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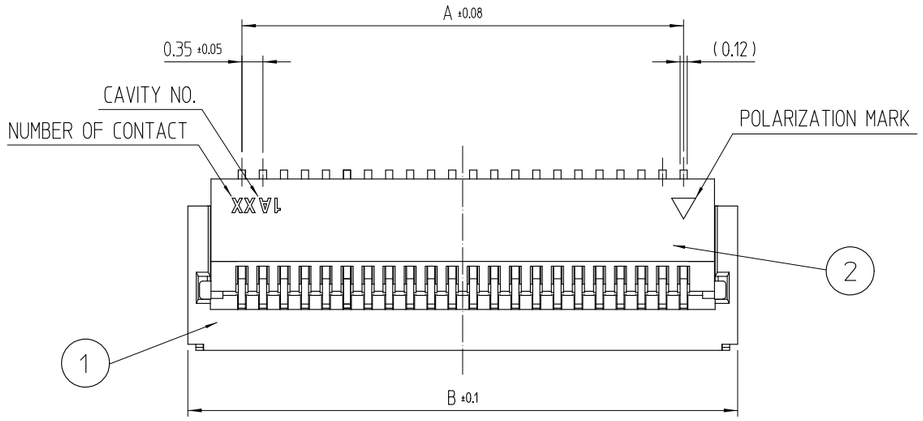
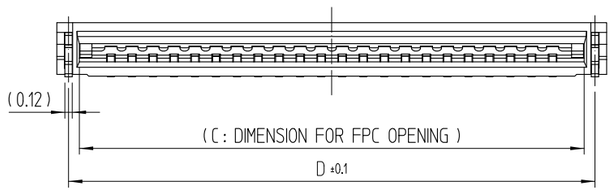
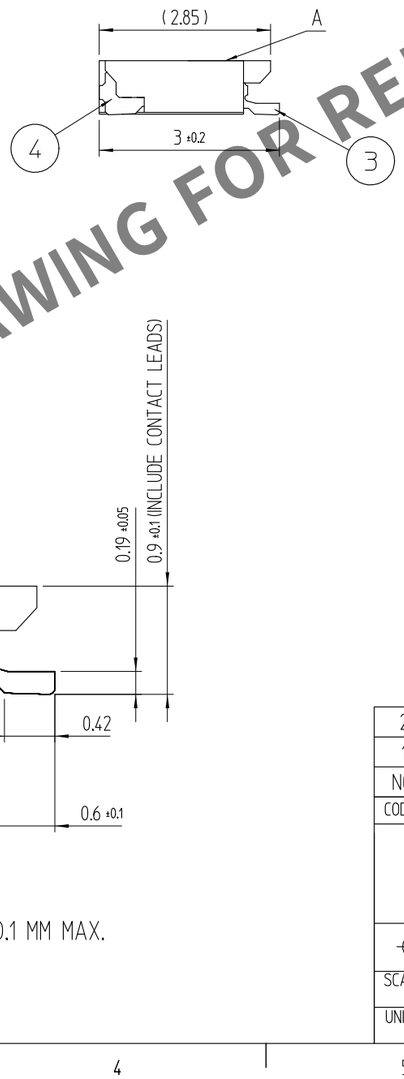
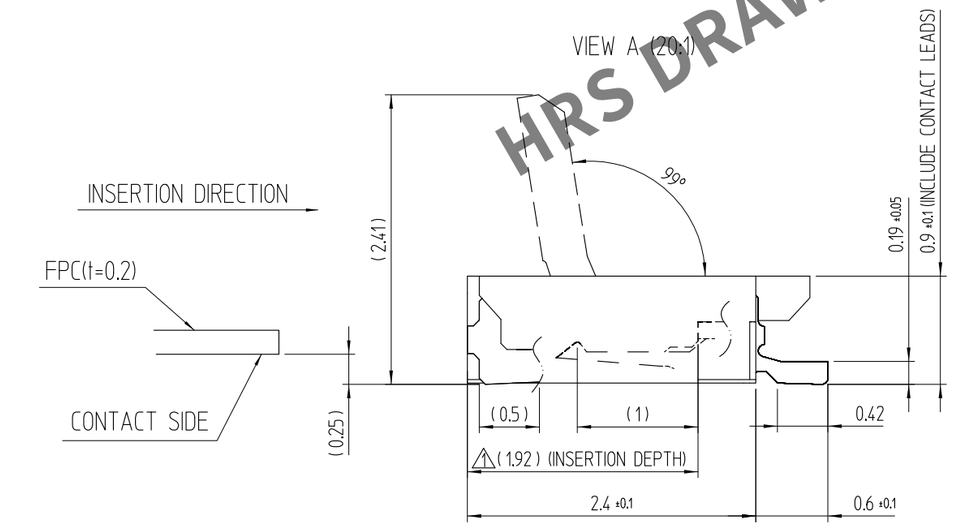
	△数 COUNT	訂正事項 DISCRIPTION OF REVISIONS	擔當 B Y	檢圖 CHKD	年月日 DATE	△数 COUNT	訂正事項 DISCRIPTION OF REVISIONS	擔當 B Y	檢圖 CHKD	年月日 DATE
△1	15	RE-5-2555	BJH	CDH	21. 02. 16	△				
△						△				
△						△				



