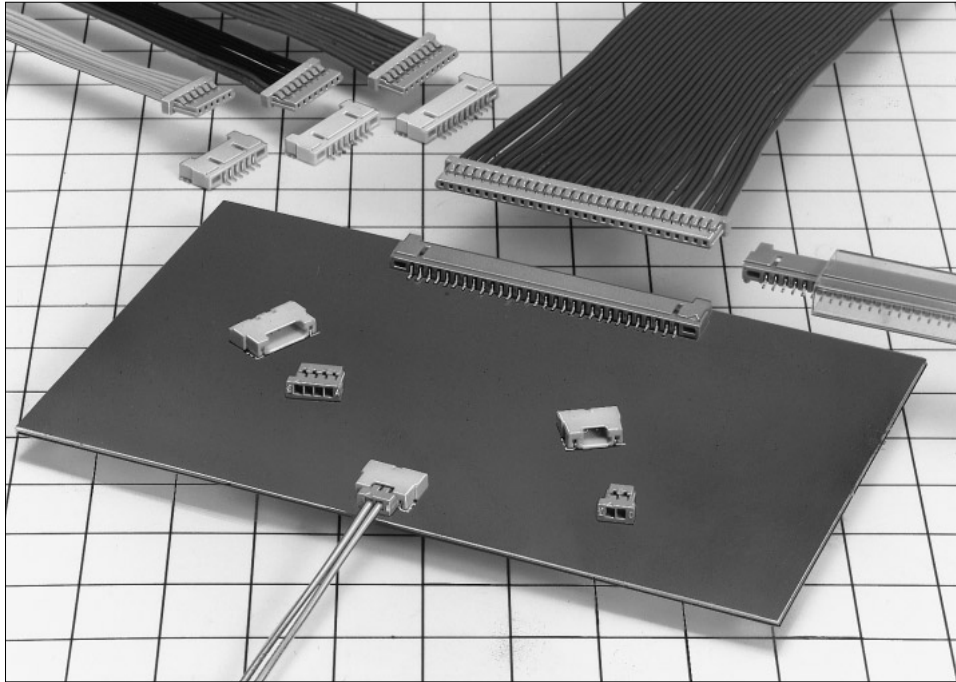


# 1.25mm Pitch Super Low profile Crimping Connector

## DF14 Series



### ■Features

#### 1. Super Low Profile

This is a connector special for right angle which has pursued a low profile on the board.

Board mounting height: **2.5mm**

A signal can be fetched from the area where there is no board to board space.

#### 2. Correspond to Automatic Mounting

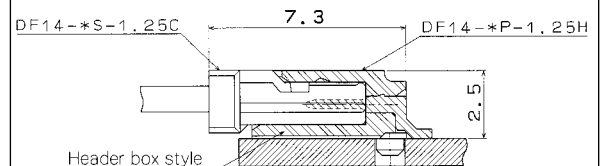
The header has the vacuum mount face which enables the vacuum absorption and the automatic mounting by the embossed tape packaging. In addition, the tube packaging can be selected.

#### 3. Four Wall Type Without Friction to Board by Socket

The header has the box structure to prevent from being twisted and has the perfect mis-insertion prevention method. Moreover the header has the wall on the board side and doesn't have any trouble resulted from the friction to board by socket.

In addition, the metal fitting is attached to prevent the solder peel.

Board Mounting Figure



### ■Applications

LCD, Note PC, Mobile Terminal Small business equipment, Video camera

## ■Product Specifications

| Rating                           | Current rating 1A   | Operating Temperature Range -25 to +85°C (Note 1)   | Storage Temperature Range -10 to +60°C (Note 2) |
|----------------------------------|---|---|---|
|                                  | Voltage rating 150V AC  | Operating Moisture Range 40 to 80%  | Storage Moisture Range 40 to 70%                |
| Item                             | Specification   | Condition   |   |
| 1. Insulation Resistance         | 500M ohms Min   | 100V DC   |   |
| 2. Withstanding voltage          | No flashover or insulation breakdown.                                 | 500V AC/1 minute  |   |
| 3. Contact Resistance            | 30m ohms Max  | 100mA   |   |
| 4. Insertion/Extraction Force    | MIN0.15N (15gf), MAX3N (300gf)  | Measure at the square steel pin of 0.3±0.002mm  |   |
| 5. Vibration                     | No electrical discontinuity of 1μs or more                            | Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 directions.       |   |
| 6. Humidity (Steady state)       | Contact resistance: 30m ohms Max Insulation resistance: 500M ohms Min | 96 hours at temperature of 40°C and humidity of 90% to 95%                                      |   |
| 7. Temperature Cycle             | Contact resistance: 30m ohms Max Insulation resistance: 500M ohms Min | (-25°C: 30 minutes → 5 to 35°C: 10 minutes → 85°C: 30 minutes → 5 to 35°C: 10 minutes) 5 cycles |   |
| 8. Durability (Mating/un-mating) | Contact resistance: 30m ohms Max                                      | Tin plating: 30 cycles Gold plating: 50 cycles  |   |
| 9. Resistance to Soldering heat  | No deformation of components affecting performance.                   | Reflow: At the recommended temperature profile  |   |
|                                  |   | Manual soldering: 300°C for 3 seconds   |   |

