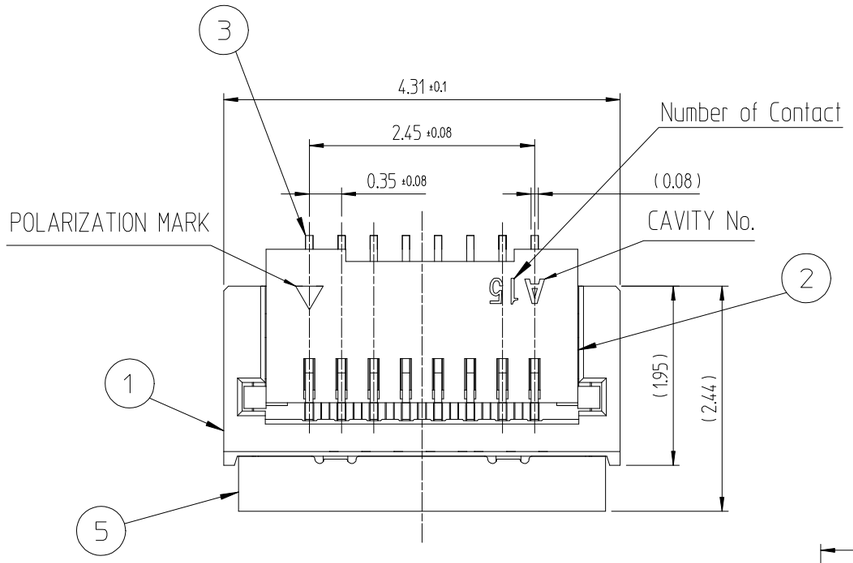
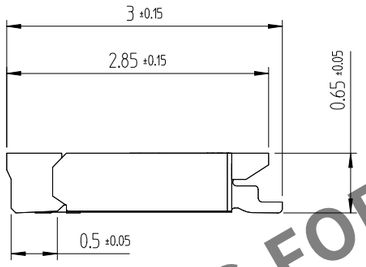
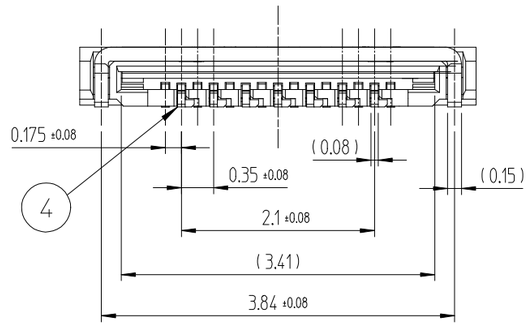
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	△数 COUNT	訂正事項 DISCRIPTION OF REVISIONS	擔當 B Y	檢圖 CHKD	年月日 DATE		△数 COUNT	訂正事項 DISCRIPTION OF REVISIONS	擔當 B Y	檢圖 CHKD	年月日 DATE
△1	4	RE-5-2634	OCU	CDH	21. 06. 16	△					. .
△					. .	△					. .
△					. .	△					. .

