

# CABLINE®-CBL

Part No. Plug: 20472-\*\*\*T-10\*, Receptacle: 20474-0\*\*E-1\*\*

## Instruction Manual

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4	S17807	November 7, 2017	M. Imai	S. Kawamura	M. Takemoto
3	S15546	November 20, 2015	R. Hoshino	-	K. Narita
2	S15290	July 6, 2015	K. Fujiwara	K. Narita	T. Takano
Rev.	ECN	Date	Prepared by	Checked by	Approved by

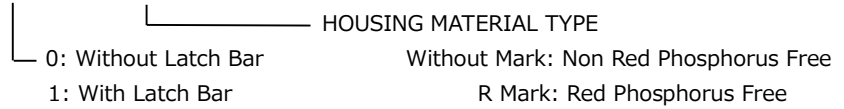
This manual provides the insertion and withdrawal methods and cautions to handle CABLINE-CBL connector properly.

**[Connector name and part number]**

**◆The cable side connector**

Product Name : CABLINE-CBL PLUG CABLE ASS'Y

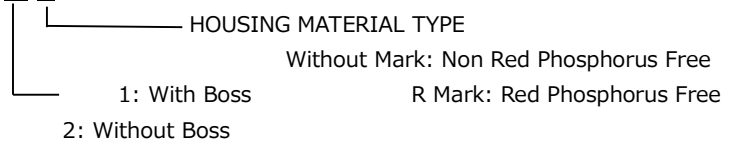
Part No. : 20472-#\*\*T-10\*



**◆The PCB side connector**

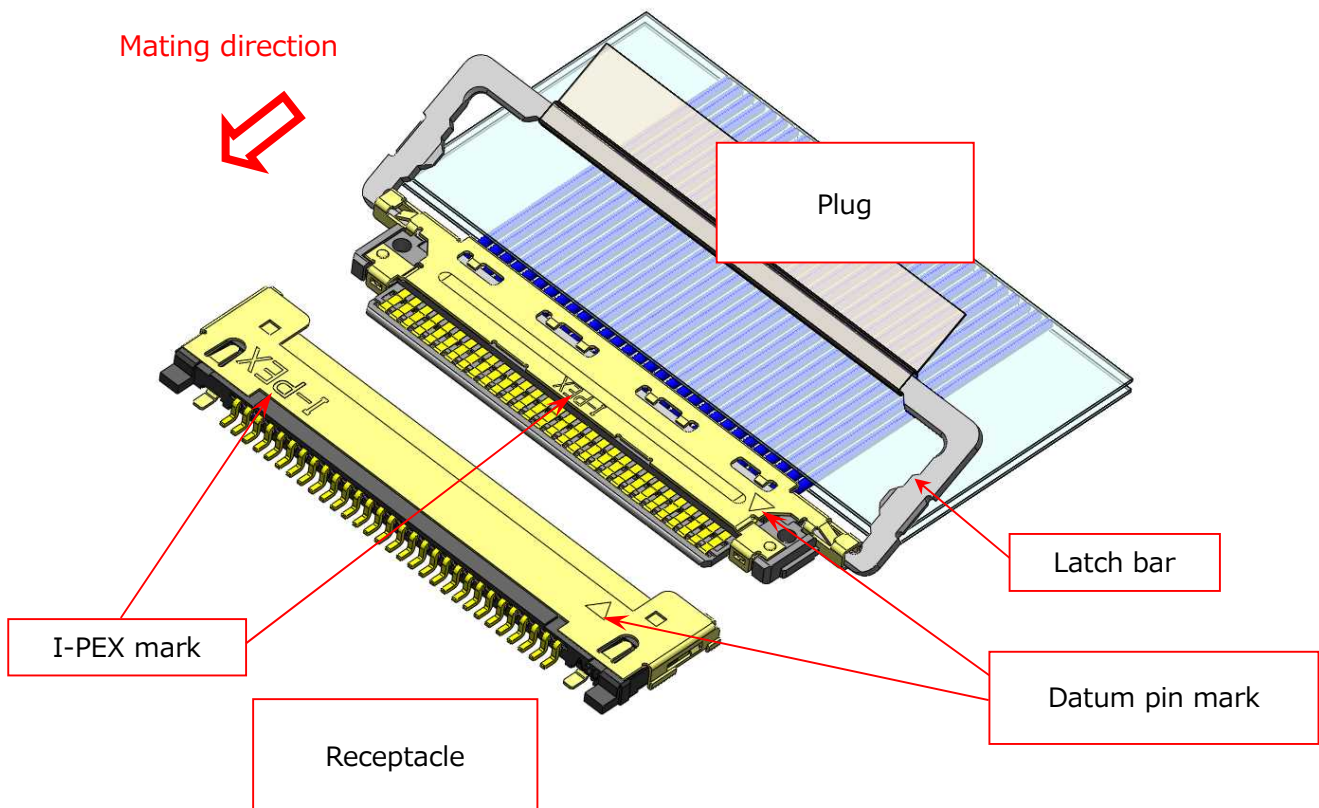
Product Name : CABLINE-CBL RECEPTACLE ASS'Y

Part No. : 20474-0\*\*E-1#\*



'\*\*' part shows the number of the connector position.

**[Names of each part of the connector]**



## 【Connector Insertion Method】

### 1. Direction to mate

As shown in Fig. 1, cable connector shall be inserted into PCB connector so that the cable locates on the opposite side of datum pin of the PCB connector.