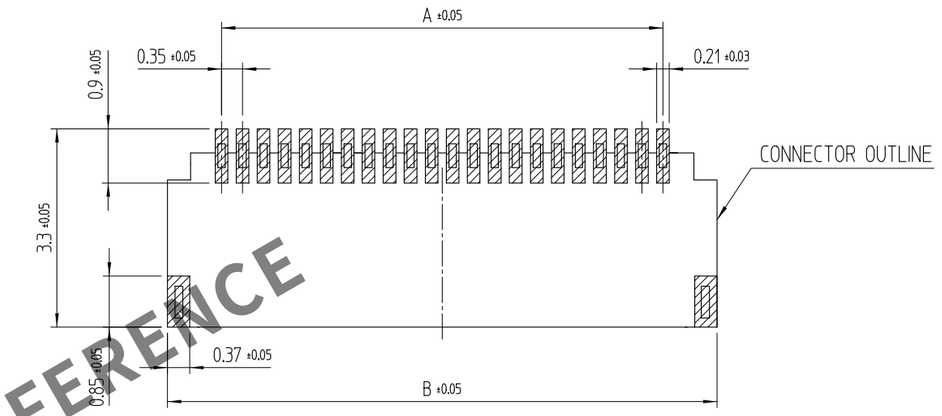




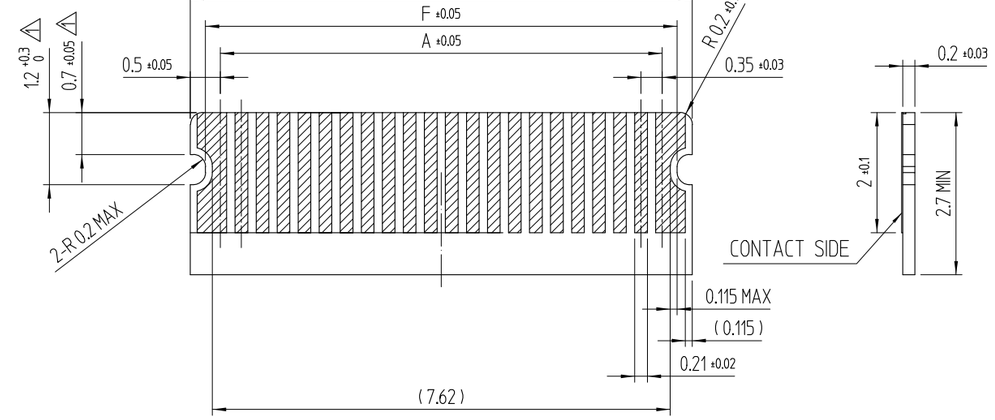


RECOMMENDED LAND PATTERN , METAL MASK (FREE)

(RECOMMENDED METAL MASK THICKNESS : t = 0.1mm)



RECOMMENDED FFC/FPC (FREE)



HRS DRAWING FOR REFERENCE

NOTE 1 : LEAD CO-PLANARITY INCLUDING REINFORCED METAL FITTINGS SHALL BE 0.1 MM MAX.
2 : TO BE DELIVERED WITH TAPE AND REEL PACKAGES.

