

0.25 mm Pitch Ultra-low Profile FPC Back-lock Connector

RoHS2

FF28 Series [Upper Contact]

DDK Ltd.

OUTLINE

The FF28 connector series utilizes a cable lock mechanism to provide positive retention of the FPC. This LIF connector has a dedicated upper contact to interface with the FPC at a 0.25mm pitch. The ultra-low profile connector has a 0.66mm height, making it one of the smallest board mounted FPC LIF connectors on the market.



FEATURE

- DDK's original cam-type back-lock system provides reliable operation and ensures retention from inadvertent upward pulling of the FPC.
- The FF28 connector has an ultra-low height of 0.66mm.
- Each individual contact is rated to 0.2A current.
- The FPC is mechanically retained within the FF28 with DDK's cable-lock design.
- These ZIF connectors are delivered with the lock lever opened for maximum production efficiency.
- Contacts utilize a nickel barrier to prevent solder wicking.
- The housing and lock lever are made of heat-resistant resin making possible lead-free reflow soldering.
- FF28 ZIF connectors are delivered in a tape and reel package for automated machine processes.

Note : Please do not close the lock lever without inserting the FPC.

Since cable lock tabs electrify next contacts, please do not use the cable lock tabs as ground tabs.

APPLICATIONS

Mobile phone, notebook PC, PDA, other Portable devices

SPECIFICATIONS

Rated Voltage	50V AC (r.m.s.)
Rated Current	0.2A / Contact
Dielectric Withstand Voltage	200V AC (r.m.s.) / 1 minute
Insulation Resistance	50 M Ω min. at 250V DC
Contact Resistance	80m Ω max.

MATERIAL/FINISH



Item	Material / Finish
Conatct	Copper Alloy / Au (Flash) over Ni
Housing	LCP Resin (UL94V-0) / Ivory
Lock lever	PPS Resin (UL94V-0) / Black

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Please verify the latest specifications with our drawings.

0.25mm Pitch FPC Connector [Upper Contact]

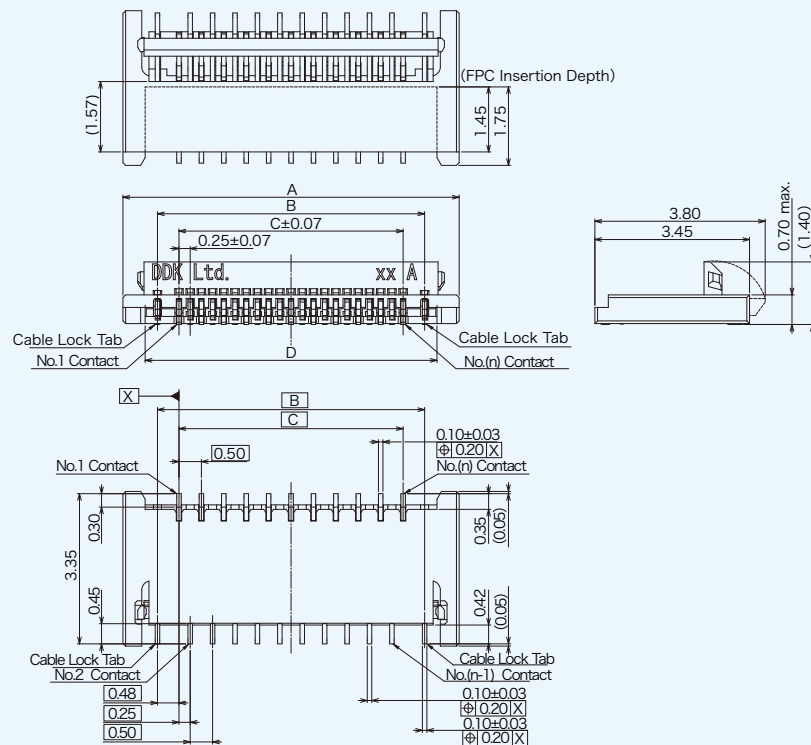
FF28- A-R11A-3H

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series	FF28
② Number of Contact	Refer to th table 1
③ Contact Position	A : Upper Contact Applicable PCB Thickness : 0.12±0.03mm
④ Contact Style	R : Right Angle
⑤ Contact Tail Length	1 : 0.45mm / 0.3mm
⑥ Contact Plating	1 : Au (Flash) over Ni
⑦ Lock Lever Style	A : Standard
⑧ Material	3H : Halogen Free