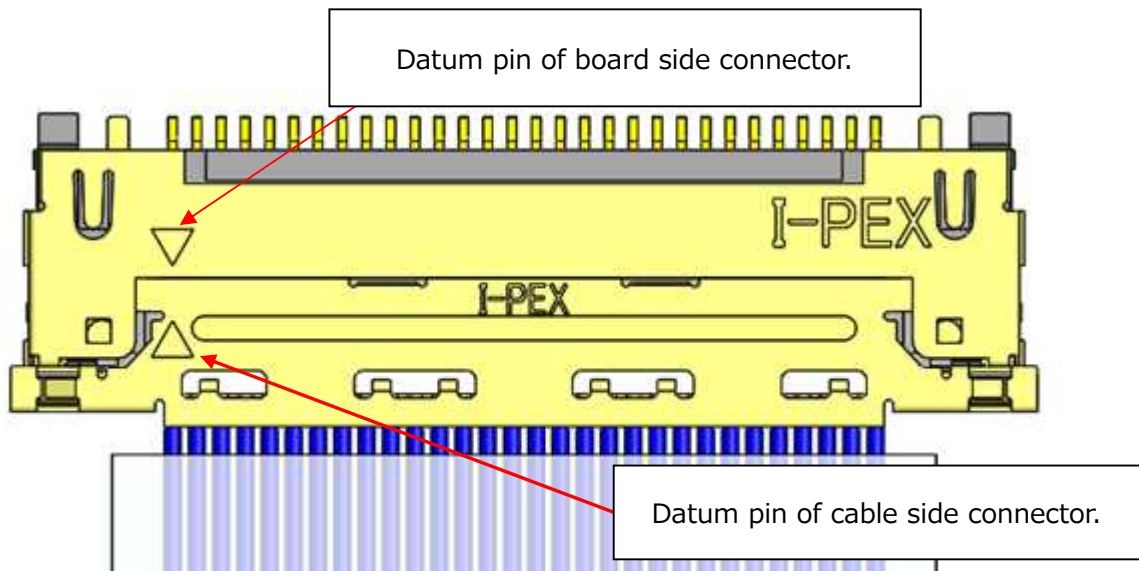


Fig. 1

For the connector with latch bar.

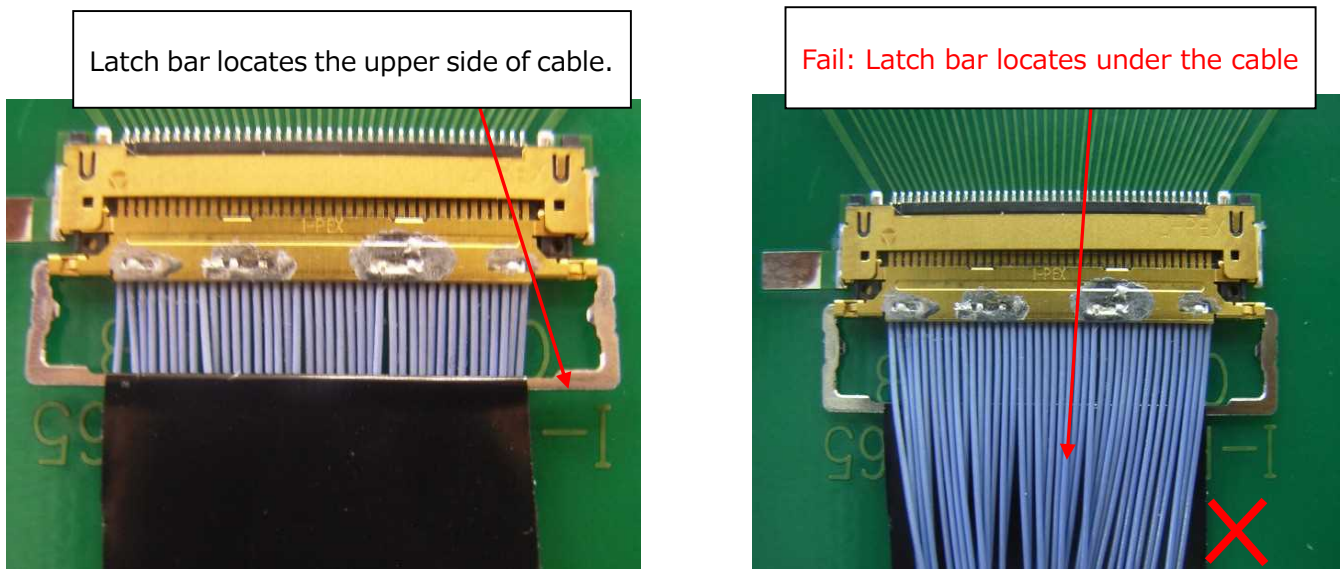


Fig. 2

2. How to mate

Push both ends of cable connector horizontally as shown in Fig. 3 until it is locked.

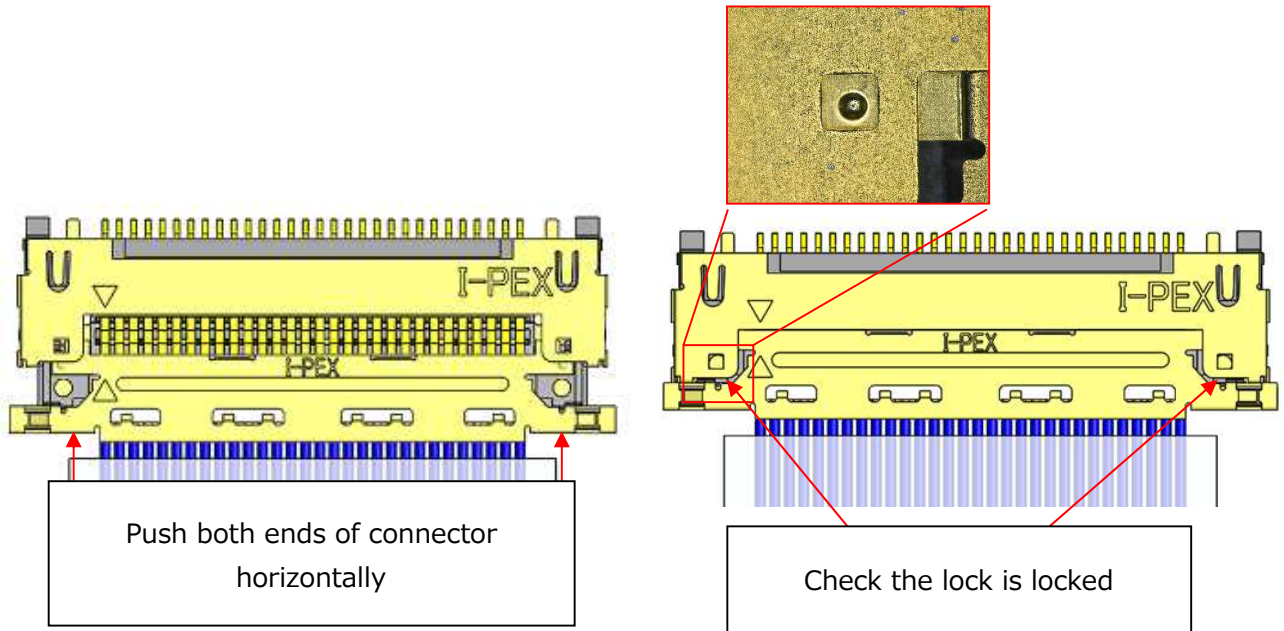


Fig. 3

For the connector with Latch bar.