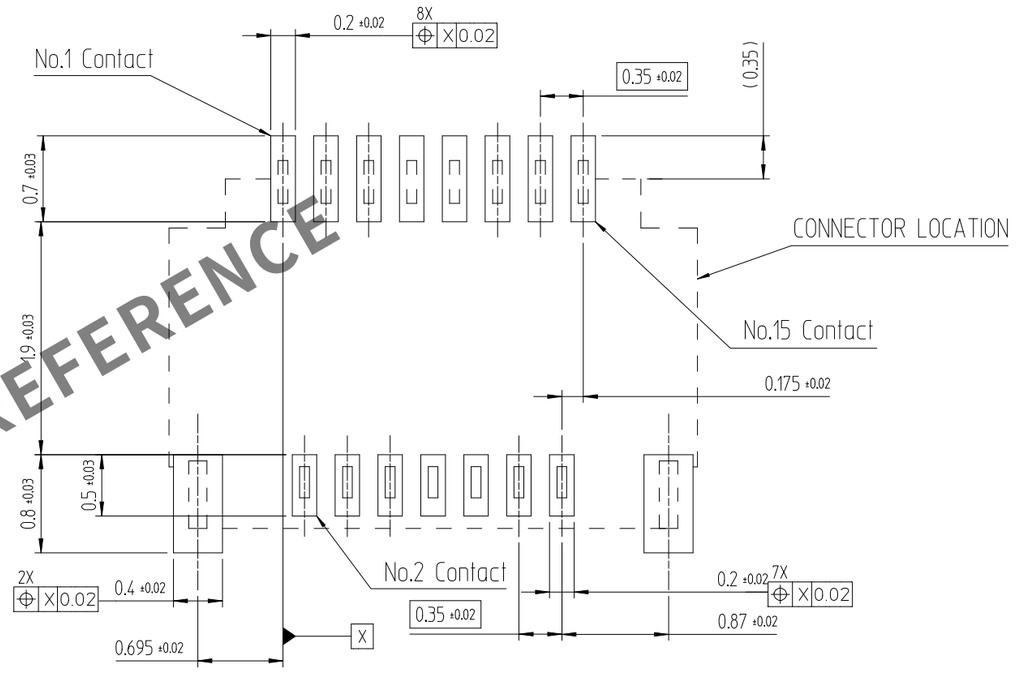






RECOMMENDED PCB PATTERN

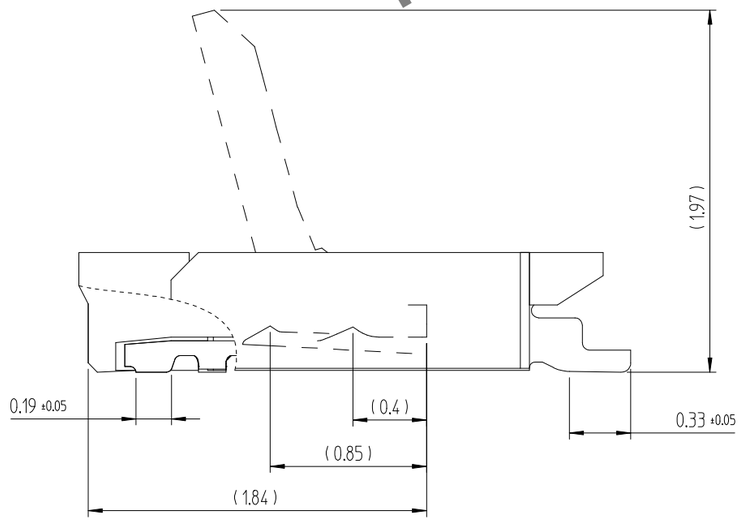
(RECOMMENDED METAL MASK = 0.1mm) (SCALE FREE)



HRS DRAWING FOR REFERENCE

ACTUATOR OPEN)

(30:1)



