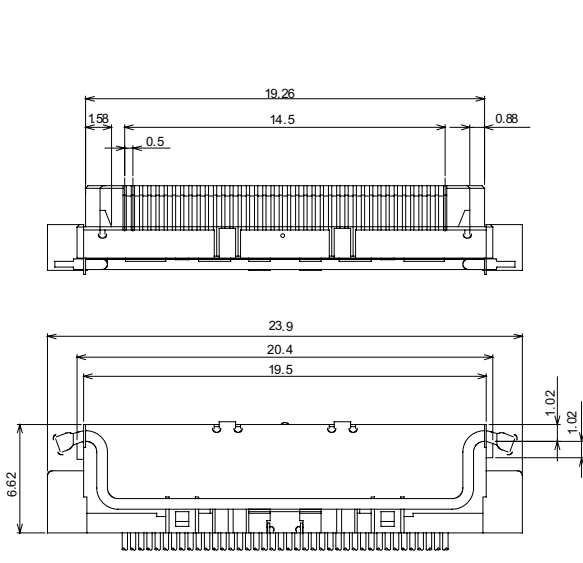
**20179-030E- \*\* F**

	Packaging	<b>E</b>	Emboss Tape
	BOSS	<b>Null</b>	With
		<b>01</b>	Without

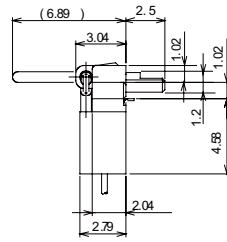
### 【Material & Finish】

Product	Parts	Material	Plating/Color
PLUG	HOUSING	LCP UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au(Mating Area) & Sn
	METAL COVER	COPPER ALLOY	Sn
RECEPTACLE	HOUSING	LCP UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au
	METAL COVER	COPPER ALLOY	Sn

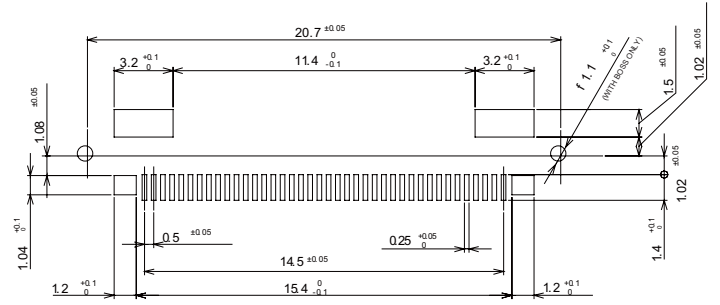
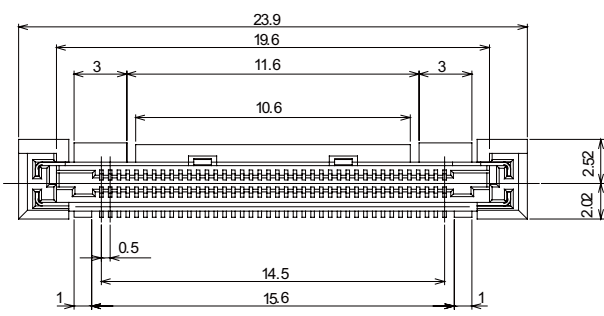
**PLUG**



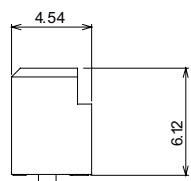
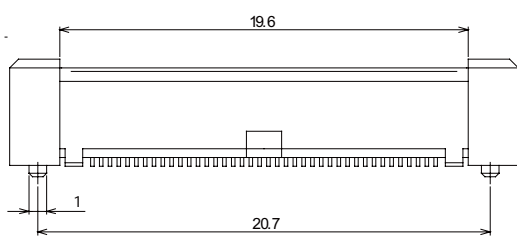
**MATED VIEW**



**RECEPTACLE**

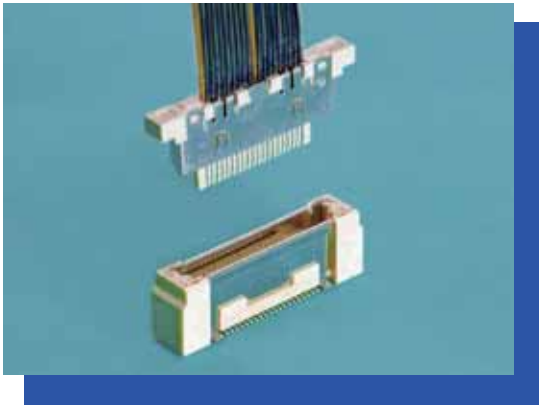


**RECOMMENDED PATTERN LAYOUT**



# CABLINE II VT4

## 0.5mm pitch Vertical Type



- 0.5mm Pitch SGC Connector
- High impedance matching and EMI performance with METAL SHELL
- PLUG Side : CABLINE II HT1 PLUG
- Easy Cable mechanical termination with “i-Fit” Technology

### 【Number of Position】

20p,40p,

### 【Applicable Cable】

SGC	AWG #34,#36,#38,#40
TWINCOAX	AWG #40

### 【Ordering Code】

PLUG Connector Set (for Cable)

**20142-** \* \*\* **U-** \*\*\*

Cable Type	<b>0</b>	SGC
	<b>T</b>	TWINCOAX
POS.	<b>20</b> :20pos. <b>40</b> :40pos.	
Packaging	<b>U</b>	Tube
Cable Size	<b>01F</b>	POS.1&2 : AWG#34 OTHER POS. : AWG#36,#38,#40
	<b>20F</b>	ALL POS. : AWG#36,#38,#40

RECEPTACLE Connector Set (for PC Board)

**20198- 0** \*\* **E-** \*\*\*

POS.	<b>20</b> :20pos. <b>40</b> :40pos.	
Packaging	<b>E</b>	Emboss Tape
BOSS	<b>20F</b>	With
	<b>21F</b>	Without

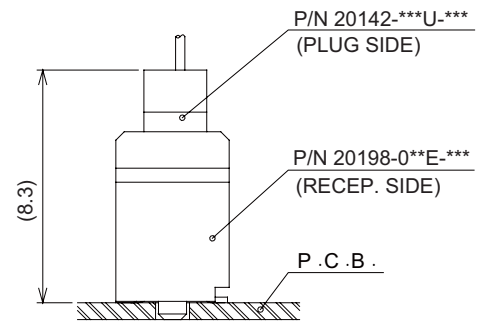
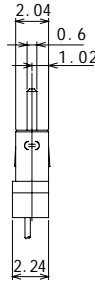
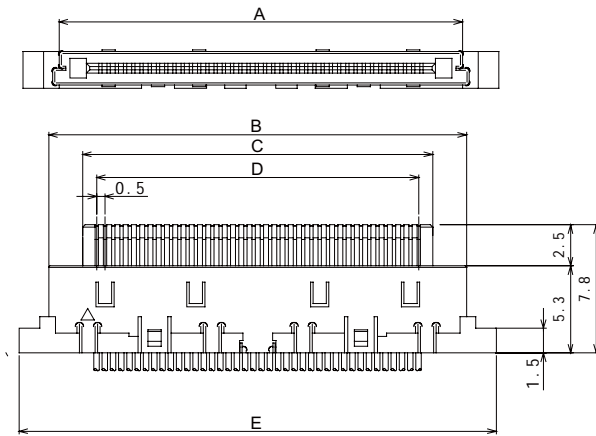
### 【Material & Finish】

Product	Parts	Material	Plating/Color
PLUG	HOUSING	LCP UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au (Mating Area) & Sn
	METAL COVER	COPPER ALLOY	Sn
RECEPTACLE	HOUSING	LCP UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au
	METAL COVER	COPPER ALLOY	Sn



**PLUG**

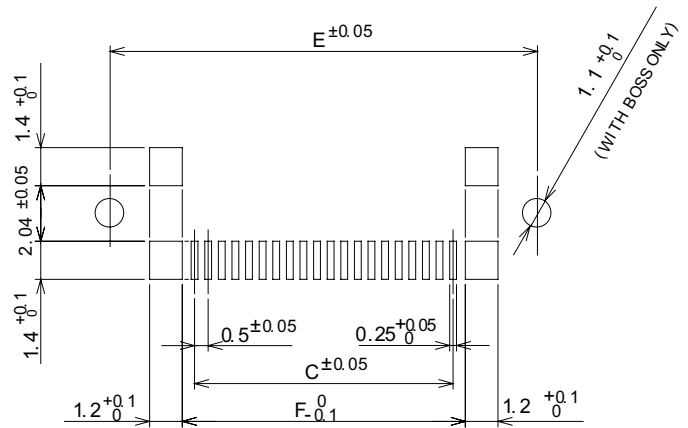
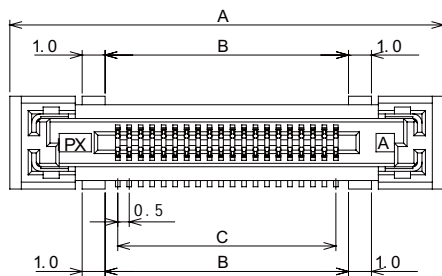
POS.	PART NO.	A	B	C	D	E
20p	20142-*20U-***	14.5	15.3	11.2	9.5	18.9
30p	20142-*30U-***	19.5	20.3	16.2	14.5	23.9
40p	20142-*40U-***	24.5	25.3	21.2	19.5	28.9
50p	20142-*50U-***	29.5	30.3	26.2	24.5	33.9



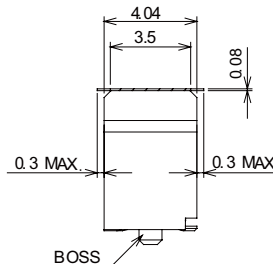
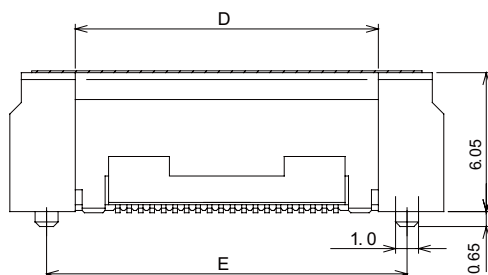
MATED VIEW

**RECEPTACLE**

POS.	PART NO.	A	B	C	D	E	F	G
20p	20198-020E-***	18.9	10.6	9.5	13.2	15.7	10.4	17.0
30p	20198-040E-***	28.9	20.6	19.5	23.2	25.7	20.4	27.0

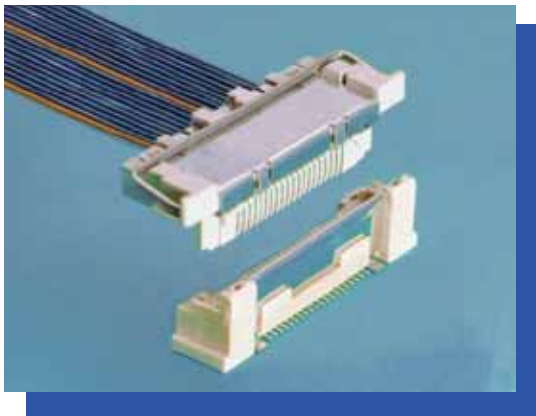


RECOMMENDED PATTERN LAYOUT



# CABLIN II VT5

## 0.5mm pitch Right Angle Type



- 0.5mm Pitch SGC Connector
- High impedance matching and EMI performance with METAL SHELL
- Pull Bar with tab to remove the PLUG from RECEPTACLE without damage
- Easy Cable mechanical termination with “i-Fit” Technology

### 【Number of Position】

20p,30p,40p

### 【Applicable Cable】

SGC	AWG #36,#38,#40
TWINCOAX	AWG #40

### 【Ordering Code】

PLUG Connector Set (for Cable)

**20226-** \* \*\* **U-** \*\*\*

Cable Type	<b>0</b>	SGC
	<b>T</b>	TWINCOAX
POS.	<b>20</b> :20pos. <b>30</b> :30pos. <b>40</b> :40pos.	
Packaging	<b>U</b>	Tube
Pull Bar	<b>20F</b>	Without
	<b>21F</b>	With

RECEPTACLE Connector Set (for PC Board)

**20228- 0** \*\* **E-** \*\*\*

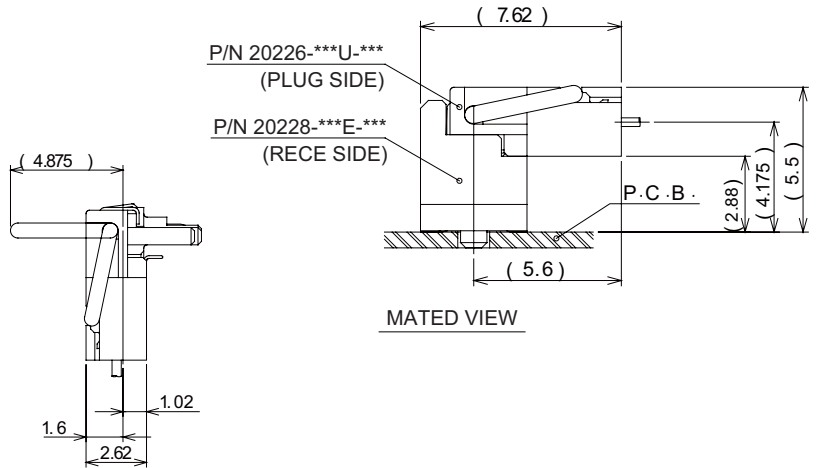
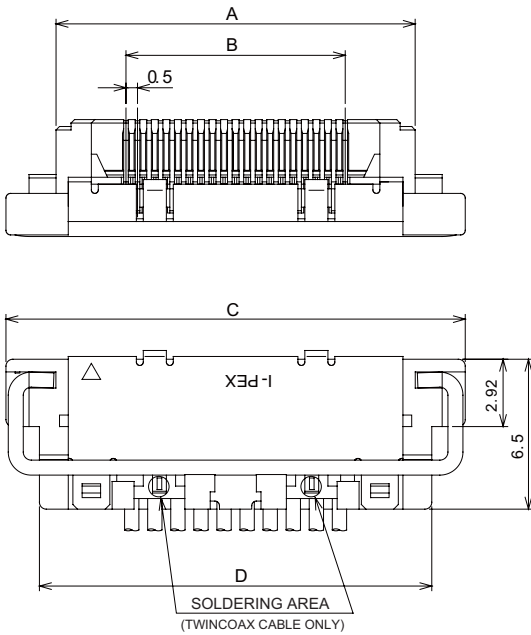
POS.	<b>20</b> :20pos. <b>30</b> :30pos. <b>40</b> :40pos.	
Packaging	<b>E</b>	Emboss Tape
BOSS	<b>22F</b>	With
	<b>23F</b>	Without

