

1. Purpose :

This manual is to explain the contact line soldering method / process of the CABLINE SS plug with cable, and assembly of metal cover.

2. Applicable Connector :

Name : CABLINE SS plug

Parts No. :

Set P/N	Cable Assembly	20380-***T-0*
Discrete P/N	Housing Assembly	20373-***T-0*
	Metal Cover	2182-0**-0*

3. Fixtures :

- Pulse heater
- Heater chip

Pressure : 4.9N (0.5kgf)

【Size】Thickness : 0.6mm

Positions	10P	14P	20P	30P	32P	35P	40P	50P
Width	4.6mm	6.2mm	8.6mm	12.6mm	13.4mm	14.6mm	16.6mm	20.6mm

- Recommended Solder Bar

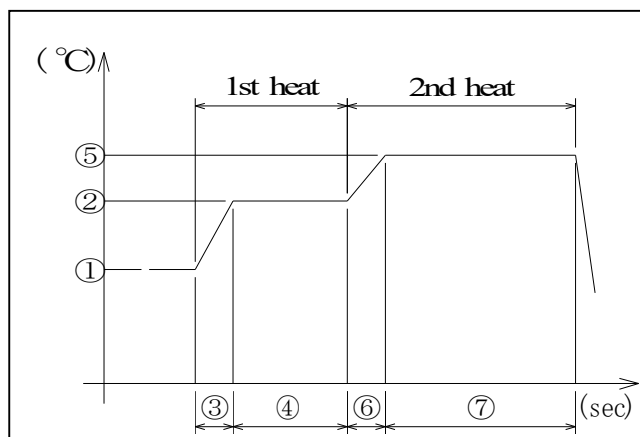
φ0.1mm (φ0.12mm when AWG#36 is used : 10P/14P/30P/40P only) not include rosin solder is pressed and used.

Positions	Length	Width	Thickness
10P	4.0 ^{±0.2}	0.2 ^{±0.1}	0.05 ^{±0.02}
14P	5.6 ^{±0.2}	0.2 ^{±0.1}	0.05 ^{±0.02}
20P	8.0 ^{±0.2}	0.2 ^{±0.1}	0.05 ^{±0.02}
30P	12.0 ^{±0.2}	0.2 ^{±0.1}	0.05 ^{±0.02}
32P	12.8 ^{±0.2}	0.2 ^{±0.1}	0.05 ^{±0.02}
35P	14.0 ^{±0.2}	0.2 ^{±0.1}	0.05 ^{±0.02}
40P	16.0 ^{±0.2}	0.2 ^{±0.1}	0.05 ^{±0.02}
50P	20.0 ^{±0.2}	0.2 ^{±0.1}	0.05 ^{±0.02}

- Soldering iron 50W

4. Recommended Pulse Heat Condition :

① Idle temp.	150°C
② 1 st heat temp.	220°C
③ " rise time	0.5sec.
④ " holding time	3.0sec.
⑤ 2 nd heat temp.	310°C
⑥ " rise time	0.5sec.
⑦ " holding time	3.0sec.

