

FEATURES

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

The 0.9mm height, 3.0mm depth contributes to overall miniaturization of product design.

* The total depth including the lever is 3.2mm.

3. Soldering terminals for higher mounting strength

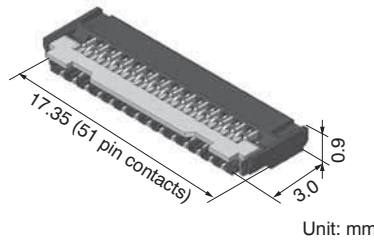
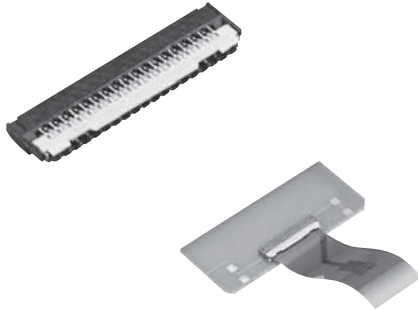
4. Easy-to-handle front lock structure

5. Wiring patterns can be placed underneath the connector.

6. Ni barrier with high resistance to solder creep

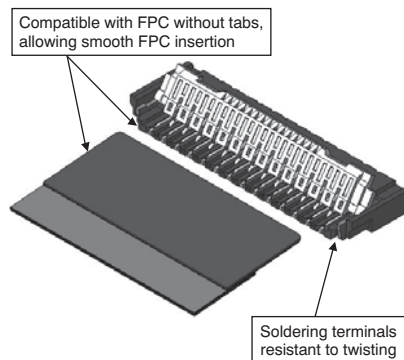
APPLICATIONS

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



2. Compatible with FPC without tabs, allowing smooth FPC insertion

Compatible with/without FPC tabs, allowing smooth FPC insertion (Y3FT is compatible with FPC with tabs.)



ORDERING INFORMATION

	AYF	3	2			1	5
32: FPC Connector 0.3 mm pitch (Front lock, ZIF type without FPC tabs)							
Number of pins (2 digits)							
Contact direction 1: Bottom contact							
Surface treatment (Contact portion / Terminal portion) 5: Au plating/Au flash plating (Ni barrier)							

PRODUCT TYPES

Height	Number of pins	Part number	Packing	
			Inner carton	Outer carton
0.9 mm	11	AYF321115	5,000 pieces	10,000 pieces
	13	AYF321315		
	15	AYF321515		
	17	AYF321715		
	23	AYF322315		
	25	AYF322515		
	27	AYF322715		
	29	AYF322915		
	31	AYF323115		
	33	AYF323315		
	35	AYF323515		
	39	AYF323915		
	41	AYF324115		
	45	AYF324515		
	51	AYF325115		

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. 1,000MΩ (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. 80mΩ	Based on the contact resistance measurement method specified by JIS C 5402.																		
Mechanical characteristics	FPC holding force	Min. 0.13N/pin contacts × 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. 100MΩ, contact resistance max. 80mΩ	Conformed to MIL-STD-202F, method 107G <table><tr><th>Order</th><th>Temperature (°C)</th><th>Time (minutes)</th></tr><tr><td>1</td><td>−55⁺⁰_{−3}</td><td>30</td></tr><tr><td>2</td><td>∅</td><td>Max. 5</td></tr><tr><td>3</td><td>85⁺³_{−0}</td><td>30</td></tr><tr><td>4</td><td>∅</td><td>Max. 5</td></tr><tr><td></td><td>−55⁺⁰_{−3}</td><td></td></tr></table>	Order	Temperature (°C)	Time (minutes)	1	−55 ⁺⁰ _{−3}	30	2	∅	Max. 5	3	85 ⁺³ _{−0}	30	4	∅	Max. 5		−55 ⁺⁰ _{−3}	
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	3	85 ⁺³ _{−0}	30																		
	4	∅	Max. 5																		
		−55 ⁺⁰ _{−3}																			
Humidity resistance (with FPC inserted)	120 hours, insulation resistance min. 100MΩ, contact resistance max. 80mΩ	Bath temperature 40±2°C, humidity 90 to 95% R.H.																			
Saltwater spray resistance (with FPC inserted)	24 hours, insulation resistance min. 100MΩ, contact resistance max. 80mΩ	Bath temperature 35±2°C, saltwater concentration 5±1%																			
H ₂ S resistance (with FPC inserted)	48 hours, contact resistance max. 80mΩ	Bath temperature 40±2°C, gas concentration 3±1 ppm, humidity 75 to 80% R.H.																			
Soldering heat resistance	Peak temperature: 260°C or less	Reflow soldering																			
	300°C within 5 sec. 350°C within 3 sec.	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																			