NO.	MATERIAL	FINISH, REMARKS
4	PHOSPHOR BRONZE	Sn PLATING OVER NICKEL
3	PHOSPHOR BRONZE	(CONTACT AREA) GOLD 0.05μm MIN OVER NICKEL 1μm MIN (LEAD) GOLD 0.05μm MIN OVER NICKEL 1μm MIN (OTHER) NICKEL PLATING 1μm MIN
2	LCP	BLACK UL94V-0
1	LCP	BLACK UL94V-0
NO.	MATERIAL	FINISH, REMARKS

CODE NO. (OLD)	DRAWN	DESIGNED	CHECKED	APPROVED	RELEASED
	M.H.LEE 17.09.26	M.H.LEE 17.09.26	D.H.CHO 17.09.26	H.C.SONG 17.09.26	ENG 21.02.16 DEPT

SCALE	DRAWING NO.	PART NO.
10:1	EDC3-632416-80	TF42-**S-0.35SH(800) △1
UNITS mm	HRS HIROSE KOREA CO.,LTD.	CODE NO CL ****-****-*-*** 1/5

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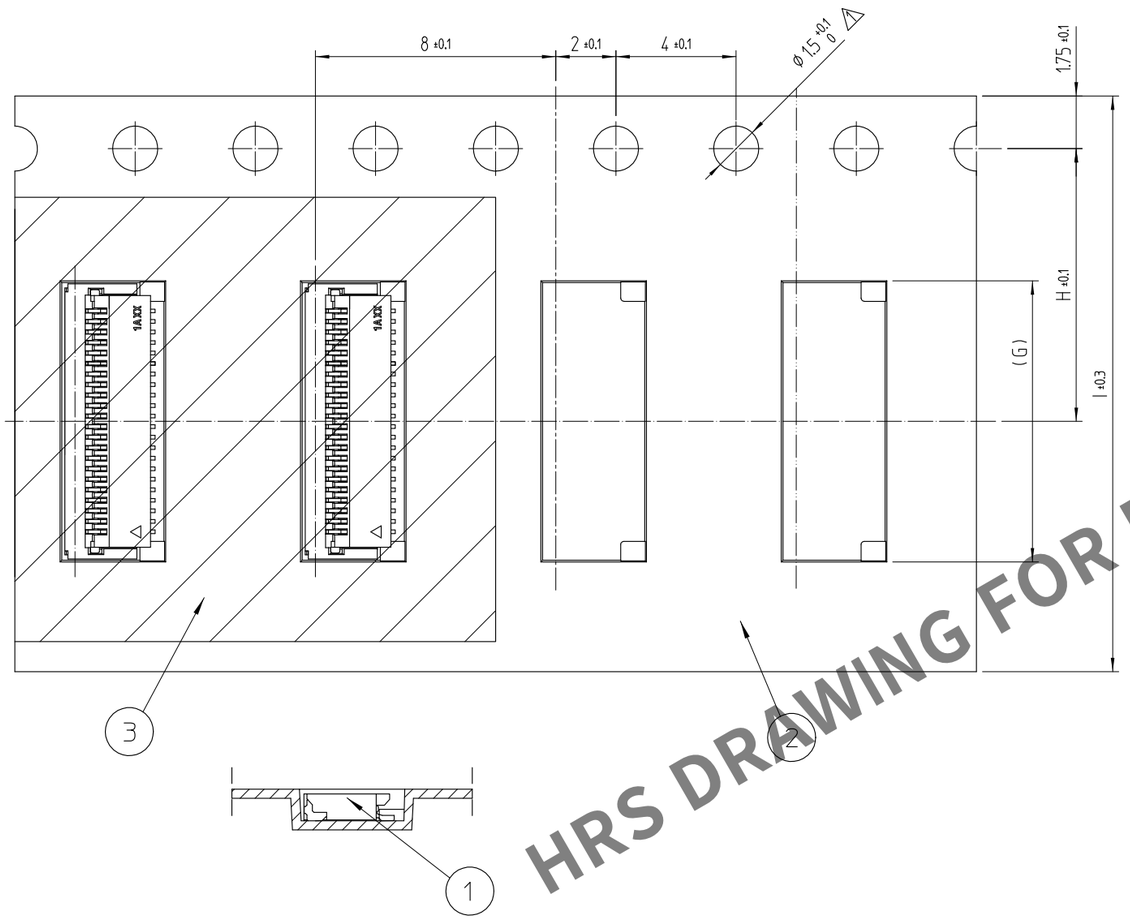
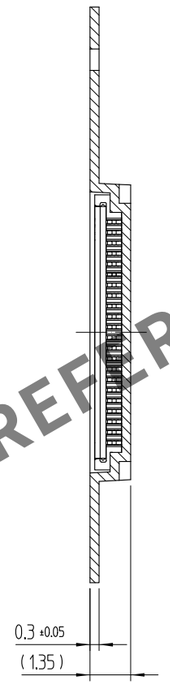
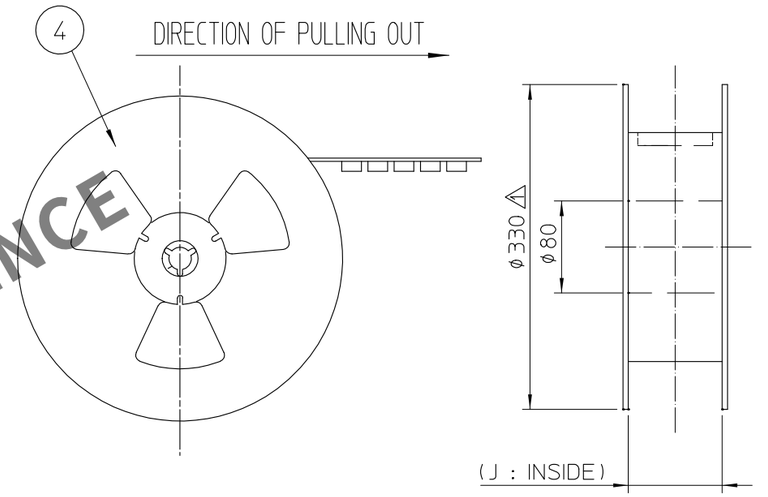
◆ EMBOSSED CARRIER TAPE DIMENSION

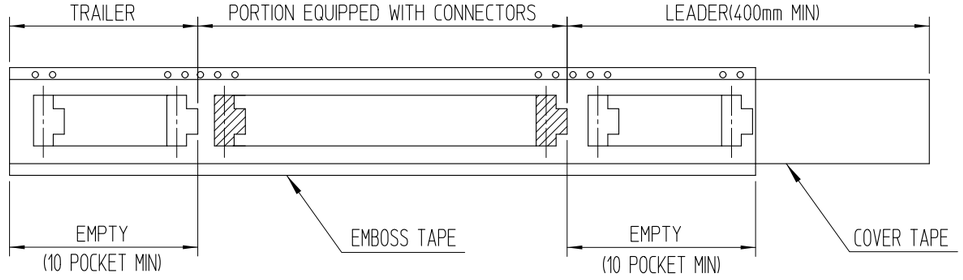
DIRECTION OF PULLING OUT





STYLE AND DIMENSION OF REEL (FREE)