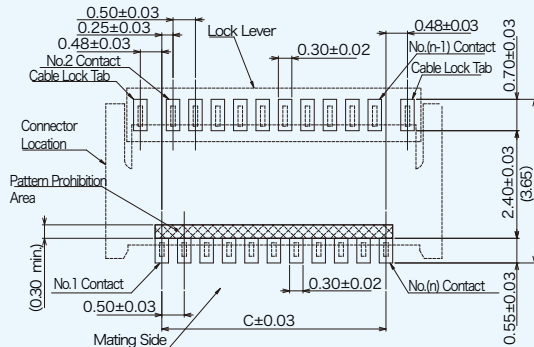
Dimensions

Odd Number of Contact

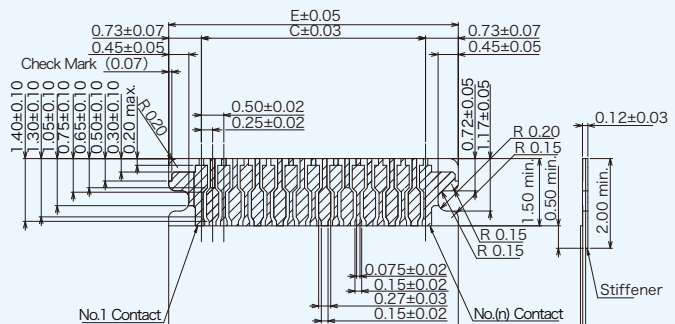


Recommended PCB Mounting Dimensions

Contacts are arranged zigzag on from No.1 contact.



Recommended FPC Dimensions



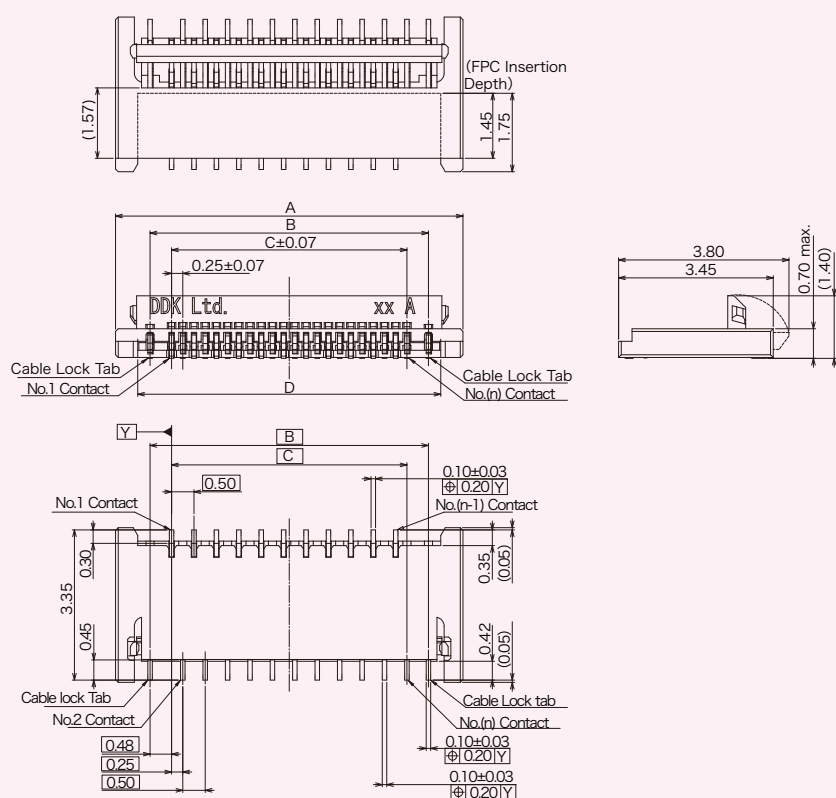
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<http://www.ddknet.co.jp>

Dimensions

Even Number of Contacts



Recommended FPC Dimensions

Contacts are arranged zigzag from No.1 contact.

