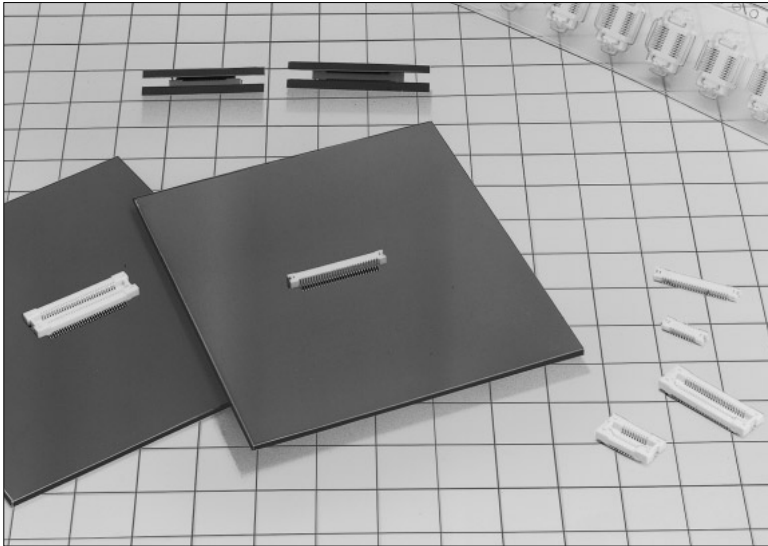


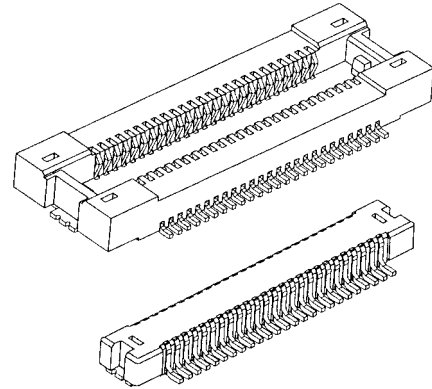
# 0.5mm Pitch SMT Board to Board Connector

## DF16 Series



### Correspond to Automatic Mounting

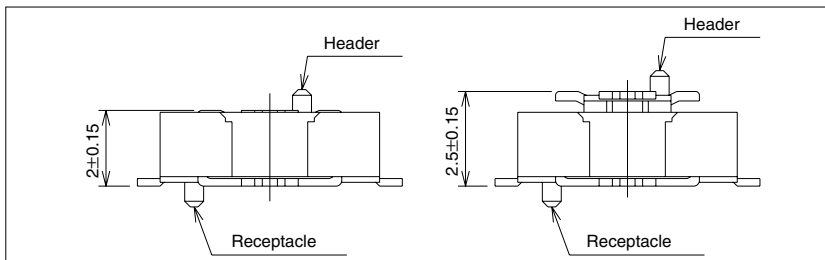
The vacuum pick-up area is prepared for automatic mounting machine.



## ■Features

### 1. Miniaturizing and Slimming

In addition to 0.5mm pitch miniaturization, board to stacking height of 2mm and 2.5mm are provided.



Note1: The stacking height doesn't include the solder paste thickness.

Receptacle commonly uses DF16#-\*DS-0.5V.

Header Product Name	Stacking Height
DF16#(2.0)-*DP-0.5V	2.0mm
DF16#(2.5)-*DP-0.5V	2.5mm

### 2. High Contact Reliability

The bellows female contact has a sufficient spring characteristic despite the low profile, and achieves high contact reliability.

### 3. Click Sensitivity in Mating

The click feeling is considered to facilitate insertion check when the connector is mated.

### 4. Metal Fitting Available

The metal fitting to prevent the solder peel is provided, considering the mounting on FPC.