PART NUMBER	NUMBER OF CONTACTS	DIMENSION OF CONNECTOR, FPC AND PCB MOUMTING PATTERN						DIMENSION OF PACKING			
		A	B	C	D	E	F	G	H	I	J
⚠1 TF42-13S-0.35SH(800)	13	4.2	6.0	5.25	5.61	5.2	4.7	6.2	7.5	16.0	16.5
TF42-16S-0.35SH(800)	16	5.25	7.05	6.3	6.66	6.25	5.75	7.25	7.5	16.0	16.5
TF42-22S-0.35SH(800)	22	7.35	9.15	8.4	8.76	8.35	7.85	9.35	11.5	24.0	24.5
TF42-24S-0.35SH(800)	24	8.05	9.85	9.1	9.46	9.05	8.55	10.05	11.5	24.0	24.5

⚠1

NO.	MATERIAL	FINISH, REMARKS	NO.	MATERIAL	FINISH, REMARKS
2	PS		4	PS	
1	CONNECTOR		3	PET	

SCALE 5:1 / UNITS mm	DRAWING NO. EDC3-632416-80	PART NO. TF42-**S-0.35SH(800) ⚠1
	HRS HIROSE KOREA CO.,LTD.	CODE NO CL ****-****-*-*** 2/5

HRS DRAWING FOR REFERENCE

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♦ [Board Mounting Precautions]

◎ Board Warpage

Be sure to minimize the board warpage as much as possible.
The Lead co-planarity including reinforced material is 0.1mm or less.
Too much board warpage may result in a soldering failures or co-planarity issues.

◎ Connector Load

Do not apply a force of 0.5N or more to the connector before mounting it on the board to prevent connector damage.
Do not insert the FPC or operate the connector before mounting.

◎ Board Stress

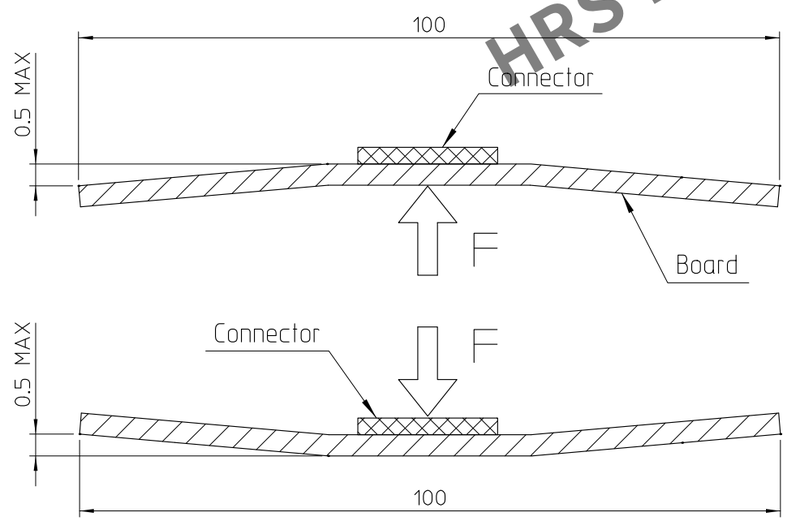
- Splitting a large board into several pieces.
- Screwing the borad.

Avoid the handling described above so that no force is exerted on the board during the assembly process.
Otherwise, the connector may become defective.

◎ Accptable Amount of Board Warpage

A 100mm wide board has an acceptable warp range of 0.5mm or less. [Fig.1]
Excessive amounts of warping will place stress on the connector which may result in damage and malfunction.

[Fig.1]



♦ [Operating Method]

As this connector is a small and thin, requires careful handling.
Please check the instructions shown below before use.

1. Initial condition.
   - The actuator is delivered closed state.
   - Don't operate the connector while it is not mounted on the board.

