

## DF50 Series

# 1mm Pitch, Positive Lock, Wire-to-Board Connector



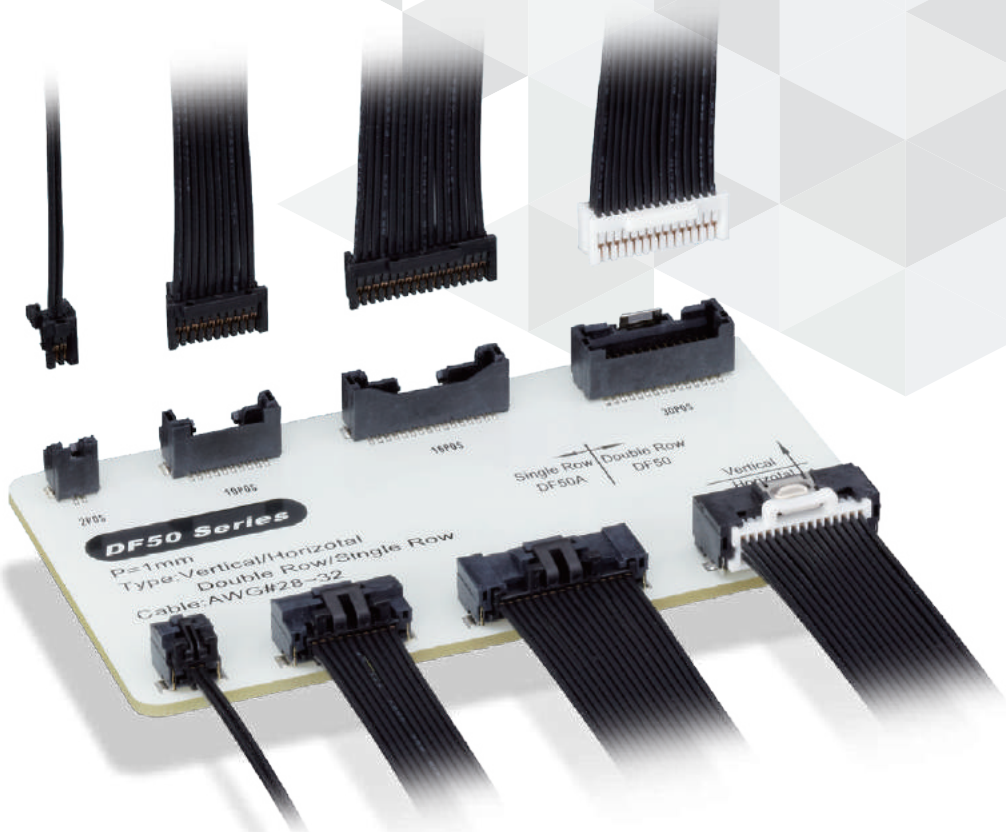
Positive-Lock



Robust



P= 1.0mm



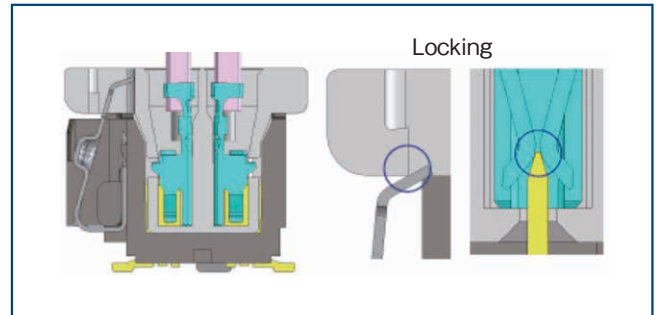
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## Features

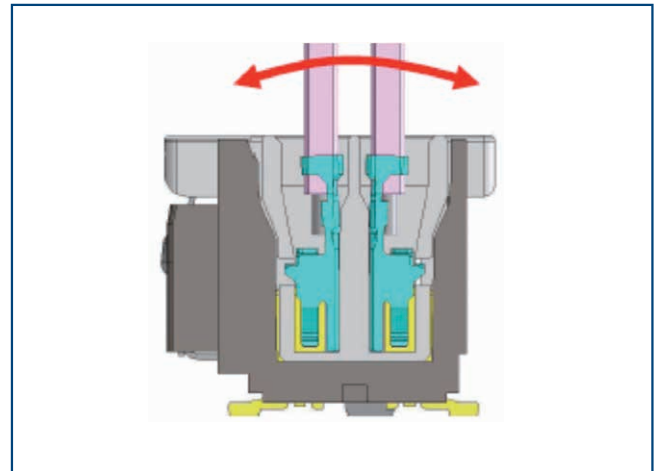
### 1. Secure lock with clear tactile click

Locking function and contact mating occur simultaneously for a clearer tactile click.



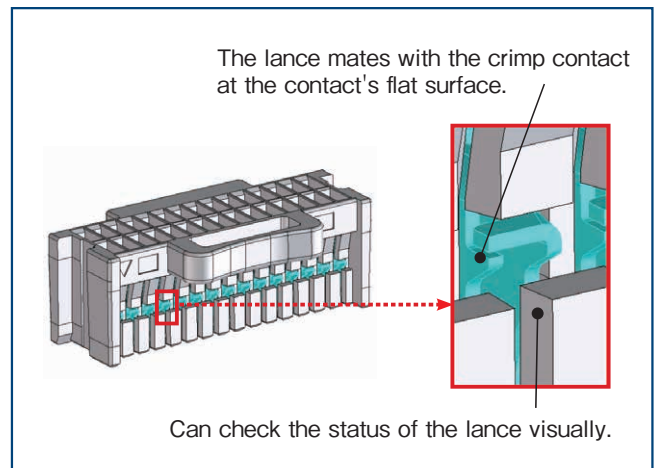
### 2. Robust design resists prying

Thick and robust housing wall provides higher strength against cracking. Insertion depth for mating housings protects against prying.



### 3. Robust and reliable lance design

The lance mates with the crimp contact at a flat surface for high lance strength.



#### **4. Vacuum pick up area is provided, no suction cap needed**

While compact the DF50 Series has sufficient adsorption area for Pick & Place Mounting without a suction cap.

(\*Specifications for adsorption cap may be provided according to your requirements)

#### **5. Compatible with 26 to 32 AWG**

1mm pitch product compatible with up to 26 AWG (0.88mm jacket diameter Max.)