Note 1: Includes temperature rise caused by current flow.

Note 2: The term "storage" refers to products stored for long period of time prior to mounting and use. Operating Temperature Range and Humidity range covers non conducting condition of installed connectors in storage, shipment or during transportation.

## ■Material

| Product                     | Part      | Material        | Finish                         | Remarks  |
|-----------------------------|-----------|-----------------|--------------------------------|----------|
| Crimping Socket             | Insulator | Polyamide       | Beige                          | UL-94V-0 |
| Crimping Contact for Socket | Contact   | Phosphor Copper | Tin-lead plated or gold plated | ————     |
| Pin Header                  | Insulator | Polyamide       | Beige                          | UL-94V-0 |
|                             | Contact   | Brass           | Tin-lead plated or gold plated | ————     |
|                             | Fitting   | Phosphor copper | Tin-lead plated                | ————     |

Note . Hirose's tin plating product takes measures against whisker.

## ■Ordering Information

### ●Connector

**DF14 - \* S - 1.25 C**

①                      ②   ③                      ④   ⑤

|  |  |
|--|--|
| ① Series Name: DF14  | ④ Contact Pitch: 1.25mm                                    |
| ② Number of Contacts: 2 to 10, 15, 20, 25, 30                        | ⑤ Contact Type<br>C: Crimping socket<br>H: Right angle SMT |
| ③ Connector Type<br>S: Single row socket<br>P: Single row pin header |  |

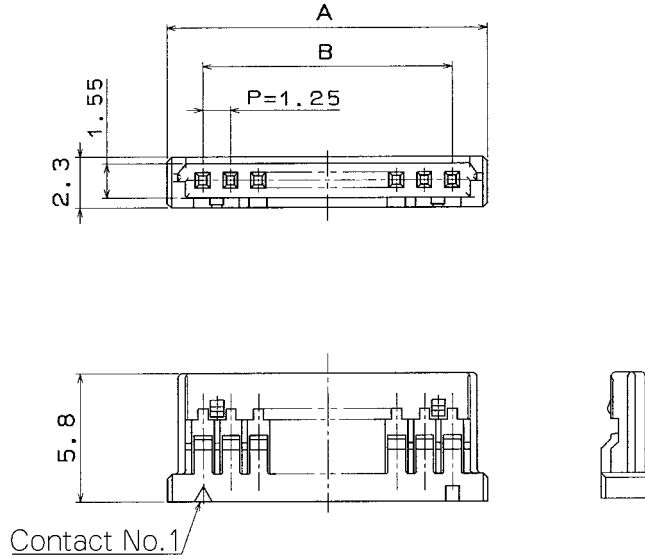
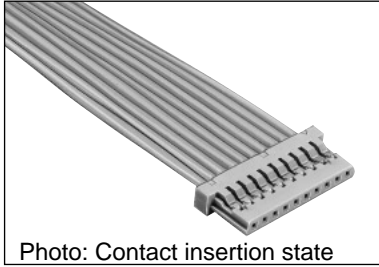
### ●Contact

**DF14 - 2628 SCF A**

①                      ②   ③

|   |   |
|---|---|
| ① Applicable cable size<br>2628: AWG26 to 28<br>3032: AWG30 to 32 | ② Packaging Type<br>SCF: Socket contact/reel          |
|   | ③ Plating Type<br>Blank: Tin plated<br>A: Gold plated |