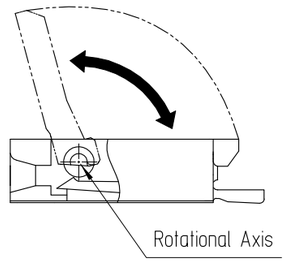
2. How to unlock the actuator

Actuator rotates around the center rotation axis, as shown in the Figure below.
Operate the actuator and slowly rotate it, releasing the lock. [Fig.2]

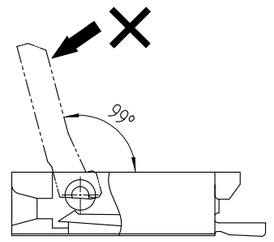
[Caution]

· Operate the actuator around the center when unlocked. [Fig.4]
· Do not operate the actuator on one side only when unlocked. [Fig.5]
· Actuator can not be opened wider than 99°. Do not open it wider than that angle. [Fig.3]
· This connector adopts a back-flip design, and there is a difference between the FPC insertion direction and the actuator operating direction. Don't try to open from FPC insertion side. [Fig.6]
· Do not pick and raise the actuator, or hook it. [Fig.7]

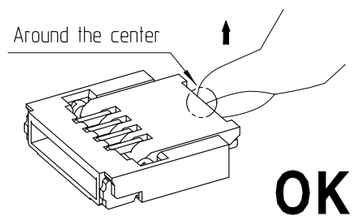
[Fig.2]



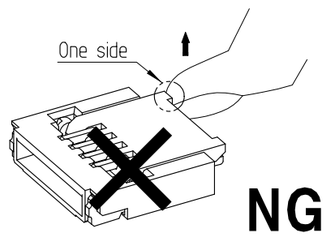
[Fig.3]



[Fig.4]



[Fig.5]



HRS DRAWING FOR REFERENCE

⚠< INSTRUCTION MANUAL (1) >

SCALE 5:1 UNITS mm	DRAWING NO. EDC3-632416-80	PART NO. TF42-**S-0.35SH(800) ⚠
	HRS HIROSE KOREA CO.,LTD.	CODE NO CL ****-****-*-*** 3/5

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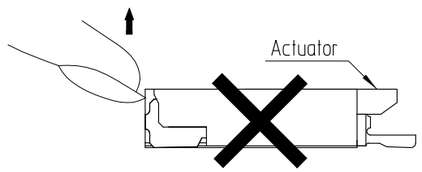
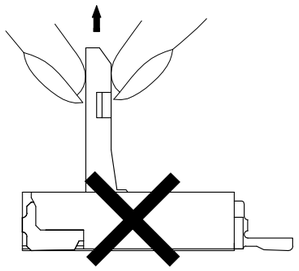
[Fig.6]



[Fig.7]



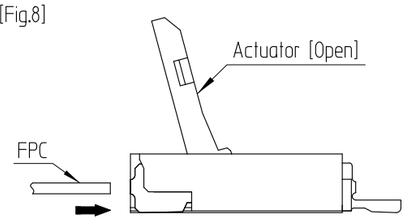
3. How to insert FPC

Insert FPC with the conductor surface facing downwards, horizontally to the board surface until fully inserted. [Fig.8]

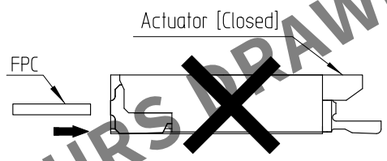
[Caution]

- Be sure to insert FPC to the end.
  This connector has a ZIF structure and its effective engagement length is 1.92mm
- Do not insert FPC while the actuator is closed. [Fig.9]
- Do not insert FPC diagonally above and do not move it
  in vertical, lateral or diagonal directions while FPC insertion. [Fig.10]

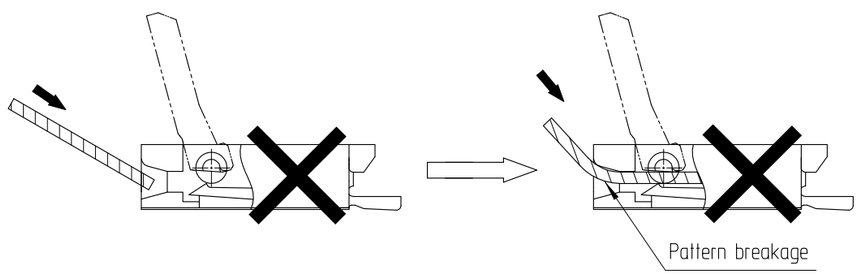
[Fig.8]



