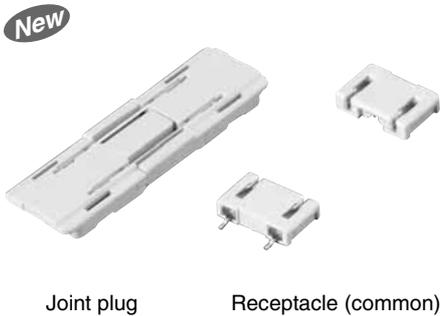


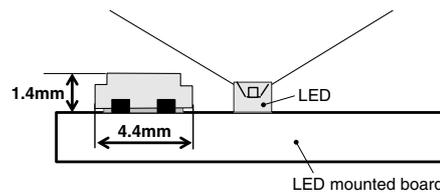
For LED	L1 Series (Joint type)
LED lighting connector	



RoHS compliant

FEATURES

1. Small and low profile design does not obstruct the LED light
 The connector is of a 2.4 mm pitch two pins board joint type. The LED light is not obstructed by the low profile (1.4 mm mated height) L1 series connector.
Explanatory diagram of the connector mounted on a circuit board



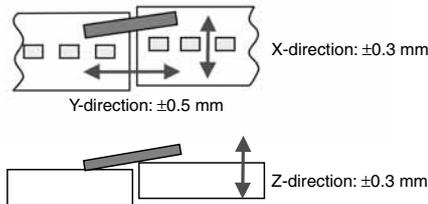
- 3. Safety covered by ensuring insulation distance (Min. 1.6 mm)**
- 4. Mating lock construction using molded lock**
- 5. Unmating configured with jig**

APPLICATIONS

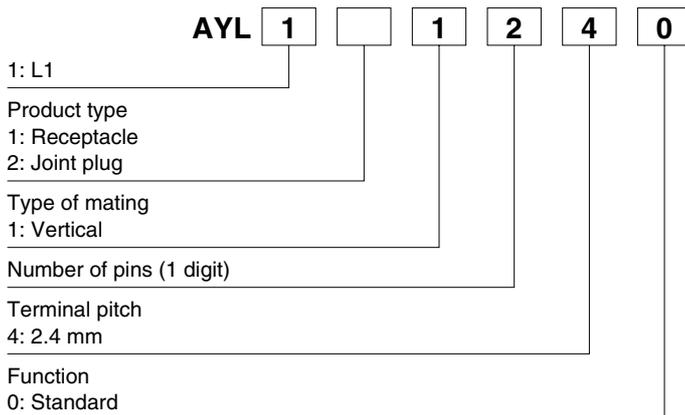
Straight LED tube lights, LED base lights, etc.

2. Floating design

The three-directional floating function (X: ±0.3 mm, Y: ±0.5 mm, Z: ±0.3 mm) accommodates thermal expansion of circuit boards.



ORDERING INFORMATION



PRODUCT TYPES

1. Receptacle

Mated height	Part No.	Packing	
		Inner carton (1-reel)	Outer carton
1.4mm	AYL111240	5,000 pieces	10,000 pieces

2. Joint plug

Mated height	Part No.	Packing	
		Inner carton (1-reel)	Outer carton
1.4mm	AYL121240	5,000 pieces	10,000 pieces

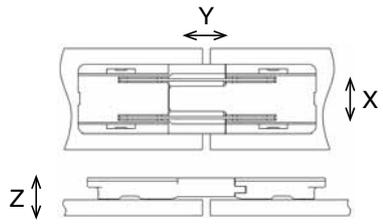
Note: Order unit:

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

Samples for mounting check: Receptacle (AYL111240) 50 units, Joint plug (AYL121240) 25 units. Please contact our sales office.