## ■Crimping Socket



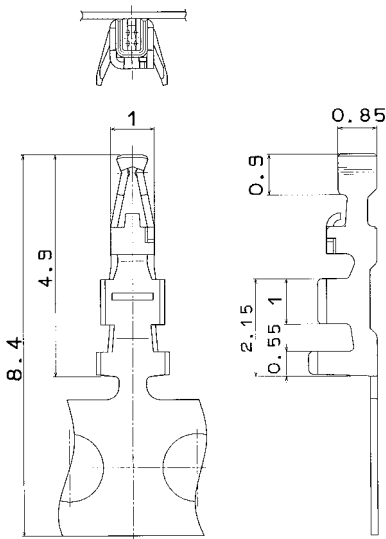
Unit: mm

| Part Number        | CL No.         | Number of Contacts | A     | B     |
|--------------------|----------------|--------------------|-------|-------|
| DF14- 2S-1.25C(**) | 538-0005-8-*** | 2                  | 4.45  | 1.25  |
| DF14- 3S-1.25C(**) | 538-0006-0-*** | 3                  | 5.70  | 2.50  |
| DF14- 4S-1.25C(**) | 538-0007-3-*** | 4                  | 6.95  | 3.75  |
| DF14- 5S-1.25C(**) | 538-0008-6-*** | 5                  | 8.20  | 5.00  |
| DF14- 6S-1.25C(**) | 538-0009-9-*** | 6                  | 9.45  | 6.25  |
| DF14- 7S-1.25C(**) | 538-0010-8-*** | 7                  | 10.70 | 7.50  |
| DF14- 8S-1.25C(**) | 538-0011-0-*** | 8                  | 11.95 | 8.75  |
| DF14- 9S-1.25C(**) | 538-0013-6-*** | 9                  | 13.20 | 10.00 |
| DF14-10S-1.25C(**) | 538-0014-9-*** | 10                 | 14.45 | 11.25 |
| DF14-15S-1.25C(**) | 538-0054-3-*** | 15                 | 20.70 | 17.50 |
| DF14-20S-1.25C(**) | 538-0059-7-*** | 20                 | 26.95 | 23.75 |
| DF14-25S-1.25C(**) | 538-0064-7-*** | 25                 | 33.20 | 30.00 |
| DF14-30S-1.25C(**) | 538-0012-3-*** | 30                 | 39.45 | 36.25 |

[Specific No.]-\*\*,(\*\*)  
Blank : 1 bag 100 pcs.

Note 1.The quantity at the specific No. "Blank" is delivered per bag. If needed, please order the products per bag.

## ■Socket Crimping Contact



| Part Number  | CL No.         | Packaging Type | Quantity | Finish     |
|--------------|----------------|----------------|----------|------------|
| DF14-2628SCF | 538-0001-7-*** | Reel           | 10,000   | Tin plated |
| DF14-3032SCF | 538-0003-2-*** | Reel           |          |            |

### ●Applicable Cable (Tin plating Annealed copper wire)

| Conductor Size (Wire construction) | Jacket Diameter |
|------------------------------------|-----------------|
| AWG26(7 cores/0.16mm)              | φ0.54 to φ1mm   |
| AWG28(7 cores/0.127mm)             |                 |
| AWG30(7 cores/0.1mm)               |                 |
| AWG32(7 cores/0.08mm)              |                 |

### ●Recommended Cable

UL1571

### ●Strip Length

1.2 to 1.9mm

Note:If other cables are used instead of the applicable cable, contact Hirose sales department.

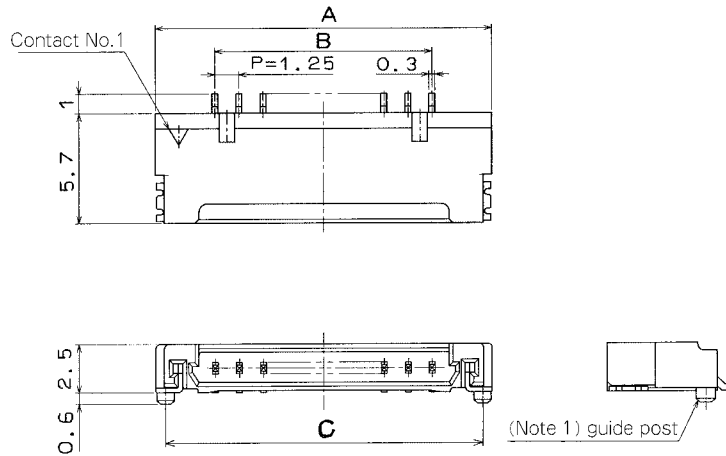
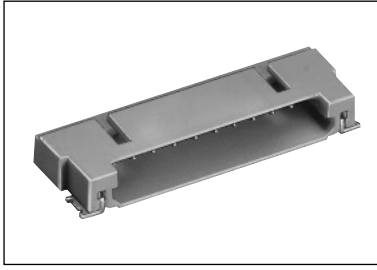
### ◆Applicable Crimping Tool