[Fig.9]



[Fig.10]



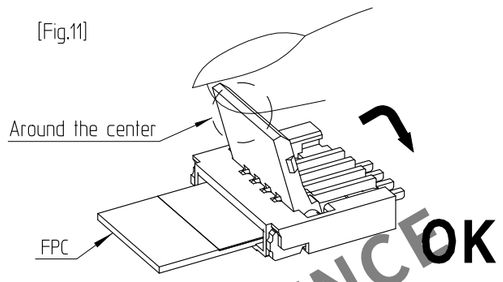
4. Actuator locking mechanism

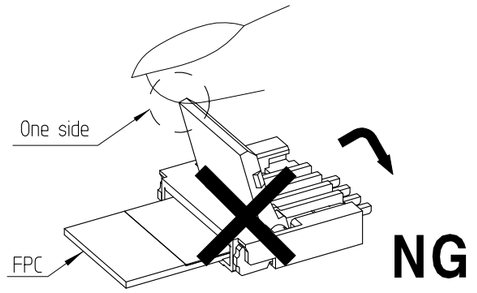
Actuator rotates around the actuator rotation axis.
After inserting FPC, operate the actuator rotating 99°.

[Caution]

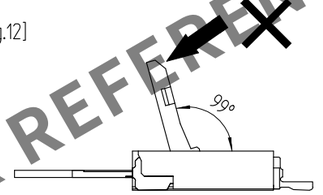
- Do not operate the actuator on one side only. [Fig.11]
- Do not operate the actuator in the direction opposite to the closing direction. [Fig.12]
- Do not operate the actuator by pushing in the vertical direction. [Fig.13]
- Please check to insure the actuator is placed horizontal to the board surface when locked.

[Fig.11]

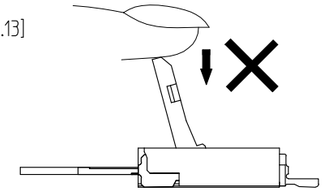




[Fig.12]



[Fig.13]



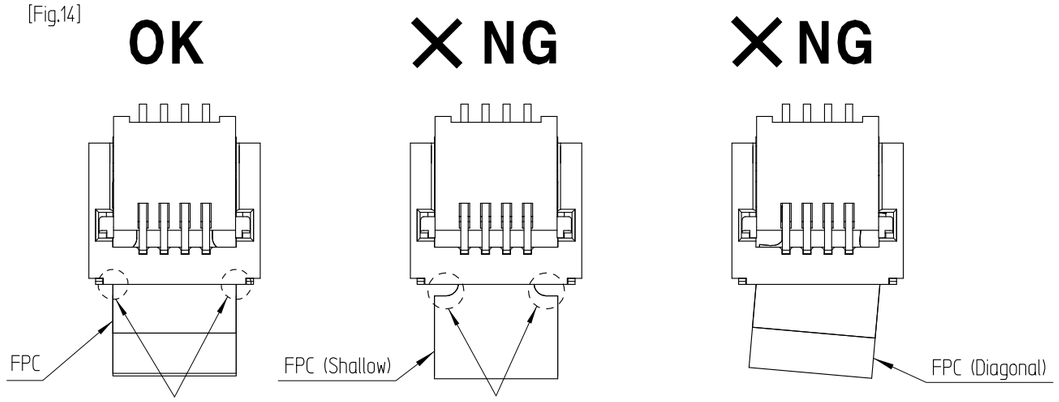
5. Checking the FPC insertion status

When FPC is completely inserted, visually inspect the inserted status of FPC.

[Caution]

- Do not insert FPC insufficiently or from a diagonal direction. [Fig.14]

[Fig.14]



Tab of FPC is hidden in the insulated case.