From temporary inserting condition as shown in Fig. 4, turn Latch bar to the PCB connector side and push both ends of cable side connector horizontally. When the lock hole is locked, the mating is completed.

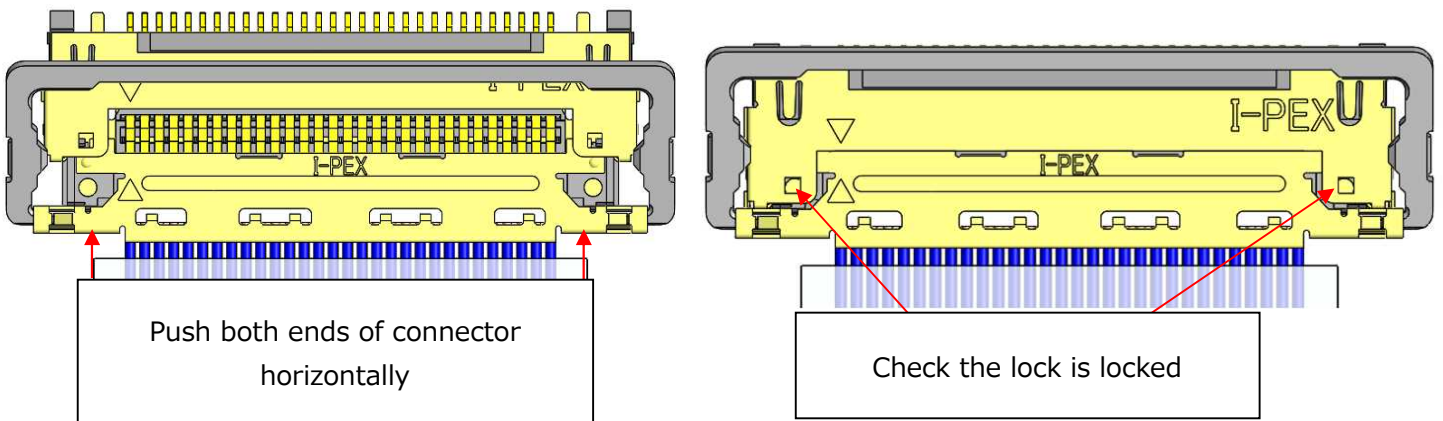


Fig. 4

Cautions

When you push one end by one end, there is possibility to cause a gap.

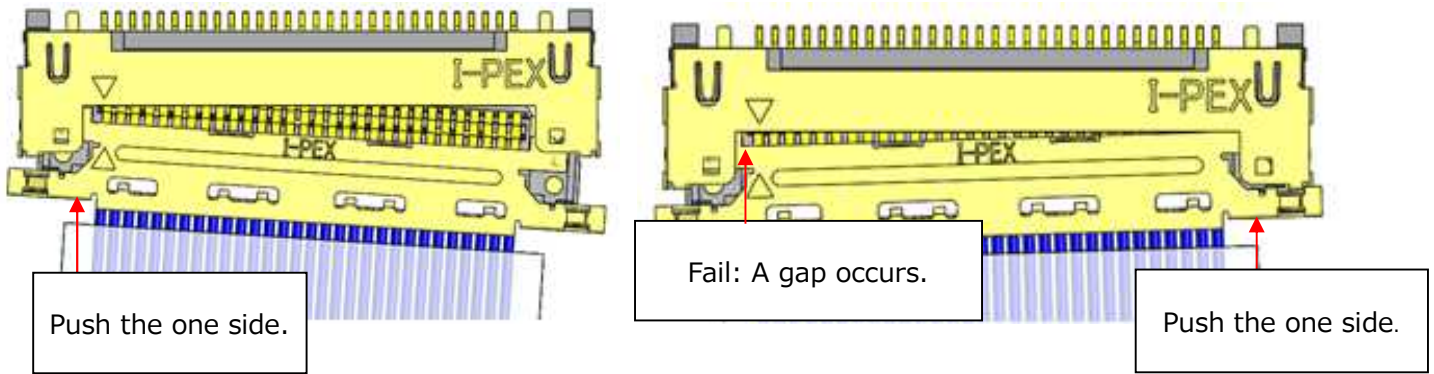


Fig. 5

Please do not apply force toward the PCB side to the plug connector in insertion.  
PCB will be damaged like below and it may cause the disconnection of the pattern or the short.

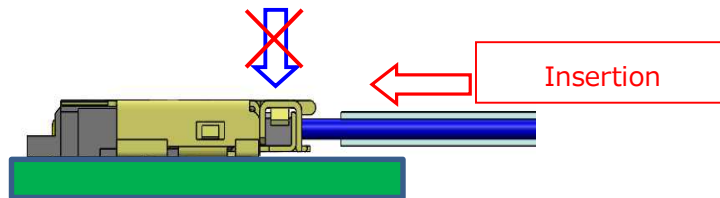


Fig. 6

For the connector with Latch bar.

In insertion, in case you mate the connector pushing latch bar as shown in Fig. 7, there are possibilities to cause latch bar deformation or the rotation axis dropping out from the connector.

Please don't push latch bar.