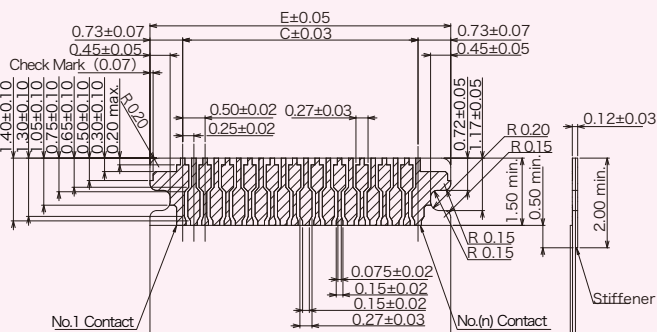
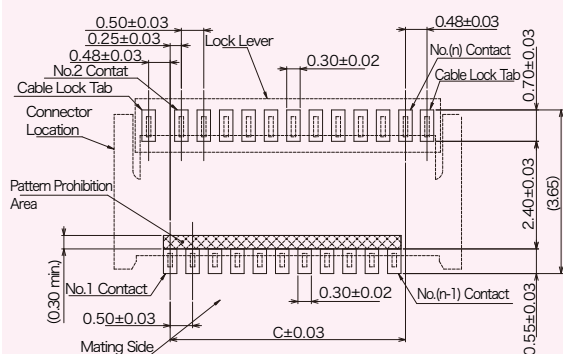


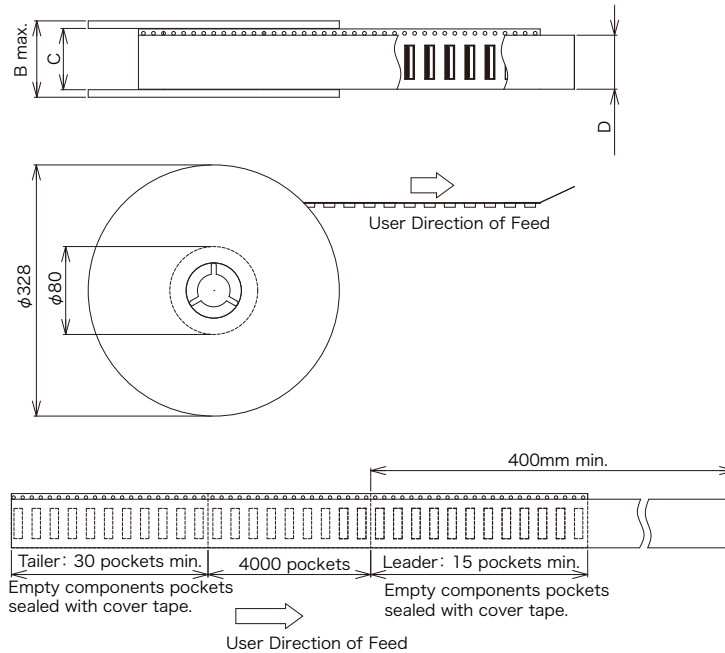
Table-1

Part Number	Number of Contact	A	B	C	D	E
FF28- 5A-R11A-3H	5	3.50	1.96	1.00	2.51	2.46
FF28- 8A-R11A-3H	8	4.25	2.71	1.75	3.26	3.21
FF28-12A-R11A-3H	12	5.25	3.71	2.75	4.26	4.21
FF28-15A-R11A-3H	15	6.00	4.46	3.50	5.01	4.96
FF28-30A-R11A-3H	30	9.75	8.21	7.25	8.76	8.71
FF28-35A-R11A-3H	35	11.00	9.46	8.50	10.01	9.96
FF28-41A-R11A-3H	41	12.50	10.96	10.00	11.51	11.46
FF28-45A-R11A-3H	45	13.50	11.96	11.00	12.51	12.46

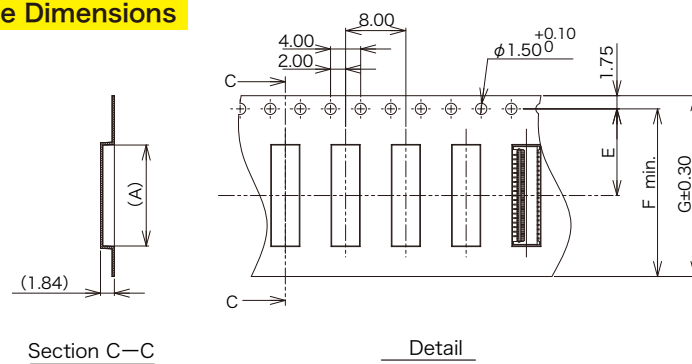
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► Packing Specifications