### 【Material & Finish】

Product	Parts	Material	Plating/Color
PLUG	HOUSING	LCP UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au (Mating Area) & Sn
	METAL COVER	COPPER ALLOY	Sn
RECEPTACLE	HOUSING	LCP UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au
	METAL COVER	COPPER ALLOY	Sn

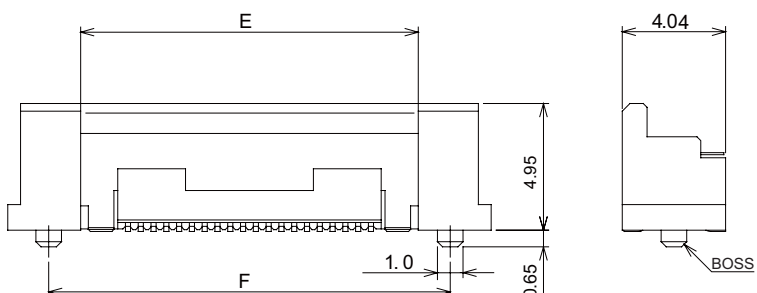
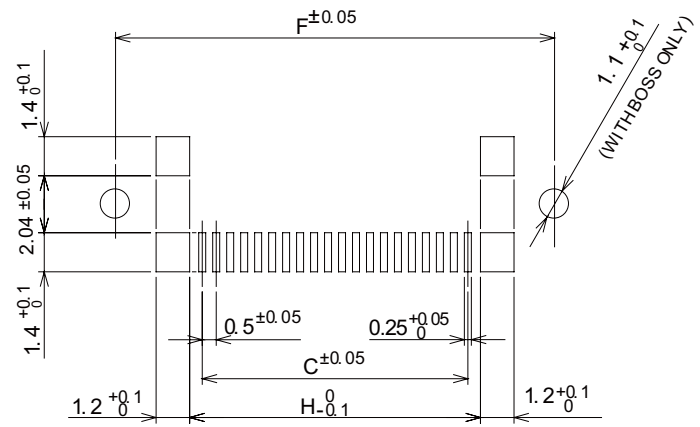
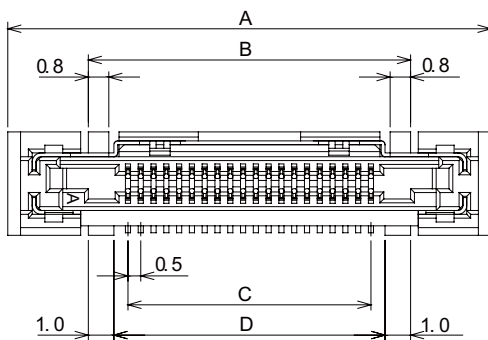
**PLUG**

POS.	PART NO.	A	B	C	D
20p	20226-*20U-***	15.6	9.5	19.9	17.0
30p	20226-*30U-***	20.6	14.5	24.9	22.0
40p	20226-*40U-***	25.6	19.5	29.9	27.0



**RECEPTACLE**

POS.	PART NO.	A	B	C	D	E	F	G	H
20p	20228-020E-***	18.9	11.0	9.5	10.6	13.2	15.7	13.0	10.4
30p	20228-030E-***	23.9	16.0	14.5	15.6	18.2	20.7	18.0	15.4
40p	20228-040E-***	28.9	21.0	19.5	20.6	23.2	25.7	23.0	20.4



# CABLIME III

## 0.5mm pitch Right Angle Stacking Type



- 0.5mm Pitch SGC Connector
- High impedance matching and EMI performance with METAL SHELL
- 4.0mm of Connector Depth
- Mating Height : 2.0mm
- Easy Cable mechanical termination with “i-Fit” Technology

### [Number of Position]

16p (Standard type)

10p[Signal] + 4p[power] (Hybrid type)

### [Applicable Cable]

SET Part No.	Applicable Cable	Size	Conformable Pos. No.
20246-016T-***	SGC	AWG #36,#38,#40	POS. 1~16
	TWINCOAX	AWG #40	
20246-410T-***	SGC	AWG #36,#38,#40	POS.5~14
		AWG #32	POS.1~4
	TWINCOAX	AWG #40	POS. 5~14

### [Ordering Code]

PLUG Connector Set (for Cable)

Parts Ordering (Housing)

**20248- \*\*\* T - \*\*\***  
                   ①   ②   ③

Parts Ordering (Cable-Holder)

**1765- \*\*\* B - \***  
                   ①   ②   ④

Parts Ordering (Metal Cover)

**1767- 016T** (for 16p)  
**1866- 410T** (for 10p+4p)

RECEPTACLE Connector Set  
 (for PC Board)

**20247- \* \*\* E- \*\*\***  
                   ① ② ③ ④

①	POS.	<b>016</b> : 16p <b>410</b> : 10p [Signal] + 4p [Power]	
②	Packaging	<b>T</b>	Tray
		<b>B</b>	Bag
③	Housing Color	<b>F</b>	BLACK
		<b>01F</b>	NATURAL
④	Cable-Holder Color	<b>B</b>	BLACK
		<b>-</b>	NATURAL

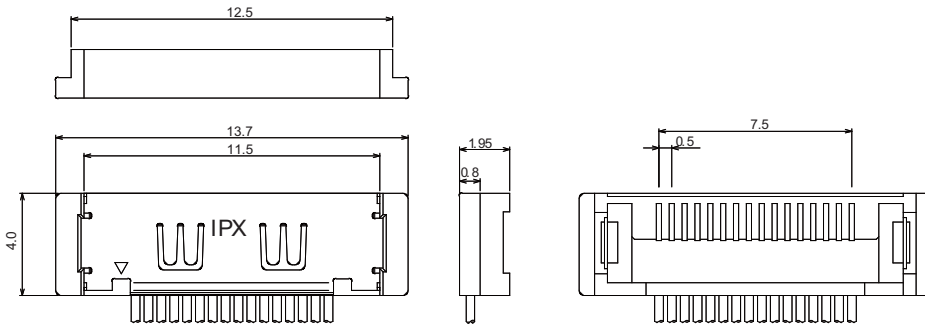
①	Adhesion Tape	<b>0</b>	With (7.5mm)
		<b>1</b>	Without
		<b>9</b>	With (9.0mm)
②	POS.	<b>16</b> : 16p <b>19</b> : 10p[Signal] + 4p[Power]	
③	Packaging	<b>E</b>	Emboss Tape
④	HOUSING COLOR & BOSS	<b>F</b>	BLACK With BOSS
		<b>01F</b>	BLACK Without BOSS
		<b>10F</b>	NATURAL With BOSS
		<b>11F</b>	NATURAL Without BOSS

### [Material & Finish]

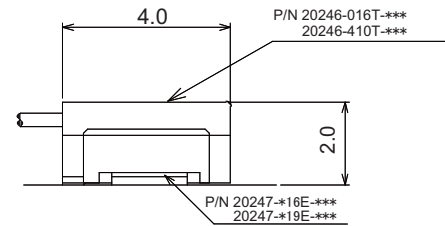
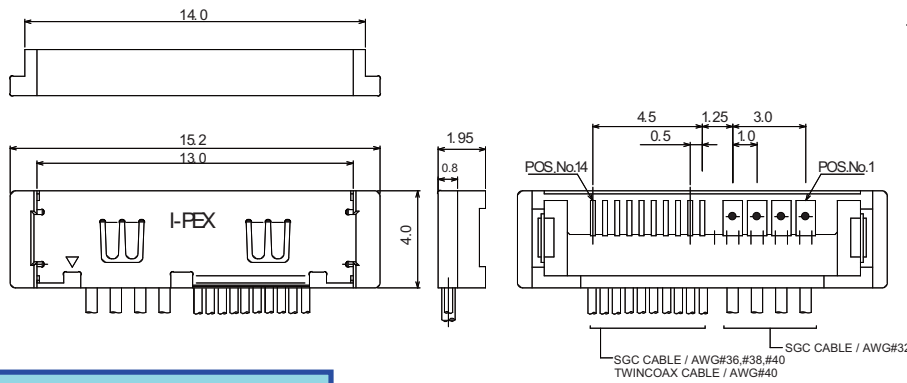
Product	Parts	Material	Plating/Color
PLUG	HOUSING	LCP UL94V-0	BLACK or NATURAL
	CONTACT	COPPER ALLOY	Sn REFLOW
	METAL COVER	COPPER ALLOY	Sn REFLOW
RECEPTACLE	HOUSING	LCP UL94V-0	BLACK or NATURAL
	CONTACT	COPPER ALLOY	Sn REFLOW
	HOLD DOWN	COPPER ALLOY	Sn REFLOW

**PLUG**

Set P/N:20246-016T-\*\*\*



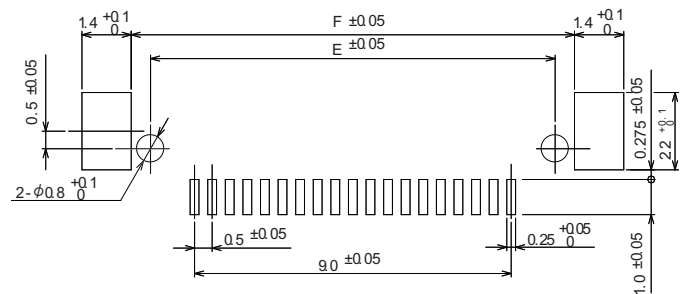
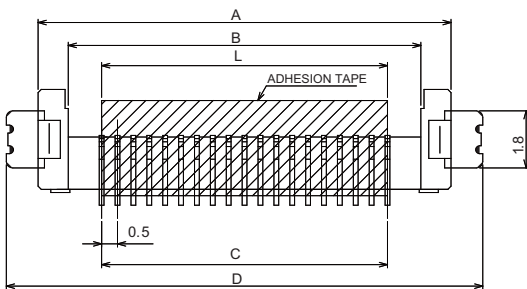
Set P/N:20246-410T-\*\*\*



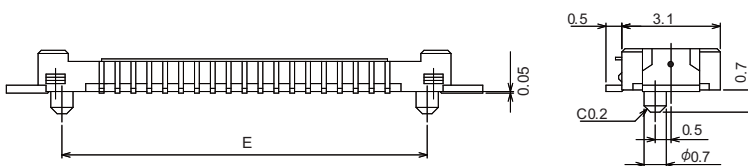
MATED VIEW

**RECEPTACLE**

POS.	PART NO.	A	B	C	D	E	F
16p	20247-*16E-***	11.5	9.6	7.5	13.5	10.0	11.1
10p+4p	20247-*19E-***	13.0	11.1	9.0	15.0	11.5	12.6



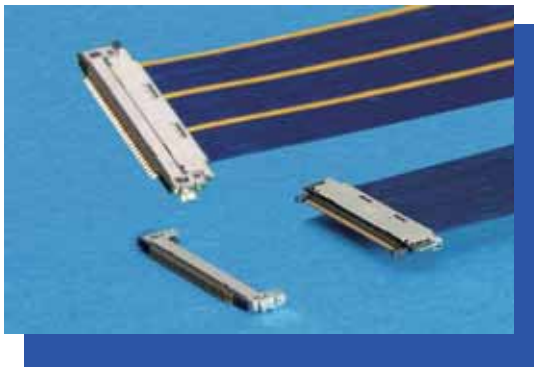
RECOMMENDED PATTERN LAYOUT





# CABLIV

## 0.5mm pitch Horizontal Type



- Half projected area of CABLINE II HT1, Mating depth : 5.65mm, Mating height : 1.0mm.
- High impedance matching and EMI performance with METAL SHELL
- Stable mating with housing lock mechanism.
- Various soldering technologies applicable.

### 【Number of Position】

10p,30p  
(20p,40p : Under Development)

### 【Ordering Code】

PLUG Connector Set (for Cable)

Parts Ordering (HOUSING)

**20326- 0 \*\* T-02**

Parts Ordering (SHELL)

**1978-0 \*\* 1**

### 【Applicable Cable】

SGC	AWG #36,#40
TWINCOAX	AWG #40
DISCRETE	AWG #32,#36

	POS.	10:10pos.	30 : 30pos
	Packaging	T	Tray

RECEPTACLE Connector Set (for PC Board)

**20327- 0 \*\* E- \*\***

	POS.	10:10pos.	30:30pos.
	Packaging	E	Emboss Tape
	BOSS	01	With
		02	Without

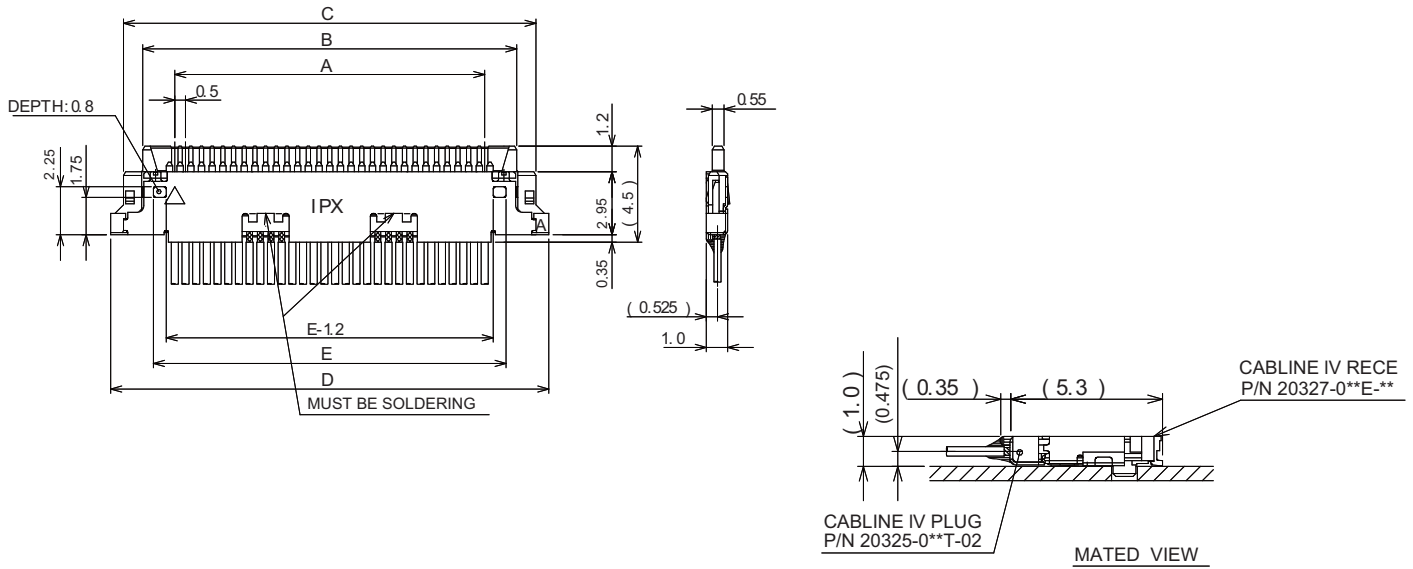
### 【Material & Finish】

Product	Parts	Material	Plating/Color
PLUG	HOUSING	LCP UL94V-0	BLACK
	CONTACT	COPPER ALLOY	Au
	SHELL A	STAINLESS STEEL	Sn-Cu
	SHELL B	STAINLESS STEEL	Sn-Cu
RECEPTACLE	HOUSING	LCP UL94V-0	BLACK
	CONTACT	COPPER ALLOY	Au
	SHELL	COPPER ALLOY	Sn-Cu

