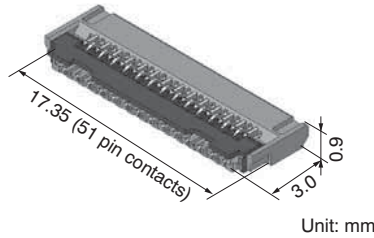


FEATURES

1. Low-profile, space-saving design (pitch: 0.3mm)

The 0.9mm height, 3.0mm depth contributes to the miniaturization and thickness reduction of target products.
* The total depth including the lever is 3.2mm.



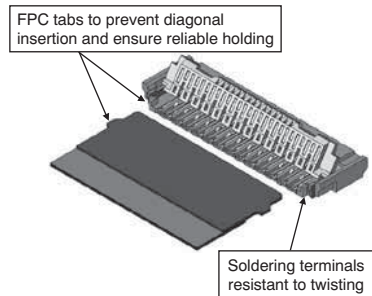
- 3. Soldering terminals for higher mounting strength
- 4. Easy-to-handle front lock structure
- 5. Wiring patterns can be placed underneath the connector.
- 6. Ni barrier with high resistance to solder creep

APPLICATIONS

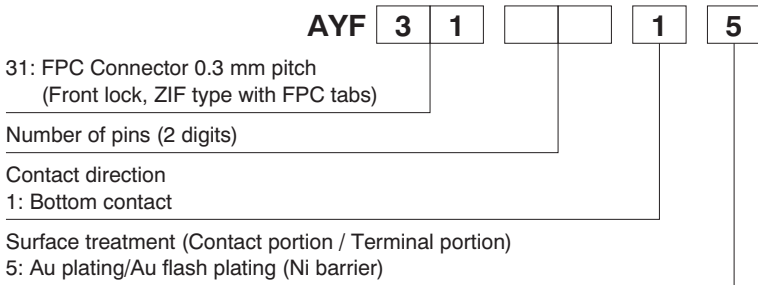
Mobile devices, such as cellular phones, smartphones, digital still cameras and digital video cameras.

2. FPC with tabs ensures high reliability through secure connectivity

Thanks to a design in which the FPC tab portion attaches to the protruding resin part, depth is reduced making the product more compact. Also makes it possible to securely position the FPC during insertion and prevent diagonal insertion. (Y3F is compatible with FPC without tabs.)



ORDERING INFORMATION



PRODUCT TYPES

Height	Number of pins	Part number	Packing	
			Inner carton	Outer carton
0.9 mm	11	AYF311115	5,000 pieces	10,000 pieces
	13	AYF311315		
	15	AYF311515		
	17	AYF311715		
	23	AYF312315		
	25	AYF312515		
	27	AYF312715		
	29	AYF312915		
	31	AYF313115		
	33	AYF313315		
	35	AYF313515		
	39	AYF313915		
	41	AYF314115		
	45	AYF314515		
51	AYF315115			

Notes: 1. Order unit;

For volume production: 1-inner carton (1-reel) units

Samples for mounting check: 50-connector units. Please contact our sales office.