| Type                 | Part Number      | CL No.     | Applicable Contact |
|----------------------|------------------|------------|--------------------|
| Applicator           | AP105-DF14-2628S | 901-4548-1 | DF14-2628SCF/SCFA  |
|                      | AP105-DF14-3032S | 901-4544-0 | DF14-3032SCF/SCFA  |
| Press Main Unit      | CM-105           | 901-0005-4 | _____              |
| Manual Crimping Tool | DF14-2628/CR-HT  | 550-0261-1 | DF14-2628SCF/SCFA  |
|                      | DF14-3032/CR-HT  | 550-0262-4 | DF14-3032SCF/SCFA  |

Note 1.If a trouble has occurred due to tools, which are not designated by Hirose, Hirose won't guarantee any product.

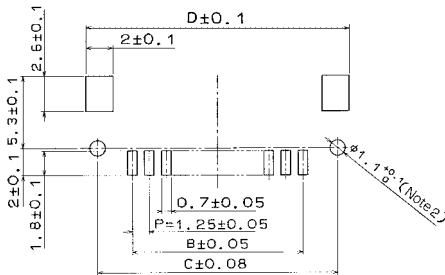
Note 2.Use the reel contact sequentially cut for manual crimping tool.

## ■Right Angle Pin Header (SMT)



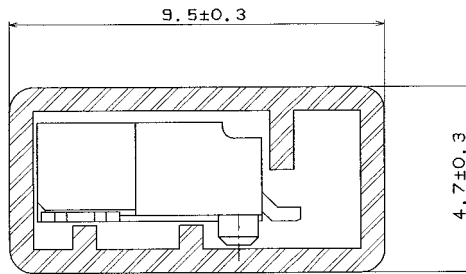
Note 1: "Without boss" indicates the style with no boss.

## ◆PCB mounting pattern



Note 2: "Without boss" indicates that no hole is needed.

## ◆Tube Packaging Dimensions



[Specific No.]—\*\*, (\*\*)  
 (20): Tin plated tube packaging  
 (21): Tin plated embossed tape packaging  
 (50): Gold plated tube packaging  
 (59): Gold plated embossed tape packaging