## Product Specifications

|                        |             |             |          |                                 |                                   |              |
|------------------------|-------------|-------------|----------|---------------------------------|-----------------------------------|--------------|
| Rated Current (Note 1) | No. of Pos. | 26 ~ 28 AWG | 30 AWG   | 32 AWG                          | Operating Temperature (Note 2)    | -35 to +85°C |
|                        | 2           | 2A/pin      | 0.9A/pin | 0.7A/pin                        | Operating Humidity Range (Note 3) | 20 to 80%    |
|                        | 3 ~ 50      | 1A/pin      | 0.9A/pin | 0.7A/pin                        | Storage Temperature (Note 4)      | -10 to +60°C |
| Rated Voltage          | 100V AC/DC  |             |          | Storage Humidity Range (Note 4) | 40 to 70%                         |              |

| Item                   | Specifications   | Conditions  |
|------------------------|--|---|
| Insulation Resistance  | 500M $\Omega$ Min.   | 100V DC   |
| Withstand Voltage      | No Flashover or Breakdown  | 300V AC for 1 min.  |
| Contact Resistance     | 30m $\Omega$ Max.  | 20mV Max., at 1mA.  |
| Vibration Resistance   | No Electrical Discontinuity of 1 $\mu$ s or Longer                                   | Frequency 10-55Hz, Single Amplitude of 0.75mm<br>3 Directions, 10 Cycles in Each Direction.   |
| Shock Resistance       | No Electrical Discontinuity of 1 $\mu$ s or Longer                                   | Acceleration : 490m/s <sup>2</sup> , 11ms,<br>Half Sine Wave in 3 Directions,<br>3 Times for Each Direction                                 |
| Moisture Resistance    | Contact Resistance : 50m $\Omega$ Max.<br>Insulation Resistance : 100M $\Omega$ Min. | Temperature : 40 $\pm$ 2°C : Humidity : 90 to 95%, Left for 96 Hours  |
| Temperature Cycles     | Contact Resistance : 50m $\Omega$ Max.<br>Insulation Resistance : 500M $\Omega$ Min. | (-55°C : 30 min. $\rightarrow$ +5 to +35°C : 2 to 3 min. $\rightarrow$ +85°C : 30 min.<br>$\rightarrow$ +5 to +35°C : 2 to 3 min.) 5 Cycles |
| Durability             | Contact Resistance : 50m $\Omega$ Max.   | 30 mating cycles  |
| Solder Heat Resistance | The resin parts should withstand the temperature and resist melting.                 | Reflow : According to the Recommended Temperature Profile<br>Hand Soldering : 350°C for 3 to 4 sec.   |

Note 1 : This is the maximum current rating while all pins are powered or used as all power lines. When isolating power lines into multiple circuits, current ratings may go above the stated current ratings. Please consult Hirose for specific details before doing this.

Note 2 : Includes temperature rise caused by current flow.

Note 3 : The connector should be completely dry. (No condensation present.)

Note 4 : The term "storage" refers to the long-term storage condition of unused products before PCB mounting.

The operating temperature and humidity ranges are applied while in a non-energized state, while in transport or after PCB mounting.

## Materials / Finish

| Product                           | Part              | Materials       | Color / Finish | Specification |
|-----------------------------------|-------------------|-----------------|----------------|---------------|
| Pin Header<br>(On the Board Side) | Insulator         | LCP             | Black          | UL94V-0       |
|                                   | Contact           | Brass           | Gold Plating   | -             |
|                                   | Retention Tab     | Brass (Note)    | Tin Plating    | -             |
|                                   | Lock Metal (DF50) | Stainless Steel | -              | -             |
| Crimp Socket                      | Insulator         | PBT             | Black (DF50A)  | -             |
|                                   |                   |                 | White (DF50S)  | UL94V-0       |
| Crimp Contact                     | Contact           | Phosphor Bronze | Gold Plating   | -             |

Note : Phosphor bronze is applied only to the single row straight pin header.

## Product Number Structure

Refer to the chart below when determining the product specifications from the product number.  
Please select from the product numbers listed in this catalog when placing orders.

### ● Connector

#### **DF50 - # DP - 1 V (##)**

①      ②   ③      ④ ⑤   ⑥

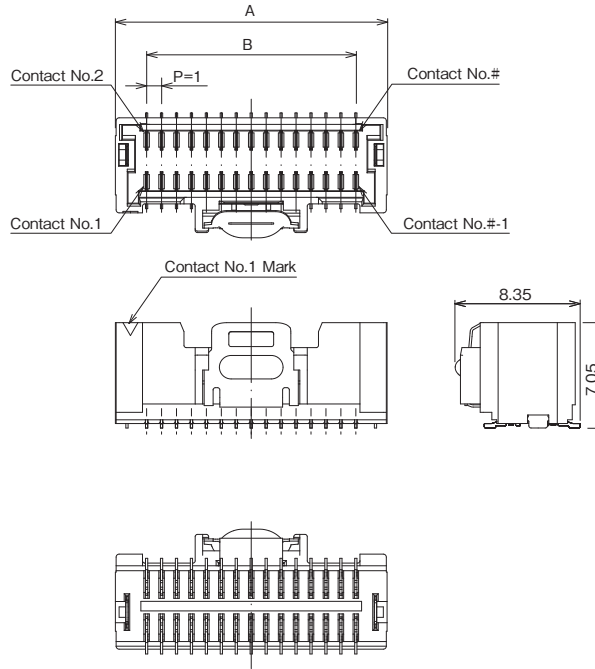
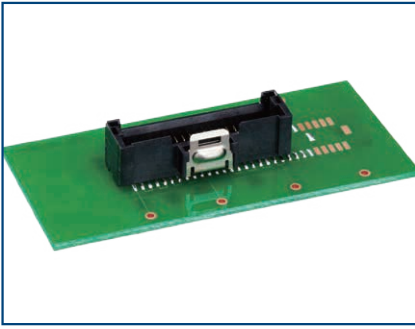
### ● Crimp Contact