### 5. Corresponding to Automatic Mounting

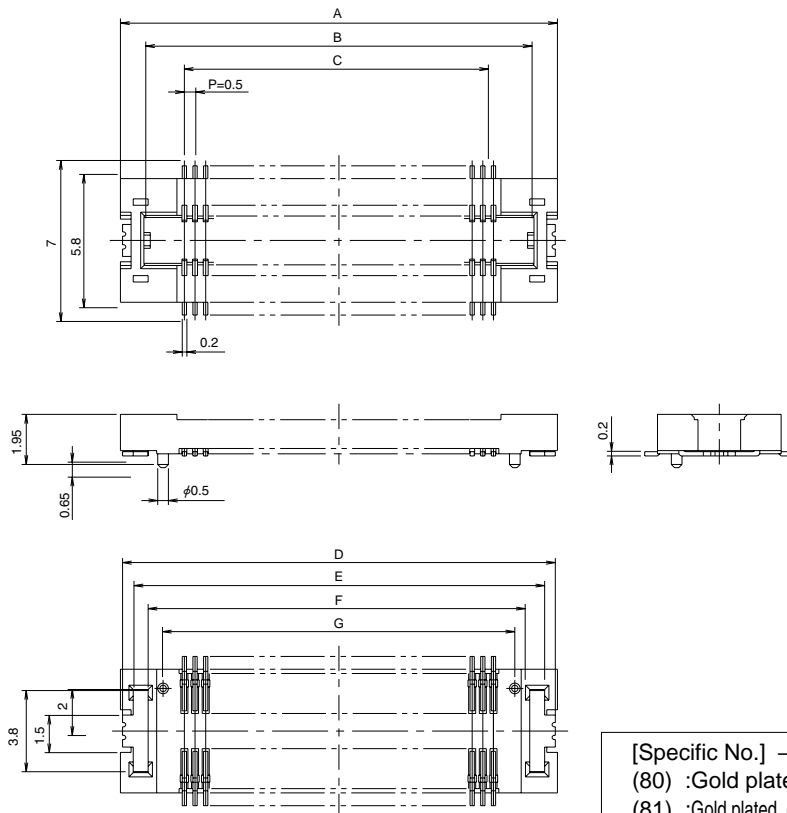
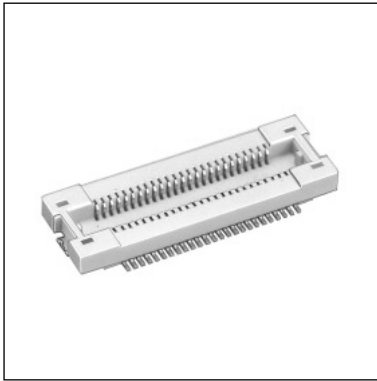
The connector has the vacuum pick-up area, and enables the automatic mounting with the embossed tape packaging. Connector specification with no boss and no fitting is also.

## ■Applications

Mobile phone, LCD(Liquid Crystal Display), and so on



## ■Receptacle With metal fitting



[Specific No.] - \* \*, (\* \*)  
 (80) :Gold plated, tube packaging  
 (81) :Gold plated, embossed tape packaging

### ●Receptacle with metal fitting, with boss

Unit: mm

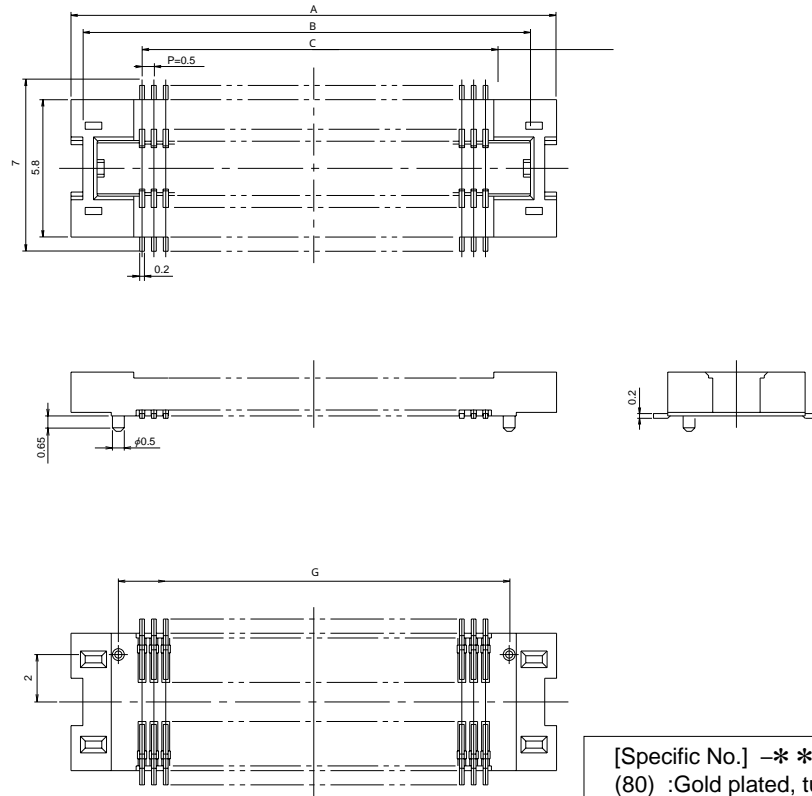
Part Number	CL No.	Number of Contacts	A	B	C	D	E	F	G	Tube Packaging Quantity( pcs.)
DF16-14DS-0.5V(**)	679-0010-1-***	14	9.0	6.8	3.0	8.8	7.8	6.4	5.6	54 pcs.
DF16-16DS-0.5V(**)	679-0001-0-***	16	9.5	7.3	3.5	9.3	8.3	6.9	6.1	51 pcs.
DF16-20DS-0.5V(**)	679-0002-3-***	20	10.5	8.3	4.5	10.3	9.3	7.9	6.5	46 pcs.
DF16-30DS-0.5V(**)	679-0003-6-***	30	13.0	10.8	7.0	12.8	11.8	10.4	9.0	37 pcs.
DF16-34DS-0.5V(**)	679-0009-2-***	34	14.0	11.8	8.0	13.8	12.8	11.4	10.0	35 pcs.
DF16-40DS-0.5V(**)	679-0004-9-***	40	15.5	13.3	9.5	15.3	14.3	12.9	11.5	31 pcs.
DF16-50DS-0.5V(**)	679-0005-1-***	50	18.0	15.8	12.0	17.8	16.8	15.4	14.0	27 pcs.
DF16-60DS-0.5V(**)	679-0006-4-***	60	20.5	18.3	14.5	20.3	19.3	17.9	16.5	23 pcs.
DF16-80DS-0.5V(**)	679-0008-0-***	80	25.5	23.3	19.5	25.3	24.3	22.9	21.5	19 pcs.