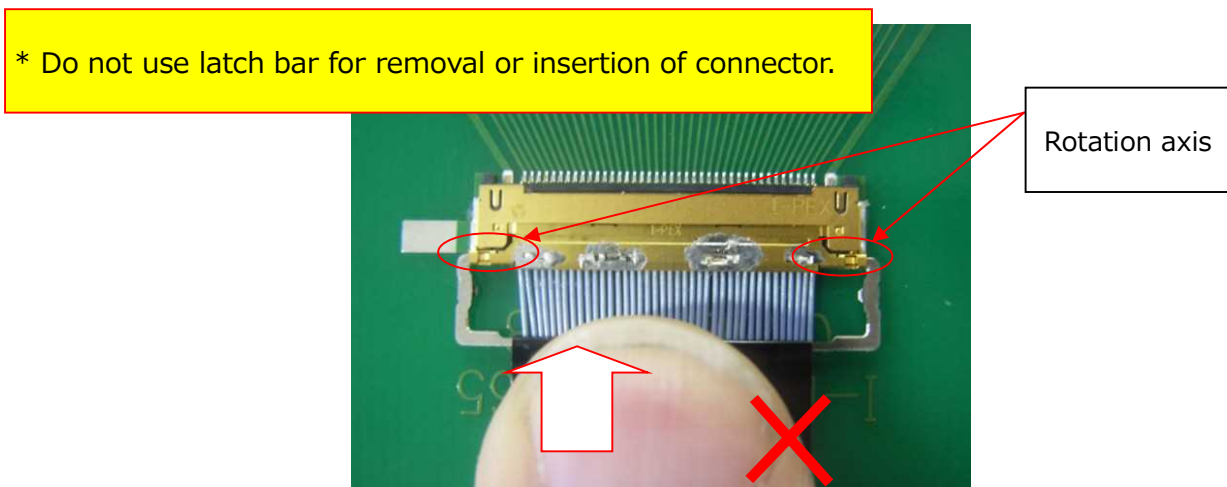


Fig. 7



## Horizontal direction

To use this connector safely, please keep insert slant  $10^\circ$  or less as shown in the photograph below. When you insert only one side in the temporary insert condition, maximum slant degree will become  $10^\circ$ . By keeping the slant  $10^\circ$  or less, deformation of the connector doesn't occur.

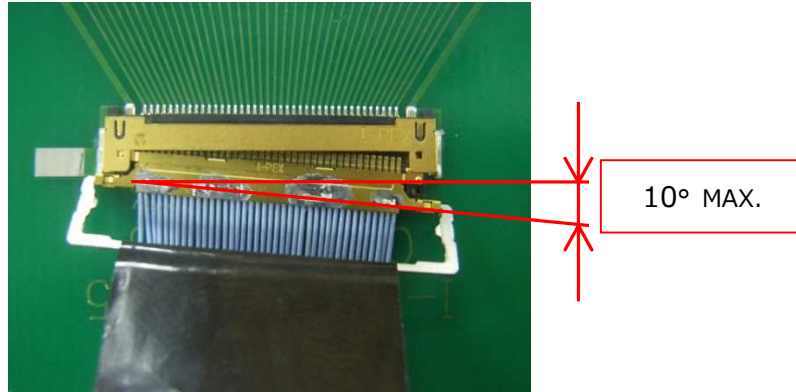


Fig. 8  $10^\circ$  slanted condition

## Vertical Direction

The acceptable angle to start connector insertion is below.

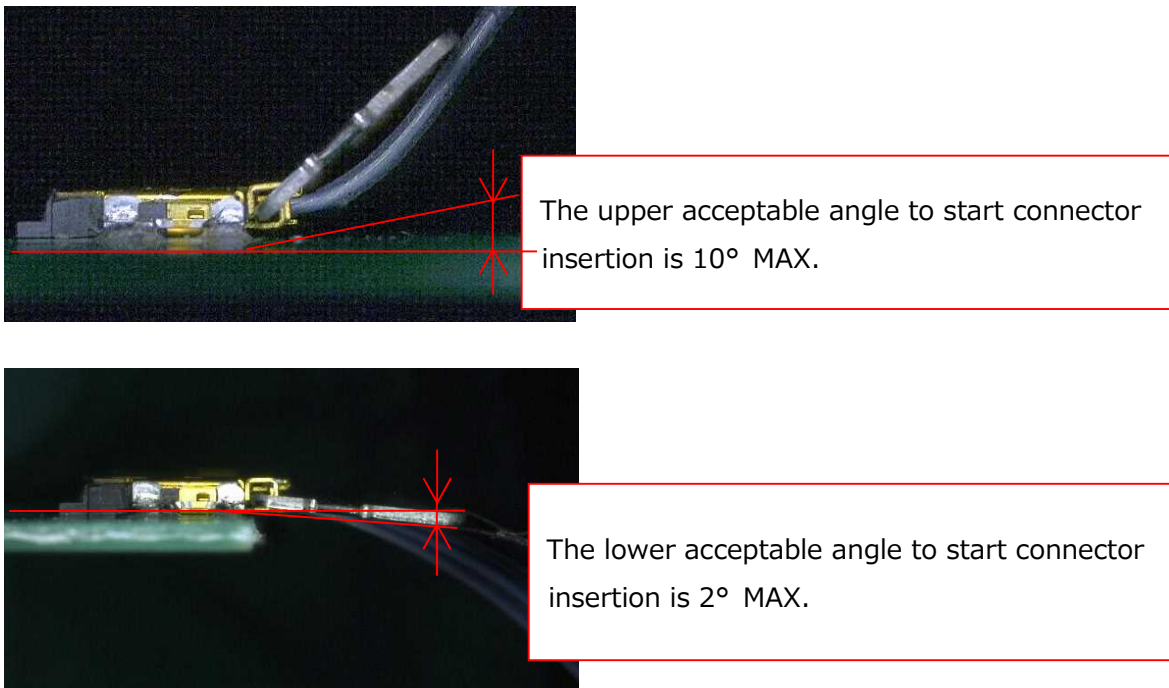
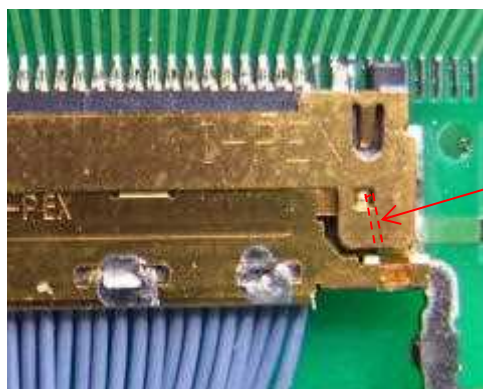