#### **DF50 - 2830 SCF A**

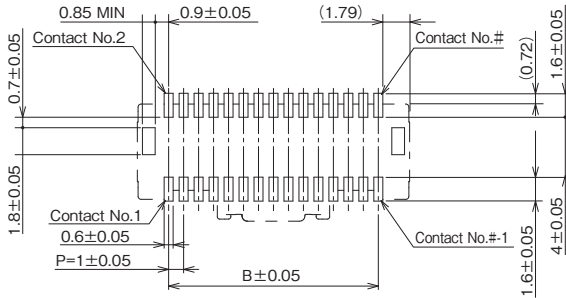
①                  ⑦      ⑧      ⑨

|                                   |  |                             |  |
|-----------------------------------|--|-----------------------------|--|
| ① Series Name                     | DF50 (Double Row Pin Header)<br>DF50S (Double Row Crimp Socket)<br>DF50A (Single Row)                      | ⑥ Specifications            | 51 : SMT Color : Black Embossed Packaging<br>52 : SMT Color : Black Embossed Packaging,<br>With Adsorption Cap |
| ② No. of Pos.                     | 20, 30, 40, 50 (Double Row)<br>2 to 16 (Single Row)  | ⑦ Applicable<br>Conductor   | 26 : 26 AWG<br>2830 : 28, 30 AWG<br>3032 : 30, 32 AWG  |
| ③ Connector Type                  | DP : Double Row Pin Header<br>DS : Double Row Socket<br>P : Single Row Pin Header<br>S : Single Row Socket | ⑧ Packaging Style           | SCF : Socket Contact, Reel   |
| ④ Contact Pitch                   | 1mm  | ⑨ Plating<br>Specifications | A : Gold Plating   |
| ⑤ Mounting Style<br>/ Wiring Type | C : Crimp Socket<br>V : SMT Straight Type<br>H : SMT Right Angle Type                                      |                             |  |

## Double Row Straight Pin Header



### Recommended PCB Layout



Unit : mm

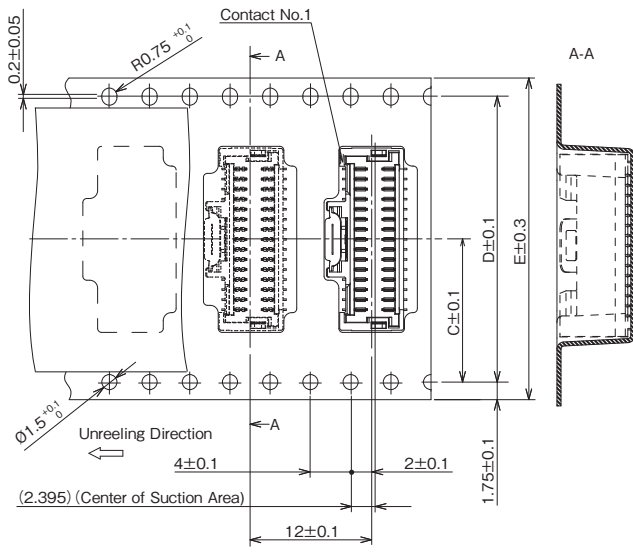
| Part No.         | HRS No.          | No. of Pos. | A     | B  | C    | D    | E  | F    | G    | Purchase Unit        |
|------------------|------------------|-------------|-------|----|------|------|----|------|------|----------------------|
| DF50-20DP-1V(##) | CL0665-0019-3-## | 20          | 13.18 | 9  | 14.2 | 28.4 | 32 | 38.4 | 32.4 | 1,000pcs<br>per reel |
| DF50-30DP-1V(##) | CL0665-0001-8-## | 30          | 18.18 | 14 | 14.2 | 28.4 | 32 | 38.4 | 32.4 |                      |
| DF50-40DP-1V(##) | CL0665-0005-9-## | 40          | 23.18 | 19 | 20.2 | 40.4 | 44 | 50.4 | 44.4 |                      |
| DF50-50DP-1V(##) | CL0665-0011-1-## | 50          | 28.18 | 24 | 20.2 | 40.4 | 44 | 50.4 | 44.4 |                      |

[Specification No.] -##, (##)

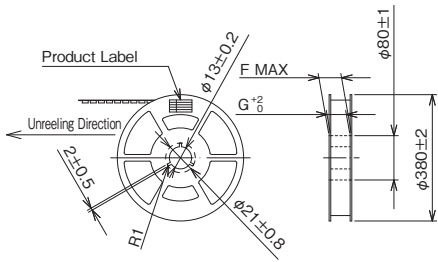
(51) Color : Black, Embossed packaging

(52) Color : Black, Embossed packaging, with adsorption cap

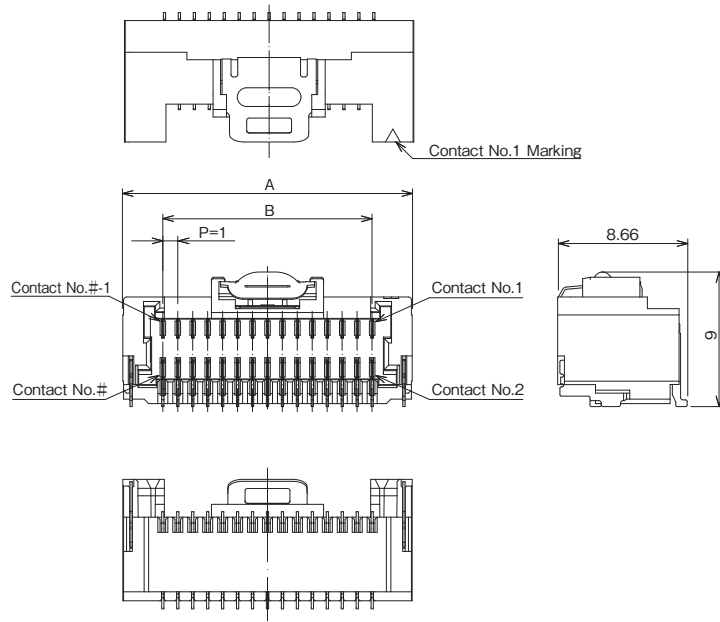
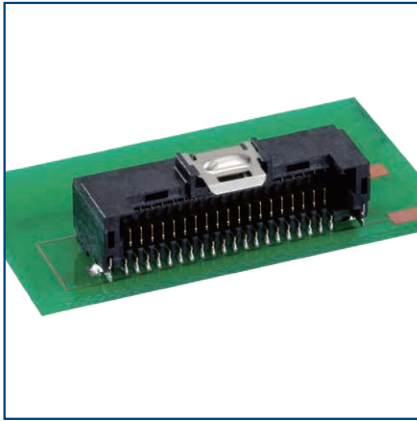
● Embossed Tape Dimensions  
(JIS C 0806 Compliant)