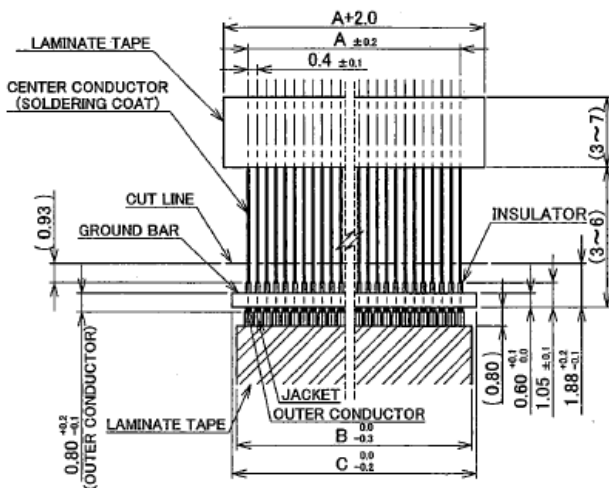


5. Work Procedures :

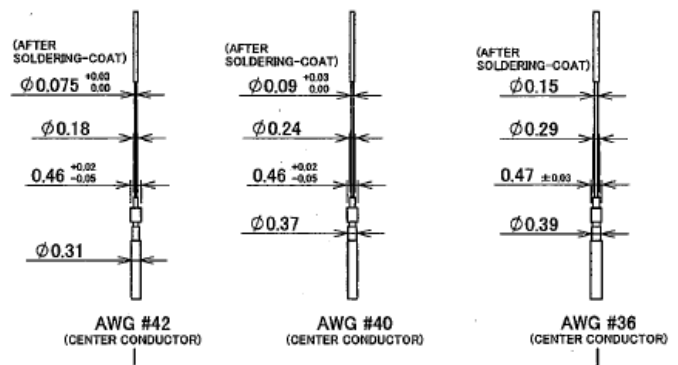
5-1. Soldering of Center-Conductor

① The cables have to be fabricated as shown below in advance of soldering.

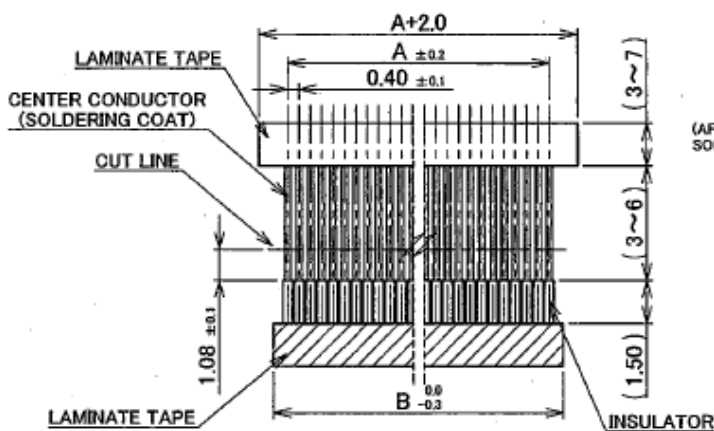
PART NO.	POS.	A	B	C
20380-*10T-03	10	3.6	4.6	5.0
20380-*14T-**	14	5.1	6.1	6.6
20380-*20T-**	20	7.5	8.5	9.0
20380-*30T-**	30	11.5	12.5	13.0
20380-*32T-**	32	12.3	13.3	13.8
20380-*35T-**	35	13.5	14.5	15.0
20380-*40T-**	40	15.5	16.5	17.0
20380-*50T-**	50	19.5	20.5	21.0



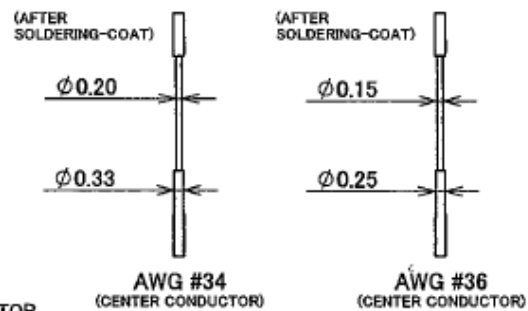
Recommended Micro-Coaxial Cable Dimensions



Micro-Coaxial Cable



Recommended Discrete Wire Dimensions



Discrete Wire

(20380-R**T-06 ONLY)

Discrete Wire

(20380-R***T-03 or 20380-R**T-06)

② Apply flux to center conductor with a brush.

Applying flux area

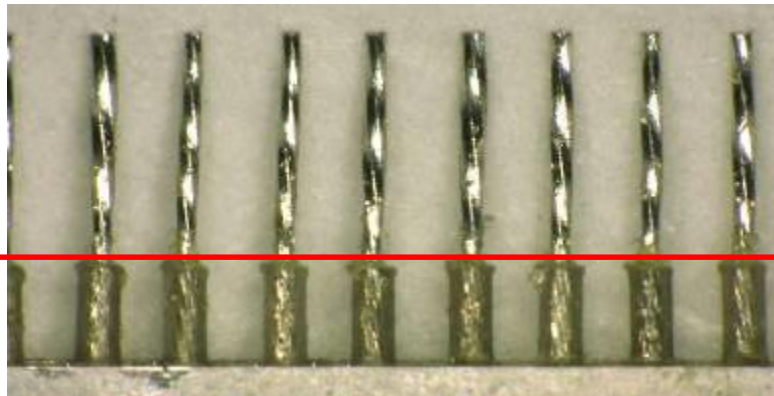


Fig.1 Applying Flux Area

③ It confirms whether all center conductors are applied flux.