### ●Receptacle with metal fitting, without boss

Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	F	G	Tube Packaging Quantity( pcs.)
DF16B-14DS-0.5V(**)	679-0030-9-***	14	9.0	6.8	3.0	8.8	7.8	6.4	—	54 pcs.
DF16B-16DS-0.5V(**)	679-0021-8-***	16	9.5	7.3	3.5	9.3	8.3	6.9	—	51 pcs.
DF16B-20DS-0.5V(**)	679-0022-0-***	20	10.5	8.3	4.5	10.3	9.3	7.9	—	46 pcs.
DF16B-30DS-0.5V(**)	679-0023-3-***	30	13.0	10.8	7.0	12.8	11.8	10.4	—	37 pcs.
DF16B-34DS-0.5V(**)	679-0029-0-***	34	14.0	11.8	8.0	13.8	12.8	11.4	—	35 pcs.
DF16B-40DS-0.5V(**)	679-0024-6-***	40	15.5	13.3	9.5	15.3	14.3	12.9	—	31 pcs.
DF16B-50DS-0.5V(**)	679-0025-9-***	50	18.0	15.8	12.0	17.8	16.8	15.4	—	27 pcs.
DF16B-60DS-0.5V(**)	679-0026-1-***	60	20.5	18.3	14.5	20.3	19.3	17.9	—	23 pcs.
DF16B-80DS-0.5V(**)	679-0028-7-***	80	25.5	23.3	19.5	25.3	24.3	22.9	—	19 pcs.

## ■Receptacle Without metal fitting



[Specific No.] -\*\* \*, (\*\* \*)  
 (80) :Gold plated, tube packaging  
 (81) :Gold plated, embossed tape packaging

## ●Receptacle without metal fitting, with boss

Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	G	Tube Packaging Quantity( pcs.)
DF16A-14DS-0.5V(**)	679-0020-5-**	14	9.0	6.8	3.0	5.6	54 pcs.
DF16A-16DS-0.5V(**)	679-0011-4-**	16	9.5	7.3	3.5	6.1	51 pcs.
DF16A-20DS-0.5V(**)	679-0012-7-**	20	10.5	8.3	4.5	6.5	46 pcs.
DF16A-30DS-0.5V(**)	679-0013-0-**	30	13.0	10.8	7.0	9.0	37 pcs.
DF16A-34DS-0.5V(**)	679-0019-6-**	34	14.0	11.8	8.0	10.0	35 pcs.
DF16A-40DS-0.5V(**)	679-0014-2-**	40	15.5	13.3	9.5	11.5	31 pcs.
DF16A-50DS-0.5V(**)	679-0015-5-**	50	18.0	15.8	12.0	14.0	27 pcs.
DF16A-60DS-0.5V(**)	679-0016-8-**	60	20.5	18.3	14.5	16.5	23 pcs.
DF16A-80DS-0.5V(**)	679-0018-3-**	80	25.5	23.3	19.5	21.5	19 pcs.