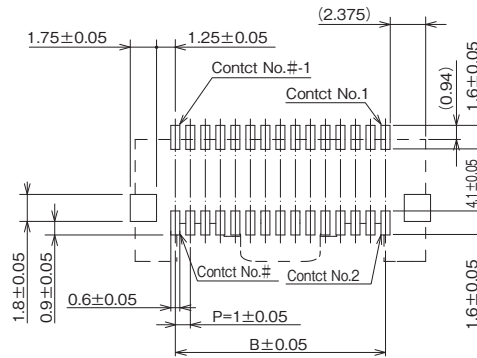
● Reel Dimensions



## Double Row Right Angle Pin Header



### Recommended PCB Layout



Unit : mm

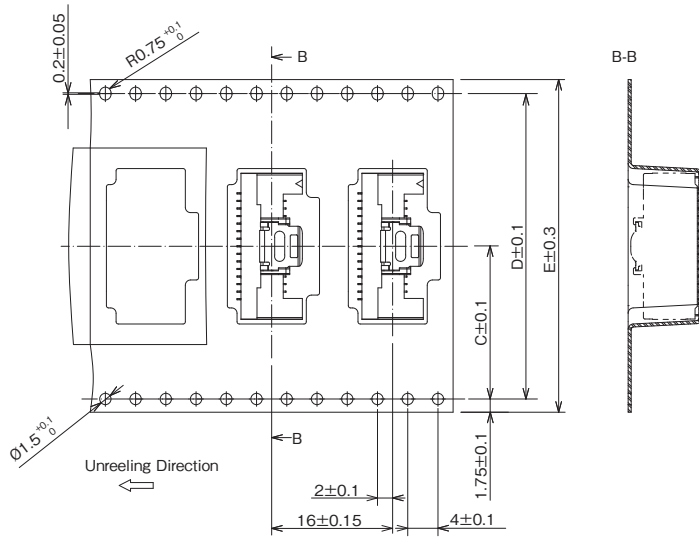
| Part No.         | HRS No.          | No. of Pos. | A     | B  | C    | D    | E  | E    | G    | Purchase Unit   |
|------------------|------------------|-------------|-------|----|------|------|----|------|------|-----------------|
| DF50-20DP-1H(51) | CL0665-0016-5-51 | 20          | 14.35 | 9  | 14.2 | 28.4 | 32 | 38.4 | 32.4 | 600pcs per reel |
| DF50-30DP-1H(51) | CL0665-0015-2-51 | 30          | 19.35 | 14 | 20.2 | 40.4 | 44 | 50.4 | 44.4 |                 |
| DF50-40DP-1H(51) | CL0665-0014-0-51 | 40          | 24.35 | 19 | 20.2 | 40.4 | 44 | 50.4 | 44.4 |                 |
| DF50-50DP-1H(51) | CL0665-0013-7-51 | 50          | 29.35 | 24 | 20.2 | 40.4 | 44 | 50.4 | 44.4 |                 |

[Specification No.]

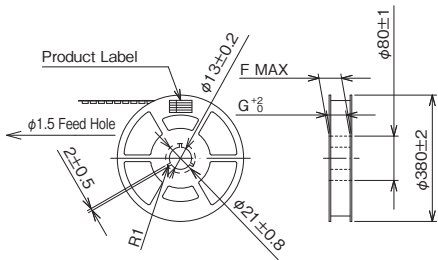
(51) Color : Black, Embossed packaging



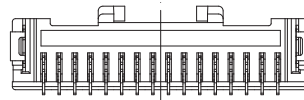
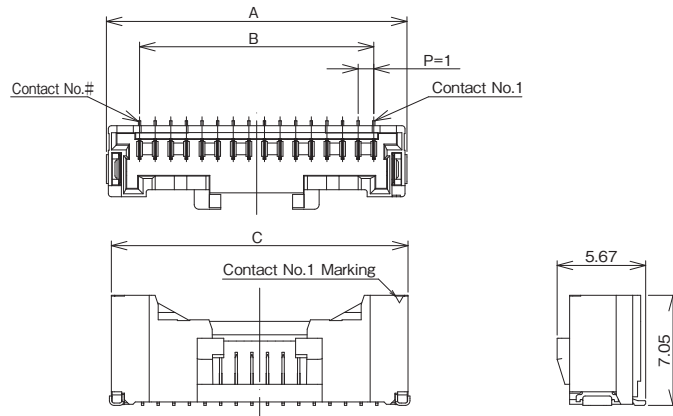
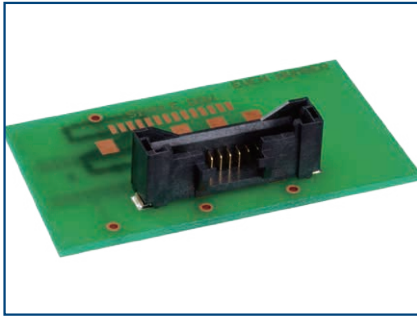
## ● Embossed Tape Dimensions (JIS C 0806 Compliant)