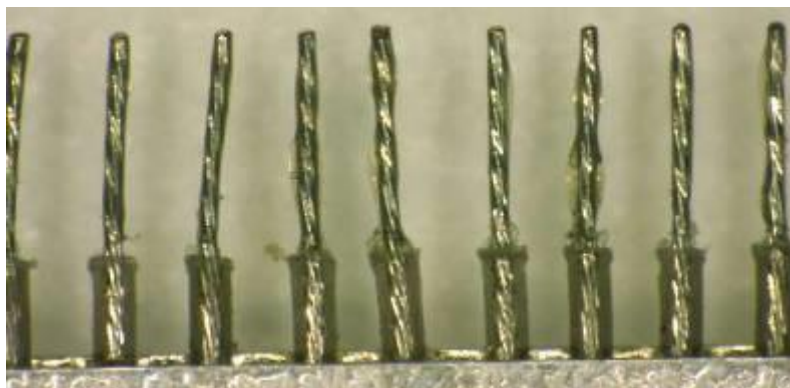


Fig.2 After Applying Flux

※ If there is the additional flux (Fig.3), wipe out it.

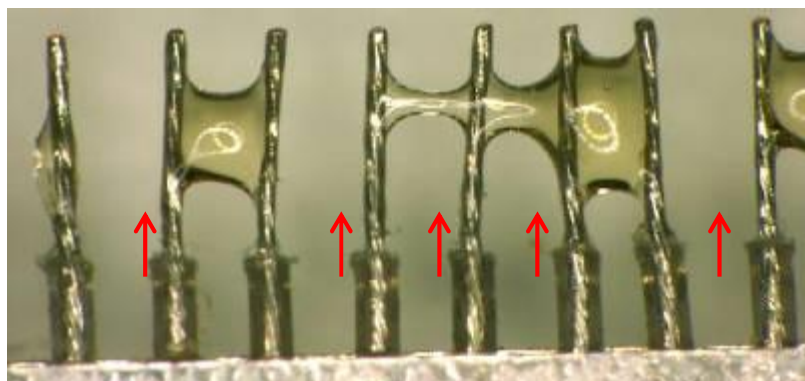


Fig.3 Wipe Out the Additional Flux

④ Pre-set and locate solder bar at center of connector (Housing assembly).

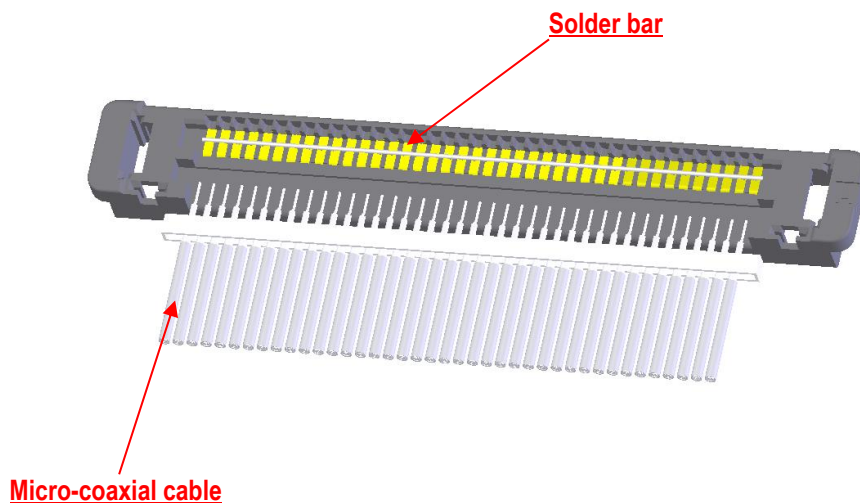
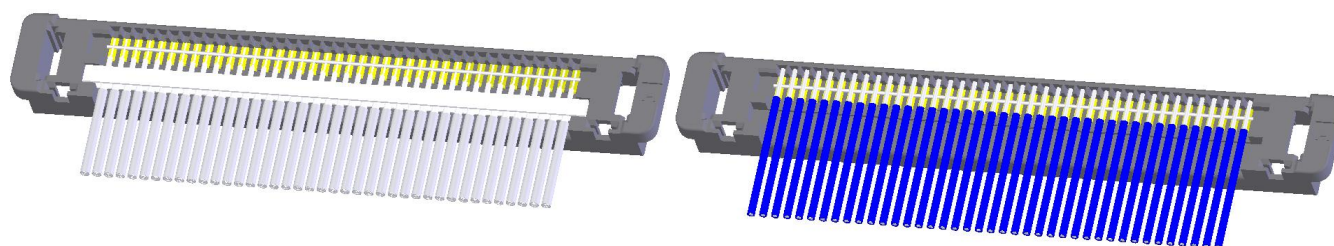
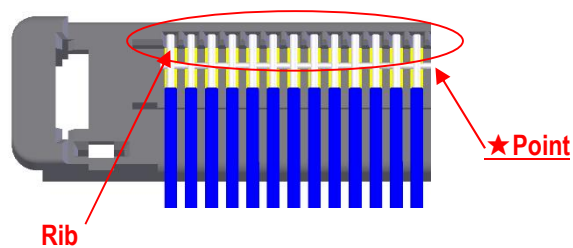