■ Reel Dimensions



■ Emboss Tape Dimensions



Part Number	Number of Contact	A	B	C	D	E	F	G
FF28- 5A-R11A-3H	5	3.80	22.4	16.4	13.5	7.5	14.25	16.0
FF28- 8A-R11A-3H	8	4.55						
FF28-12A-R11A-3H	12	5.55						
FF28-15A-R11A-3H	15	6.30	30.4	24.4	21.5	11.5	22.25	24.0
FF28-30A-R11A-3H	30	10.05						
FF28-35A-R11A-3H	35	11.30						
FF28-41A-R11A-3H	41	12.80						
FF28-45A-R11A-3H	45	13.80						

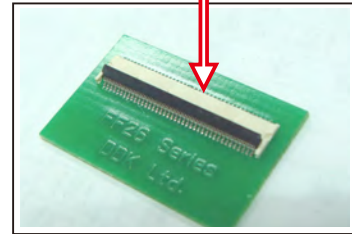
■ Quantity : 4000pcs. / Reel

▶ Operating Instruction and Cautions

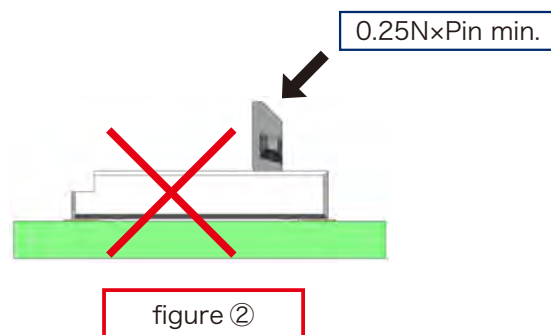
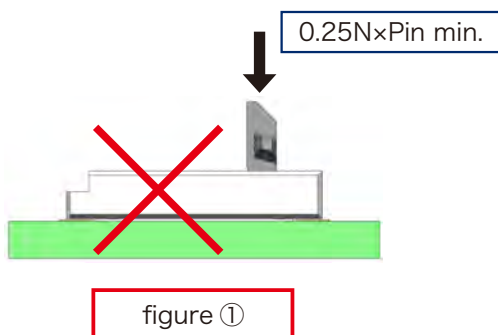
1. Connector mounting Instruction

- Connectors are delivered with the lock lever opened.
You do not have to operate the lock lever before inserting FPC.
(picture ①)
- Please do not re-flow with the lock lever in the closed condition.
- Please do not close the lock lever without inserting FPC.
Otherwise, the contact gap will become narrower and FPC insertion force will rise. (picture ②)
- Please do not load from the top of the lock lever. (figure ①)
And please do not load toward the opposite direction of the lock lever. (figure ②)
Otherwise, the lock lever may be broken or contacts may be deformed.

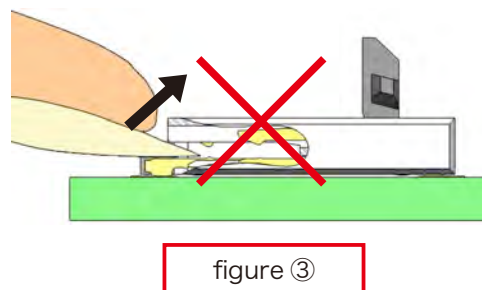
Lock lever is opened when delivery.



picture ①



- Please do not insert finger nail into the entry as it may damage the connector (figure ③)



▶ Operating Instructions and Cautions

Cable lock tabs conduct to both ends of contacts.

Please do not ground the cable lock tab pad on the mounting board. (figure ④)