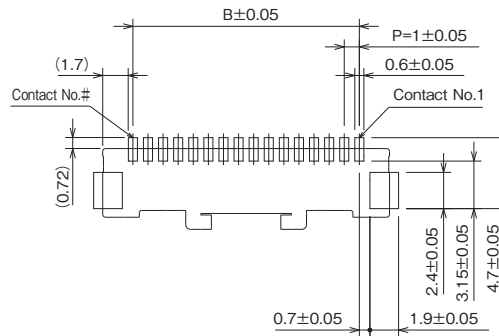
## ● Reel Dimensions



# Single Row Straight Pin Header



## Recommended PCB Layout



Unit : mm

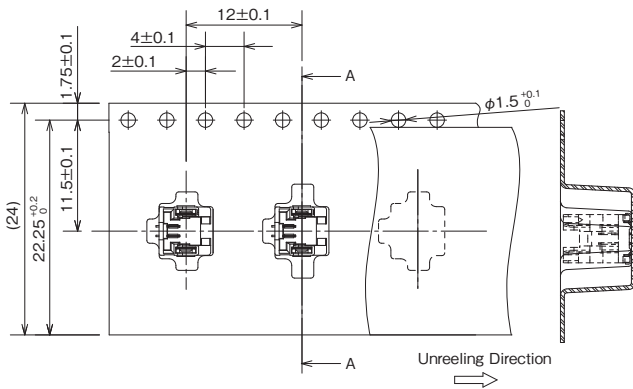
| Part No.         | HRS No.          | No. of Pos. | A     | B  | C  | Purchase Unit        |
|------------------|------------------|-------------|-------|----|----|----------------------|
| DF50A-2P-1V(51)  | CL0665-1001-3-51 | 2           | 5.25  | 1  | 5  | 1,000pcs<br>per reel |
| DF50A-3P-1V(51)  | CL0665-1004-1-51 | 3           | 6.25  | 2  | 6  |                      |
| DF50A-4P-1V(51)  | CL0665-1006-7-51 | 4           | 7.25  | 3  | 7  |                      |
| DF50A-5P-1V(51)  | CL0665-1008-2-51 | 5           | 8.25  | 4  | 8  |                      |
| DF50A-6P-1V(51)  | CL0665-1010-4-51 | 6           | 9.25  | 5  | 9  |                      |
| DF50A-7P-1V(51)  | CL0665-1012-0-51 | 7           | 10.25 | 6  | 10 |                      |
| DF50A-8P-1V(51)  | CL0665-1014-5-51 | 8           | 11.25 | 7  | 11 |                      |
| DF50A-9P-1V(51)  | CL0665-1016-0-51 | 9           | 12.25 | 8  | 12 |                      |
| DF50A-10P-1V(51) | CL0665-1017-3-51 | 10          | 13.25 | 9  | 13 |                      |
| DF50A-11P-1V(51) | CL0665-1019-9-51 | 11          | 14.25 | 10 | 14 |                      |
| DF50A-12P-1V(51) | CL0665-1021-0-51 | 12          | 15.25 | 11 | 15 |                      |
| DF50A-13P-1V(51) | CL0665-1023-6-51 | 13          | 16.25 | 12 | 16 |                      |
| DF50A-14P-1V(51) | CL0665-1025-1-51 | 14          | 17.25 | 13 | 17 |                      |
| DF50A-15P-1V(51) | CL0665-1027-7-51 | 15          | 18.25 | 14 | 18 |                      |
| DF50A-16P-1V(51) | CL0665-1029-2-51 | 16          | 19.25 | 15 | 19 |                      |

[Specification No.]

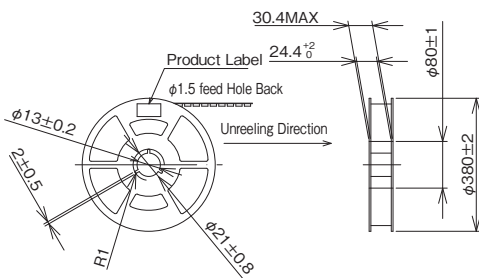
(51) Color : Black, Embossed packaging

## ● Embossed Tape Dimensions (JIS C 0806 Compliant)

DF50A-2P-1V-DF50A-8P-1V (No. of Pos. 2-8)

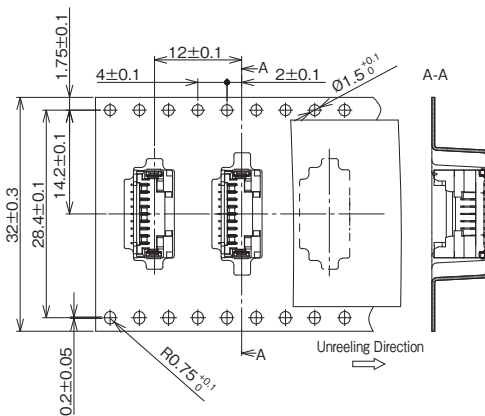


## ● Reel Dimensions

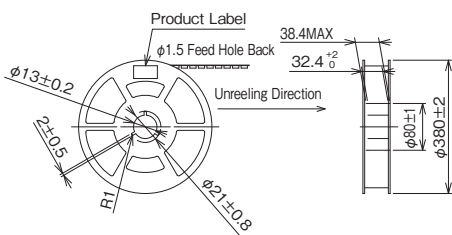


## ● Embossed Tape Dimensions (JIS C 0806 Compliant)

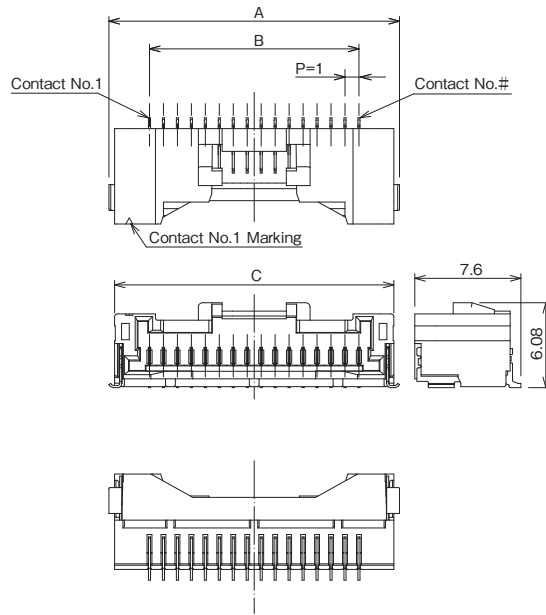
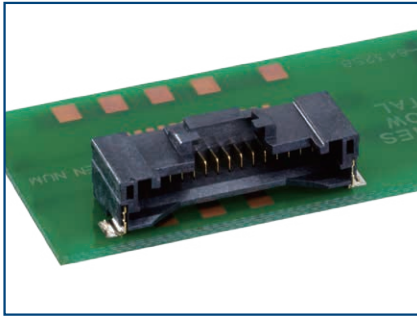
DF50A-9P-1V-DF50A-16P-1V (No. of Pos. 9-16)