Fig.4 Set of Solder Bar

⑤ Set the cable.

In case of discrete wire, the cable center conductor sets between the ribs. (Fig5 ★部)

※ Take care not to put cable center conductor applied flux in outside the soldering area.



Micro-Coaxial Cable

Discrete Wire

Fig.5 Set of Cable

⑥Center-conductors are soldered with pulse heater. See photo.1,2 of soldering condition.

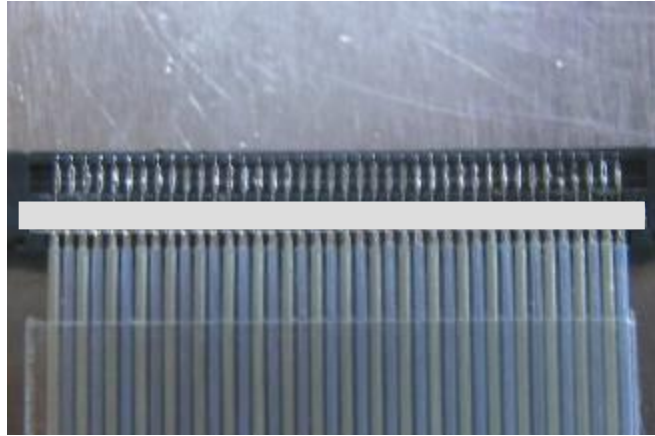


Photo.1 AWG#42

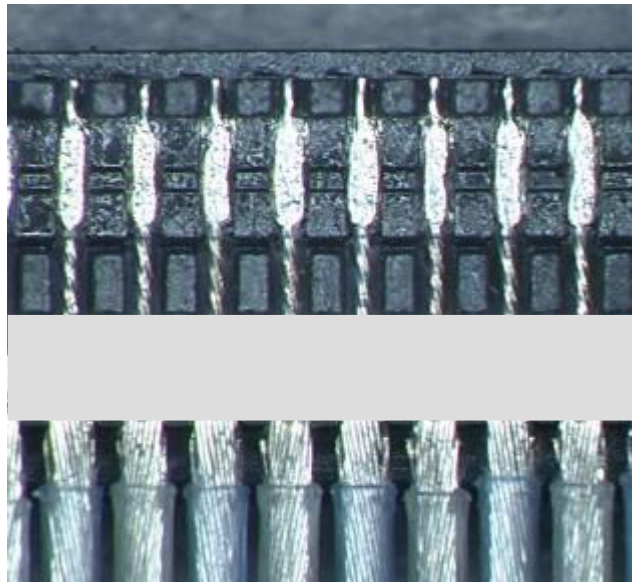


Photo.2 Expansion Part

※When solder bridge is appeared between the terminal, try heating again with pulse heater only one time.

If the bridge isn't repaired, use the soldering iron only a incorrect point.

Condition of soldering iron : 50W

Operating temperature : 350°C~380°C

Application time of soldering iron : Within 5sec.

※It must not wash to take off the flux, because it may accrete flux to mating side .

5-2. Cautions in Treating Metal Cover

Metal cover is delivered in the reel with a carrier.

The following is the method to cut metal cover from carrier.

- ① Cut carrier on the cut line of a lower left picture (Green line) by a scissors for metal.