NOTE

1. EMBOSS PACKING
2. LEAD CO-PLANARITY SHALL BE 0.1mm MAX

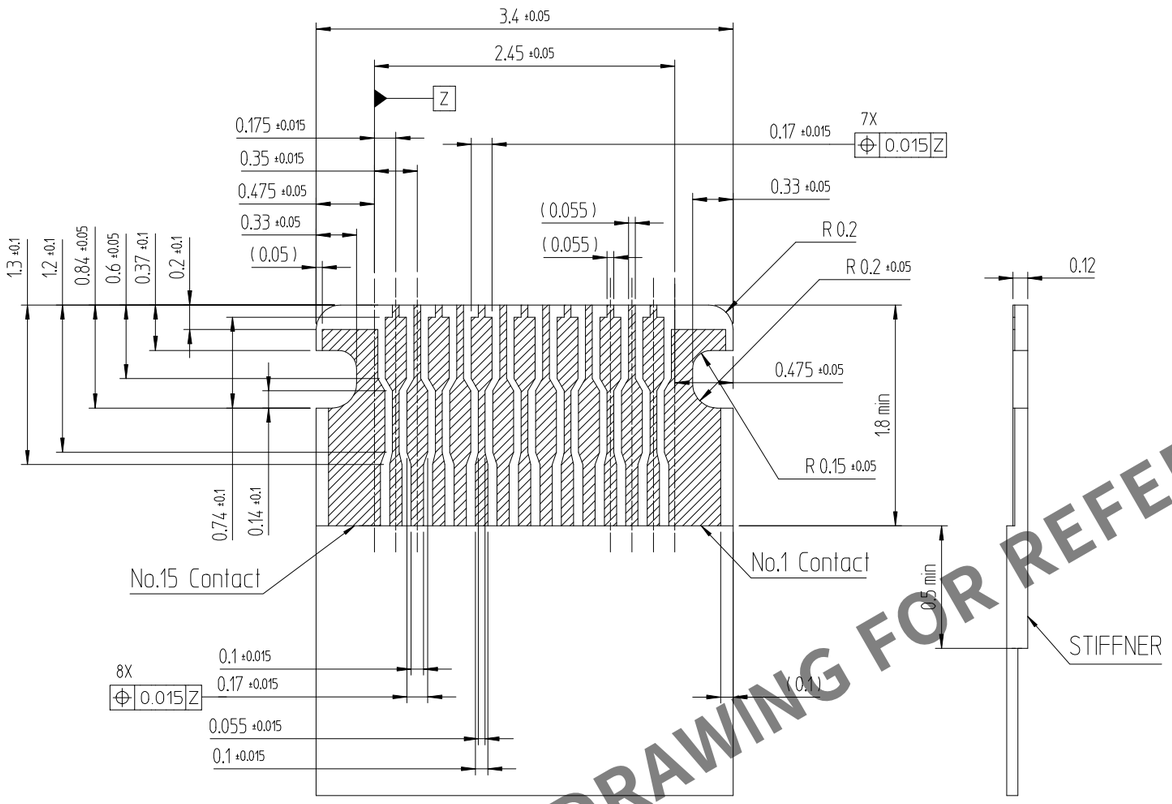
4	PHOSPHOR BRONZE	(CONTACT AREA) Au 0.05μm MIN OVER Ni 1μm (LEAD AREA) Au 0.05μm MIN OVER Ni 1μm (OTHER) Ni PLATING 1μm MIN			
3	PHOSPHOR BRONZE	(CONTACT AREA) Au 0.05μm MIN OVER Ni 1μm (LEAD AREA) Au 0.05μm MIN OVER Ni 1μm (OTHER) Ni PLATING 1μm MIN	8	(CONNECTOR)	
			7	POLYESTER	
2	PA9T(GP2450NH)	BLACK UL94-0	6	POLYESTER	
1	LCP(S475)	BLACK UL94-0	5	PHOSPHOR BRONZE	Ni 1μm + SN 1μm MIN
NO.	MATERIAL	FINISH,REMARKS	NO.	MATERIAL	FINISH,REMARKS

CODE NO. (OLD)	DRAWN	DESIGNED	CHECKED	APPROVED	RELEASED
	C.U.Oh 19.12.09	C.U.Oh 19.12.09	C.U.Oh 19.12.09	D.H.Cho 19.12.09	ENG 21.06.24 DEPT

SCALE 20:1 UNITS mm	DRAWING NO. EDC3-632840-80	PART NO. TF20-15S-0.175SHW(800)
	HRS HIROSE KOREA CO.,LTD.	CODE NO CL 6556-0003-4-800 1/5

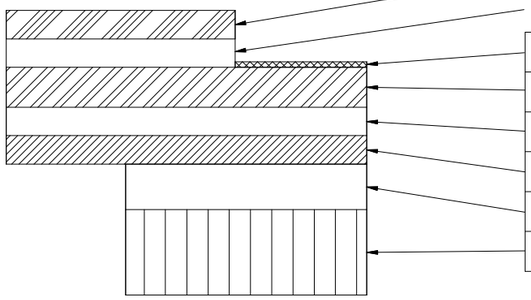
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RECOMMENDED FPC (FREE)