2. Please contact our sales office for connectors having a number of pins other than those listed above.

SPECIFICATIONS

1. Characteristics

	Item	Specifications	Conditions																		
Electrical characteristics	Rated current	0.2A/pin contact																			
	Rated voltage	50V AC/DC																			
	Insulation resistance	Min. 1,000M Ω (initial)	Using 250V DC megger (applied for 1 min.)																		
	Breakdown voltage	150V AC for 1 min.	No short-circuiting or damage at a detection current of 1 mA when the specified voltage is applied for one minute.																		
	Contact resistance	Max. 80m Ω	Based on the contact resistance measurement method specified by JIS C 5402.																		
Mechanical characteristics	FPC holding force	Min. 0.23N/pin contacts \times pin contacts (initial)	Measurement of the maximum force applied until the inserted compatible FPC is pulled out in the insertion axis direction while the connector lever is closed																		
Environmental characteristics	Ambient temperature	-55°C to +85°C	No freezing at low temperatures. No dew condensation.																		
	Storage temperature	-55°C to +85°C (product only) -40°C to +50°C (emboss packing)																			
	Thermal shock resistance (with FPC inserted)	5 cycles, insulation resistance min. 100M Ω , contact resistance max. 80m Ω	Conformed to MIL-STD-202F, method 107G <table border="1"> <thead> <tr> <th>Order</th> <th>Temperature (°C)</th> <th>Time (minutes)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-55$\frac{0}{3}$</td> <td>30</td> </tr> <tr> <td>2</td> <td>}</td> <td>Max. 5</td> </tr> <tr> <td>3</td> <td>85$\frac{0}{3}$</td> <td>30</td> </tr> <tr> <td>4</td> <td>}</td> <td>Max. 5</td> </tr> <tr> <td></td> <td>-55$\frac{0}{3}$</td> <td></td> </tr> </tbody> </table>	Order	Temperature (°C)	Time (minutes)	1	-55 $\frac{0}{3}$	30	2	}	Max. 5	3	85 $\frac{0}{3}$	30	4	}	Max. 5		-55 $\frac{0}{3}$	
	Order	Temperature (°C)	Time (minutes)																		
	1	-55 $\frac{0}{3}$	30																		
	2	}	Max. 5																		
	3	85 $\frac{0}{3}$	30																		
4	}	Max. 5																			
	-55 $\frac{0}{3}$																				
Humidity resistance (with FPC inserted)	120 hours, insulation resistance min. 100M Ω , contact resistance max. 80m Ω	Bath temperature 40 \pm 2°C, humidity 90 to 95% R.H.																			
Saltwater spray resistance (with FPC inserted)	24 hours, insulation resistance min. 100M Ω , contact resistance max. 80m Ω	Bath temperature 35 \pm 2°C, saltwater concentration 5 \pm 1%																			
H ₂ S resistance (with FPC inserted)	48 hours, contact resistance max. 80m Ω	Bath temperature 40 \pm 2°C, gas concentration 3 \pm 1 ppm, humidity 75 to 80% R.H.																			
Soldering heat resistance	Peak temperature: 260°C or less 300°C within 5 sec. 350°C within 3 sec.	Reflow soldering Soldering iron																			
Lifetime characteristics	Insertion and removal life	30 times	Repeated insertion and removal: min. 10 sec./time																		
	Unit weight	51 pin contact type: 0.09 g																			

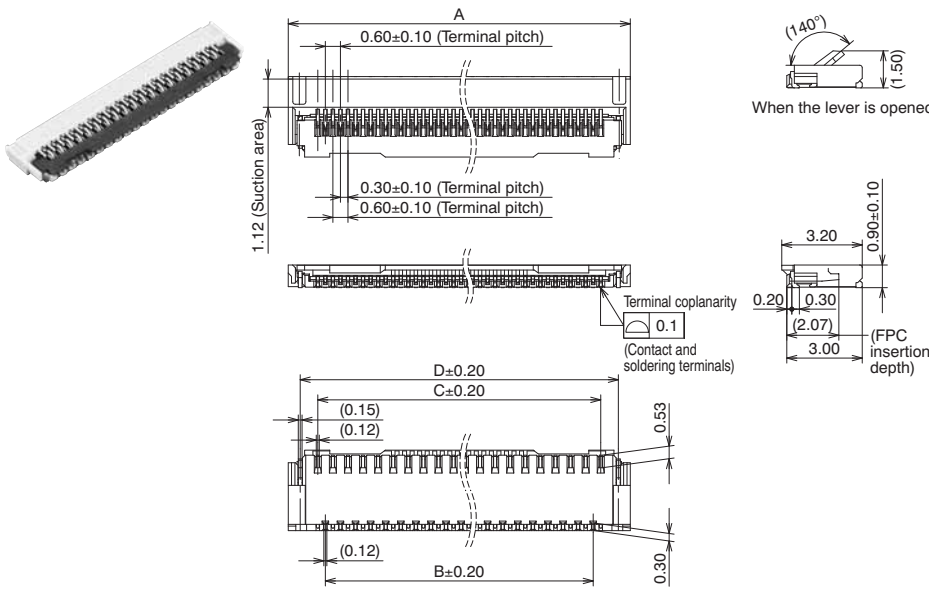
2. Material and surface treatment

Part name	Material	Surface treatment
Molded portion	Housing: LCP resin (UL94V-0) Lever: LCP resin (UL94V-0)	—
Contact	Copper alloy	Contact portion; Base: Ni plating, Surface: Au plating Terminal portion; Base: Ni plating, Surface: Au plating
Soldering terminal portion	Copper alloy	Base: Ni plating, Surface: Au plating

DIMENSIONS (Unit: mm)

Interested in CAD data? You can obtain CAD data for all products with a mark from your local Panasonic Electric Works representative.