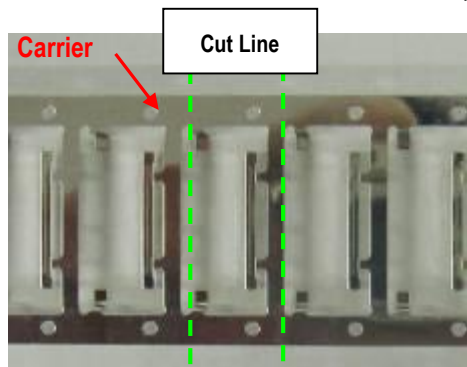


Photo.3 Before Cut

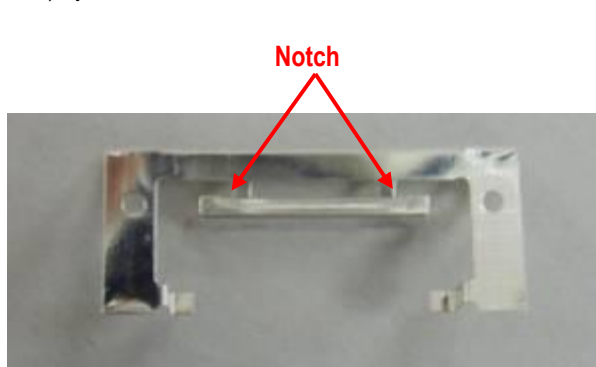


Photo.4 After Cut

- ② Hold the center of metal cover and bend it 45 deg back and forth to cut it from notch. When it does not be cut, bend it again. After separated, check there is no burr around the cut part. (Photo.6)

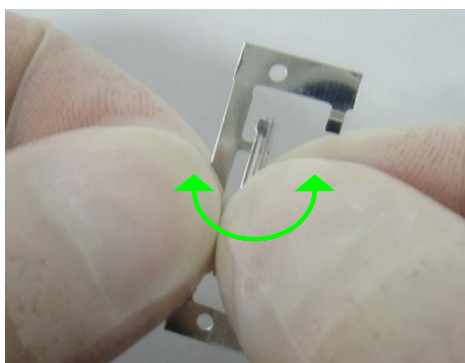
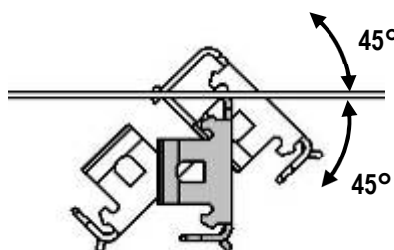
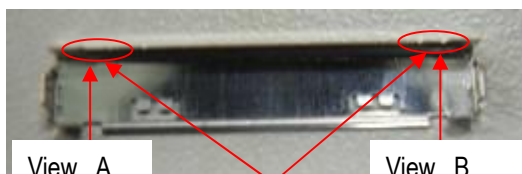


Photo.5 Cut Condition

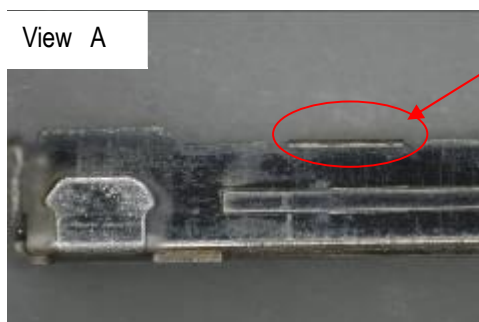




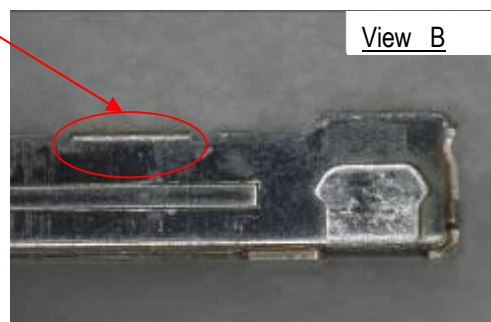
View A

View B

Without burrs



View A



View B

Photo.6 After Cut

Metal cover (Detail of notch)