**PLUG**

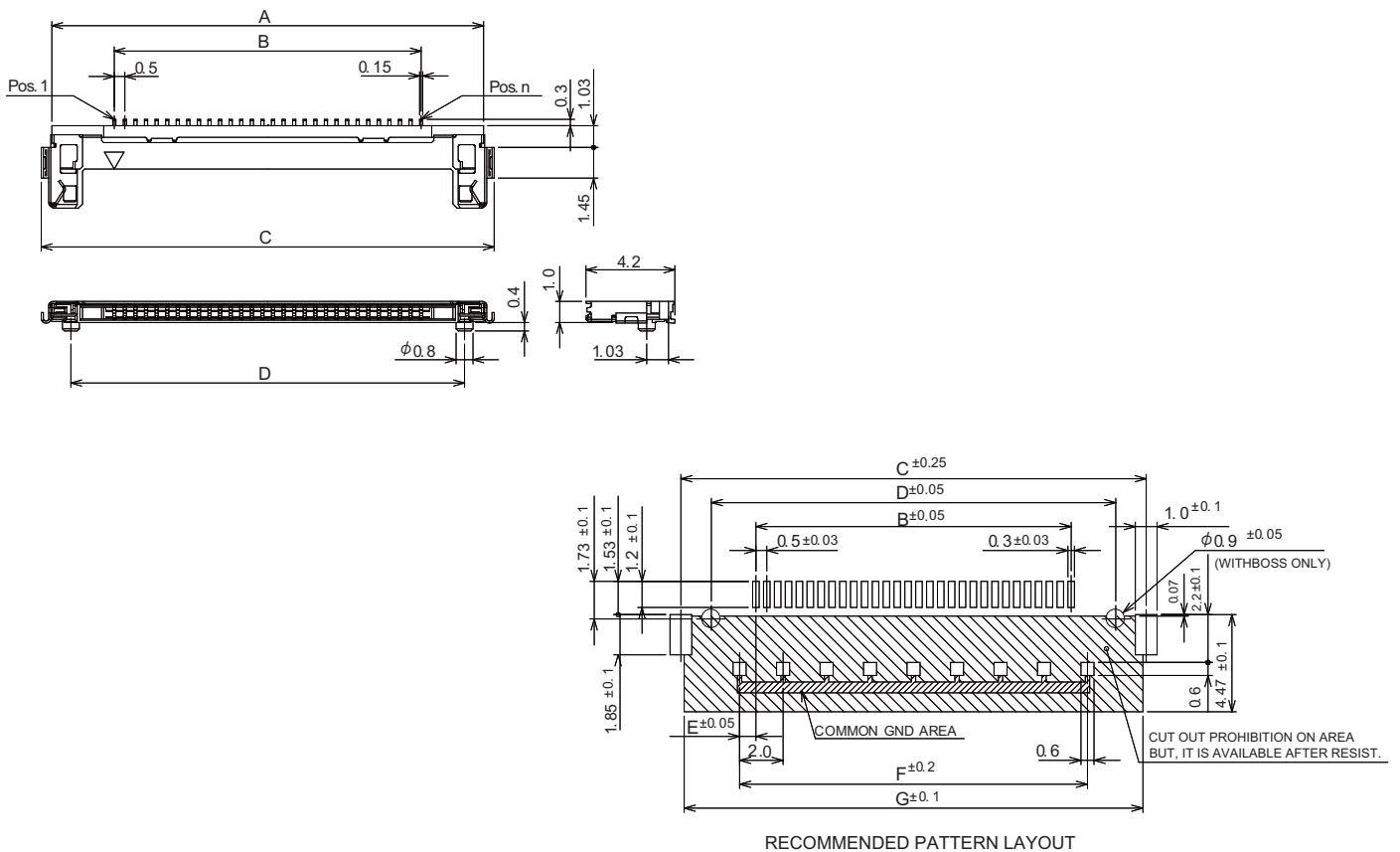
Set P/N:20325-0\*\*T-02

POS.	A	B	C	D	E
10p	4.5	7.5	9.3	10.5	6.5
30p	14.5	17.5	19.3	20.5	16.5



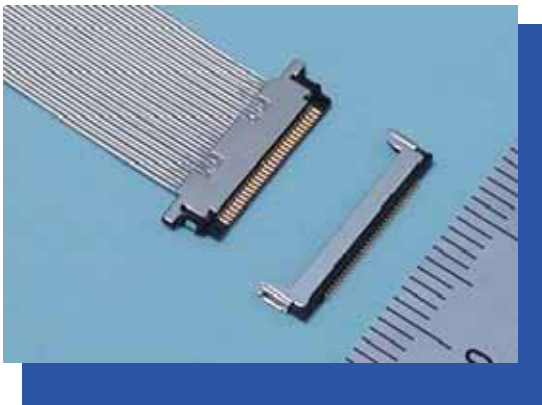
**RECEPTACLE**

POS.	PART NO.	A	B	C	D	E	F	G
10p	20327-010E-02	10.4	4.5	11.4	8.6	0.75	6.0	11.1
30p	20327-030E-02	20.4	14.5	21.4	18.6	0.75	16.0	21.1



# CABLIN V

## 0.4mm pitch Horizontal Type



- Ultra low profile : 1.0mm maximum of mating height,  
Mating depth : 5.65mm, Connector width : 16.8mm (30p).
- High impedance matching and EMI performance  
with METAL SHELL
- Stable mating with housing lock mechanism.
- Various soldering technologies applicable.

### 【Number of Position】

10p,15p,25p,30p,35p,40p  
(20p Under Development)

### 【Ordering Code】

PLUG Connector Set (for Cable)

Parts Ordering (HOUSING)

**20346- 0 \*\* T-02**

Parts Ordering (SHELL)

**2047-0 \*\* 1**

### 【Applicable Cable】

SGC	AWG #40,#42
TWINCOAX	AWG #40
DISCRETE	AWG #36

POS.	10:10pos. 15:15pos. 25:25pos. 30:30pos. 35:35pos. 40:40pos.
Packaging	T Tray

RECEPTACLE Connector Set (for PC Board)

**20347- 0 \*\* E- \*\***

POS.	10:10pos. 15:15pos. 25:25pos. 30:30pos. 35:35pos. 40:40pos.
Packaging	E Emboss Tape
BOSS	01 With
	02 Without

### 【Material & Finish】

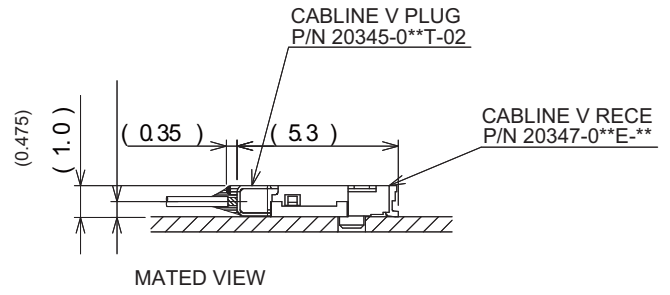
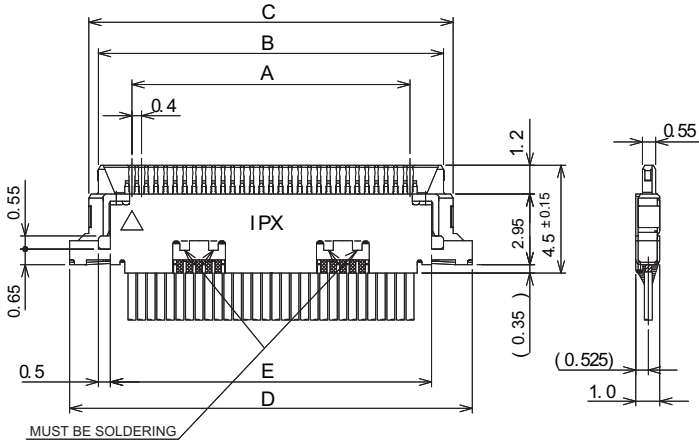
Product	Parts	Material	Plating/Color
PLUG	HOUSING	LCP UL94V-0	BLACK
	CONTACT	COPPER ALLOY	Au
	SHELL A	STAINLESS STEEL	Sn-Cu
	SHELL B	COPPER ALLOY	Sn-Cu
RECEPTACLE	HOUSING	LCP UL94V-0	BLACK
	CONTACT	COPPER ALLOY	Au
	SHELL	COPPER ALLOY	Sn-Cu

**PLUG**

Set P/N:20345-0\*\*T-02

POS.	A	B	C	D	E
10p	3.6	6.4	7.2	8.8	5.4
15p	5.6	8.4	9.2	10.8	7.4
◆20p	7.6	10.4	11.2	12.8	9.4
25p	9.6	12.4	13.2	14.8	11.4
30p	11.6	14.4	15.2	16.8	13.4
35p	13.6	16.4	17.2	18.8	15.4
40p	15.6	18.4	19.2	20.8	17.4

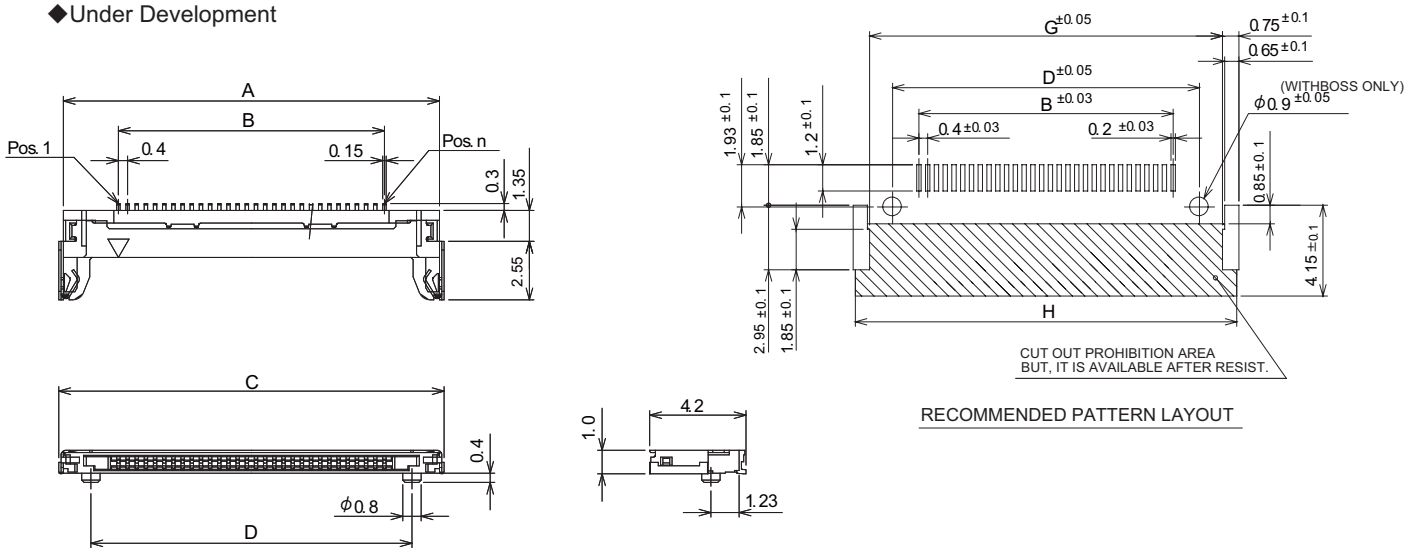
◆Under development



**RECEPTACLE**

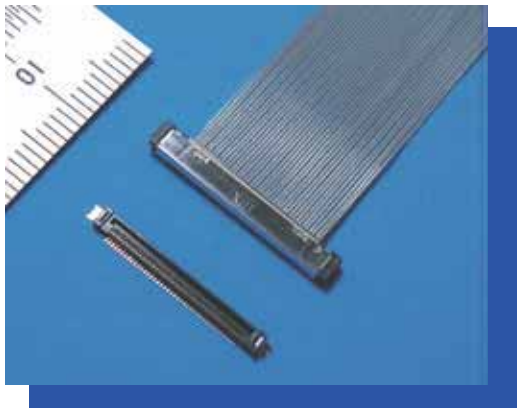
POS.	PART NO.	A	B	C	D	E	F	G	H
10p	20347-010E-**	8.4	3.6	8.8	6.0	0.925	1.75	8.1	9.4
15p	20347-015E-**	10.4	5.6	10.8	8.0	1.05	3.5	10.1	11.4
◆20p	20347-020E-**	12.4	7.6	12.8	10.0	1.175	5.25	12.1	13.4
25p	20347-025E-**	14.4	9.6	14.8	12.0	1.3	7.0	14.1	15.4
30p	20347-030E-**	16.4	11.6	16.8	14.0	0.55	10.5	16.1	17.4
35p	20347-035E-**	18.4	13.6	18.8	16.0	0.675	12.25	18.1	19.4
40p	20347-040E-**	20.4	15.6	20.8	18.0	0.8	14.0	20.1	21.4

◆Under Development



# CABLINE-SS

## 0.4mm pitch Right Angle Type



- Super Slim SGC Connector Going through Small Hinge Hole after Cabling
- Connector Depth of 3.0mm
- Mating Height : 1.85mm (MAX)
- W-Point Contact with higher Reliability for Mating
- Various Soldering technologies applicable

### 【Number of Position】

\*20p,30p,\*32p,40p,50p

\* : Inside for making for Pre-Production

### 【Ordering Code】

PLUG Connector Set (for Cable)

Parts Ordering (HOUSING)