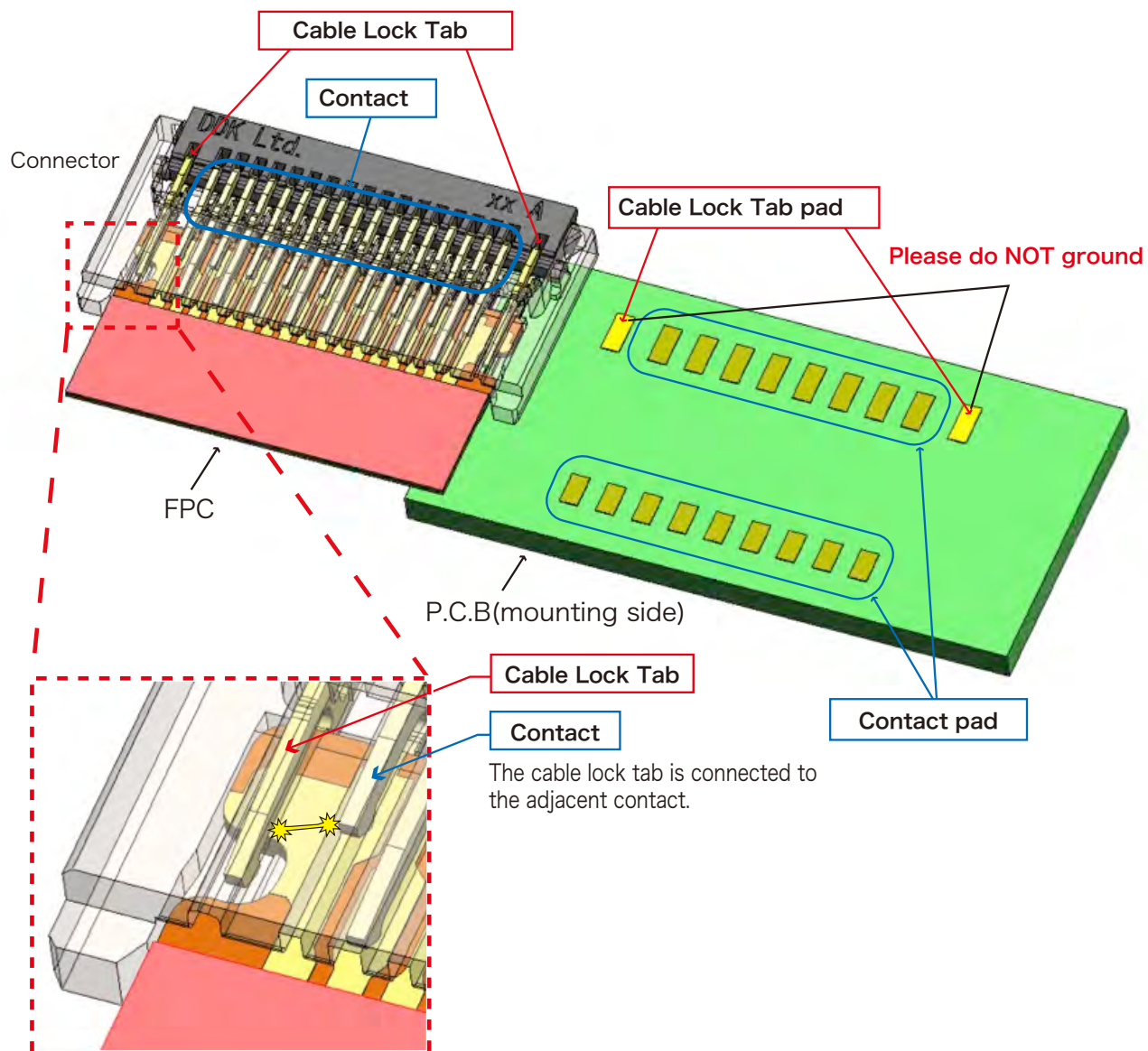


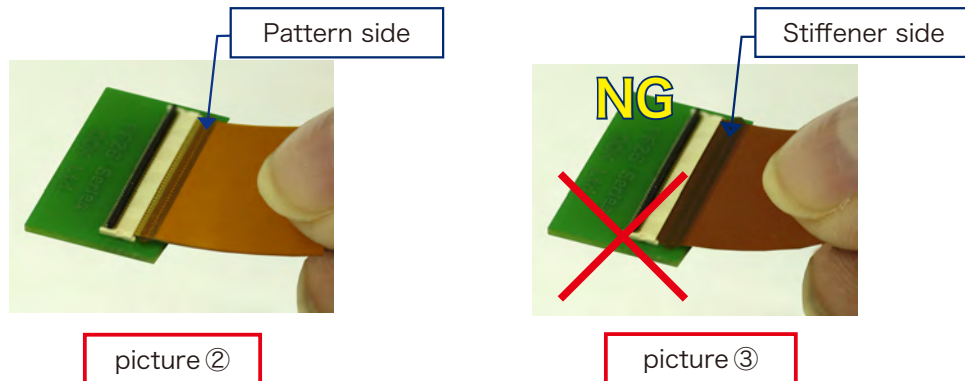
figure ④

▶ Operating Instruction and Cautions

2. FPC Insertion

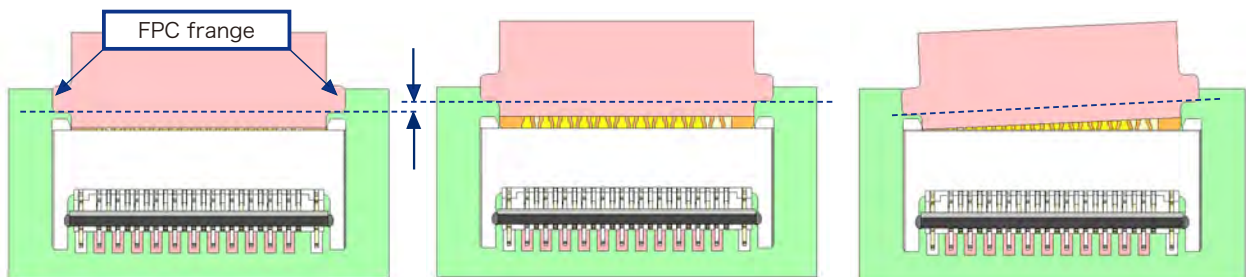
Please insert the FPC with the pattern side up.(correct: picture ② , wrong : picture ③)

- Please insert the FPC straight into the connector.
Due to the semi-retaining mechanism, some insertion force is necessary when inserting FPC.
FPC insertion is completed when the edges of the FPC are touching connector frange.



3. Correct FPC Insertion Position

- Check line enables a visual verification of the mating position.
It prevents shallow and diagonal insertion. (picture ⑤、⑥、⑦)