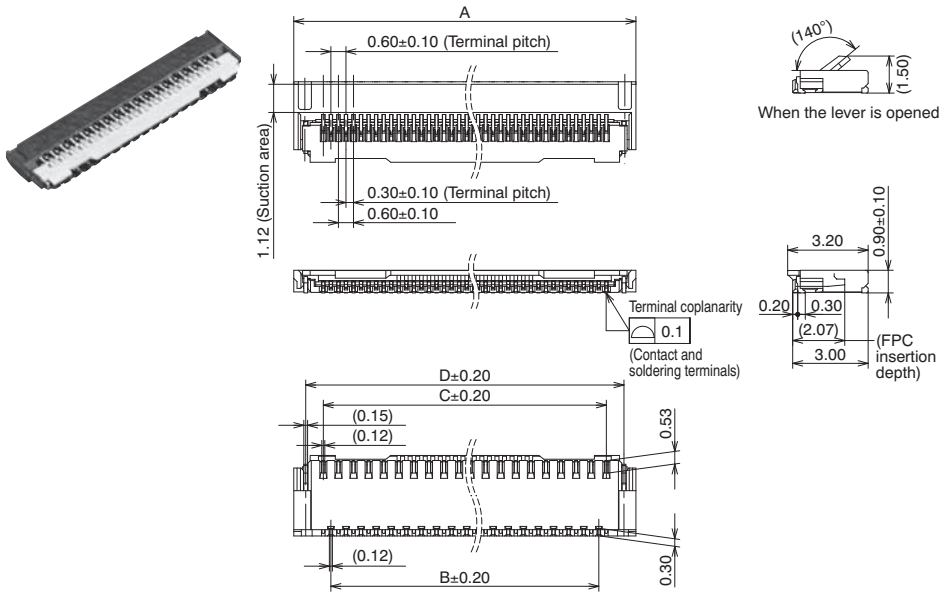
2. Material and surface treatment

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

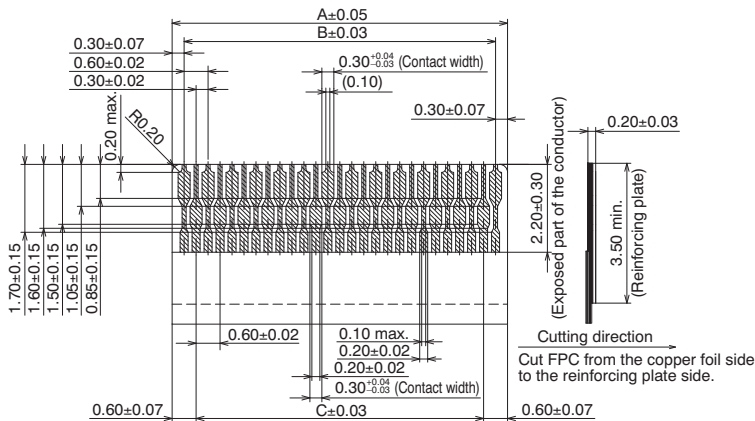


Number of pins/ dimension	A	B	C	D
11	5.35	2.40	3.00	4.40
13	5.95	3.00	3.60	5.00
15	6.55	3.60	4.20	5.60
17	7.15	4.20	4.80	6.20
23	8.95	6.00	6.60	8.00
25	9.55	6.60	7.20	8.60
27	10.15	7.20	7.80	9.20
29	10.75	7.80	8.40	9.80
31	11.35	8.40	9.00	10.40
33	11.95	9.00	9.60	11.00
35	12.55	9.60	10.20	11.60
39	13.75	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: $t = 0.2 \pm 0.03$)