SPECIFICATIONS

1. Characteristics

Item		Specifications	Conditions																		
Electrical characteristics	Rated current	1.0A/pin contact																			
	Rated voltage	125V AC/DC																			
	Breakdown voltage	1,250V 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.																		
	Insulation resistance	Min. 1,000MΩ (initial)	Using 500V DC megger (applied for 1 min.)																		
	Contact resistance	Max. 90mΩ	Based on the contact resistance measurement method specified by JIS C 5402. Two contacts of receptacle and a post of joint plug																		
Mechanical characteristics	Composite insertion force (initial)	Max. 25.2N	Insertion force of two receptacles and a joint plug																		
	Composite removal force (initial)	Min. 4.0N	Removal force of two receptacles and a joint plug																		
	Floating distance (Receptacle and joint plug mated)	X direction: ±0.3 mm Y direction: ±0.5 mm Z direction: ±0.3 mm																			
Environmental characteristics	Ambient temperature	-40°C to +105°C	No freezing at low temperatures. No dew condensation.																		
	Storage temperature	-40°C to +85°C (product only) -40°C to +50°C (packing structure)	No freezing at low temperatures. No dew condensation.																		
	Thermal shock resistance (Receptacle and plug)	200 cycles, insulation resistance min. 100MΩ, contact resistance max. 90mΩ	Conformed to MIL-STD-202F, method 107G <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Order</th> <th>Temperature (°C)</th> <th>Time (minutes)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40₃</td> <td>30</td> </tr> <tr> <td>2</td> <td>∩</td> <td>Max. 5</td> </tr> <tr> <td>3</td> <td>105₃</td> <td>30</td> </tr> <tr> <td>4</td> <td>∩</td> <td>Max. 5</td> </tr> <tr> <td></td> <td>-40₃</td> <td></td> </tr> </tbody> </table>	Order	Temperature (°C)	Time (minutes)	1	-40 ₃	30	2	∩	Max. 5	3	105 ₃	30	4	∩	Max. 5		-40 ₃	
	Order	Temperature (°C)	Time (minutes)																		
	1	-40 ₃	30																		
	2	∩	Max. 5																		
3	105 ₃	30																			
4	∩	Max. 5																			
	-40 ₃																				
Humidity resistance (Receptacle and plug)	500 hours, insulation resistance min. 100MΩ, contact resistance max. 90mΩ	Bath temperature 85±2°C, humidity 80 to 85% R.H.																			
Saltwater spray resistance (Receptacle and plug)	24 hours, insulation resistance min. 100MΩ, contact resistance max. 90mΩ	Conformed to MIL-STD-1344A, method 1001 Bath temperature 35±2°C, saltwater concentration 5±1%																			
H ₂ S resistance (Receptacle and plug)	48 hours, contact resistance max. 90mΩ	Conformed to JEIDA-38-1984 Bath temperature 40±2°C, gas concentration 3±1 ppm, humidity 75 to 80% R.H.																			
Durability	3 times, contact resistance max. 90mΩ	Using removal tool																			
Soldering temperature resistance	Receptacle	The initial specification must be satisfied electrically and mechanically	Reflow soldering: Max. peak temperature of 260°C, Max. 2 times (PC board surface temperature near connector terminals) Soldering iron: 300°C within 5 s 350°C within 3s																		
Solder paste thickness		The initial specification must be satisfied electrically and mechanically	Recommendation t = 0.12 mm screen																		

Note: The preceding show characteristics, when mated with receptacle and Joint plug.