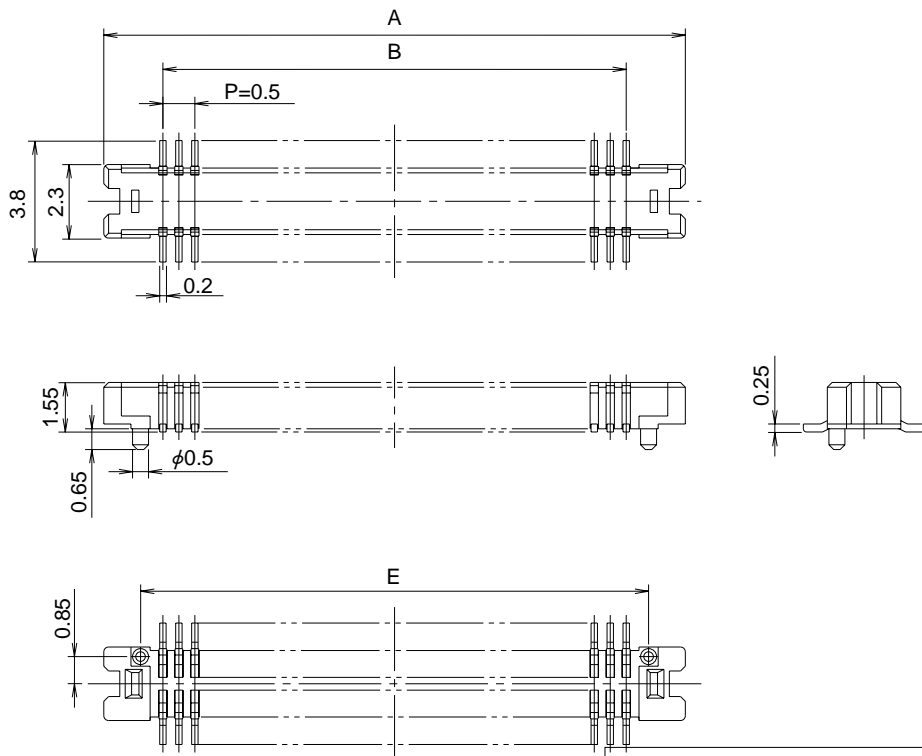
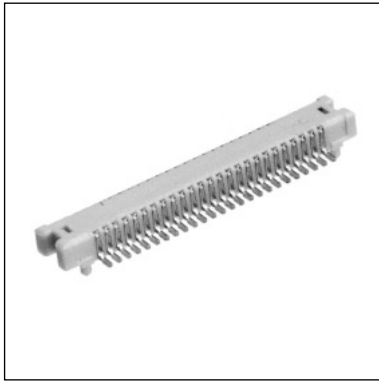
## ●Receptacle without metal fitting, without boss

Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	G	Tube Packaging Quantity( pcs.)
DF16C-14DS-0.5V(**)	679-0040-2-**	14	9.0	6.8	3.0	—	54 pcs.
DF16C-16DS-0.5V(**)	679-0031-1-**	16	9.5	7.3	3.5	—	51 pcs.
DF16C-20DS-0.5V(**)	679-0032-4-**	20	10.5	8.3	4.5	—	46 pcs.
DF16C-30DS-0.5V(**)	679-0033-7-**	30	13.0	10.8	7.0	—	37 pcs.
DF16C-34DS-0.5V(**)	679-0039-3-**	34	14.0	11.8	8.0	—	35 pcs.
DF16C-40DS-0.5V(**)	679-0034-0-**	40	15.5	13.3	9.5	—	31 pcs.
DF16C-50DS-0.5V(**)	679-0035-2-**	50	18.0	15.8	12.0	—	27 pcs.
DF16C-60DS-0.5V(**)	679-0036-5-**	60	20.5	18.3	14.5	—	23 pcs.
DF16C-80DS-0.5V(**)	679-0038-0-**	80	25.5	23.3	19.5	—	19 pcs.