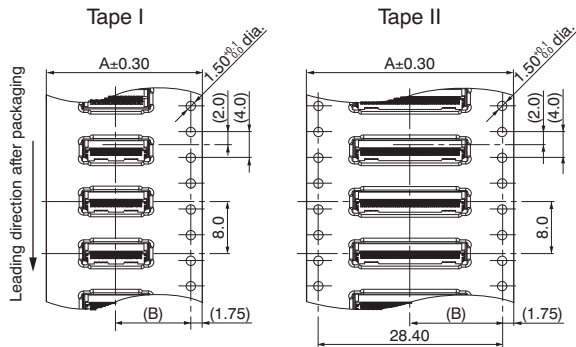
The conductive parts should be based by Ni plating and then Au plating.



Number of pins/ dimension	A	B	C
11	3.60	3.00	2.40
13	4.20	3.60	3.00
15	4.80	4.20	3.60
17	5.40	4.80	4.20
23	7.20	6.60	6.00
25	7.80	7.20	6.60
27	8.40	7.80	7.20
29	9.00	8.40	7.80
31	9.60	9.00	8.40
33	10.20	9.60	9.00
35	10.80	10.20	9.60
39	12.00	11.40	10.80
41	12.60	12.00	11.40
45	13.80	13.20	12.60
51	15.60	15.00	14.40

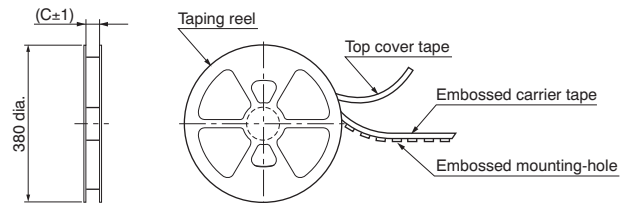
EMBOSSED TAPE DIMENSIONS (Unit: mm) (Common for respective contact type)

• 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

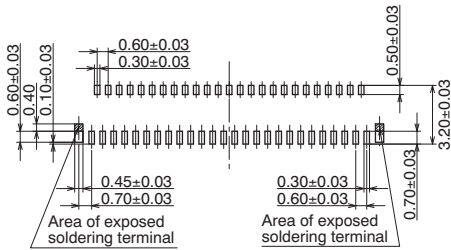
Direction of tape progress	Type	Y3F
		

NOTES

1. Recommended PC board and metal mask patterns

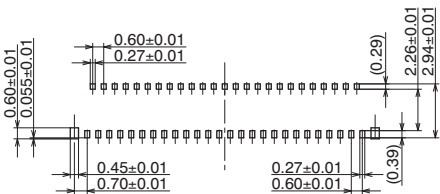
Connectors are mounted with high pitch density, intervals of 0.3 mm or 0.5 mm. In order to reduce solder bridges and other issues make sure the proper levels of solder is used. The figures to the right are recommended metal mask patterns. Please use them as a reference.

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



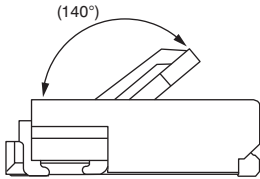
Recommended metal mask pattern

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%)

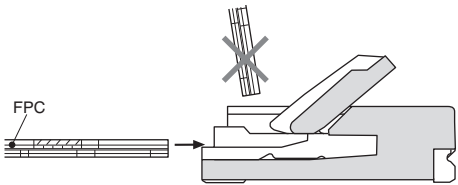


2. Precautions for insertion/removal of FPC

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.



Completely insert the FPC horizontally. 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 parallel with the lever fully opened. If the lever is closed, or if the FPC is forcedly pulled, 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.