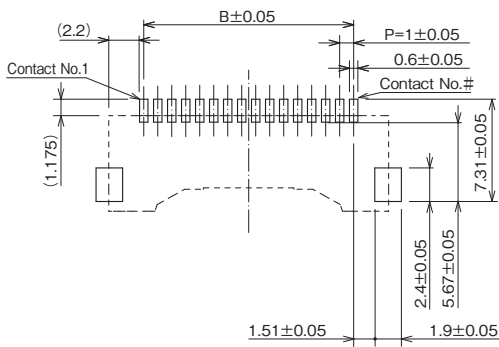
## ● Reel Dimensions



# Single Row Right Angle Pin Header



## Recommended PCB Layout



Unit : mm

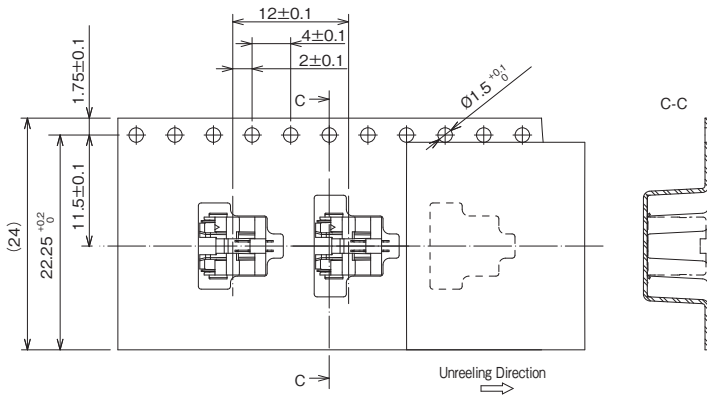
| Part No.         | HRS No.          | No. of Pos. | A     | B  | C  | Purchase Unit        |
|------------------|------------------|-------------|-------|----|----|----------------------|
| DF50A-2P-1H(51)  | CL0665-1031-4-51 | 2           | 6.81  | 1  | 6  | 1,000pcs<br>per reel |
| DF50A-3P-1H(51)  | CL0665-1032-7-51 | 3           | 7.81  | 2  | 7  |                      |
| DF50A-4P-1H(51)  | CL0665-1033-0-51 | 4           | 8.81  | 3  | 8  |                      |
| DF50A-5P-1H(51)  | CL0665-1034-2-51 | 5           | 9.81  | 4  | 9  |                      |
| DF50A-6P-1H(51)  | CL0665-1035-5-51 | 6           | 10.81 | 5  | 10 |                      |
| DF50A-8P-1H(51)  | CL0665-1037-0-51 | 8           | 12.81 | 7  | 12 |                      |
| DF50A-10P-1H(51) | CL0665-1039-6-51 | 10          | 14.81 | 9  | 14 |                      |
| DF50A-12P-1H(51) | CL0665-1041-8-51 | 12          | 16.81 | 11 | 16 |                      |
| DF50A-16P-1H(51) | CL0665-1045-9-51 | 16          | 20.81 | 15 | 20 |                      |

[Specification No.]

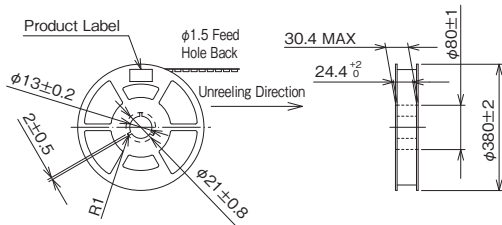
(51)Color : Black, Embossed packaging

### ● Embossed Tape Dimensions (JIS C 0806 Compliant)

DF50A-2P-1H-DF50A-6P-1H (No. of Pos.2-6)

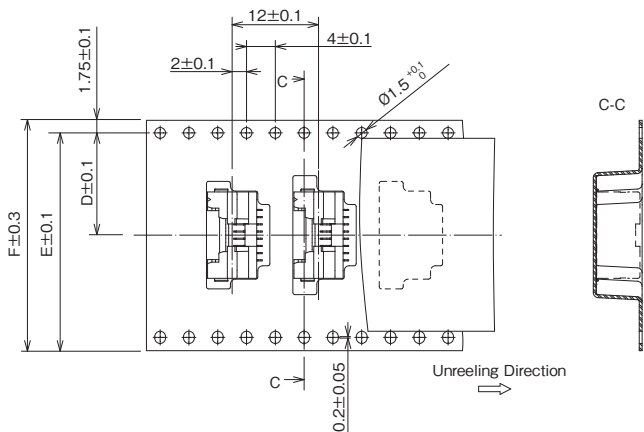


### ● Reel Dimensions

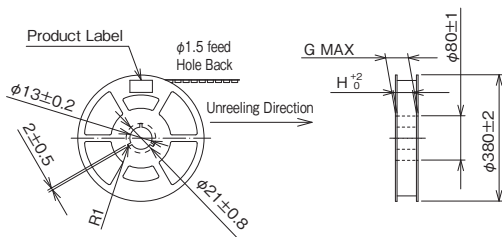


### ● Embossed Tape Dimensions (JIS C 0806 Compliant)

DF50A-8P-1H-DF50A-16P-1H (No. of Pos.8-16)



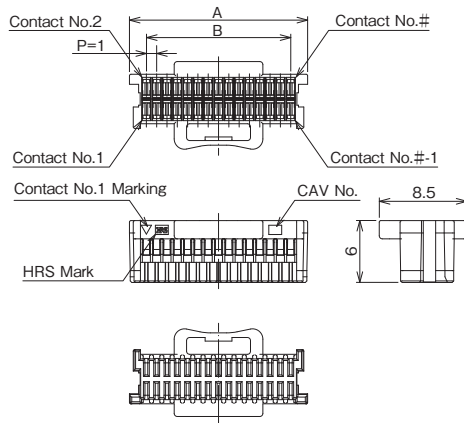
### ● Reel Dimensions



Unit : mm

| Part No.         | HRS No.          | No. of Pos. | D    | E    | F  | G    | H    | Purchase Unit     |
|------------------|------------------|-------------|------|------|----|------|------|-------------------|
| DF50A-8P-1H(51)  | CL0665-1037-0-51 | 8           | 14.2 | 28.4 | 32 | 38.4 | 32.4 | 1,000pcs per reel |
| DF50A-10P-1H(51) | CL0665-1039-6-51 | 10          | 14.2 | 28.4 | 32 | 38.4 | 32.4 |                   |
| DF50A-12P-1H(51) | CL0665-1041-8-51 | 12          | 14.2 | 28.4 | 32 | 38.4 | 32.4 |                   |
| DF50A-16P-1H(51) | CL0665-1045-9-51 | 16          | 20.2 | 40.4 | 44 | 50.4 | 44.4 |                   |

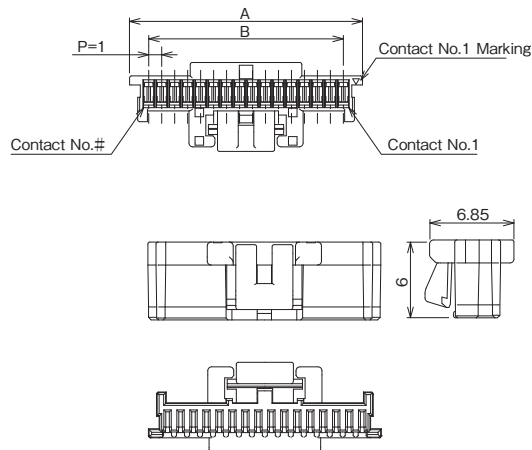
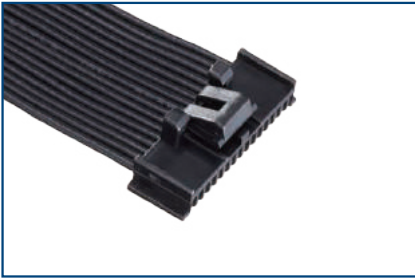
## Double Row Crimp Socket