Fig. 9

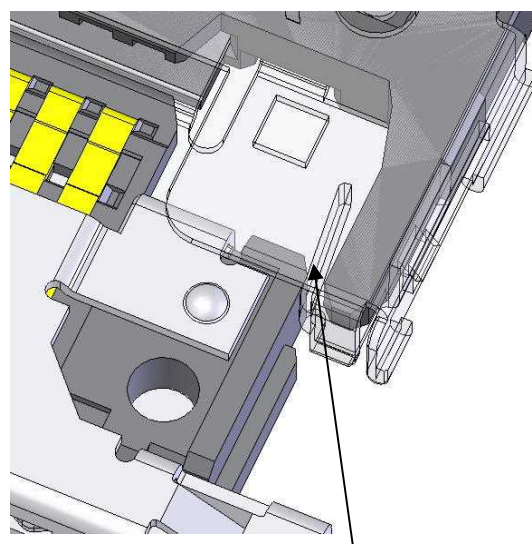
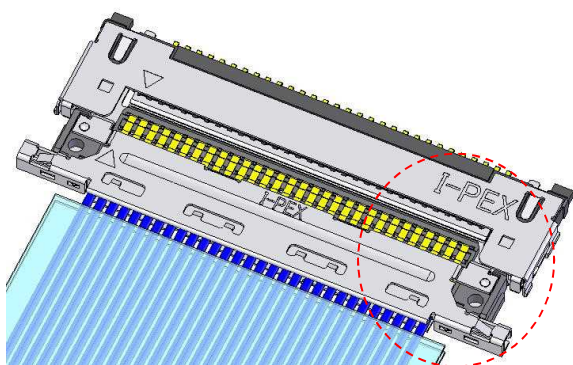
Receptacle shell has an insertion guide as shown in the photograph below.

Please insert connector along this guide.

As long as inserting along the guide, deformation of the connector doesn't occur.



The guide shape on the back side of shell



Receptacle shell guide

Fig. 10

### 3. How to lock

After mated, latch bar rotated and push both ends of latch bar vertically as shown in Fig. 11 until it is locked.

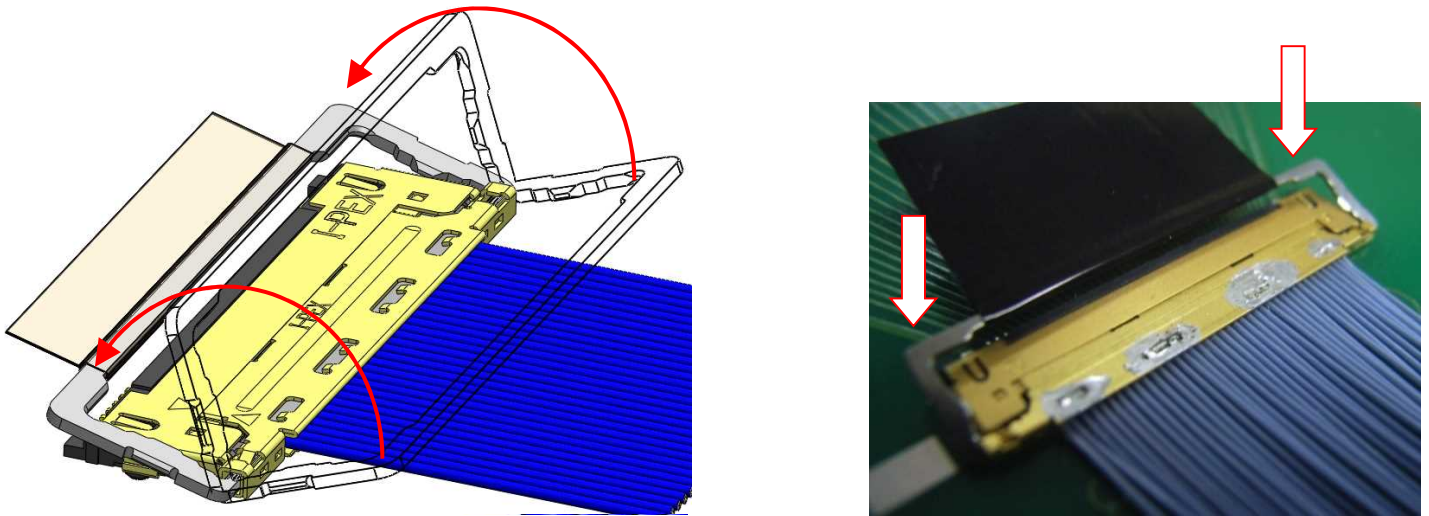


Fig. 11

Contents of confirmation :

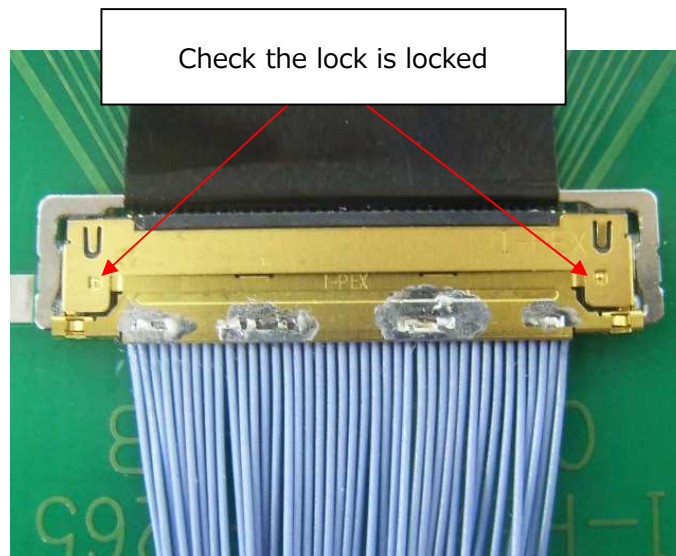
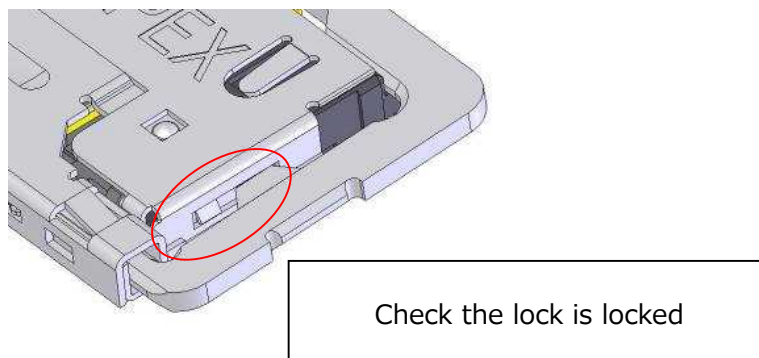


Fig. 12





## 【Connector Withdrawal Method】

### 1. Withdraw connector

Withdraw cable side connector in parallel with board side connector as shown in the Fig 13.