Tab of FPC is visible from the insulated case.

Diagonal direction.

HRS DRAWING FOR REFERENCE

⚠< INSTRUCTION MANUAL (2) >

SCALE 10:1 UNITS mm	DRAWING NO. EDC3-632416-80	PART NO. TF42-**S-0.35SH(800) ⚠
	HRS HIROSE KOREA CO.,LTD.	CODE NO CL ****-****-*-*** 4/5

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6. How to remove FPC

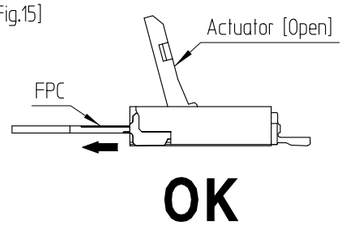
After unlock the actuator , remove the FPC in the horizontal direction. [Fig.15]

[Caution]

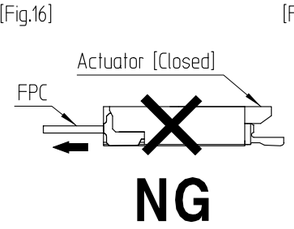
・ Do not remove the FPC while the actuator is closed. [Fig.16]

・ When pulling out FPC, do not apply load in the upward or lateral direction. [Fig.17]

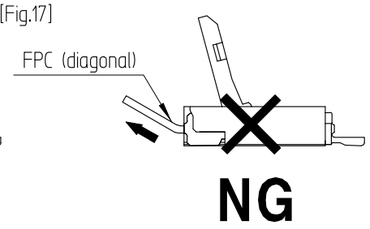
[Fig.15]



[Fig.16]



[Fig.17]



7. Routing of FPC

When routing the FPC please do not apply a load as it may cause FPC disconnection and damage.
It also may cause additional load to the connector resulting in poor connection and other issues.

[Caution]

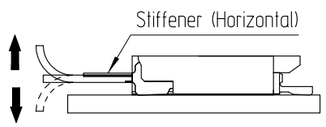
・ When routing FPC, please be careful that FPC is not pulled and routing is carried out with a margin.

・ Please check that the stiffener is parallel to the board surface. [Fig.18].

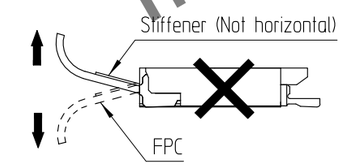
・ Please insure there is no load is applied to the connector in the pulling, inserting or lateral direction. [Fig.19]

・ Don't place any parts under the stiffener that will interfere with FPC. [Fig.20]

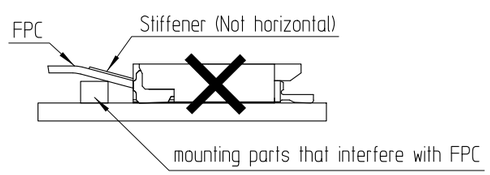
[Fig.18]



[Fig.19]



[Fig.20]



♦ [Other Instructions]

◎ Manual soldering

Follow the instructions listed below when soldering the connector manually during repair work, etc.

1. Do not perform reflow soldering or manual soldering with the FPC/FFC inserted into the connector.
2. Do not overheat the connector.
   Do not allow the soldering iron to contact any part other than the intended connector leads.
   Otherwise, the connector may be deformed or melted.
3. Do not use excessive solder (or flux).
   If excessive solder (or flux) is used on the terminals, solder or flux may adhere to the contacts or the rotating parts of the actuator, resulting in poor contact or a rotation failure of the actuator.

HRS DRAWING FOR REFERENCE

⚠< INSTRUCTION MANUAL (3) >

SCALE 10:1 UNITS mm	DRAWING NO. EDC3-632416-80	PART NO. TF42-**S-0.35SH(800) ⚠
	HRS HIROSE KOREA CO.,LTD.	CODE NO. CL ****-****-*-*** 5/5