Unit: mm

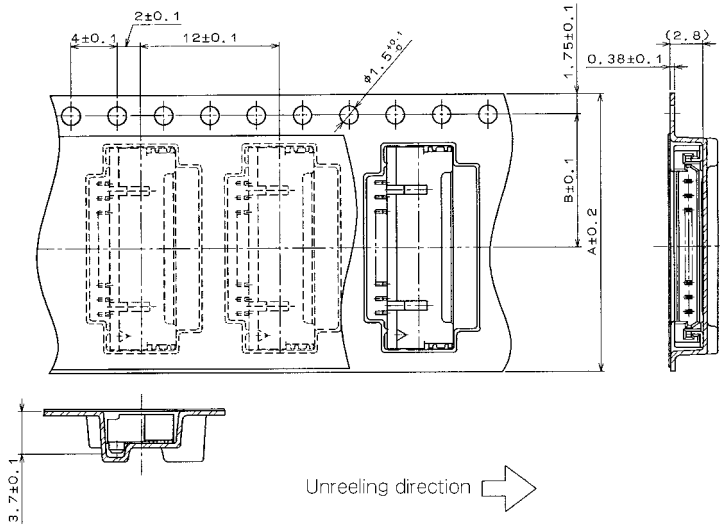
| With boss          |                | Without boss        |                | Number of Contacts | A     | B     | C     | D     | Tube Packaging Quantity |
|--------------------|----------------|---------------------|----------------|--------------------|-------|-------|-------|-------|-------------------------|
| Part Number        | CL No.         | Part Number         | CL No.         |                    |       |       |       |       |                         |
| DF14- 2P-1.25H(**) | 538-0021-4-**- | DF14A- 2P-1.25H(**) | 538-0033-3-**- | 2                  | 7.45  | 1.25  | 6.45  | 8.05  | 66                      |
| DF14- 3P-1.25H(**) | 538-0022-7-**- | DF14A- 3P-1.25H(**) | 538-0034-6-**- | 3                  | 8.70  | 2.50  | 7.70  | 9.30  | 56                      |
| DF14- 4P-1.25H(**) | 538-0023-0-**- | DF14A- 4P-1.25H(**) | 538-0035-9-**- | 4                  | 9.95  | 3.75  | 8.95  | 10.55 | 49                      |
| DF14- 5P-1.25H(**) | 538-0024-2-**- | DF14A- 5P-1.25H(**) | 538-0036-1-**- | 5                  | 11.20 | 5.00  | 10.20 | 11.80 | 44                      |
| DF14- 6P-1.25H(**) | 538-0025-5-**- | DF14A- 6P-1.25H(**) | 538-0037-4-**- | 6                  | 12.45 | 6.25  | 11.45 | 13.05 | 39                      |
| DF14- 7P-1.25H(**) | 538-0026-8-**- | DF14A- 7P-1.25H(**) | 538-0038-7-**- | 7                  | 13.70 | 7.50  | 12.70 | 14.30 | 36                      |
| DF14- 8P-1.25H(**) | 538-0027-0-**- | DF14A- 8P-1.25H(**) | 538-0039-0-**- | 8                  | 14.95 | 8.75  | 13.95 | 15.55 | 32                      |
| DF14- 9P-1.25H(**) | 538-0028-3-**- | DF14A- 9P-1.25H(**) | 538-0040-9-**- | 9                  | 16.20 | 10.00 | 15.20 | 16.80 | 30                      |
| DF14-10P-1.25H(**) | 538-0029-6-**- | DF14A-10P-1.25H(**) | 538-0041-1-**- | 10                 | 17.45 | 11.25 | 16.45 | 18.05 | 28                      |
| DF14-15P-1.25H(**) | 538-0084-4-**- | DF14A-15P-1.25H(**) | 538-0114-3-**- | 15                 | 23.70 | 17.50 | 22.70 | 24.30 | 20                      |
| DF14-20P-1.25H(**) | 538-0089-8-**- | DF14A-20P-1.25H(**) | 538-0119-7-**- | 20                 | 29.95 | 23.75 | 28.95 | 30.55 | 16                      |
| DF14-25P-1.25H(**) | 538-0094-8-**- | DF14A-25P-1.25H(**) | 538-0124-7-**- | 25                 | 36.20 | 30.00 | 35.20 | 36.80 | 13                      |
| DF14-30P-1.25H(**) | 538-0020-1-**- | DF14A-30P-1.25H(**) | 538-0045-2-**- | 30                 | 42.45 | 36.25 | 41.45 | 43.05 | 11                      |

Note 1. Please order the tube packaging product, multiplying the packaging quantity (pcs.).

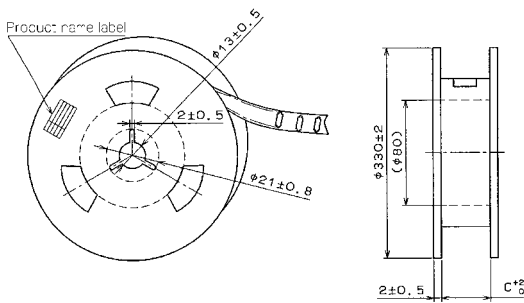
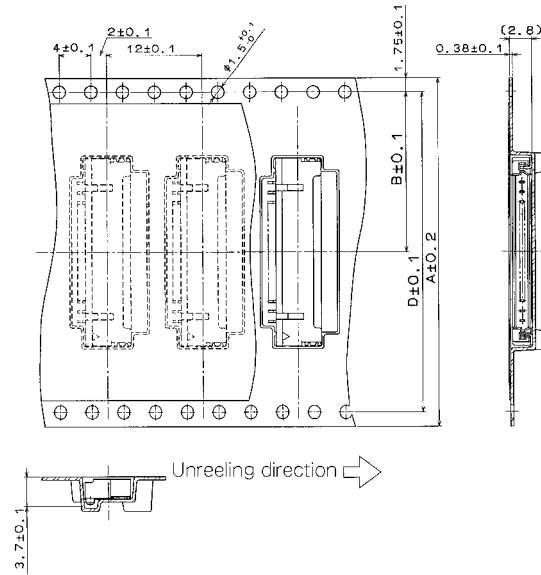
Note 2. Please order the embossed tape packaging product according to reel number. (1000 pcs./reel)