**20373- 0 \*\* T- \*\***

Parts Ordering (SHELL)

**2182-0 \*\* -00**

RECEPTACLE Connector Set  
(for PC Board)

**20374- 0 \*\* E- \* \***

### 【Material & Finish】

### 【Applicable Cable】

SGC	AWG #42
	AWG #40 (30p Only)

POS.	*20 : 20pos. 30 : 30pos. *32 : 32pos. 40 : 40pos. 50 : 50pos.		
Packaging	T	Tray	
-	00	*20pos. 30pos. *32pos. 50pos.	
	01	40pos. ONLY	

POS.	*20 : 20pos 30 : 30pos *32 : 32pos. 40 : 40pos. 50 : 50pos.		
Packaging	E	Emboss Tape	
CONTACT FINISH	0	All Au	
	1	Selective Au (With NICKEL BARRIER)	
VACUUM CLIP	0	Without	
	1	With	

Product	Parts	Material	Plating/Color
PLUG	HOUSING	LCP UL94V-0	BLACK
	CONTACT	COPPER ALLOY	Au
	METAL COVER	COPPER ALLOY	Sn REFLOW
RECEPLACLE	HOUSING	LCP UL94V-0	BLACK
	CONTACT	COPPER ALLOY	Au
	FIXNG METAL	COPPER ALLOY	Sn-Cu
	VACUUM CLIP	LCP UL94V-0	NATURAL

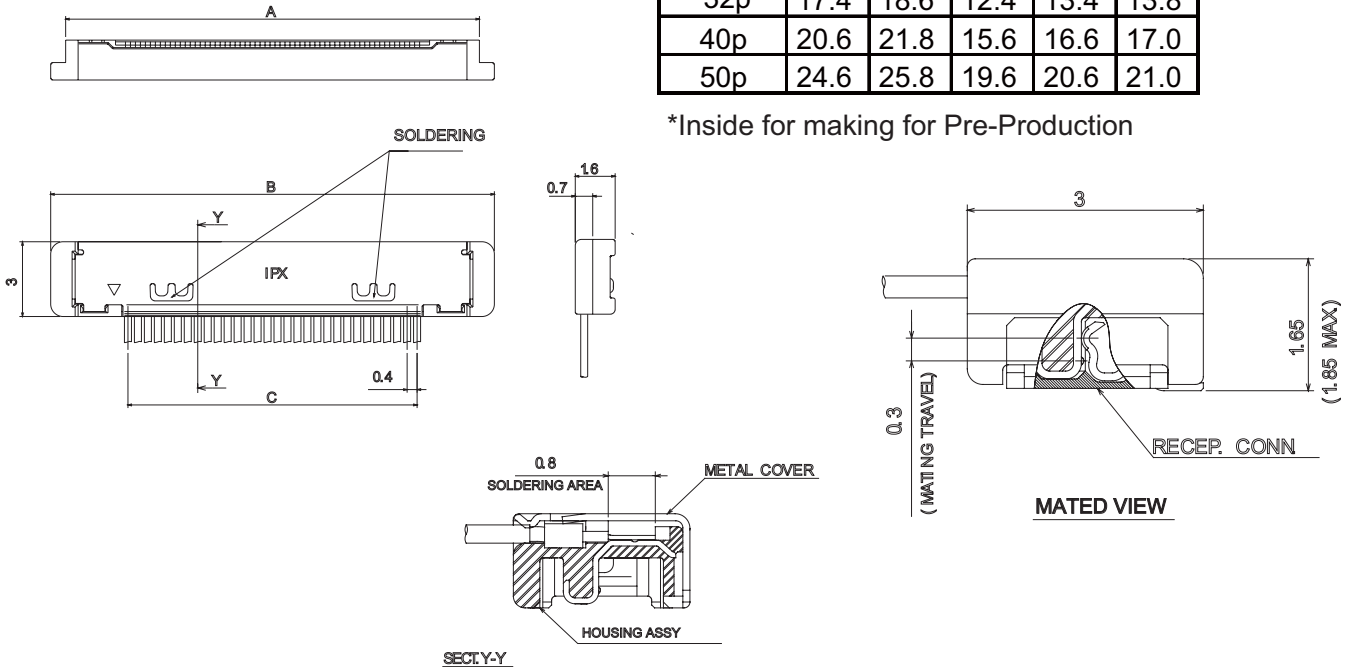


**PLUG**

Set P/N:20380-0\*\*T-\*\*

POS.	A	B	C	D	E
*20p	12.6	13.8	7.6	8.6	9.0
30p	16.6	17.8	11.6	12.6	13.0
*32p	17.4	18.6	12.4	13.4	13.8
40p	20.6	21.8	15.6	16.6	17.0
50p	24.6	25.8	19.6	20.6	21.0

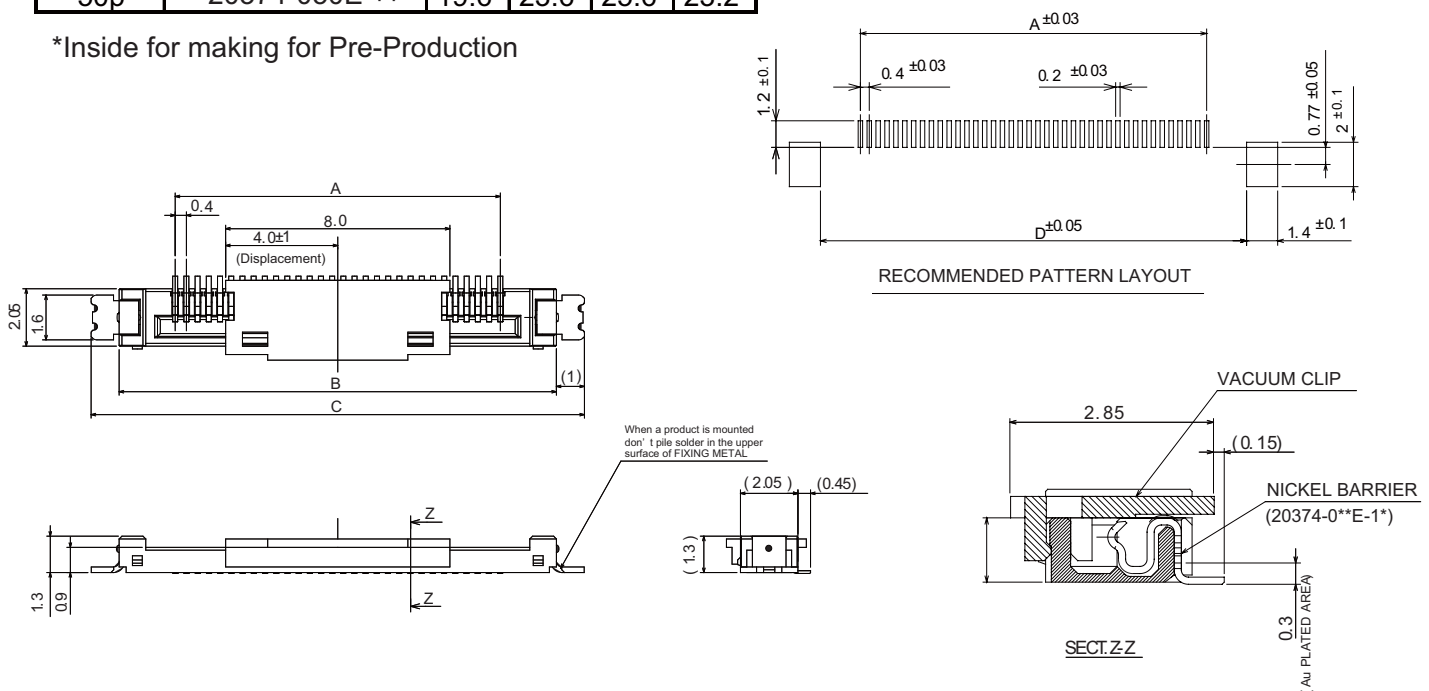
\*Inside for making for Pre-Production



**RECEPTACLE**

POS.	PART NO.	A	B	C	D
*20p	*20374-020E-**	7.6	11.6	13.6	11.2
30p	20374-030E-**	11.6	15.6	17.6	15.2
*32p	*20374-032E-**	12.4	16.4	18.4	16.0
40p	20374-040E-**	15.6	19.6	21.6	19.2
50p	20374-050E-**	19.6	23.6	25.6	23.2

\*Inside for making for Pre-Production



# CABLNE-MS

## 0.3mm pitch Right Angle Type



- Mating Height : 1.6mm
- SGC AWG#44 Applicable
- W-Point Contact with Higher Reliability for Mating
- 2.35mm Wide Slim PLUG Going through Small Hinge Hole after Cabling
- Easy Mating Operation with PLUG Guide Part-Design
- Various soldering technologies applicable

### 【Number of Position】

40p

### 【Ordering Code】

PLUG Connector Set (for Cable)

Parts Ordering (HOUSING)

**20395- 0\*\* T**  
① ②

Parts Ordering (SHELL)

**2280-0\*\*- \*\***  
① ③

RECEPTACLE Connector Set  
 (for PC Board)

**20394- 0\*\* E- \* \***  
① ② ③ ④

### 【Applicable Cable】

SGC	AWG #44
-----	---------

①	POS.	32 : 32pos	40: 40pos
②	Packaging	T	Tray
③	Metal Cover Finish	01	Sn
		02	Au

①	POS.	32 : 32pos	40: 40pos
②	Packaging	E	Emboss Tape
③	Contact Finish	0	All Au
		1	Selective Au (With NICKEL Barrier)
④	SHELL Finish	1	Sn
		2	Au

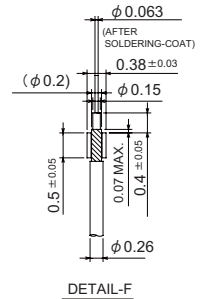
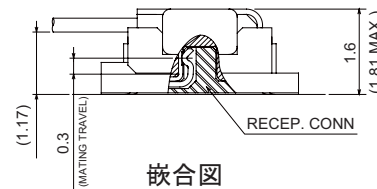
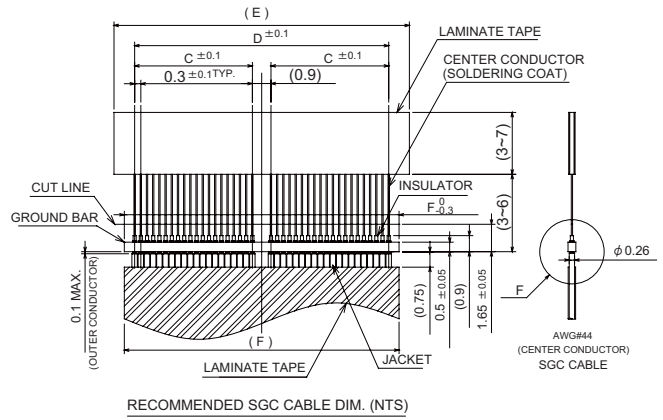
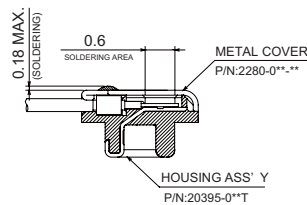
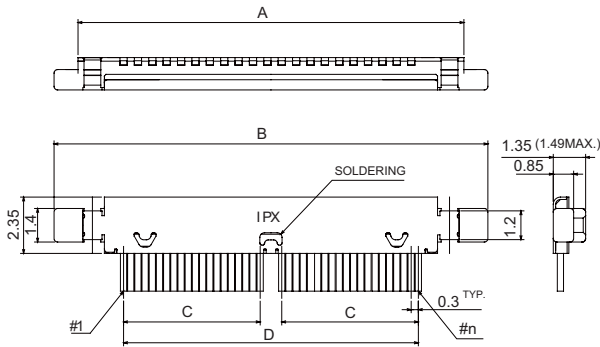
### 【Material & Finish】

Product	Parts	Material	Plating/Color
PLUG	HOUSING	LCP UL94V-0	BLACK
	CONTACT	COPPER ALLOY	Au
	METAL COVER	COPPER ALLOY	Sn or Au
RECEPTACLE	HOUSING	LCP UL94V-0	BLACK
	CONTACT	COPPER ALLOY	Au
	SHELL	COPPER ALLOY	Sn or Au
	VACUUM CLIP	LCP UL94V-0	BLACK

**PLUG**

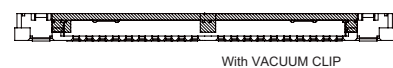
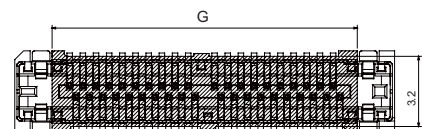
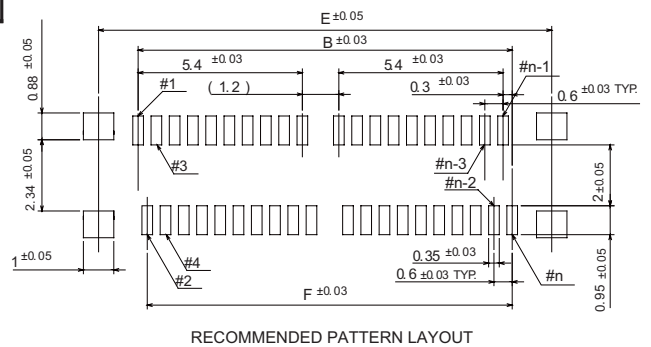
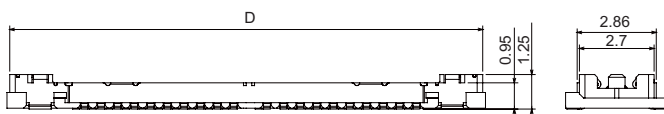
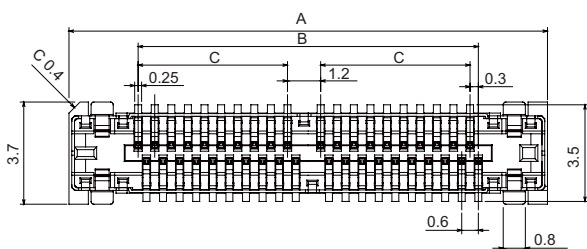
Set P/N: 20396-0\*\*T

POS.	A	B	C	D	E	F
32p	13.7	15.7	4.5	9.9	11.9	10.9
40p	16.1	18.1	5.7	12.3	14.3	13.3



**RECEPTACLE**

POS.	PART NO.	A	B	C	D	E	F	G
32p	20394-032E-**	14.9	9.9	4.2	14.7	12.5	9.6	11.5
40p	20394-040E-**	17.3	12.3	5.4	17.1	14.9	12.0	13.9