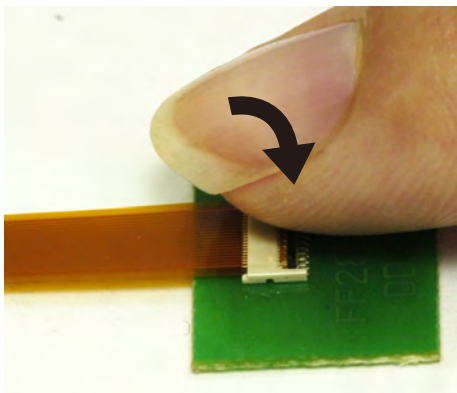


- If cable lock tabs catch the FPC correctly, FPC patterns are not dislocated from contacts.

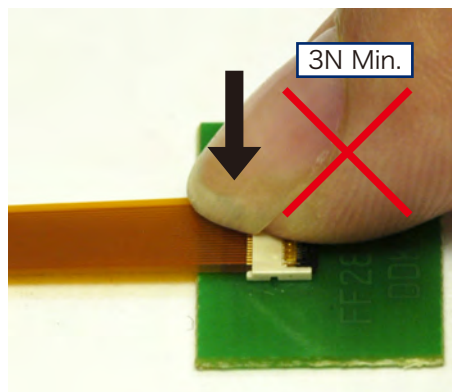
▶ Operating Instruction and Cautions

4. Closing Lock Lever

- Please rotate down the lock lever until firmly closed.(picture ④)
- ⚠ Please do not load excessive force on the housing.(picture ⑤)

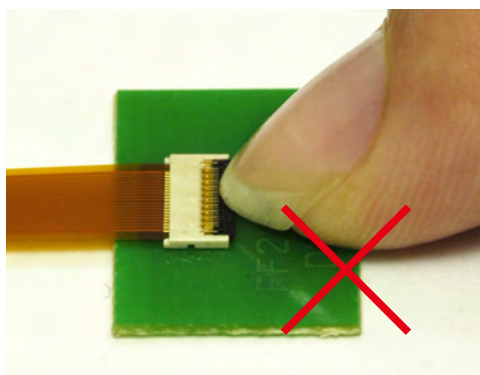


picture ④

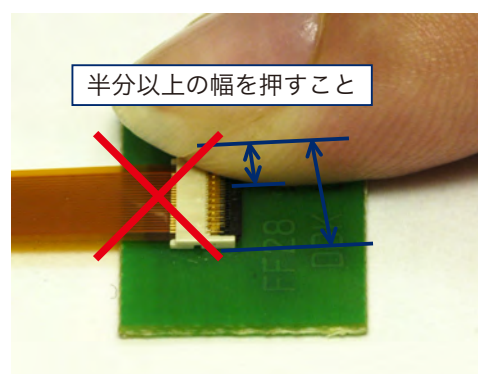


picture ⑤

- Please do not close the lock lever by tip of finger nail. (picture ⑥)
- Please hold the lock lever at least half width of it. (picture ⑦)