2. Material and surface treatment

1. Receptacle

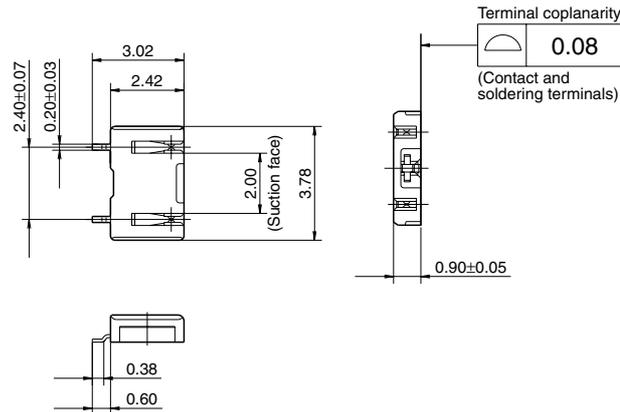
Part name	Material	Color	Surface treatment
Molded portion	LCP resin (UL94V-0)	White	—
Contact	Copper alloy	—	Contact portion: Pd-Ni+Au flash plating over Ni Terminal portion: Au plating over Ni (except the terminal tips)
Soldering terminal	Copper alloy	—	Terminal portion: Au plating over Ni (except the terminal tips)

2. Joint plug

Part name	Material	Color	Surface treatment
Molded portion	LCP resin (UL94V-0)	White	—
Post	Copper alloy	—	Terminal portion: Pd-Ni+Au flash plating over Ni

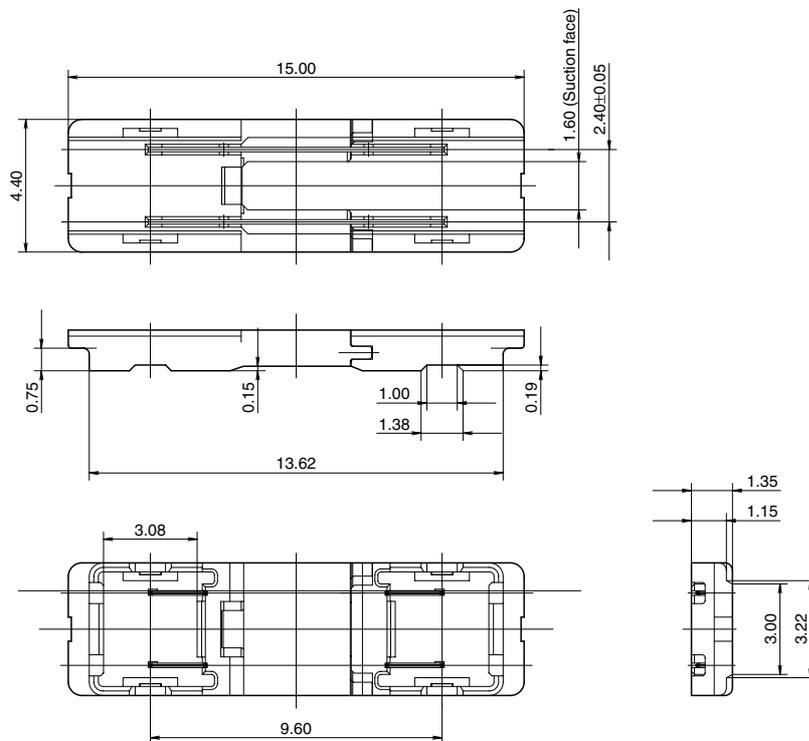
DIMENSIONS (Unit: mm)

Receptacle



General tolerance: ±0.2

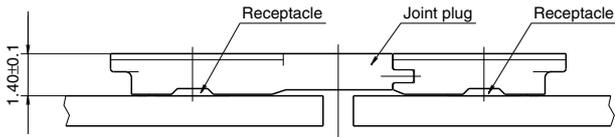
Joint plug



General tolerance: ±0.2

AYL11, 12

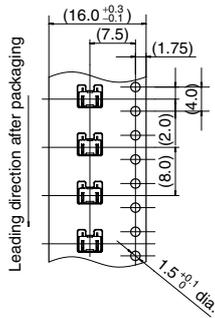
Receptacle and Joint plug are mated



EMBOSSED TAPE DIMENSIONS (Unit: mm)