## Board to Board 2mm Header Without metal fitting



[Specific No.] -\* \*, (\* \*)  
 (80) :Gold plated, tube packaging  
 (81) :Gold plated, embossed tape packaging

### Board to Board 2mm Header without metal fitting, with boss

Unit: mm

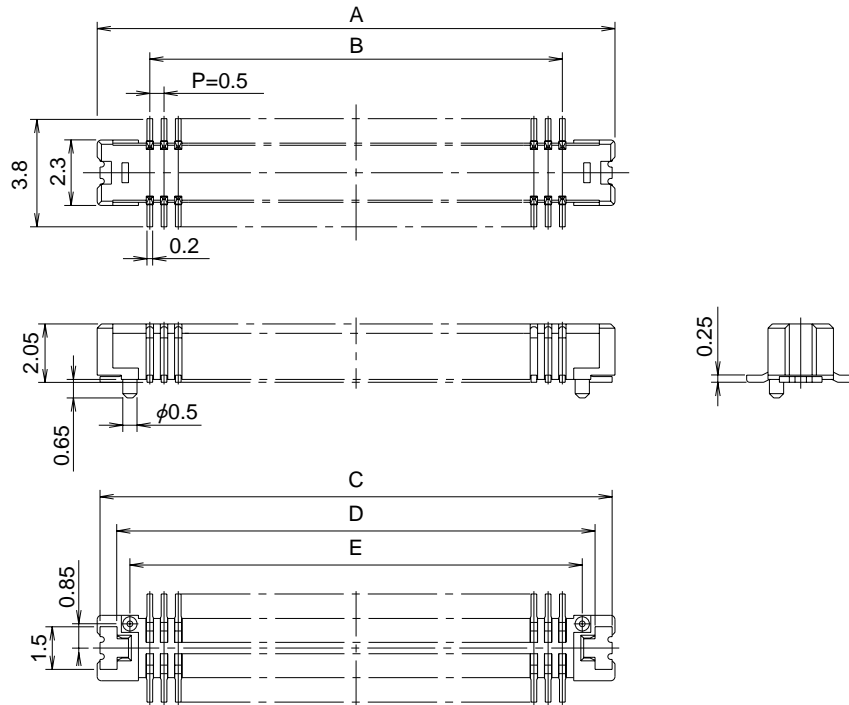
Part Number	CL No.	Number of Contacts	A	B	E	Tube Packaging Quantity( pcs.)
DF16A(2.0)-14DP-0.5V(**)	679-0059-0-***	14	6.7	3.0	4.4	73 pcs.
DF16A(2.0)-16DP-0.5V(**)	679-0051-9-***	16	7.2	3.5	4.9	68 pcs.
DF16A(2.0)-20DP-0.5V(**)	679-0052-1-***	20	8.2	4.5	5.9	59 pcs.
DF16A(2.0)-30DP-0.5V(**)	679-0053-4-***	30	10.7	7.0	8.4	45 pcs.
DF16A(2.0)-40DP-0.5V(**)	679-0054-7-***	40	13.2	9.5	10.9	37 pcs.
DF16A(2.0)-50DP-0.5V(**)	679-0055-0-***	50	15.7	12.0	13.4	31 pcs.
DF16A(2.0)-60DP-0.5V(**)	679-0056-2-***	60	18.2	14.5	15.9	26 pcs.
DF16A(2.0)-80DP-0.5V(**)	679-0058-8-***	80	23.2	19.5	20.9	21 pcs.

### Board to Board 2mm Header without metal fitting, without boss

Unit: mm

Part Number	CL No.	Number of Contacts	A	B	E	Tube Packaging Quantity( pcs.)
DF16C(2.0)-14DP-0.5V(**)	679-0079-8-***	14	6.7	3.0	—	73 pcs.
DF16C(2.0)-16DP-0.5V(**)	679-0071-6-***	16	7.2	3.5	—	68 pcs.
DF16C(2.0)-20DP-0.5V(**)	679-0072-9-***	20	8.2	4.5	—	59 pcs.
DF16C(2.0)-30DP-0.5V(**)	679-0073-1-***	30	10.7	7.0	—	45 pcs.
DF16C(2.0)-40DP-0.5V(**)	679-0074-4-***	40	13.2	9.5	—	37 pcs.
DF16C(2.0)-50DP-0.5V(**)	679-0075-7-***	50	15.7	12.0	—	31 pcs.
DF16C(2.0)-60DP-0.5V(**)	679-0076-0-***	60	18.2	14.5	—	26 pcs.
DF16C(2.0)-80DP-0.5V(**)	679-0078-5-***	80	23.2	19.5	—	21 pcs.