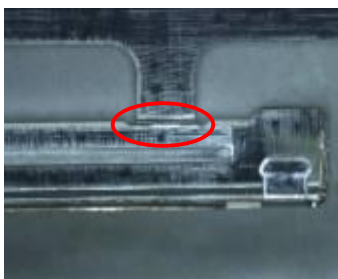


Photo.7 Bottom Side View

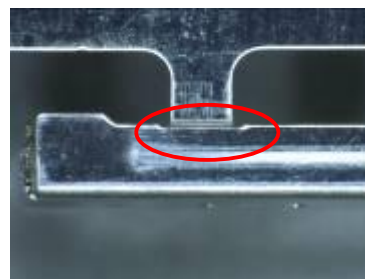


Photo.8 Upper Side View

Caution: By pulling like a lower photo to cut off by force (Red arrow direction), burrs and transformation can be caused.

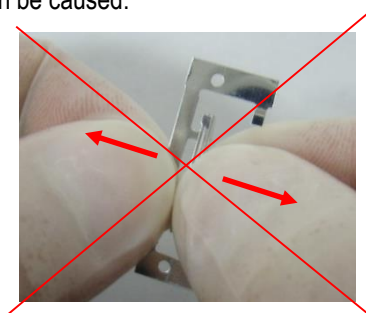


Photo.9 Cut by Force (Bad example)

5-3. Assembly of Metal Cover

① Metal cover is assembled in the insertion hole of housing from the connector upper surface side.

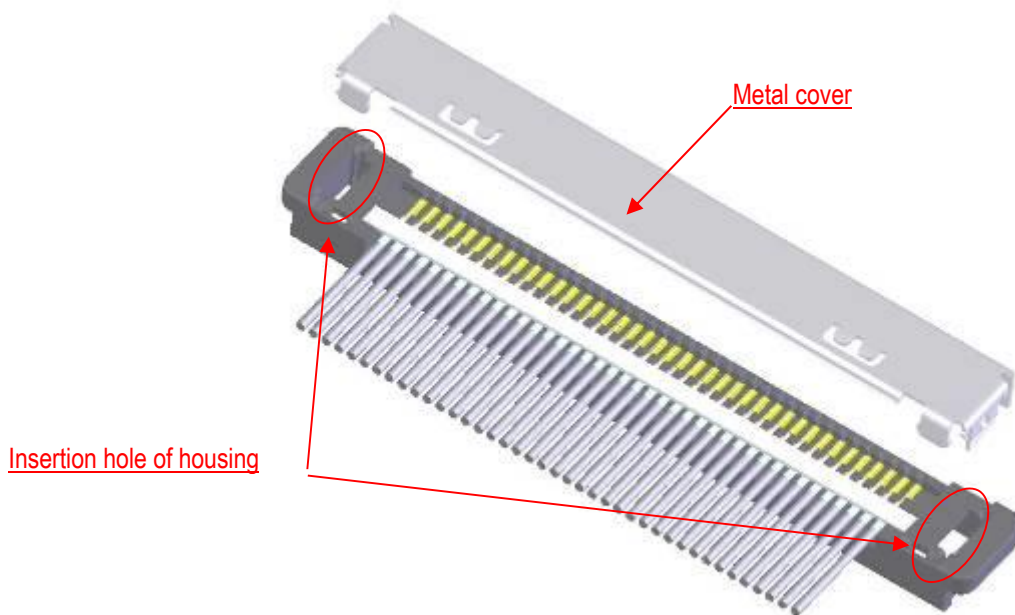


Fig.6 Assembly of Metal Cover

③ It confirms whether metal cover is being assembled normally.

Whether metal cover is inserted in housing. (Fig.7 ★ point)