Unit : mm

| Part No.      | HRS No.          | No. of Pos. | A     | B  | Purchase Unit     |
|---------------|------------------|-------------|-------|----|-------------------|
| DF50S-20DS-1C | CL0665-0020-2-00 | 20          | 12.28 | 9  | 100pcs<br>per bag |
| DF50S-30DS-1C | CL0665-0021-5-00 | 30          | 17.28 | 14 |                   |
| DF50S-40DS-1C | CL0665-0022-8-00 | 40          | 22.28 | 19 |                   |
| DF50S-50DS-1C | CL0665-0012-4-00 | 50          | 27.28 | 24 |                   |

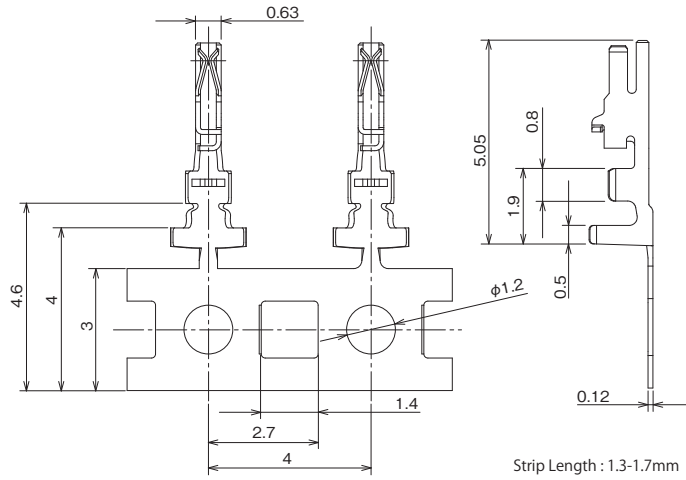
## Single Row Crimp Socket



Unit : mm

| Part No.     | HRS No.          | No. of Pos. | A     | B  | Purchase Unit     |
|--------------|------------------|-------------|-------|----|-------------------|
| DF50A-2S-1C  | CL0665-1002-6-00 | 2           | 3.95  | 1  | 100pcs<br>per bag |
| DF50A-3S-1C  | CL0665-1005-4-00 | 3           | 4.95  | 2  |                   |
| DF50A-4S-1C  | CL0665-1007-0-00 | 4           | 5.95  | 3  |                   |
| DF50A-5S-1C  | CL0665-1009-5-00 | 5           | 6.95  | 4  |                   |
| DF50A-6S-1C  | CL0665-1011-7-00 | 6           | 7.95  | 5  |                   |
| DF50A-7S-1C  | CL0665-1013-2-00 | 7           | 8.95  | 6  |                   |
| DF50A-8S-1C  | CL0665-1015-8-00 | 8           | 9.95  | 7  |                   |
| DF50A-9S-1C  | CL0665-1100-5-00 | 9           | 10.95 | 8  |                   |
| DF50A-10S-1C | CL0665-1018-6-00 | 10          | 11.95 | 9  |                   |
| DF50A-11S-1C | CL0665-1020-8-00 | 11          | 12.95 | 10 |                   |
| DF50A-12S-1C | CL0665-1022-3-00 | 12          | 13.95 | 11 |                   |
| DF50A-13S-1C | CL0665-1024-9-00 | 13          | 14.95 | 12 |                   |
| DF50A-14S-1C | CL0665-1026-4-00 | 14          | 15.95 | 13 |                   |
| DF50A-15S-1C | CL0665-1028-0-00 | 15          | 16.95 | 14 |                   |
| DF50A-16S-1C | CL0665-1030-1-00 | 16          | 17.95 | 15 |                   |

## Crimp Contact



| Part No.       | HRS No.          | Applicable Wire (Tin Plated Annealed Copper) (Note 1) |     |                         |                          |                 | Purchase Unit      |
|----------------|------------------|---|-----|-------------------------|--------------------------|-----------------|--------------------|
|                |                  | UL  | AWG | Stranded Wire Structure | Calculated Cross-section | Jacket Diameter |                    |
| DF50-26SCFA    | CL0665-0023-0-00 | 3302  | 26  | 7/0.160mm               | 0.141mm <sup>2</sup>     | 0.88mm          | 30,000pcs per reel |
| DF50-2830SCFA  | CL0665-0002-0-00 | 1061  | 28  | 7/0.127mm               | 0.089mm <sup>2</sup>     | 0.80 to 0.88mm  |                    |
|                |                  |   | 30  | 7/0.102mm               | 0.057mm <sup>2</sup>     |                 |                    |
| DF50K-2830SCFA | CL0665-0017-8-00 | 1571  | 28  | 7/0.127mm               | 0.089mm <sup>2</sup>     | 0.58mm          |                    |
|                |                  |   | 30  | 7/0.102mm               | 0.057mm <sup>2</sup>     |                 |                    |
| DF50-3032SCFA  | CL0665-0026-0-00 | 1571  | 30  | 7/0.102mm               | 0.057mm <sup>2</sup>     | 0.54 to 0.56mm  |                    |
|                |                  |   | 32  | 7/0.080mm               | 0.035mm <sup>2</sup>     |                 |                    |

Note 1 : When using cables not specified by Hirose, please contact a Hirose sales representative

Note 2 : The strip length is for reference. Adjust each dimension after crimping so that the specified value is satisfied. Refer to the crimping quality standards (ETAD-H0616-00) for details.



## Applicable Crimping Tools

| Type            | Part No.                   | HRS No.          | Applicable Contact | Remarks  |
|-----------------|----------------------------|------------------|--------------------|--|
| Applicator      | AP105-DF50-2630S           | CL0901-4641-7-00 | DF50-26SCFA        |  |
|                 |                            |                  | DF50-2830SCFA      |  |
|                 | AP105-DF50K-2830S          | CL0901-4628-9-00 | DF50K-2830SCFA     |  |
|                 | AP105-DF50-3032S           | CL0901-4648-0-00 | DF50-3032SCFA      |  |
|                 | DHS799100-BH(-UP)          | -                | DF50-2830SCFA      | Manufactured by Japan Automatic Machine Co., Ltd. (Note 4) |
| DHX001800K(-UP) | -                          | DF50K-2830SCFA   |                    |  |
| Press Body      | CM-105C                    | CL0901-0001-0-00 | -                  |  |
| Hand Tool       | HT305/DF50-2830HC (Note 3) | CL0902-4634-8-00 | DF50-2830SCFA      |  |
| Extraction Tool | DF-C-PO(B)                 | CL0550-0179-2-00 | DF50(K)-####SCFA   |  |

Note 1 : Please conduct crimping work according to the Crimping Quality Standard (ETAD-H0616-00) and Crimping Condition Table.