# CABLINE-FX II & III

## 1.0mm pitch Horizontal Type



- This is Board-to-Cable receptacle connector the most suitable for LCD/FPD interface of LVDS transmission
- Cable assembly by blanket soldering with different size cables for SGC and Discrete wire
- I-PEX Unique W-Point Contact Design for Higher Reliability to Prevent Loose Contact with Dust Particles
- Various soldering technologies applicable

### 【Number of Position】

30p

(20p Under Development)

### 【Applicable Cable】

SGC	AWG #32,#34,#36,#40
TWINCOAX	AWG #40
DISCRETE	AWG #28,#32,#36
FFC	FFC conductor width 0.5mm

### 【Overview】

PLUG Connector Set (for Cable)

Set P/N	HOUSING P/N	SHELL P/N	Product Name	Note
20337-*30T-01F	<b>20338-*30T-01F</b>	<b>2030-0301F</b>	CABLINE-FX II-N	
20339-*30T-01F	<b>20340-*30T-01F</b>	<b>2030-0301F</b>	CABLINE-FX II-L	with LATCH
20385-*30T	<b>20386-*30T</b>	<b>2030-0301F</b>	CABLINE-FX III	Large LATCH type

RECEPTACLE Connector Set (for PC Board)

P/N	Product Name
20389-*30E	CABLINE-FX II ZERO OFFSET STANDARD

### 【Material & Finish】

Product	Parts	Material	Plating/Color
PLUG	HOUSING	PA46 UL94V-0	BLACK
	CONTACT	COPPER ALLOY	Au
	SHELL A	COPPER ALLOY	Sn
	SHELL B	COPPER ALLOY	Sn
	LATCH	STAINLESS STEEL	-
RECEPTACLE	HOUSING	LCP UL94V-0	BLACK
	CONTACT	COPPER ALLOY	Au
	SHELL	COPPER ALLOY	Sn
	LATCH LOCK	STAINLESS STEEL	-

**PLUG**

**CABLIN-FX II-N**

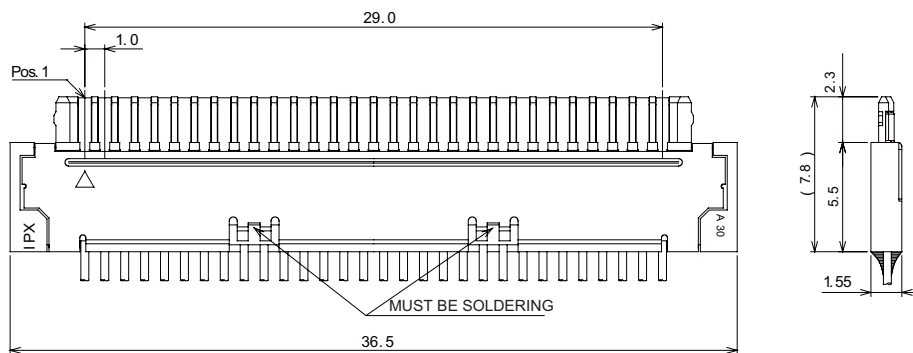
Parts Ordering (HOUSING)

**20338- \* 30 T-01F**

Parts Ordering (SHELL)

**2030-0301F**

	Contact	<b>0</b>	0.7 μ m MIN.
	Au Plating	<b>Y</b>	0.2 μ m MIN.
	POS.	<b>30</b>	: 30pos.
	Packaging	<b>T</b>	Tray



**CABLIN-FX II-L**

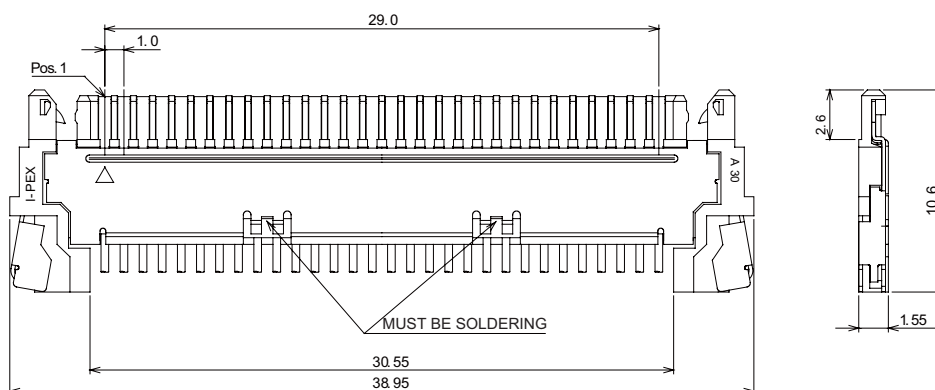
Parts Ordering (HOUSING)

**20340- \* 30 T-01F**

Parts Ordering (SHELL)

**2030-0301F**

	Contact	<b>0</b>	0.7 μ m MIN.
	Au Plating	<b>Y</b>	0.2 μ m MIN.
	POS.	<b>30</b>	: 30pos.
	Packaging	<b>T</b>	Tray





**PLUG**

**CABLINE-FX III**

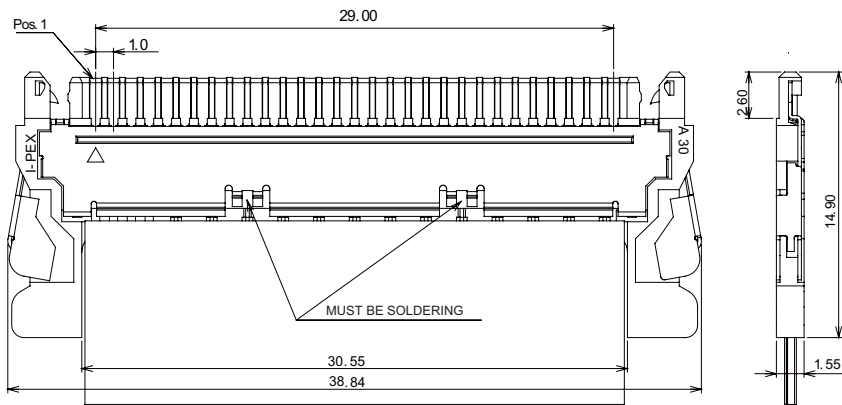
Parts Ordering (HOUSING)

**20386- \* 30 T**

Parts Ordering (SHELL)

**2030-0301F**

Contact Au Plating	<b>0</b>	0.7 μ m MIN.
	<b>Y</b>	0.2 μ m MIN.
POS.	<b>30</b>	: 30pos.
Packaging	<b>T</b>	Tray

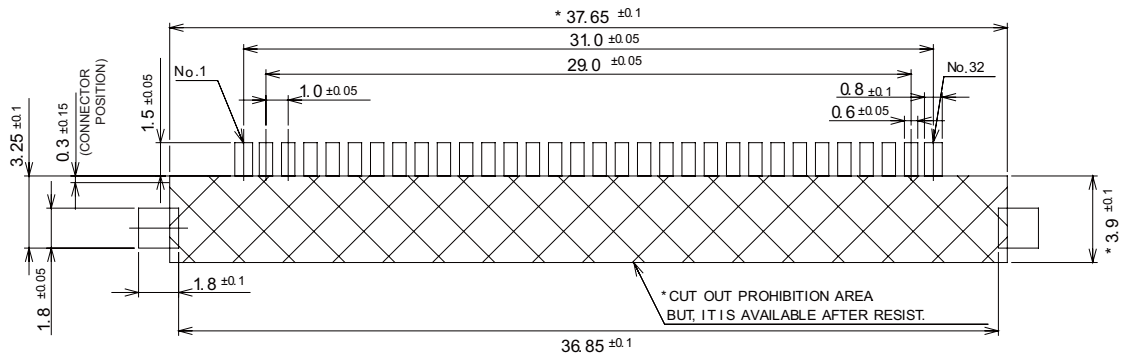
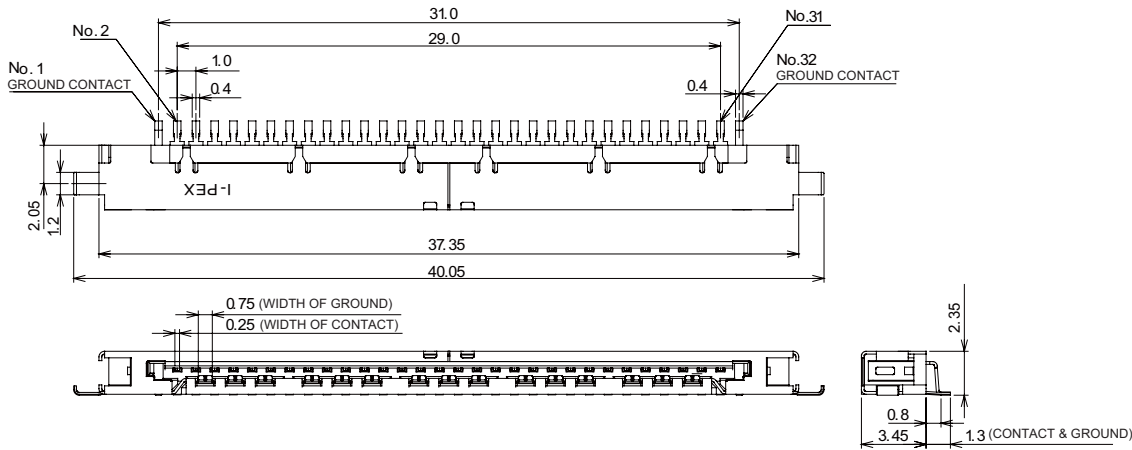


**RECEPTACLE**

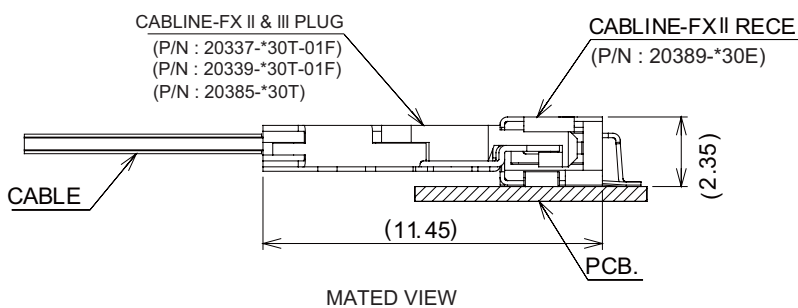
**Ordering Code**

**20389- \* 30 E**

Contact	<b>0</b>	0.7 μ m MIN.
Au Plating	<b>Y</b>	0.1 μ m MIN.
POS.	<b>30</b>	: 30pos.
Packaging	<b>E</b>	Emboss Tape



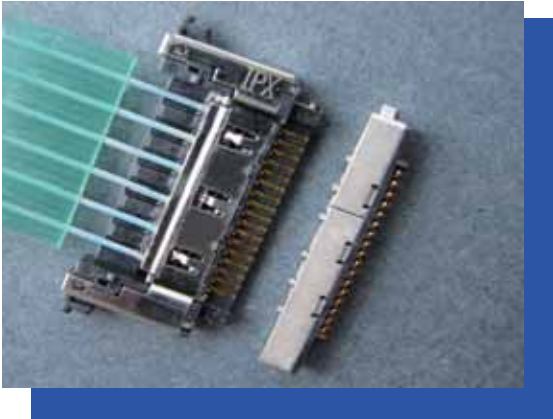
RECOMMENDED PATTERN LAYOUT



MATED VIEW

# CABLNE-FE

## 1.0mm pitch Horizontal Type



- Appropriate connector for LVDS transmission to interconnect the home digital electronics appliance
- Well designed for EMI performance by METAL SHELL and impedance matching.
- Stable mating by housing lock mechanism.
- Various soldering technologies applicable

### 【Number of Position】

14p,17p

### 【Applicable Cable】

TWINCOAX	AWG #40
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### 【Ordering Code】

PLUG Connector Set (for Cable)

Parts Ordering (HOUSING)

**20350-0**    <sup>\*\*</sup>       **T**

	POS.	<b>14</b> : 14pos. <b>17</b> : 17pos.	
	Packaging	<b>T</b>	Tray

Parts Ordering (SHELL)

**2073-0**    <sup>\*\*</sup>   

RECEPTACLE Connector Set (for PC Board)

**20364-0**    <sup>\*\*</sup>    **E**

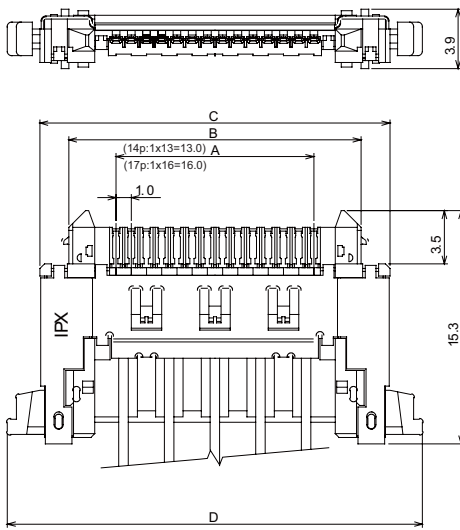
	POS.	<b>14</b> : 14pos. <b>17</b> : 17pos.	
	Packaging	<b>E</b>	Emboss Tape

### 【Material & Finish】

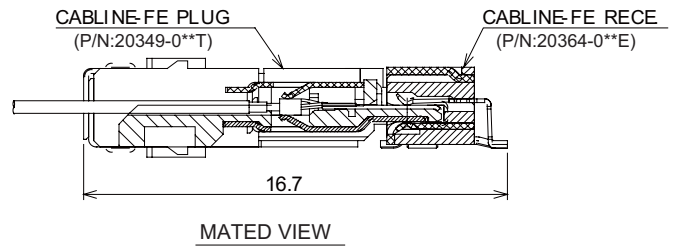
Product	Parts	Material	Plating
PLUG	HOUSING	LCP UL94V-0	BLACK
	CONTACT	COPPER ALLOY	Au
	SHELL	COPPER ALLOY	Sn
	LATCH	STAINLESS STEEL	-
RECEPTACLE	HOUSING	LCP UL94V-0	BLACK
	CONTACT	COPPER ALLOY	Au
	SHELL	COPPER ALLOY	Sn
	LATCH LOCK	STAINLESS STEEL	-