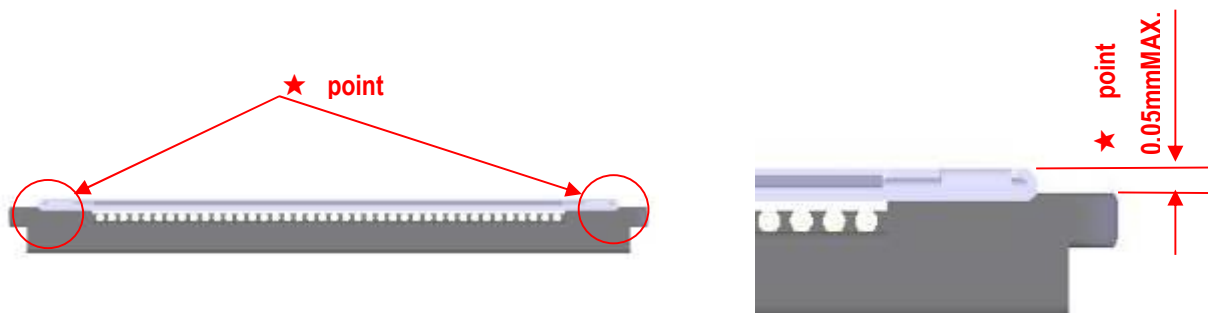


Fig.7 The Assembly Confirmation of Metal Cover

④ Metal cover and ground bar are soldered with the soldering iron. (Fig.8 **◆ point**)

Refer to Fig.10 for a limit of the solder height. (Connector height: 1.7mm MAX.)

Conditions of soldering iron refer to sheet 6.

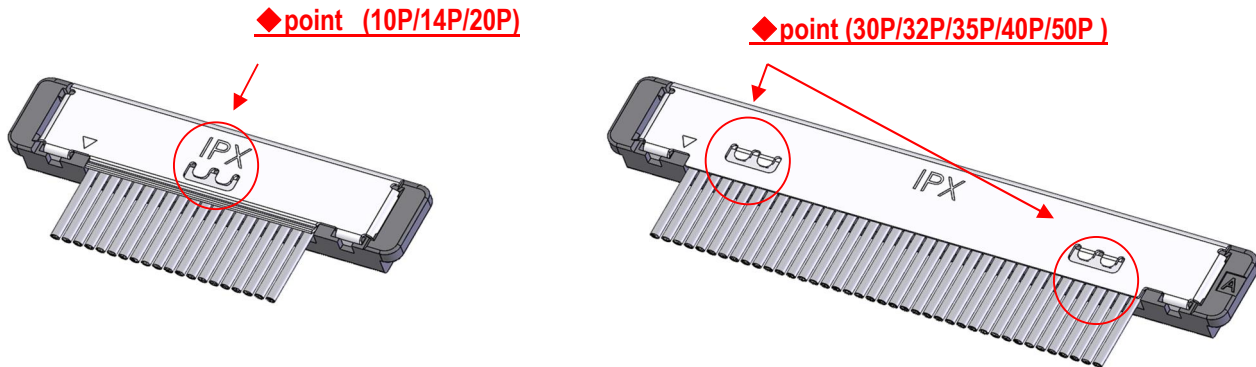
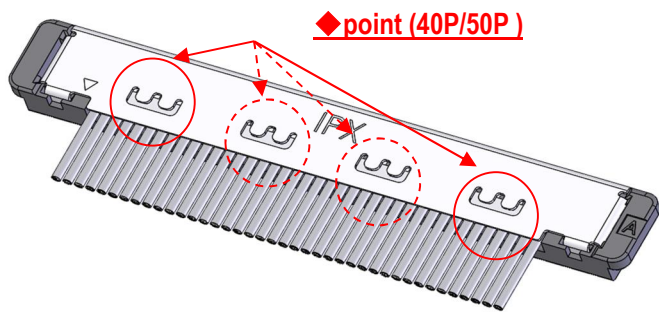


Fig.8 Soldering of Metal Cover and Ground Bar

※In the case of using metal cover four solder areas type



If all conductors are attached to ground bar, there are no problems to solder only the both ends of the points.
Please solder the two of the center points according to your company's wiring.

Fig.9 Metal Cover (Four solder areas type)

P / N : 2182-0**-04 (40P / 50P)

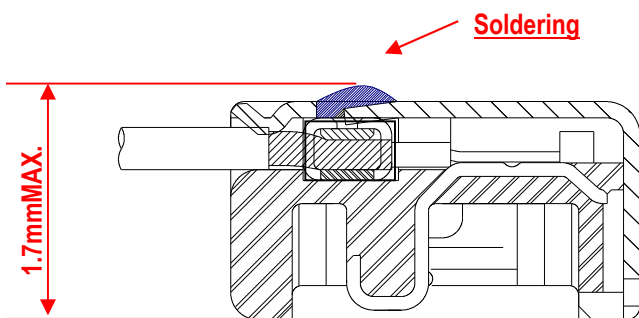


Fig.10 Soldering

5-4. Cable Fixation

In the case of discrete wire, fixing the cable terminal part with the bond is recommended.