HRS DRAWING FOR REFERENCE

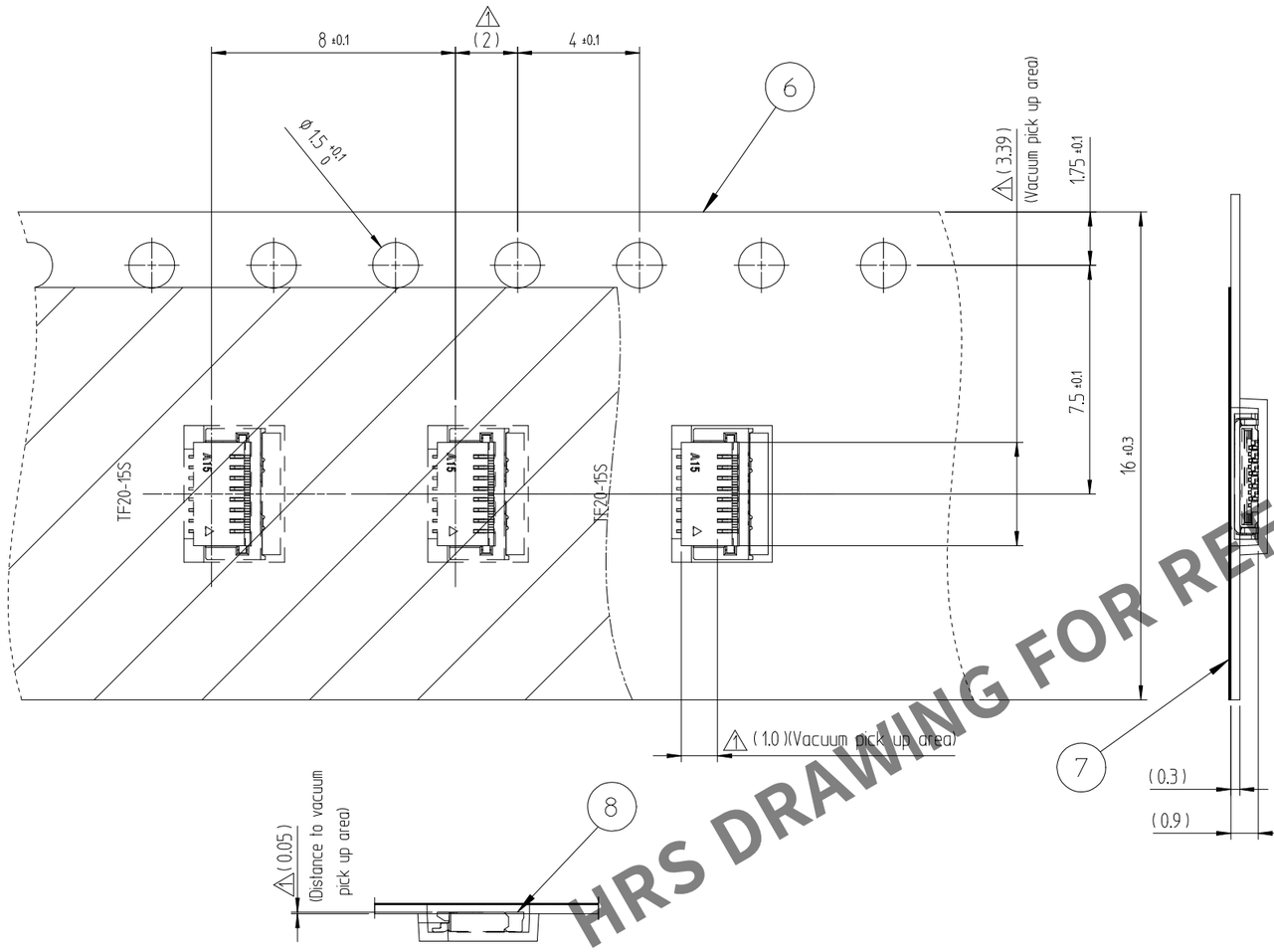
FPC CONSTRUCTION (Recomended Specifications)



MATERIAL	MATERIAL	Type (1) (0.15A) THICKNESS(μm)	Type (2) (0.2A) THICKNESS(μm)
COVERING FILM LAYER.	POLYIMIDE	12.5	12.5
COVER ADHESIVE		25	25
SURFACE TREATMENT	PLATING TREATMENT	(4)	(4)
COPPER FOIL	C u	18	35
BASE ADHESIVE			
BASE FILM	POLYIMIDE	25	25
REINFORCEMENT MATERIAL ADHESIVE	HEAT-HARDENED ADHESIVE	30	30
STIFFENER	POLYIMIDE	50	30