## Board to Board 2.5mm Header With metal fitting



[Specific No.] -\* \*, (\* \*)  
 (80) :Gold plated, tube packaging  
 (81) :Gold plated, embossed tape packaging

### Board to Board 2.5mm Header with metal fitting, with boss

Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	Tube Packaging Quantity( pcs.)
DF16(2.5)-20DP-0.5V(**)	679-0082-2-***	20	8.2	4.5	8.0	6.8	5.9	59 pcs.
DF16(2.5)-30DP-0.5V(**)	679-0083-5-***	30	10.7	7.0	10.5	9.3	8.4	45 pcs.
DF16(2.5)-34DP-0.5V(**)	679-0089-1-***	34	11.7	8.0	11.5	10.3	9.4	42 pcs.
DF16(2.5)-40DP-0.5V(**)	679-0084-8-***	40	13.2	9.5	13.0	11.8	10.9	37 pcs.
DF16(2.5)-50DP-0.5V(**)	679-0085-0-***	50	15.7	12.0	15.5	14.3	13.4	31 pcs.
DF16(2.5)-60DP-0.5V(**)	679-0086-3-***	60	18.2	14.5	18.0	16.8	15.9	26 pcs.

### Board to Board 2.5mm Header with metal fitting, without boss

Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	Tube Packaging Quantity( pcs.)
DF16B(2.5)-20DP-0.5V(**)	679-0102-8-***	20	8.2	4.5	8.0	6.8	—	59 pcs.
DF16B(2.5)-30DP-0.5V(**)	679-0103-0-***	30	10.7	7.0	10.5	9.3	—	45 pcs.
DF16B(2.5)-34DP-0.5V(**)	679-0109-7-***	34	11.7	8.0	11.5	10.3	—	42 pcs.
DF16B(2.5)-40DP-0.5V(**)	679-0104-3-***	40	13.2	9.5	13.0	11.8	—	37 pcs.
DF16B(2.5)-50DP-0.5V(**)	679-0105-6-***	50	15.7	12.0	15.5	14.3	—	31 pcs.
DF16B(2.5)-60DP-0.5V(**)	679-0106-9-***	60	18.2	14.5	18.0	16.8	—	26 pcs.