# ◆ Embossed Carrier Tape Dimensions

## ■ 2 to 10 Contacts



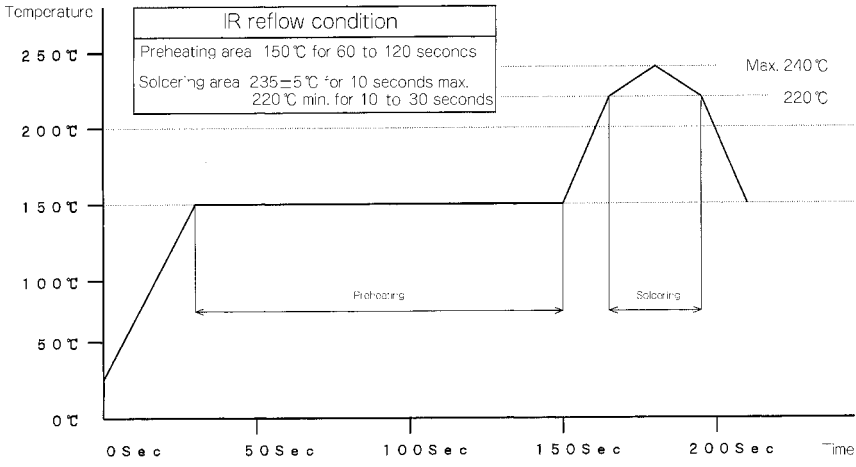
## ■ 15, 20, 25, 30 Contacts



Unit: mm

| Inserted Connector | Number of Contacts | A  | B    | C    | D    |
|--------------------|--------------------|----|------|------|------|
| DF14/14A- 2P-1.25H | 2                  | 16 | 7.5  | 16.4 | —    |
| DF14/14A- 3P-1.25H | 3                  | 16 | 7.5  | 16.4 | —    |
| DF14/14A- 4P-1.25H | 4                  | 24 | 11.5 | 24.4 | —    |
| DF14/14A- 5P-1.25H | 5                  | 24 | 11.5 | 24.4 | —    |
| DF14/14A- 6P-1.25H | 6                  | 24 | 11.5 | 24.4 | —    |
| DF14/14A- 7P-1.25H | 7                  | 24 | 11.5 | 24.4 | —    |
| DF14/14A- 8P-1.25H | 8                  | 24 | 11.5 | 24.4 | —    |
| DF14/14A- 9P-1.25H | 9                  | 24 | 11.5 | 24.4 | —    |
| DF14/14A-10P-1.25H | 10                 | 24 | 11.5 | 24.4 | —    |
| DF14/14A-15P-1.25H | 15                 | 44 | 20.2 | 44.4 | 40.4 |
| DF14/14A-20P-1.25H | 20                 | 44 | 20.2 | 44.4 | 40.4 |
| DF14/14A-25P-1.25H | 25                 | 56 | 26.2 | 56.4 | 52.4 |
| DF14/14A-30P-1.25H | 30                 | 56 | 26.2 | 56.4 | 52.4 |

## ◆Precautions

|  |  |
|--|--|
| <p>1. Recommended Temperature Profile (SMT)</p>        |  <p>Note 1. The soldering process is allowed up to twice under the same condition. However, the interval between the first and second processes must be maintained at the room temperature.</p> <p>Note 1. The temperature indicates the board surface temperature on the connector lead area.</p> |
| <p>2. Recommended Manual Soldering Condition (SMT)</p> | <p>Manual soldering: 290°C for 2 seconds</p>   |
| <p>3. Recommended Screen Thickness (SMT)</p>           | <p>0.15 to 0.2mm</p>   |
| <p>4. Board Sled (SMT)</p>                             | <p>Max 0.03mm at the connector center area, based on both connector edges</p>  |
| <p>5. Cleaning Condition</p>                           | <p>Refer to Nylon Connector Use Hand book.</p>   |
| <p>6. Connection Condition</p>                         | <p>Refer to Nylon Connector Use Hand book.</p> <p>■Be careful to carry out the crimping operation according to the "Crimping Condition Sheet" and "Crimping Quality Reference", because the crimping contact style is too small.</p>   |
| <p>7. Cautions</p>                                     | <p>■Be careful for an excessive scoop insertion/extraction, which will cause damage to the product.</p>  |