picture ⑥

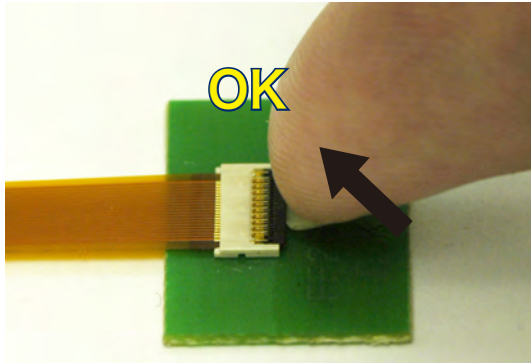


picture ⑦

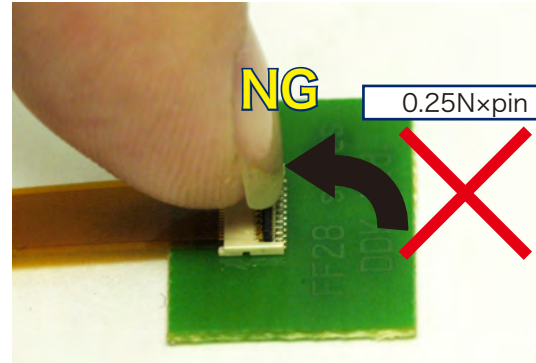
▶ Operating Instruction and Cautions

5. Removing FPC

- Please lift the lock lever by flipping up in the direction of arrow. (picture ⑧)
- Please do not load excessive force on the lock lever.(picture ⑨)



picture ⑧



picture ⑨

6. Others

- In case of hand soldering, please do not heap excessive solder on the contact tails. (above terminal 0.05mm max.)(figure ⑧)

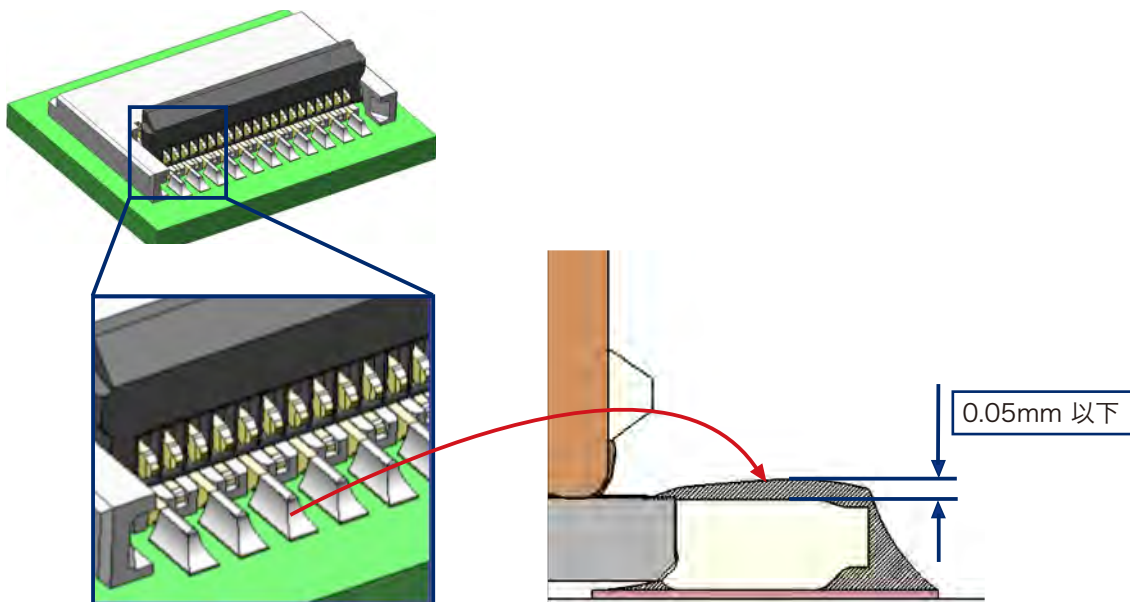


figure ⑧

7. ESD(Electrostatic Discharge)

- This connector does not protect the circuit from ESD.

8. Disposal of connector

- Please dispose the connector as industrial waste.