Bond : LOCTITE 352

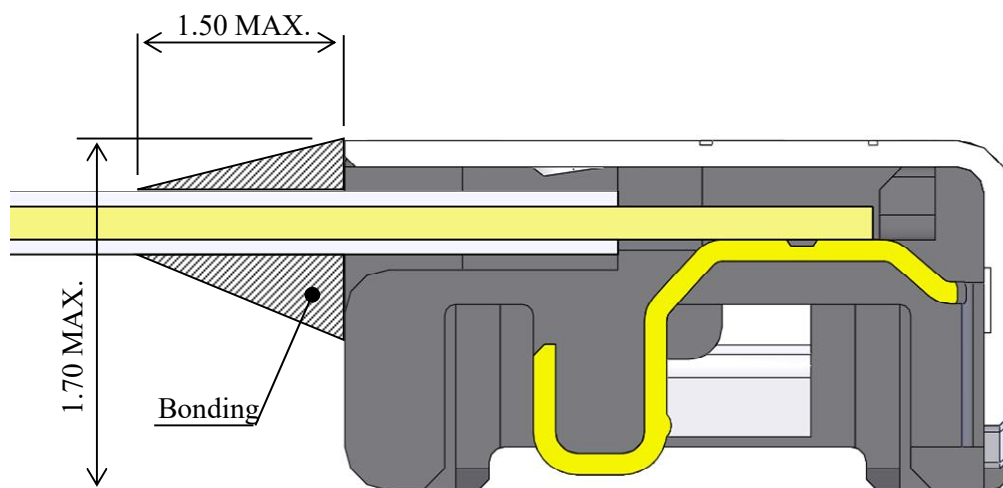
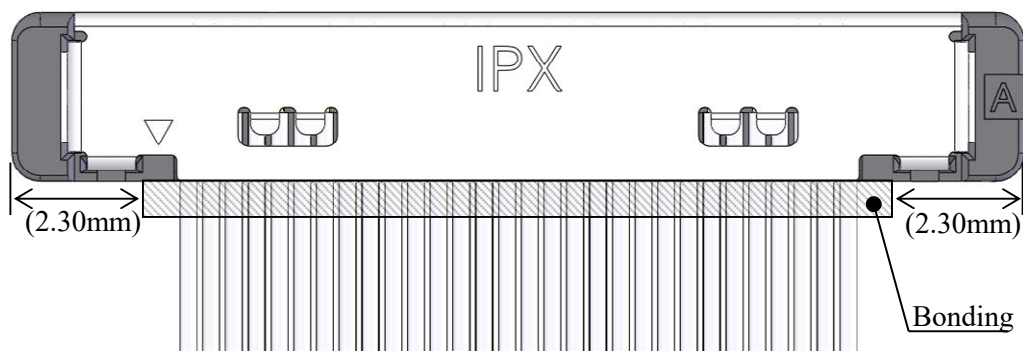


Fig.11 Bonding

5-5. Appearance Inspection After an Electric Inspection

- ① From the mating side of a connector, it checks whether there is any modification in the spring part of metal cover.

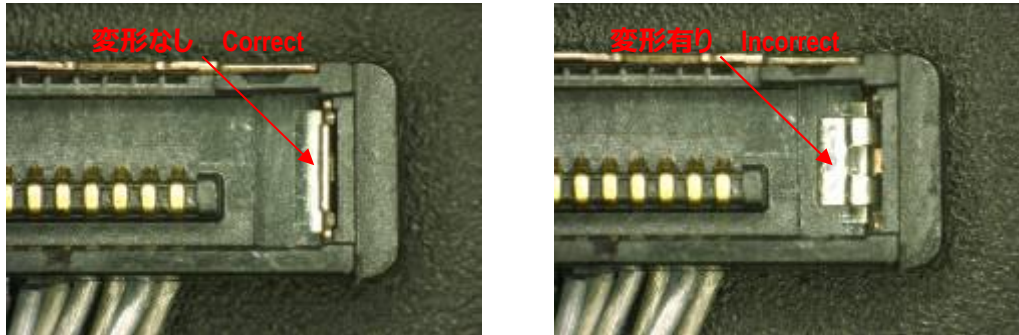


Photo.12 Appearance Inspection After an Electric Inspection