**PLUG**

Set P/N:30349-0\*\*T

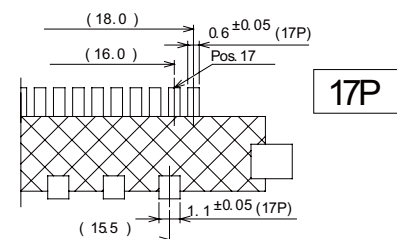
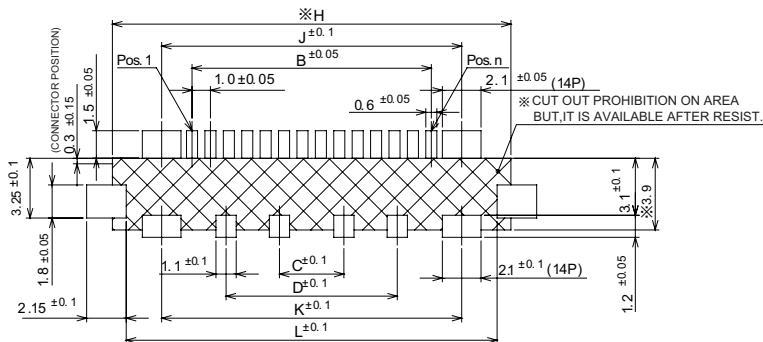
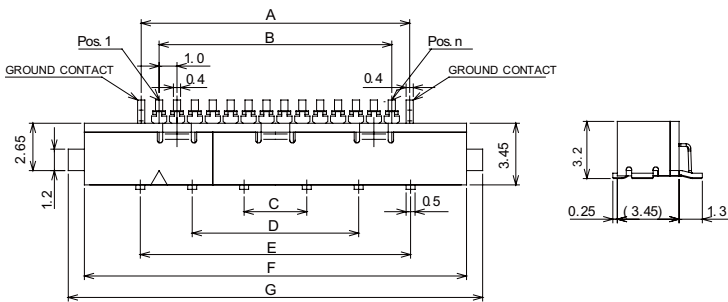


POS.	A	B	C	D
14p	13.0	19.2	23.0	27.28
17p	16.0	22.2	26.0	30.28



**RECEPTACLE**

POS.	PART NO.	A	B	C	D	E	F	G	H	J	K	L
14p	20364-014E	15.0	13.0	3.5	9.3	15.1	21.35	23.15	21.65	16.3	16.3	20.15
17p	20364-017E	18.0	16.0	3.9	9.7	15.5	25.15	27.0	25.5	18.0	15.5	24.0



RECOMMENDED PATTERN LAYOUT

# CABLINF

## 1.25mm pitch Horizontal Type



- 1.25mm Pitch SGC Connector
- High impedance matching and EMI performance with METAL SHELL
- SPWG 1.0 Compatible
- Easy Cable mechanical termination with “i-Fit” Technology

### 【Number of Position】

20p

### 【Applicable Cable】

SGC	AWG #36,#38,#40
TWINCOAX	AWG #40

### 【Ordering Code】

Connector Set (for Cable)

**20197- \* 20 U-F**

Cable Type	0	SGC
	T	TWINCOAX
POS.	20 :20pos.	
Packaging	U	Tube

Connector Set (for PC Board)

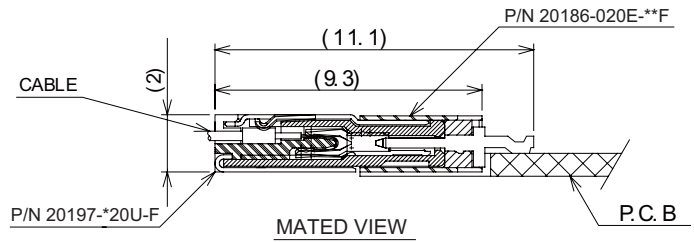
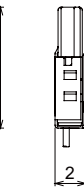
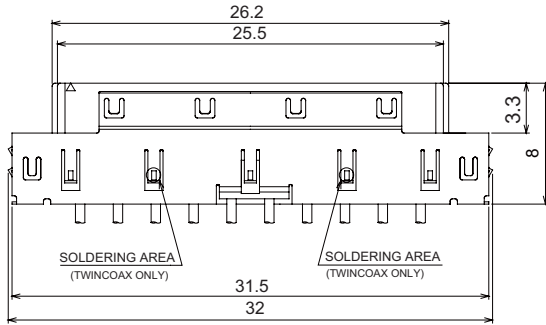
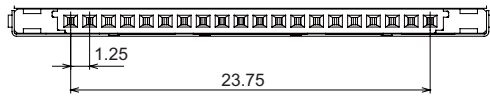
**20186- 020 E- \* \* F**

POS.	20 : 20pos.	
Packaging	E	Emboss Tape
INS. MATERIAL	0	PPS
	1	LCP
OFFSET	1	1.48mm
	2	1.31mm
	3	1.00mm

### 【Material & Finish】

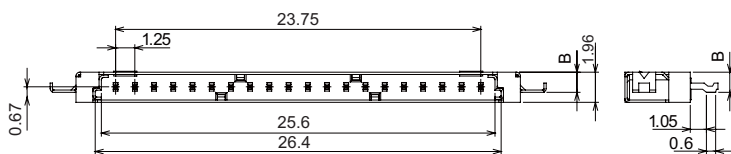
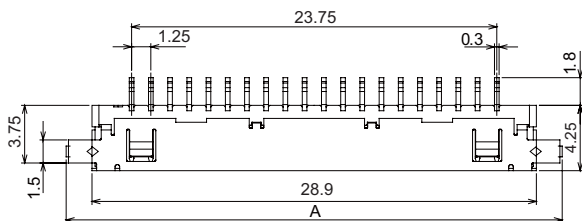
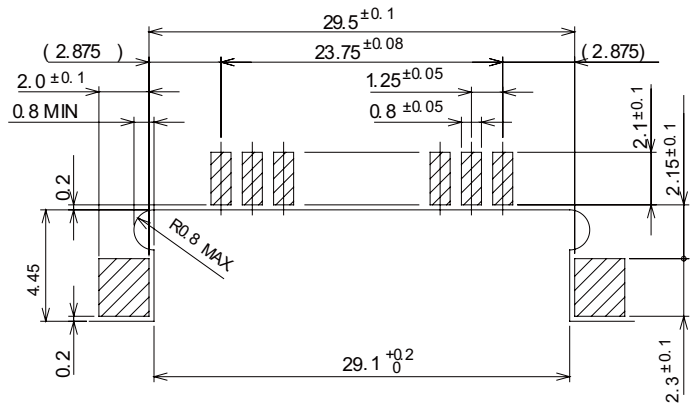
Product	Parts	Material	Plating/Color
Cable Side	HOUSING	PPS UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au (Mating Area) & Sn
	SHELL	COPPER ALLOY	Sn
PC Board Side	HOUSING	PPS or LCP UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au
	METAL COVER	COPPER ALLOY	Sn

**CABLE SIDE**



**PC Board SIDE**

PART NO.	A	B
20186-020E-*1	31.9	1.48
20186-020E-*2	32.3	1.31
20186-020E-*3	32.9	1.00



# CABLIN-G

## 1.0mm pitch Horizontal Type



- 1.0mm Pitch SGC Connector
- High impedance matching and EMI performance with METAL SHELL
- Choice of either Offset type or Zero Offset type of PC Board Side Connector
- Easy Cable mechanical termination with “i-Fit” Technology

### 【Number of Position】

14p,20p

### 【Applicable Cable】

SGC	AWG #36,#38,#40
TWINCOAX	AWG #40
DISCRETE	AWG #36

### 【Ordering Code】

Connector Set (for Cable)

**20230- \* \*\* B-F**

Cable Type	<b>0</b>	SGC
	<b>T</b>	TWINCOAX
	<b>W</b>	DISCRETE
POS.	<b>14</b> : 14pos. <b>20</b> : 20pos.	
Packaging	<b>B</b>	Tube

Connector Set (for PC Board)

**20268- 0\*\* E- \*\*F**

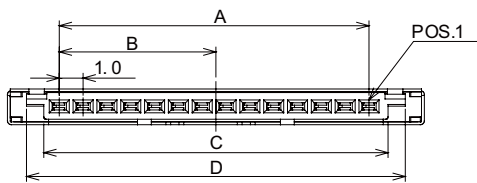
POS.	<b>14</b> : 14pos. <b>20</b> : 20pos.	
Packaging	<b>E</b>	Emboss Tape
OFFSET	<b>01</b>	1.0mm
	<b>02</b>	1.1mm
	<b>03</b>	ZERO OFFSET

### 【Material & Finish】

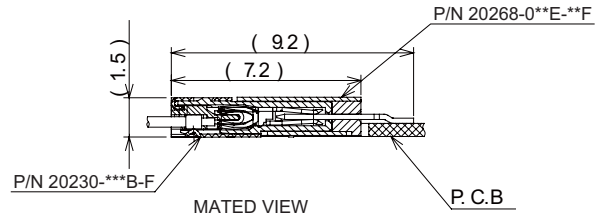
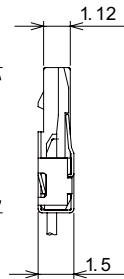
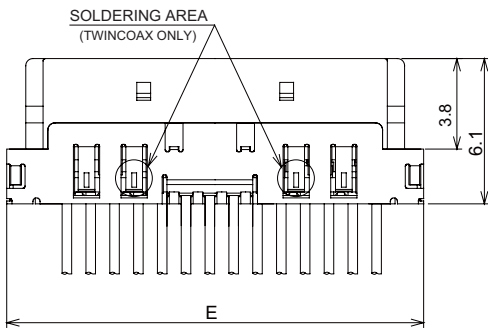
Product	Parts	Material	Plating/Color
Cable Side	HOUSING	LCP UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au (Mating Area) & Sn
	SHELL	COPPER ALLOY	Sn REFLOW
PC Board Side	HOUSING	PPS or LCP UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au
	SHELL	COPPER ALLOY	Sn



**CABLE SIDE**

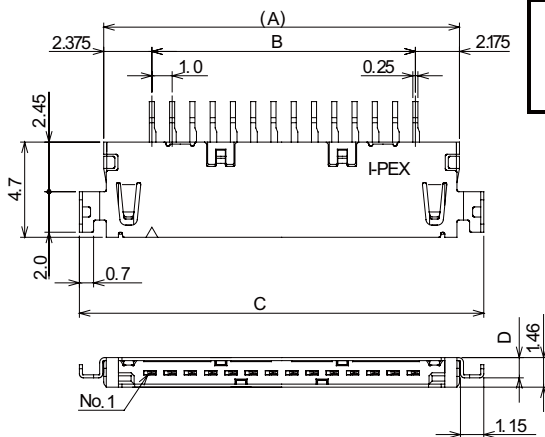


POS.	PART NO.	A	B	C	D	E	F
14p	20230-*14B-F	13.0	6.575	14.45	15.9	17.5	14.35
20p	20230-*20B-F	19.0	9.575	20.45	21.9	23.5	20.35

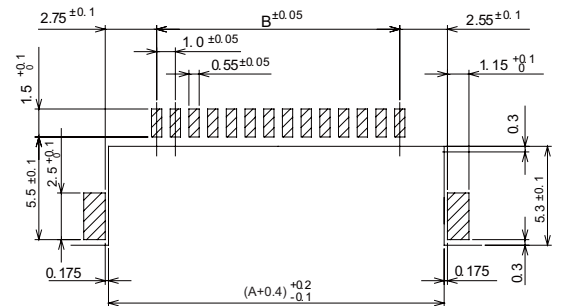


**PC Board SIDE**

**OFFSET TYPE**

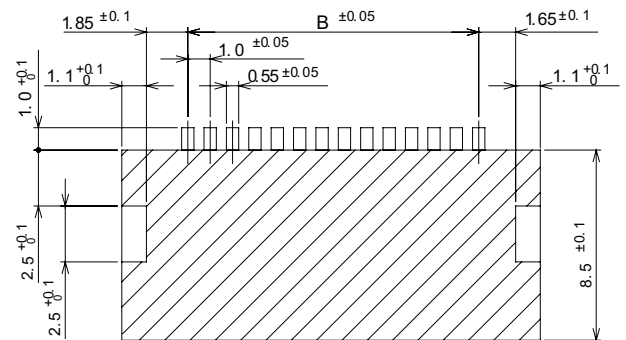
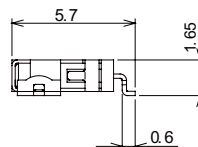
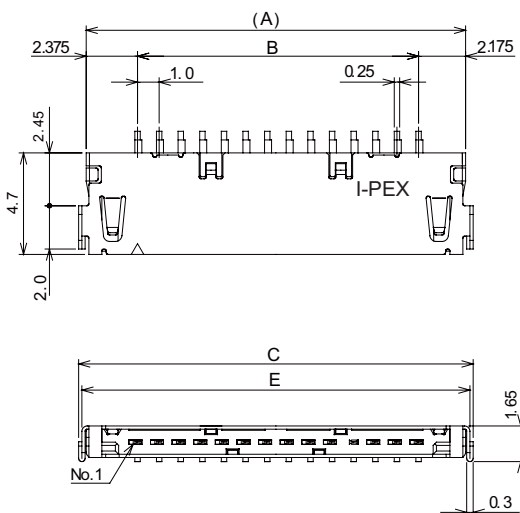


POS.	PART NO.	A	B	C	D	E
14p	20268-014E-01F	17.55	13.0	19.95	1.0	-
	20268-014E-02F			19.75	1.1	-
	20268-014E-03F			19.75	-	17.95
20p	20268-020E-01F	23.55	19.0	19.95	1.0	-
	20268-020E-02F			19.75	1.1	-
	20268-020E-03F			19.75	-	23.95



RECOMMENDED PATTERN LAYOUT

**ZERO OFFSET TYPE**

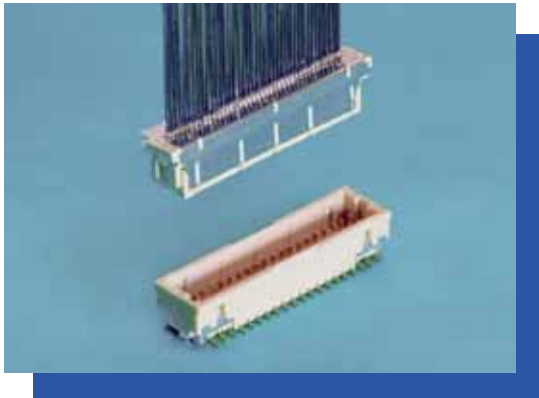


RECOMMENDED PATTERN LAYOUT

PATTERN IN THE AREA MAY TOUCH THE SHELL WHEN NO RESIST IS APPLIED

# DUALCOAX

## 1.0mm pitch Vertical Type



- 1.0mm Pitch SGC Connector
- Dual-row Contact
- High impedance matching and EMI performance with METAL SHELL