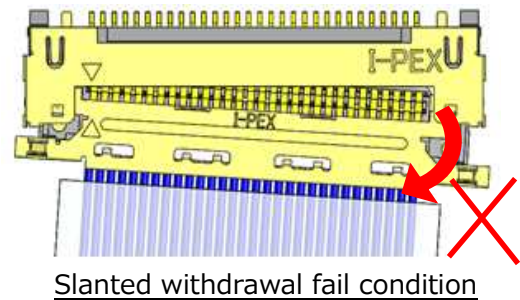
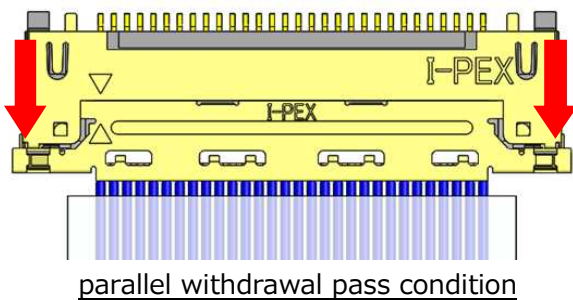
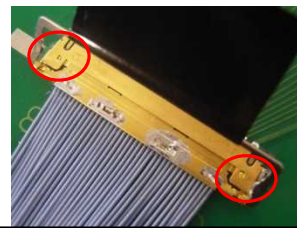
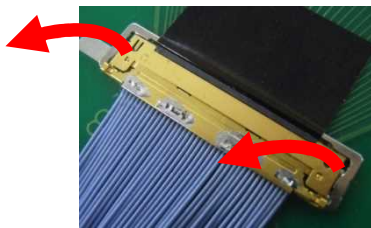


Fig. 13

For the connector with Latch bar.

Pull up both ends of latch bar vertically at the same time as shown in Fig. 14 until the right and left sides of locks are unlocked.



Check the lock is unlocked

Fig. 14

Withdraw cable side connector in parallel with board side connector as shown in the Fig 15.

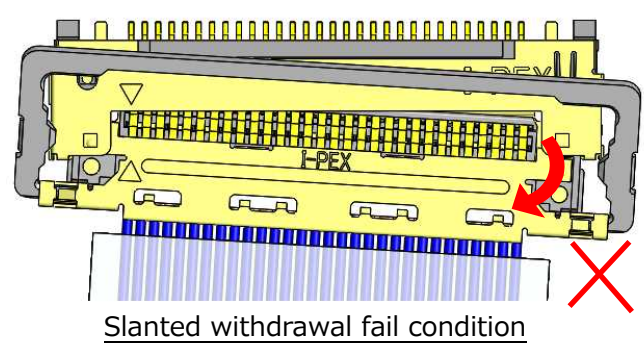
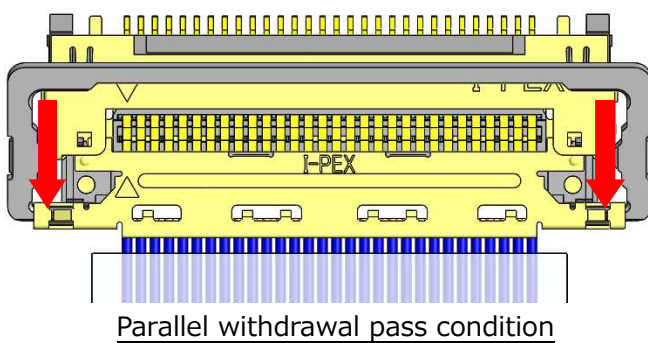


Fig. 15

Deformation of the latch bar occurs, if you pull up only center of latch bar.

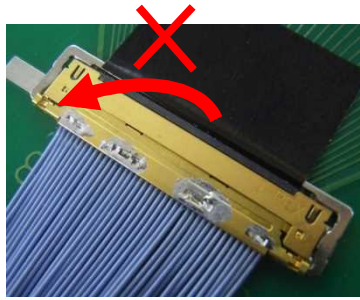


Fig. 16

To use this connector safely, please keep insert slant  $10^\circ$  or less as shown in the photograph below. By keeping the slant  $10^\circ$  or less, deformation of the connector doesn't occur.

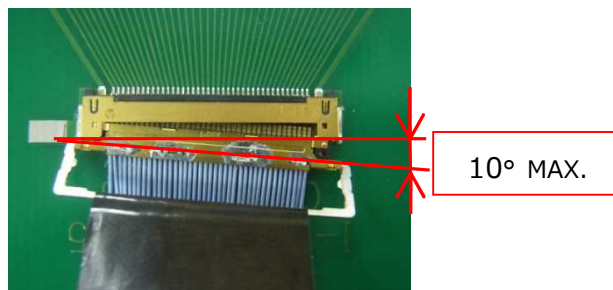


Fig. 17  $10^\circ$  slanted condition

## Cautions

Please do not apply force toward the PCB side to the plug connector in withdrawal.  
PCB will be damaged like below and it may cause the disconnection of the pattern or the short.

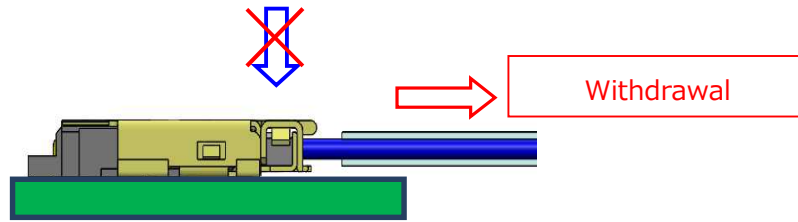


Fig. 18

For the connector with latch bar.

In withdraw, in case you unmate the connector pulling center of latch bar as shown in Fig. 19, there are possibilities to cause latch bar deformation or the rotation axis dropping out from the connector.

Please don't pull latch bar.

\* Do not use latch bar for removal or insertion of connector.