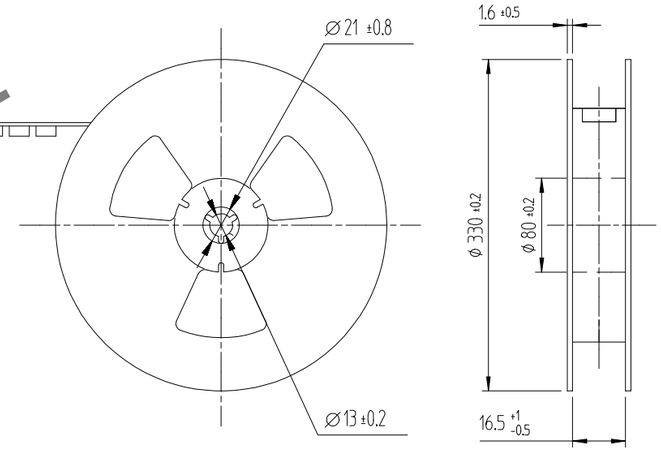
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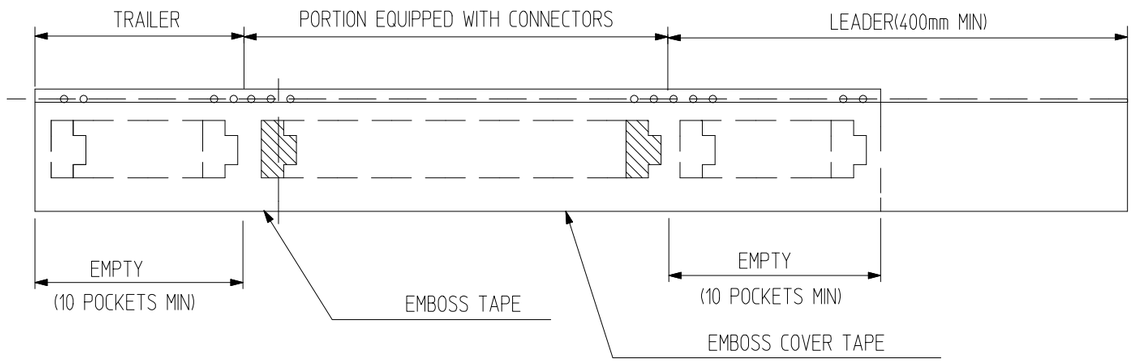
DIRECTION OF UNREELING



HRS DRAWING FOR REFERENCE

STYLE AND DIMENSION OF REEL(FREE)





NOTE1. 1REEL: 5,000EA CONNECTORS

HIROSE KOREA CO.,LTD.	PART NO. TF20-15S-0.175SHW(800)	⚠1	3/5

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HRS DRAWING FOR REFERENCE

This connector requires delicate and careful handing.
Read through the instructions shown below and the connector properly.
Each values indicating here are for reference and may differ from standard value.

[INSTRUCTIONS FOR MOUNTING ON THE BOARD]

◆ Warp of Board
Minmize warp of the board as possible
Lead co-planarity including reinforced metal fitting is 0.1mm or less
Too much board warpage may result in soldering failures or co-planarity issues.

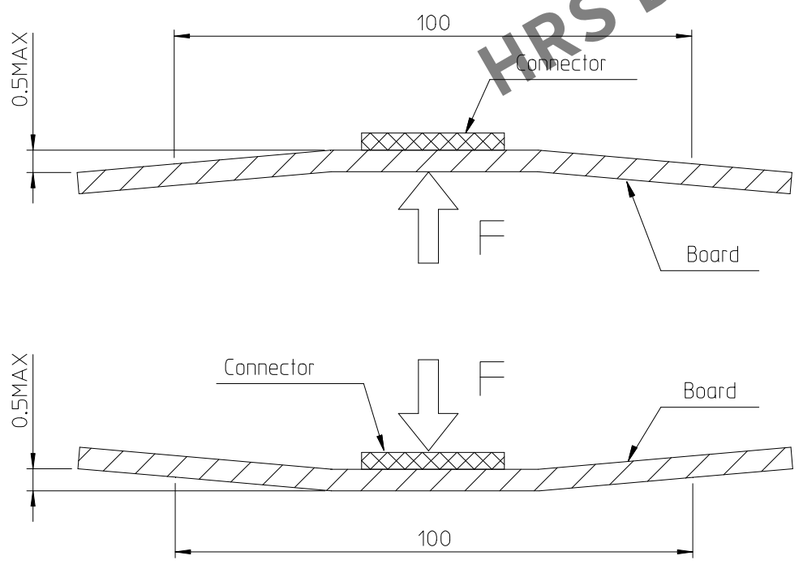
◆ Load to Connector
Do not apply a force of 0.5N or more to the connector before mounting it on the board.
Otherwise, the connector may be broken.
Do not warp the FPC or operate the connector before mounting it.

◆ Flexible board design
Please male sure to put a stiffener on the backside of the flexible board.
We recommended a glass epoxy material with the thickness of 0.3mm MIN.