### 【Overview】

#### Connector Set (for Cable)

HOUSING P/N	SHELL A P/N	SHELL B P/N	Product Name	Pos.	Applicable Cable	Size	Mating No.
20256-0**T-00F	1791-0**1F	-	DUALCOAX	30p 40p	SGC	#32,#34,#36,#38,#40	20265-0**E-**F
20282-0**T-00F		1792-0**1F	(SHELL ass'y after soldered the cable type)		TWINCOAX	#40	
					DISCRETE	#32,#36	
20282-030T-00F	1849-0301F	1850-0301	DUALCOAX R/A type	30p	SGC	#36,#38,#40	20265-0**E-**F
					TWINCOAX	#40	
20384-040T-00F	2213-0401F	-	DUALCOAX H type	40p	SGC	#32,#34,#36,#38,#40	20381-040E-00F
					TWINCOAX	#40	
					DISCRETE	#32,#36	
20297-050T-**F	1877-0501F	1878-0501	DUALCOAX H R/A type	50p	SGC	(#32),#36,#38,#40	20298-050E-00F
					TWINCOAX	#40	

#### HEADER Connector Set (for PC Board)

Part No.	Product Name	Mating No.
20265-0**E-**F	DUALCOAX	20257-0**B-00F
		20316-0**B-00F
		20281-0**B-00F
20381-040E-00F	DUALCOAX H type 40p	20383-040E-00F
20298-050E-00F	DUALCOAX H type 50p	20296-050E-**F

### 【Material & Finish】

Product	Parts	Material	Plating/Color
Cable Side	HOUSING	LCP UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au
	SHELL A	COPPER ALLOY	Sn
	SHELL B	COPPER ALLOY	Sn
HEADER	HOUSING	PA46 UL94V-0	NATURAL
	COVER	PA46 UL94V-0	NATURAL
	CONTACT	COPPER ALLOY	Au Flash
	HOLD DOWN	COPPER ALLOY	Sn

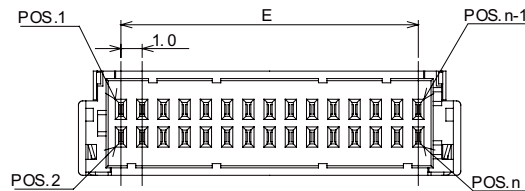
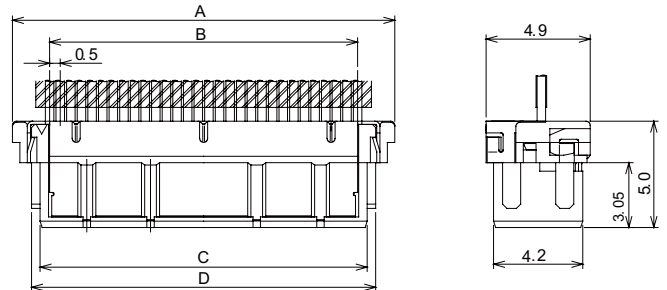
# DUALCOAX

## Cable Side

Parts Ordering (HOUSING)  
**20256-0\*\*T-00F**

Parts Ordering (SHELL A)  
**1791-0\*\*1F**

POS.	30 : 30p	40 : 40p
Packaging	T	Tray



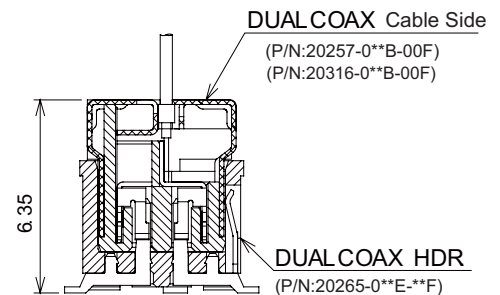
**- SHELL A / B assy after soldered the cable type-**

Parts Ordering (HOUSING)  
**20282-0\*\*T-00F**

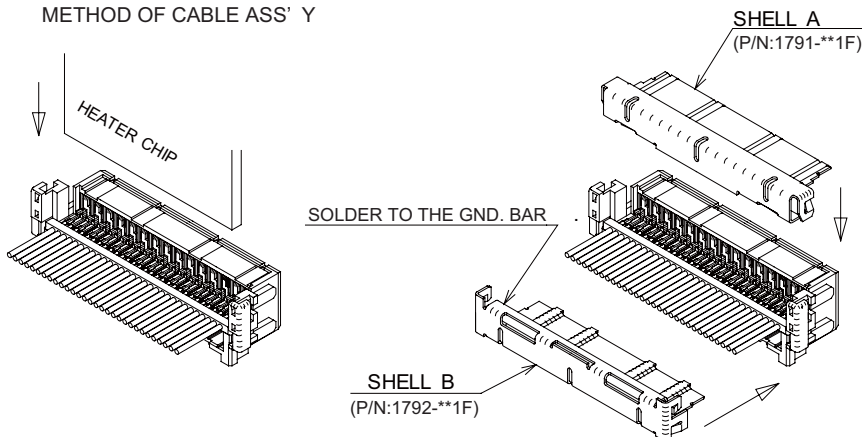
Parts Ordering (SHELL A)  
**1791-0\*\*1F**

Parts Ordering (SHELL B)  
**1792-0\*\*1F**

POS.	A	B	C	D	D
30p	18.0	14.5	15.4	16.2	14.0
40p	23.0	19.5	20.4	21.2	19.0



### METHOD OF CABLE ASS'Y



1. SOLDE THE CABLE BY PULSE HEATER

2. ASSEMBLE SHELL B AND SOLDER TO THE GND. BAR.  
 3. ASSEMBLE SHELL A

### MATED VIEW

# DUALCOAX

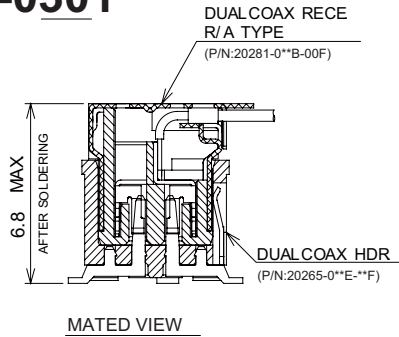
## Cable Side

### - Right Angle type (30p Only)-

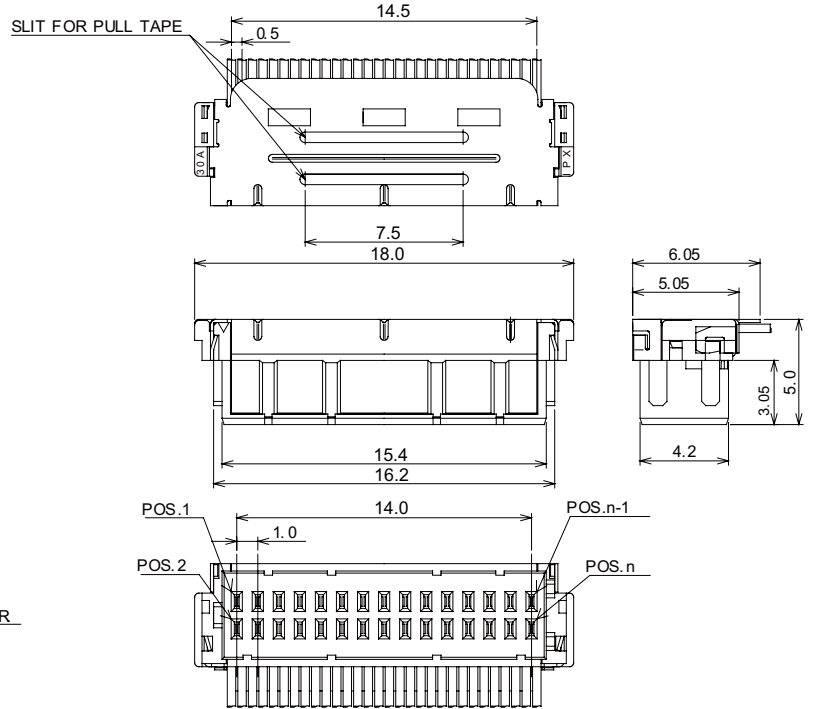
Parts Ordering (HOUSING)  
**20282-030 T-00F**

Parts Ordering (SHELL A)  
**1849-0301F**

Parts Ordering (SHELL B)  
**1850-0301**



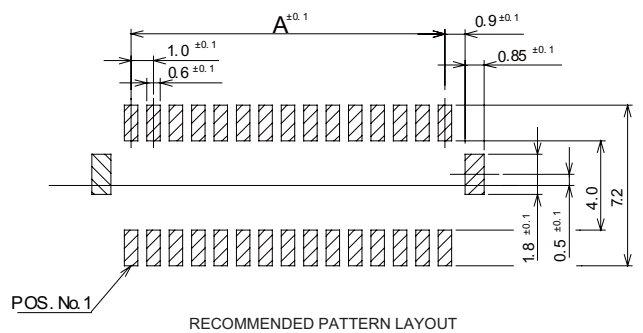
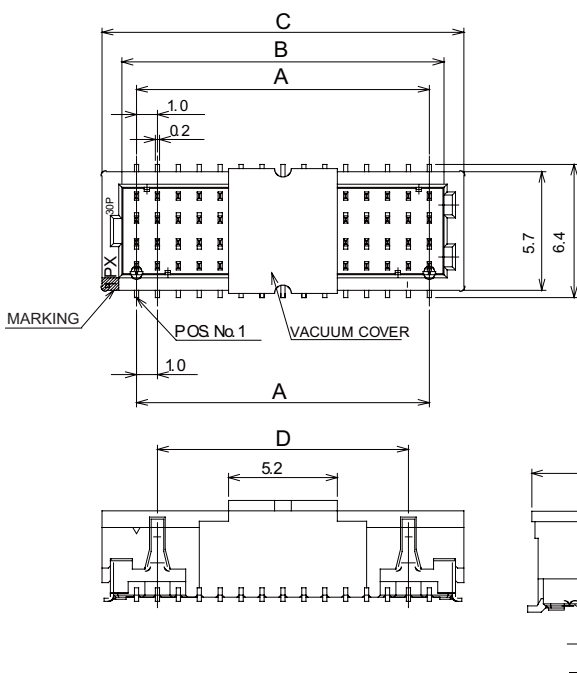
POS.	30 : 30p	
Packaging	T	Tray



## HEADER

**20265-0\*\*E\*\*F**

POS.	30 : 30p	40 : 40p
Packaging	E	Emboss Tape
MARKING	00	Without
	02	With (30p Only)



POS.	A	B	C	D
30p	14.0	15.4	17.3	12.0
40p	19.0	20.4	22.3	17.0

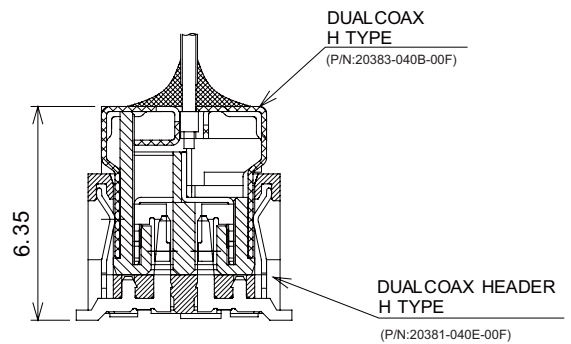
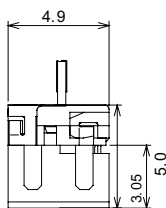
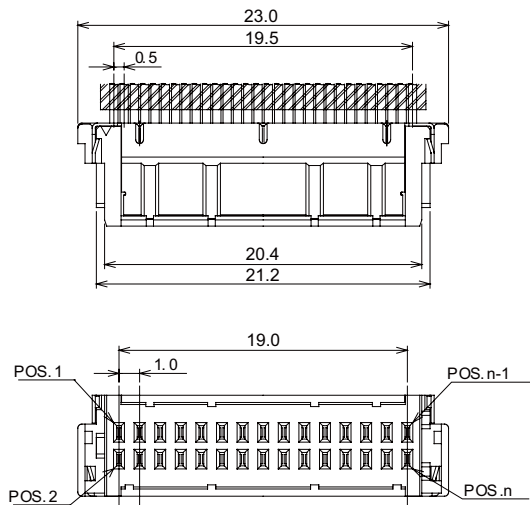
# DUALCOAX H type

## Cable Side

Parts Ordering (HOUSING)  
**20384- 040 T-00F**

Parts Ordering (SHELL A)  
**2213-0401F**

POS.	40 : 40p	
Packaging	T	Tray

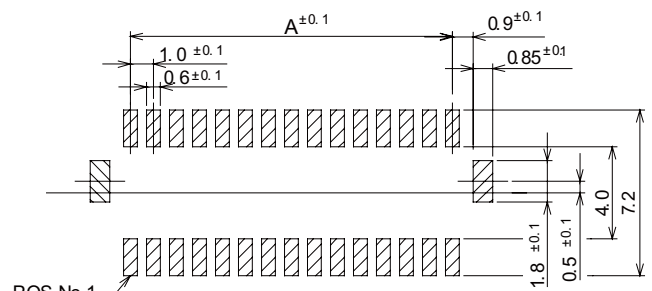
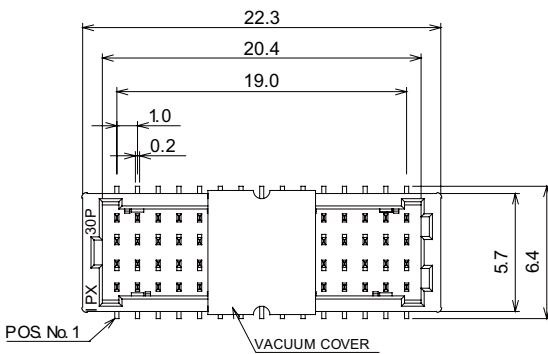


MATED VIEW

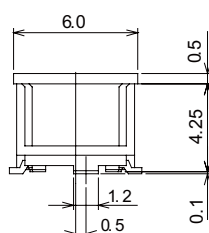
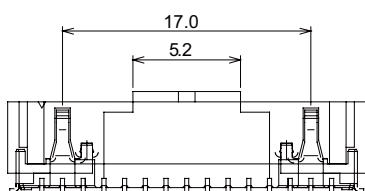
## HEADER