CAD Data

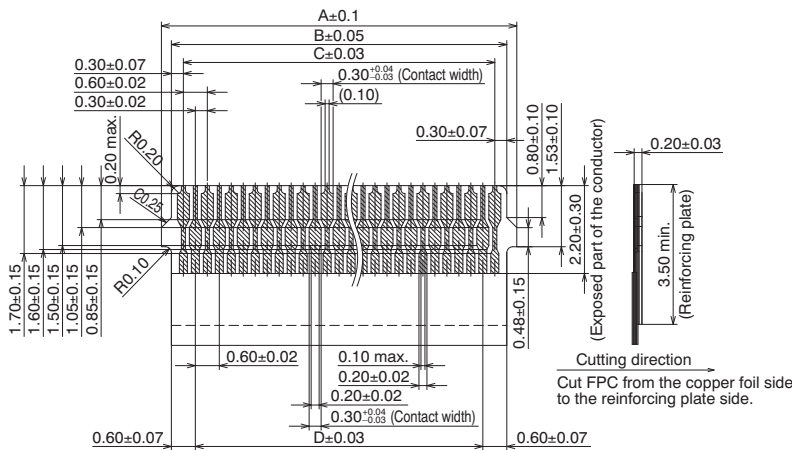


Number of pins/dimension	A	B	C	D
11	5.35	2.40	3.00	4.40
13	5.95	3.00	3.60	5.00
15	6.55	3.60	4.20	5.60
17	7.15	4.20	4.80	6.20
23	8.95	6.00	6.60	8.00
25	9.55	6.60	7.20	8.60
27	10.15	7.20	7.80	9.20
29	10.75	7.80	8.40	9.80
31	11.35	8.40	9.00	10.40
33	11.95	9.00	9.60	11.00
35	12.55	9.60	10.20	11.60
39	13.75	10.80	11.40	12.80
41	14.35	11.40	12.00	13.40
45	15.55	12.60	13.20	14.60
51	17.35	14.40	15.00	16.40

RECOMMENDED FPC DIMENSIONS

(Finished thickness: $t = 0.2 \pm 0.03$)

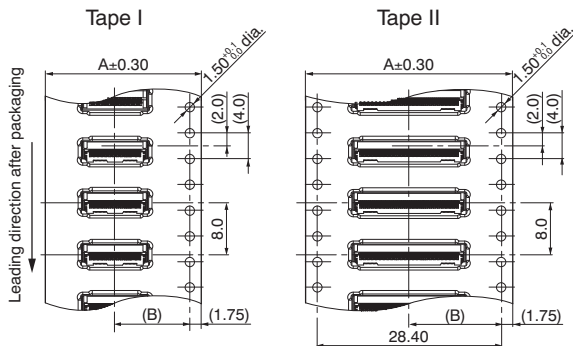
The conductive parts should be based by Ni plating and then Au plating.



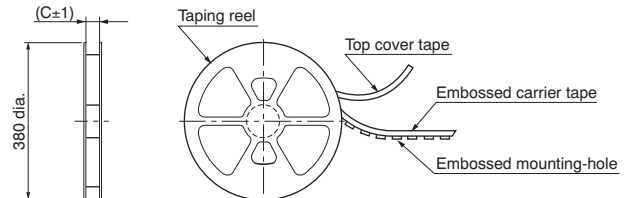
Number of pins/dimension	A	B	C	D
11	4.10	3.60	3.00	2.40
13	4.70	4.20	3.60	3.00
15	5.30	4.80	4.20	3.60
17	5.90	5.40	4.80	4.20
23	7.70	7.20	6.60	6.00
25	8.30	7.80	7.20	6.60
27	8.90	8.40	7.80	7.20
29	9.50	9.00	8.40	7.80
31	10.10	9.60	9.00	8.40
33	10.70	10.20	9.60	9.00
35	11.30	10.80	10.20	9.60
39	12.50	12.00	11.40	10.80
41	13.10	12.60	12.00	11.40
45	14.30	13.80	13.20	12.60
51	16.10	15.60	15.00	14.40

EMBOSSED TAPE DIMENSIONS (Unit: mm) (Common for respective contact type)

• Specifications for taping




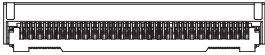
• Specifications for the plastic reel (In accordance with EIAJ ET-7200B.)