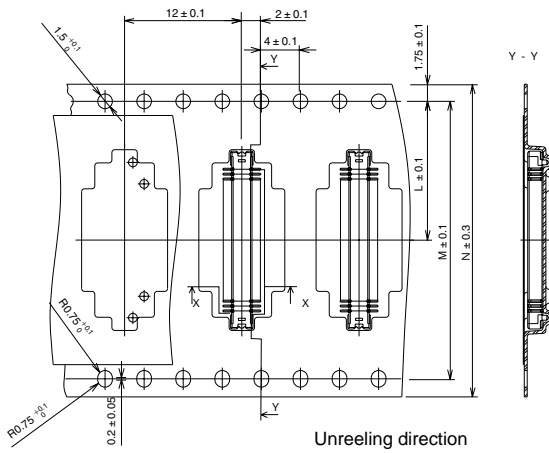




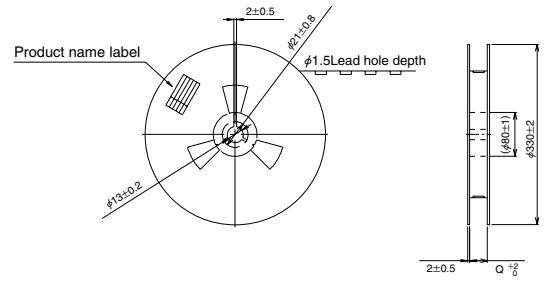


# ■ Embossed Carrier Tape Dimensions

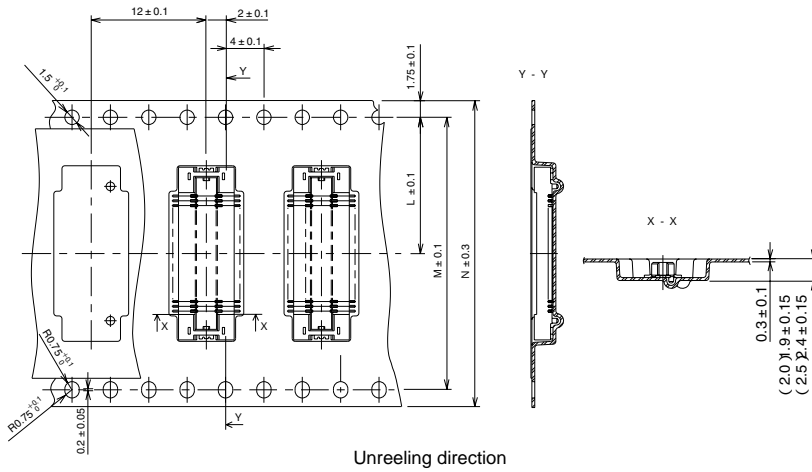
## ● Receptacle



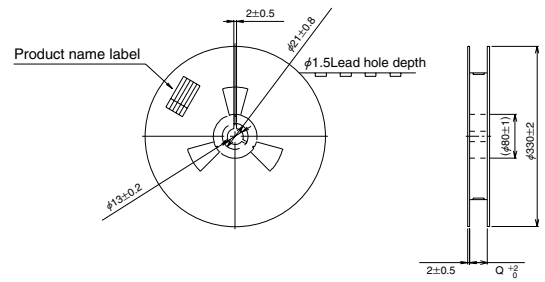
## ● Reel Dimensions



## ● Header



## ● Reel Dimensions



Product Name	N	M	L	Q
DF16#-14DS-0.5V	24.0	—	11.5	24.4
DF16#-16DS-0.5V	24.0	—	11.5	24.4
DF16#-20DS-0.5V	24.0	—	11.5	24.4
DF16#-30DS-0.5V	24.0	—	11.5	24.4
DF16#-34DS-0.5V	24.0	—	11.5	24.4
DF16#-40DS-0.5V	32.0	28.4	14.2	32.4
DF16#-50DS-0.5V	32.0	28.4	14.2	32.4
DF16#-60DS-0.5V	32.0	28.4	14.2	32.4
DF16#-80DS-0.5V	44.0	40.4	20.2	44.4
DF16#(2.0)-14DP-0.5V	16.0	—	7.5	16.4
DF16#(2.0)-16DP-0.5V	16.0	—	7.5	16.4
DF16#(2.0)-34DP-0.5V	24.0	—	11.5	24.4
DF16#(2.0/2.5)-20DP-0.5V	16.0	—	7.5	16.4
DF16#(2.0/2.5)-30DP-0.5V	24.0	—	11.5	24.4
DF16#(2.0/2.5)-40DP-0.5V	24.0	—	11.5	24.4
DF16#(2.0/2.5)-50DP-0.5V	24.0	—	11.5	24.4
DF16#(2.0/2.5)-60DP-0.5V	32.0	28.4	14.2	32.4
DF16#(2.0/2.5)-80DP-0.5V	44.0	40.4	20.2	44.4

## ◆Precautions

<p>1. Recommended Temperature Profile (SMT)</p>	<p>Note1: Maximum two actions are allowed under the same condition. However, the interval between the first and second actions must be maintained at the room temperature.</p> <p>Note2: The temperature indicates the board surface temperature of the connector lead area.</p>
<p>2. Recommended Manual Soldering Condition (SMT)</p>	<p>Soldering iron temperature: <math>290 \pm 10^\circ\text{C}</math>, Soldering time: Within 2 seconds</p>
<p>3. Recommended Screen Thickness (SMT)</p>	<p>0.15mm</p>
<p>4. Board Warp (SMT)</p>	<p>Maximum 0.2mm in the connector center area, based on the both connector edges</p>
<p>5. Cleaning Condition</p>	<p>Refer to the "Nylon Connector Use Hand book".</p>
<p>6. Cautions</p>	<ul style="list-style-type: none"> <li>■The header is designed in a structure where contacts are exposed. Touching it with bare hands would cause contact failure or electrostatic element damage.</li> <li>■Where no board is mounted, the insertion or extraction will cause damage or contact deformation.</li> <li>■Avoid retaining the board with the connector only, and fix the board by any other means than the connector.</li> <li>■Excessive scoop insertion or extraction may result in damage.</li> <li>■In the manual soldering process, don't carry out flux coating which will cause a flux blister on the connector.</li> <li>■The color phase of this product may be slightly different from that of the formed product according to the manufacturing lot. However, the difference doesn't affect the performance.</li> </ul>