**20381- 040 E-00F**

POS.	40 : 40p	
Packaging	E	Emboss Tape



RECOMMENDED PATTERN LAYOUT



# DUALCOAX H Right Angle type

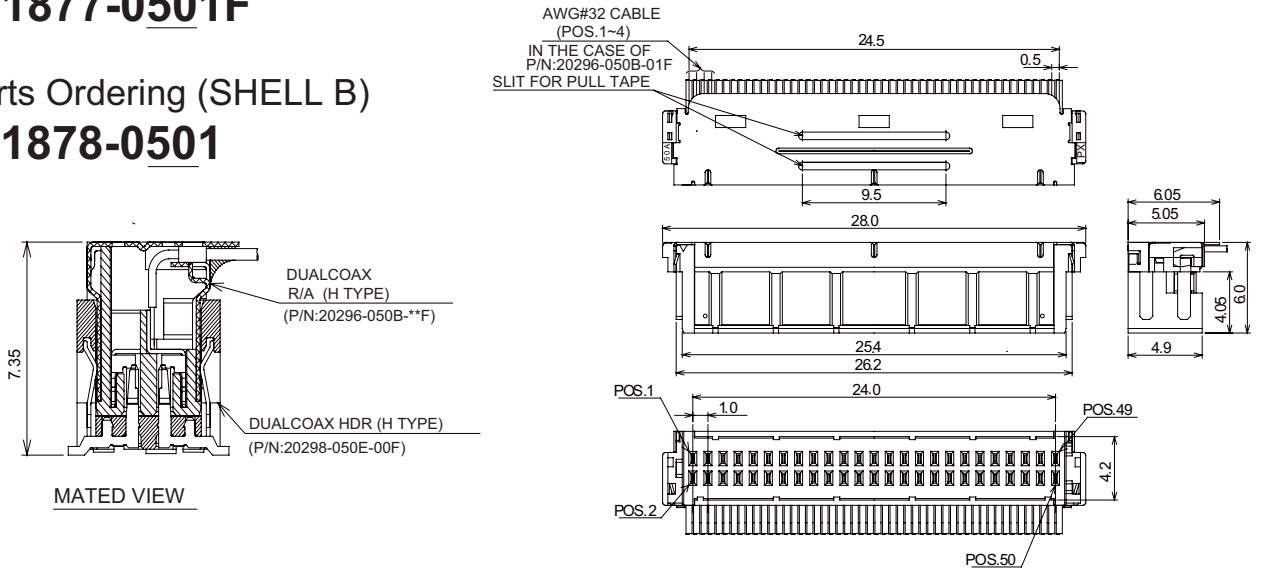
## Cable Side

Parts Ordering (HOUSING)  
**20297-050 T- \*\* F**

Parts Ordering (SHELL A)  
**1877-0501F**

Parts Ordering (SHELL B)  
**1878-0501**

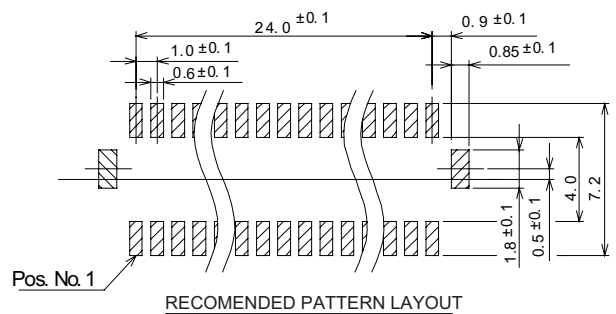
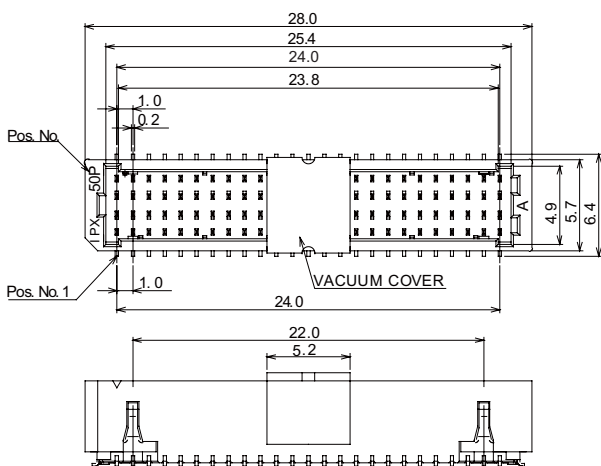
POS.	50 : 50p	
Packaging	T	Tray
Use Cable	00	AWG#36~#40 (ALL)
	01	AWG#32 (POS.1~4) AWG#36~#40(OTHRRES)



## HEADER

**20298-050 E-00F**

POS.	50 : 50p	
Packaging	E	Emboss Tape



~ M E M O ~





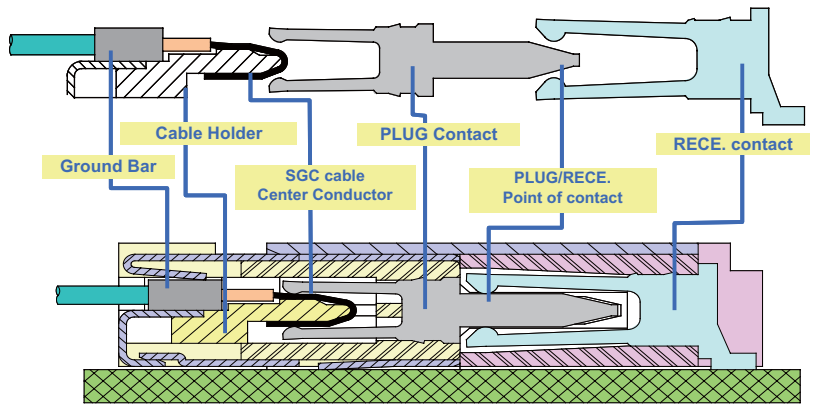
**Terminating a small conductor....**

- Conductor scratch is critical damage.  
Crimping & IDC has potential critical.
- Soldering needs more process & time.  
High soldering technique needed for fine pitch SGC.

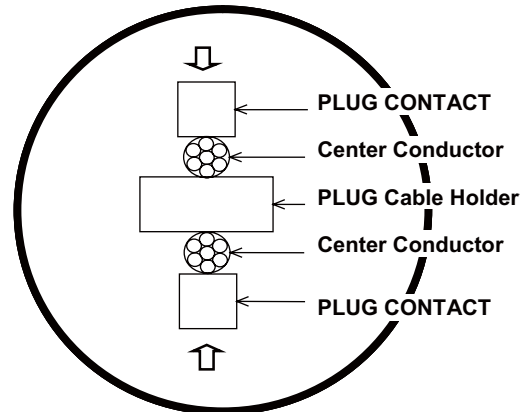
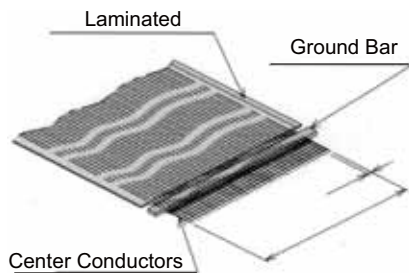
**Solution by " i-Fit " !**

- " i-Fit " applies high pressure contact w/o deformation.
- Low cost Gang termination possible.

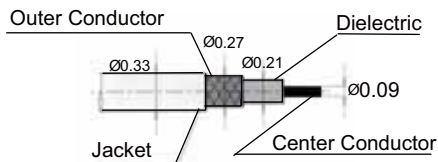
**" i-Fit " Technology**



Preparative Assy of SGC for Gang Termination (Flattening)

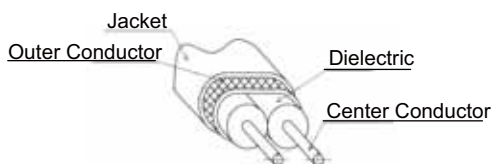


Construction of SGC Cable



Applicable conductor gauge  
AWG#32,#34,#36,#38,#40,#42,#44  
(example AWG#40)

Construction of TWINCOAX Cable



**i-Fit Patent No.**

No.3066799	JAPAN
No.405284	TAIWAN
6.264.500	U.S.A.
GB2325793	UK

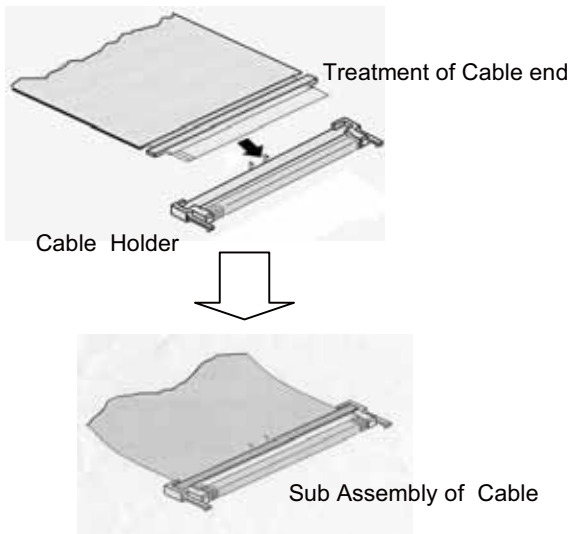
# Application Tooling

Two tools are provided for "i-Fit" contact cable assembly.

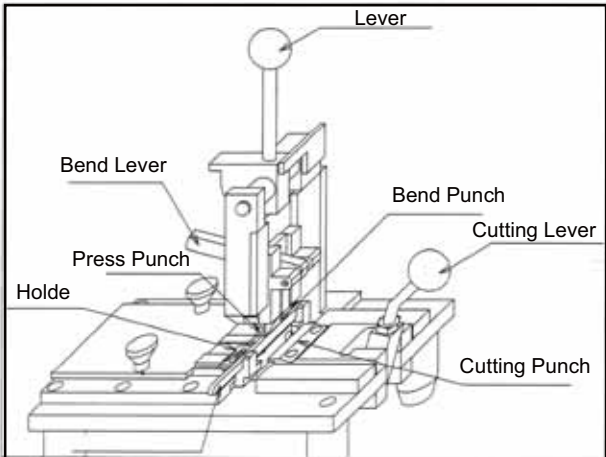
Step 1. Treatment of Cable-end by [ Cut & Bending tool ] and setting it on Cable Holder

Step 2. Assemble cable connector by [ Housing Insertion and Tab Bending tool ]

## Process

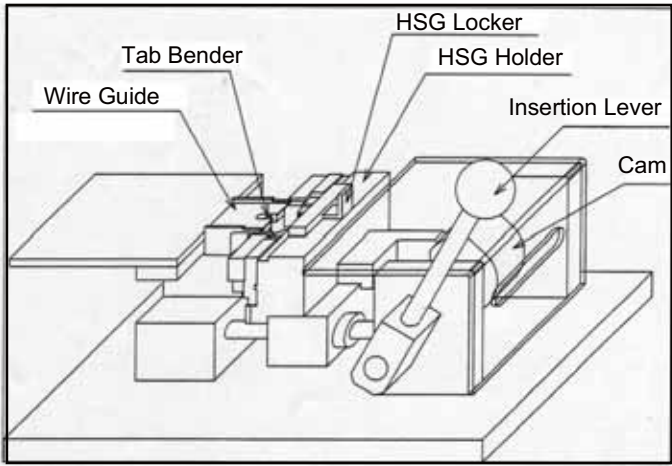


## Cut & Bending tool

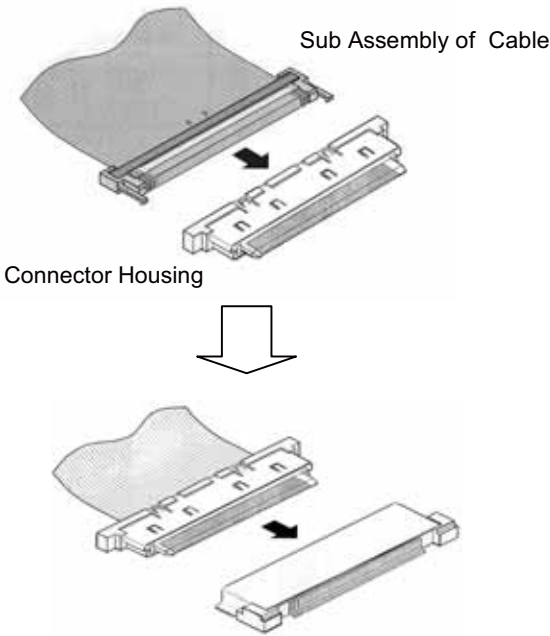


Terminated cable conductor is set on cable holder by this tool

## Housing Insertion & Tab Bending tool



Sub assembly cable set is inserted into connector housing and then housing is fixed by bending tab of housing



## Finished Cable Assembly



## CABLINER SERIES CONNECTORS

### I-PEX Co.,Ltd.

<b>Head Office</b>	6-27-19 HARAMACHIDA, MACHIDA-City, TOKYO, JAPAN 194-0013 TEL 042-729-1670 FAX 042-729-1671	<b>Shanghai</b>	21F.,Room2181-2182, Hong Qiao Shanghai City Tower B .No.100 Zun Yi Road, Chang Ning District Zoe, Shanghai 200051, China TEL 86-21-5208-1611 FAX 86-21-5208-1612
<b>Osaka</b>	5F Chiyoda Budg, Nishi-Kan 2-5-4 UMEDA, KITA-KU, OSAKA-City, OSAKA, JAPAN 530-0001 TEL 06-6346-2022 FAX 06-6346-2023	<b>KOREA</b>	Room426,Budang Trapatace 10-1,Sunae-dong Bundang-gu,Seongnam-si gyeonggi-do,463-854 Korea TEL 82-31-719-6501 FAX82-31-716-3801
<b>TAIWAN</b>	15F-6,No.700, Jung Jeng Rd., Jung He City, Taipei 235Taiwan, R.O,C TEL 886-2-8227-9288 FAX886-2-8227-8665	<b>Hong Kong</b>	Unit 18, 8/F, Bank of America Tower, 12 Harcourt Road, Admiralty, Hong Kong TEL 852-2735-8077 FAX 852-2735-8099
<b>Singapore</b>	6 TEMASEK BOULEVARD #27-03 SUNTEC TOWER FOUR SINGAPORE 038986 TEL 65-6333-0662 FAX65-6333-0663	<b>USA</b>	2305Donley Drive,Suite110,Austin,Texas 78758 TEL +1-512-339-IPEX(4739) FAX 1-512-339-4745

<http://www.i-pex.co.jp>

Product design and specification is subject to change for improvement without notice in advance. Please inquire to I-PEX representative for your confirmation.