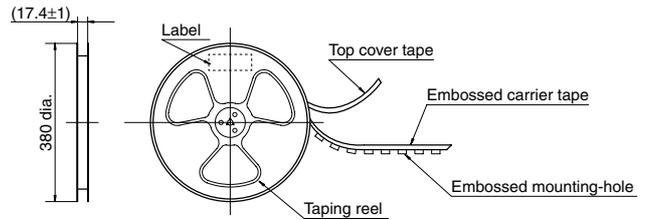
• Tape packed status

Receptacle

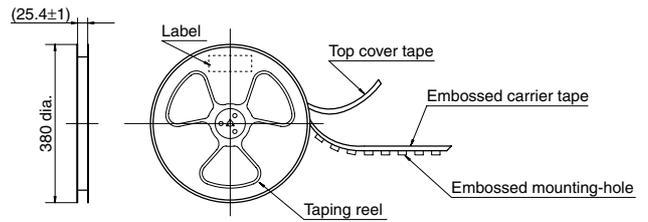
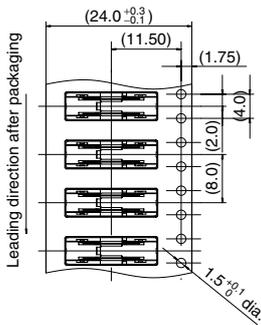


• Specifications for the plastic reel

(In accordance with EIAJ ET-7200B.)



Joint plug



• Connector orientation with respect to embossed tape feeding direction

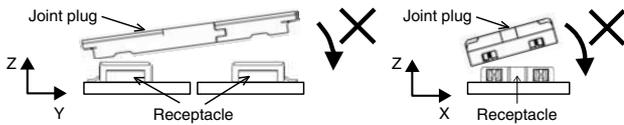
Direction of tape progress	Type	L1	
	Receptacle		Joint plug

AYL11, 12

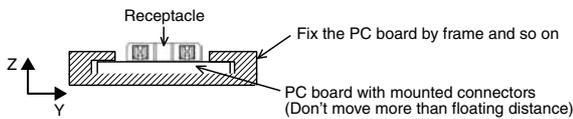
- Do not drop or handle the connector carelessly. Otherwise, the terminals may become deformed due to excessive force or applied solderability may degrade.
- When cutting or bending the PC board after mounting the connector, be careful that the soldered sections are subjected to excessive forces.

■ Insertion / Removal and mating retention of connectors

- Do not insert or remove the connector when it is not soldered. Also, forcibly applied external pressure on the terminals can weaken the adherence of the terminals to the molded part or cause the terminals to lose their evenness.
- Excessive prying-force applied to one end may cause product breakage and separation of the solder joints at the terminal. Excessive force applied for insertion in a pivot action as shown may also cause product breakage. Always align the connector with the mating part and slide it in parallel.

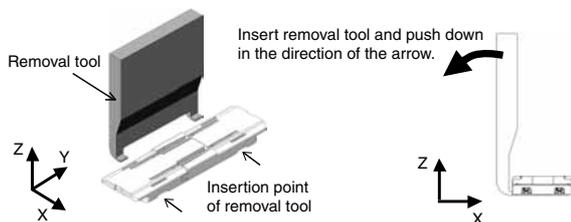


- Pushing the plug excessively when inserting it may deform and break the product.
- This product has simple lock structure for mating. However, connectors may be unmated because of impact by dropping and so on. Please take countermeasures at the equipment side for preventing removal of connectors. In order to prevent removal of connectors, please fix the PC board by frame and so on not to move more than floating distance, especially the neighborhood of connectors.



- When removing the connector, please use the recommended removal tool.

After inserting the tip of removal jig under the plug, push down the jig shown in below. (Removable from either the left or right side) Since holding force of mating will decline when removing the connector without using tool, please don't use the remove plug, and exchange to a new plug.



- Although this product has floating structure, it's the performance in the state of receptacles and a plug mated. We can't guarantee mating in the state where receptacles and a plug are shifted from the center. When inserting a plug in receptacles, please check the position of a mutual receptacle.