Note 2 : Issues with non-Hirose specified tools are outside the scope of warranty

Note 3 : The compatible wire is limited to UL1061, 28 to 30 AWG.

Note 4 : Applicator manufactured by JAPAN AUTOMATIC MACHINE (J.A.M.).

Please contact J.A.M. via the URL below regarding inquiries on the applicator or crimp defects.

(URL : <http://www.jam-net.co.jp>)

## Mated Dimensions

|             | Double Row | Single Row |
|-------------|------------|------------|
| Vertical    |            |            |
| Right Angle |            |            |

## Crimping

### ■ Items Required Prior to Starting

The work-related documents listed below are required before starting harness assembly.  
(The ● mark indicates a required document.)

When the documents shown below are not available, ask a Hirose sales personnel to provide them.

| Document Title  | Description  | Automatic Crimping Machine | Hand Crimping Tool | Remarks   |
|---|--|----------------------------|--------------------|---|
| ① Instruction Manual for the Crimping Machine Main Unit                     | Explanation of main press machine unit                                 | ●                          | —                  | Bundled with the purchase of the main press machine unit. |
| ② Applicator Spare Parts Identification                                     | Explanation for Applicator installation                                | ●                          | —                  | Bundled with the purchase of applicator.                  |
| ③ Crimp Conditions  | Standard values of :<br>Crimp height,<br>Tensile strength              | ●                          | —                  |   |
| ④ Crimp Quality Standards   | Various standards for crimping conditions                              | ●                          | —                  |   |
| ⑤ Operating Instructions for Hand Tool                                      | Inspection items of :<br>Crimp height,<br>Tensile strength, and others | —                          | ●                  | Bundled with the purchase of hand tool.                   |
| ⑥ Cable Assembly Procedure<br>DF50 : ETAD-H0354-00<br>DF50A : ETAD-H0437-00 | Harness procedure  | ●                          | ●                  | Ask a HRS sales representative.                           |

### ■ Tools

Use tools designated by Hirose when crimping.

- Crimping performed using tools other than those specified is outside the scope of warrant
- The operating instructions manual is available for the crimping machine and the applicator. Be sure to carefully read the operating instructions manual before beginning work.

### ■ Applicable Cables

Check that the cables to be used are within the applicable range

If you intend to use a cable other than those recommended, ask a HRS sales personnel.

#### 【Precautions】

- Electric wires that are suitable for crimp connectors are tin-plated stranded soft copper wire.
- Avoid crimping solid wires, wires with polyester threads or tin-coated wires.
- Avoid crimping two electric wires together.
- The crimp height setting value (Note) may vary between tin-plated and gold-plated contacts even if the same electric wires are used.
- The crimp height setting value (Note) may vary depending on the difference in the core wire configuration even if the computed cross-sectional area is the same.

Note : The crimp height is an important item that determines crimping quality. We execute crimping tests for each electric wire to ensure the optimal value for the crimp height with high precision, thereby ensuring optimal setup values.

## Precautions

|  |   |
|--|---|
| <p>Recommended Temperature Profile<br/>(Compatible with Lead-Free Soldering)</p> | <p>[Conditions]</p> <ol style="list-style-type: none"> <li>1. Peak Temperature : 250°C</li> <li>2. Heating : 220°C min. for 60 sec. max.</li> <li>3. Preheating : 150 to 180°C, 90 to 120 sec.</li> <li>4. Number of Reflow Cycles : 2 cycles max.</li> </ol> <p>* Temperature refers to the surface temperature of the board near the connector lead.<br/>Soldering results may change depending on the conditions such as solder paste types, manufacturer, PCB size, and other soldering materials, so please fully check the mounting conditions before use.<br/>(Note) This temperature profile is a recommended value.</p>  |
| <p>Recommended Manual Soldering Conditions</p>                                   | <p>Soldering iron temperature : 350 ± 10°C , Soldering Time : 3 to 4 sec.</p>   |
| <p>Recommended Metal Mask Thickness and Open Area to PCB Pattern Area Ratio</p>  | <p>Thickness : 0.1mm, Aperture Ratio : 100%</p>   |
| <p>Board Warpage</p>   | <p>Max. of 0.02mm at the center in reference to both ends of the connector</p>  |
| <p>Cleaning</p>  | <p>IPA cleaning is allowed. (Cleaning is not recommended due to potential changes in mating action and other variables. Please contact us if you use other cleaning agents.)</p>  |
| <p>Precautions</p>   | <ol style="list-style-type: none"> <li>1. When inserting a crimped contact into a socket, please refrain from inserting at a diagonal as doing so may affect performance reliability.</li> <li>2. Please refer to the "DF50 Series Cable Assembly Procedure" (ETAD-H0354), "DF50A Series Cable Assembly Procedure" (ETAD-H0437), and the DF50#-###SCFA(##) Crimp Quality Standards" and "Crimp Conditions".</li> <li>3. Caution is required for mating and un-mating the connector when it is not mounted on a PCB. Doing so can damage or deform the contacts.</li> <li>4. Do not remove the product by holding the cable as it may result in damage.</li> <li>5. When soldering by hand do not apply flux that may result in flux rising.</li> <li>6. The housing color may have slight variations depending on the production lot. This color variation does not affect performance.</li> <li>7. Black spots may appear on the mold resin but this does not affect the product quality.</li> </ol> |
| <p>Handling Instructions</p>   | <p>Please refer to the following documents when handling this product.</p> <ul style="list-style-type: none"> <li>■ Crimp Quality Standards (ETAD-H0616-00)</li> <li>■ Cable Assembly Procedure (ETAD-H0354-00, ETAD-H0437-00)</li> <li>■ Wire-to-Board Connector Use Handbook</li> </ul>   |

## While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please review the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, the warranty of the product may be affected.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/ defense etc. Hirose must review before assurance of reliability can be given.