[INSTRUCTIONS FOR PCB HANDLING AFTER MOUNTING THE CONNECTOR]

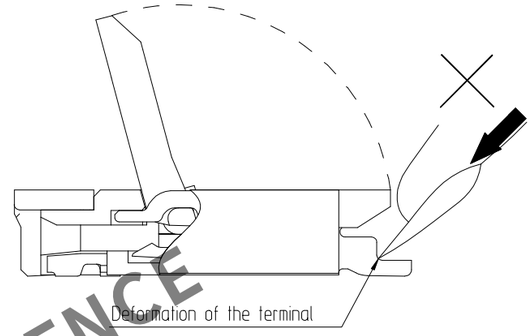
◆ Load to board
Splitting a large board into seveal pieces
Screwing the board
Avoid the handling described above so that no force is exerted on the board during the assembly process.
Otherwise, the connector may become defective.

◆ Amount of Warp
The warp of a 100-mmwide board should be 0.5mm or less.
The warp of board suffers stress on connector and connector may become defective.

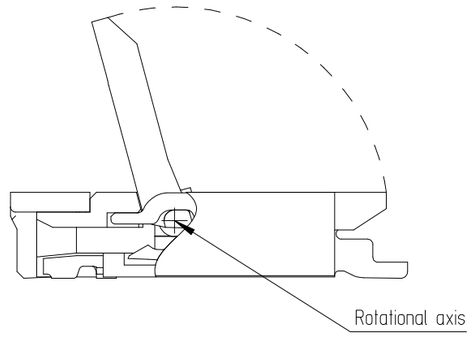


[INSTRUCTIONS ON INSERTING FFC/FPC AND CONNECTOR]

◆ Use of the Actuator
1. Be very careful not to apply excessive force when releasing the Actuator.
in the initial position (with no FPC inserted)
if you use your nail or finger as shown, the terimals may be deformed.

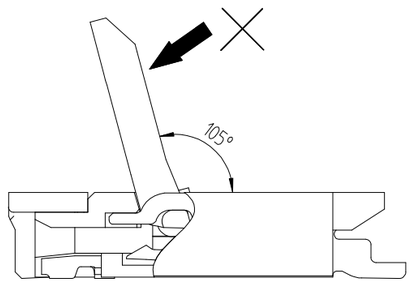


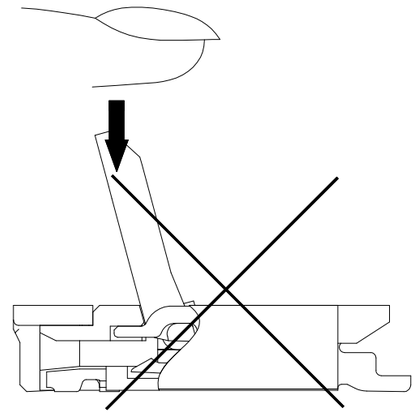
2. The actuator rotates around the rotational axis as shown below.
Please rotate the actuator.



3. Please do not push downwards to the Actuator with more than 0.3N force, as shown below.
Otherwise, the Actuator may fall off or be damaged.

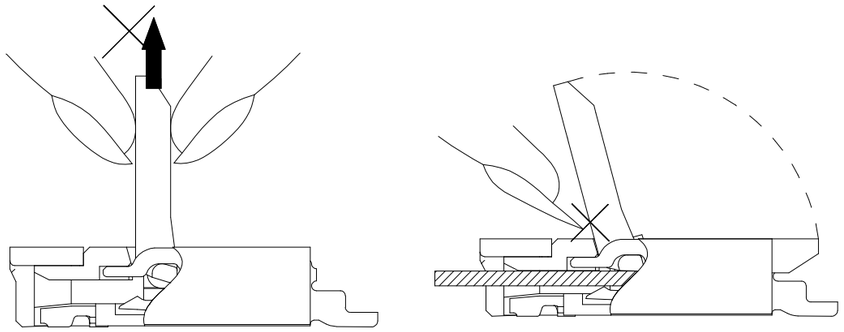
4. The actuator will not open more than 105°.
Do not apply any force backward beyond this point.
Otherwise the actuator may come off or braek.