• Dimension table (Unit: mm)

Number of pins	Type of taping	A	B	C	Quantity per reel
Max. 17	Tape I	16.0	7.5	17.4	5,000
23 to 45	Tape I	24.0	11.5	25.4	5,000
51	Tape II	32.0	14.2	33.4	5,000

• Connector orientation with respect to embossed tape feeding direction

Direction of tape progress 	Type Y3FT	
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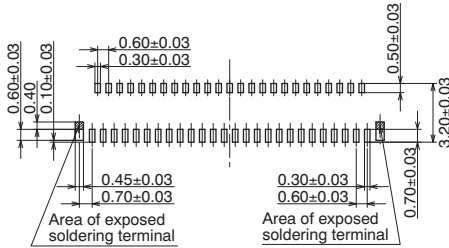
NOTES

1. Recommended PC board and metal mask patterns

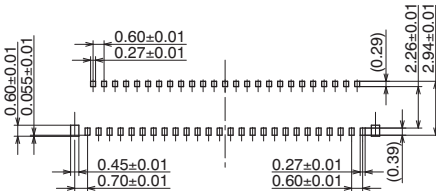
Connectors are mounted with high pitch density, intervals of 0.3 mm or 0.5 mm. In order to reduce solder bridges and other issues make sure the proper levels of solder is used.

The figures to the right are recommended metal mask patterns. Please use them as a reference.

Recommended PC board pattern
(mounting layout)
(TOP VIEW)



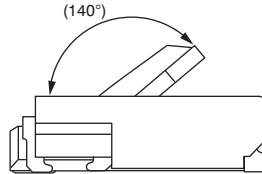
Recommended metal mask pattern
Metal mask thickness: Here, 120µm
(Front terminal portion opening area ratio: 50%)
(Back terminal portion opening area ratio: 51%)
(Soldering terminal portion opening area ratio: 100%)



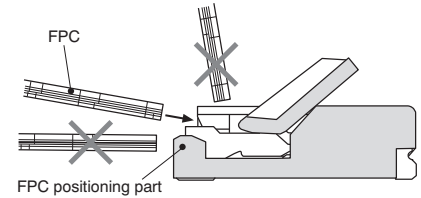
2. Precautions for insertion/removal of FPC

To open the lever, hold its center and pull it up. An uneven load applied to the lever on one side may deform and break the lever. Do not apply an excessive load to the lever in the opening direction, otherwise, the terminals may be deformed. Don't further apply an excessive load to the fully opened lever; otherwise, the lever may be deformed. Fully open the lever to insert an FPC.

Since this product connects at the bottom, please insert the FPC so that its electrode plane is facing the board to which it will be mounted. Do not insert the FPC in the reverse direction of the contact section; otherwise, operation failures or malfunctions may be caused.



This product has a structure to position an inserted FPC using the FPC tabs. Therefore, insert an FPC at an angle to the board. If the FPC is inserted in the direction parallel to the board, the molded positioning parts block the FPC, leading to incomplete insertion. An FPC inserted at an excessive angle to the board may cause the deformation of metal parts, FPC insertion failures, and FPC circuit breakages.



Insert the FPC to the full depth of the connector without altering the angle. When closing the lever, carefully use the tip of your finger to push the entire lever or both sides of it. If pressure to the lever is applied unevenly, IE: only the edge, it may deform or break the FPC. Make sure that the lever is closed completely. Not doing so will cause a faulty connection. Avoid applying an excessive load to the top of the lever during or after closing the lever. Otherwise, the terminals may be deformed.

Remove the FPC at an angle with the lever fully opened. If the lever is closed, or if the FPC is forcedly pulled into a direction parallel to the board, the molded part may break.

After an FPC is inserted, carefully handle it so as not to apply excessive stress to the base of the FPC.

Please refer to the latest product specifications when designing your product.

For Cautions for Use, see the “GENERAL NOTES FOR USING FPC CONNECTORS” in the [Connector Technical Information](#). For other details, please verify with the product specification sheets.