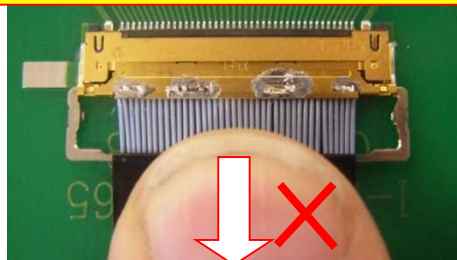
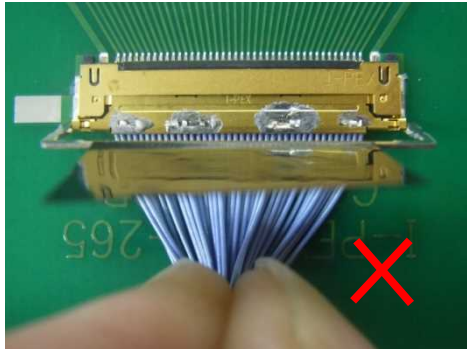


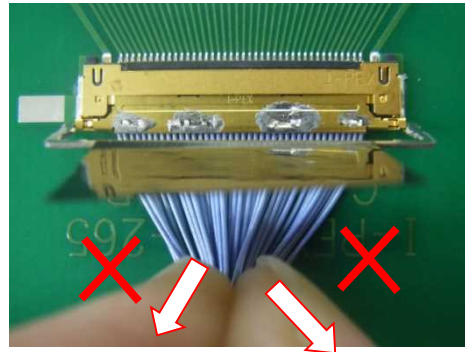
Fig. 19

**[Caution in cable connector handling]**

•In case you withdraw connector by pulling cable, there is possibility to break the cable. Please avoid such withdrawal. In addition, such withdrawal can cause locally-force to cable and the inner conductor can be damaged. Especially, slanted withdrawal by some cables is more dangerous. Please be careful.



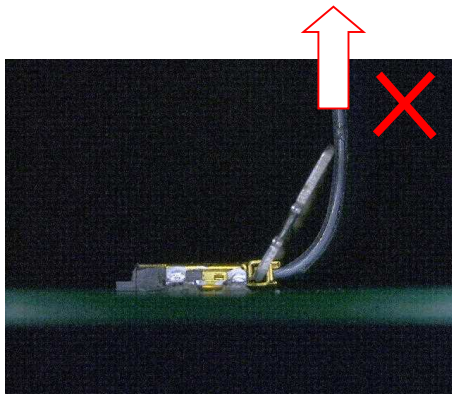
Fail



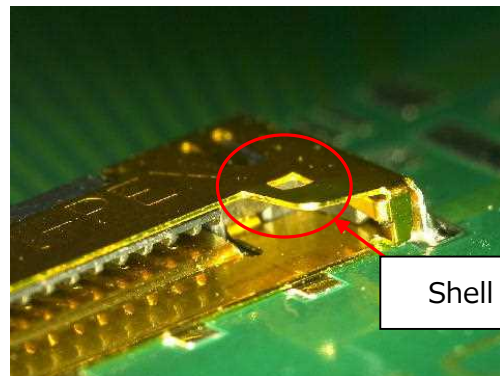
Fail

Fig. 20

In case the cable is pulled to the vertical direction, shell of the PCB side connector can deform. Please don't pull vertically. Similarly, latch bar should not be pulled to the vertical direction.



Fail for handling



Shell deformation

Fig. 21



- In cable harnessing work, be careful NOT to apply the pulling force to specific cables. Be careful NOT to apply the pulling force or repeated bending force to the cable attachment part of a cable connector.

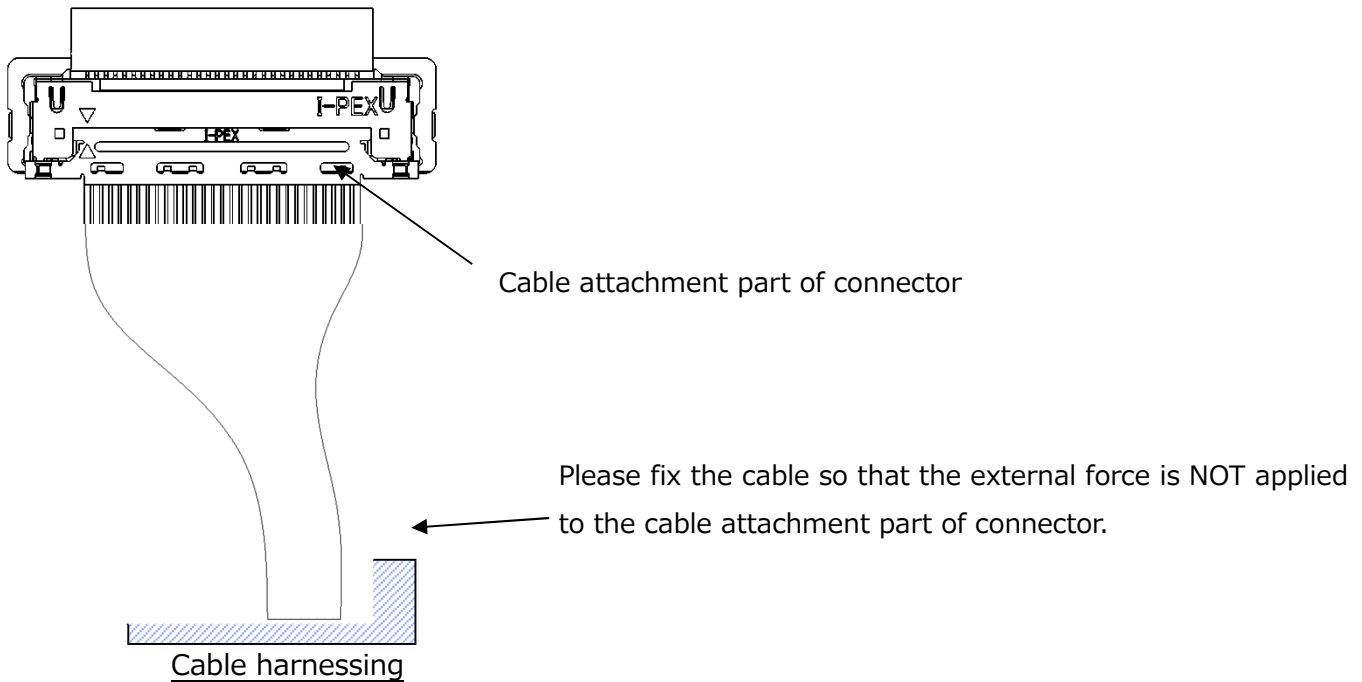


Fig.22

- Continuous force of the direction shown in black arrow in Fig. 23 can damage connectors or cause the coming off from receptacle connector. Please be careful NOT to apply such force.