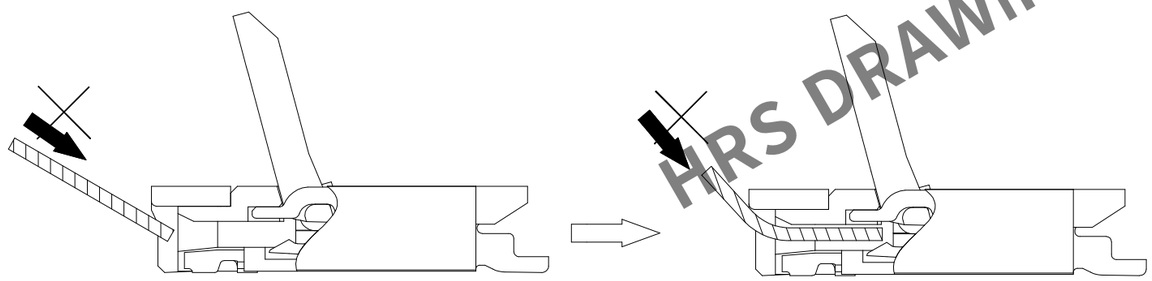
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5. Move the actuator at approximately the center.
   (It may break if operate the edge of the actuator with FPC inserted.)
6. Do not pinch or pick the actuator to lift it as shown below, Otherwise, it may break.
   (Do not carry out any operation other than rotating the actuator as shown in 2 above.)



♦ Direction of Contacts
This connector has contacts on the bottom. Thus, insert FPC with the exposed conductors face down.

Inserting the FPC
1. Insert the FPC horizontally along the surface and at a right angle to the connector.
   Insert it properly to the very end.
   If the FPC is inserted at a slant(incorrectly)
   the conductors may short-circuit due to pitch shift or the edge of the FPC may catch in the terminals.
   resulting in deformation of the terminals.
   This connector has a ZIF structure and its effective engagement length is 1.84mm
   (when the recommended FPC nominal is used)
   Use the actuator carefully to prevent the FPC from dislocating after inserting it.



2. Do not insert the FPC diagonally from above
   If the FPC is inserted at a slat (incorrectly) as shown below in the FPC insertion process,
   the FPC may bend and patterns may break or the FPC may not insert completely.
   resulting in improper conduction.

Keep a sufficient FPC insertion space in the stage of the layout in order to avoid incorrect FPC insertion.
  Besides, it is not difficult to insert FPC correctly al the way to the end.
  Designed the proper layout of parts.

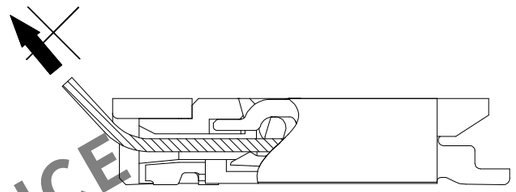
Make adjustments with the FPC manufacturer for bending performance and breakage resistant.

♦ Checking the Locking Condition
In the locked condition, make sure that actuator is horizontal on board surface.
Do not apply excessive force to it near the 0°position of the actuator.
Otherwise, the terminals may be deformed. (Allowable force:1N or less)

[INSTRUCTION ON FPC LAYOUT AFTER CONNECTOR]

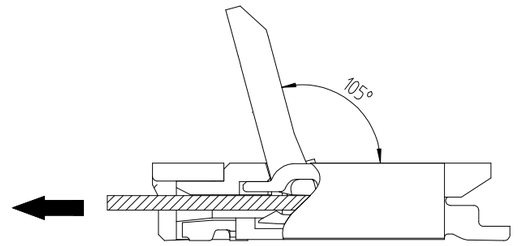
♦ Load to FPC
Be very careful not to apply any force to the FPC after inserting it.
Otherwise, the connector may become unlocked or the FPC may break.
Fix the FPC, in particular, when loads are applied to it continuously.
Design the FPC layout with care not to bend it sharply near the insertion opening.

Load: 0.25(N) x n MAX
(n: number of contacts)



[INSTRUCTIONS ON REMOVING FPC]

♦ Release the actuator at approximately the center.
(It may break if operate the edge of the actuator with FPC inserted.)



[OTHER INSTRUCTIONS]

♦ Instruction on Manual Soldering
Follow the instructions shown when soldering the connector manually during repair work, etc
1. Do not perform reflow soldering or manual soldering with the FPC inserted into the connector.
2. Do not heat the connector excessively. Be very careful not to let the soldering iron contact
   any parts other than connector leads. Otherwise, the connector may be deformed or melt.
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 rotating parts of the actuator, resulting inpoor contact or a rotation failure
   of the actuator.

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