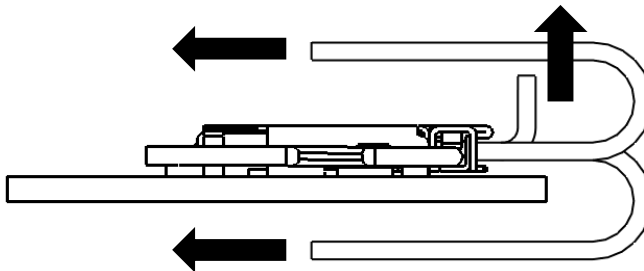


Fig. 23

- Do not wipe metal area of connector with chemical liquid, such as alcohol, or rust due to corrosion may cause electrical discontinuity.

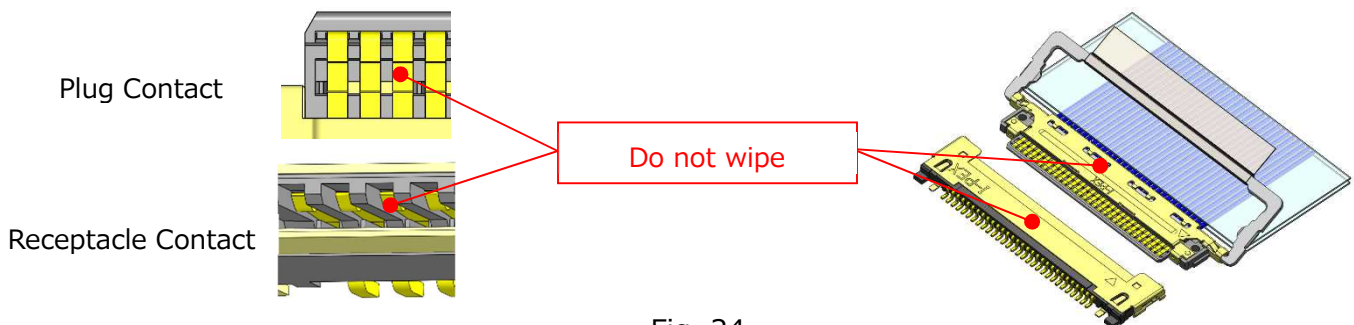


Fig. 24

**[Cautions for electrical inspection when using plug]**

Please note that damage, buckling and offset will occur on the receptacle when the receptacle is inserted into the damaged or distorted plug housing, and these may cause short circuit.

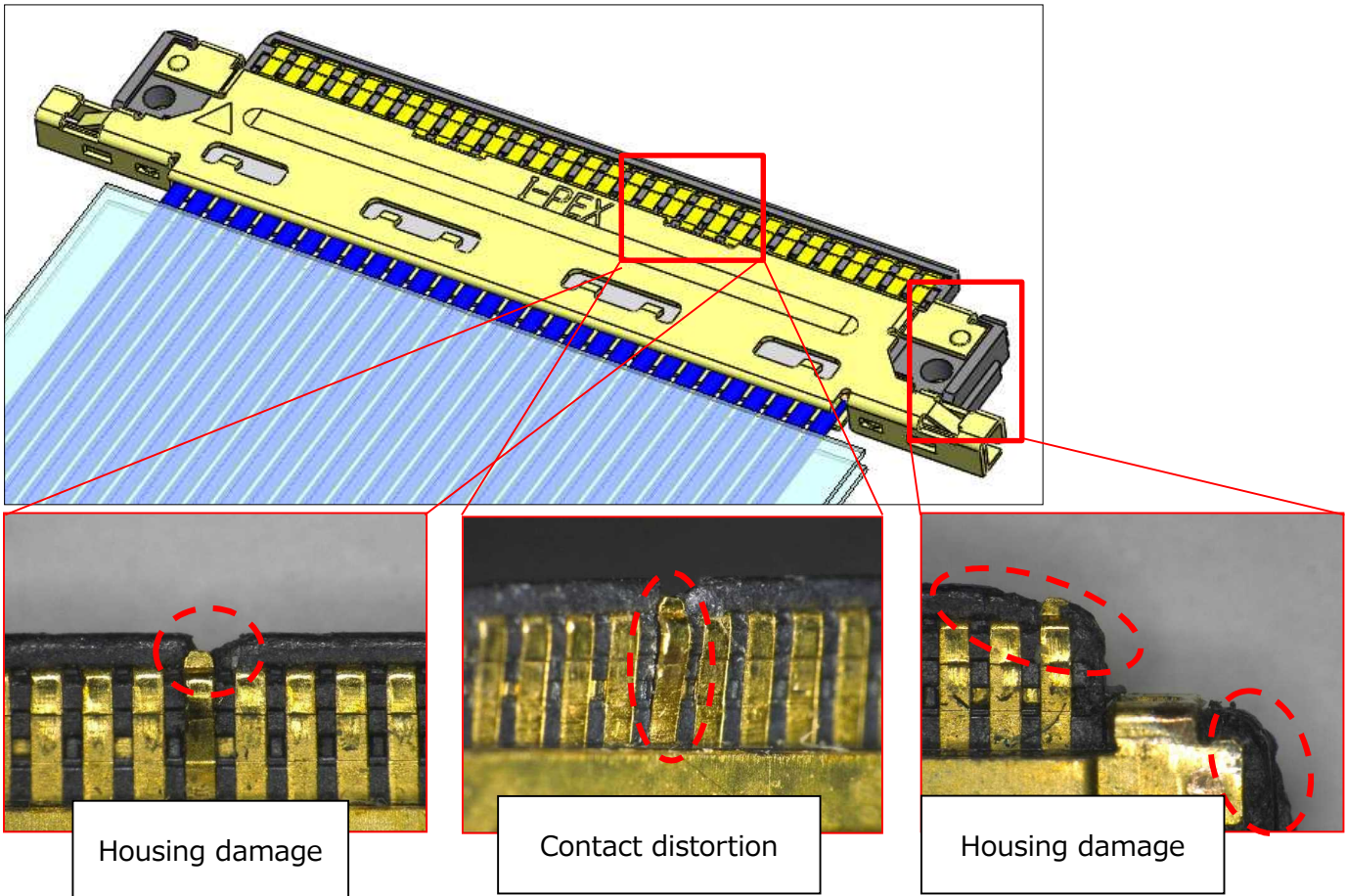


Fig. 25