

# Yokowo SPRING LOADED CONNECTOR

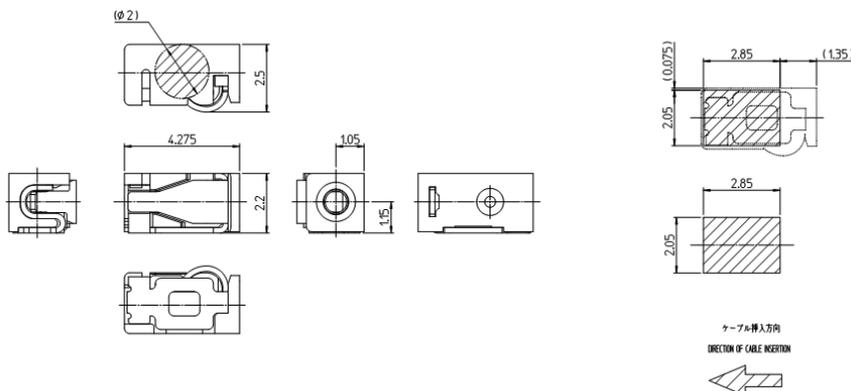


## Lead Socket\_1Pin\_SMD Vertical Series

**~For single or twist wire Terminal With Cap type~**

### Basic Specification

Part Number :	LWS-2422H-1-Y1-00-0000
Rated Current :	AC/DC 4A
Contact Resistance :	30mΩ MAX
Operation Temp. :	-40°C~+105°C
Recommended Cable :	Equivalent to AWG#22-#24 (single wire or twisted wire)



### Electrical Characteristic

Rated Current :	AC/DC 4A
Contact Resistance :	30mΩ MAX (without cable conductor resistance)

### Mechanical Characteristics

Insertion Force :	10N MAX
Withdrawal force :	1.0N MIN

### Other Characteristic

Operational Durability :	insert and withdraw cable consecutively 5 times.
Low Temp. Durability :	Store in temp. -40°C ± 3°C for 96 hours then ,leaves in ambient temp. for 1 hour.
High Temp. Durability :	Store in temp. +105°C ± 2°C for 96 hours then ,leaves in ambient temp. for 1 hour.
Humidity Durability :	Store in temp. +60°C ± 2°C with humidity of 90~95% for 96 hours.
Temp. Cyclic Test :	Cycle 5 times (Table1. shows test condition for 1cycle) Leave in ambient temp. for 1 hour.
Temp. And Humidity Cyclic Test :	10 times of a cycle test based on JIS C60068-2-38.
Anti-corrosion(Salt Water Spray) :	The electrical performance shall be measured after continuous spray of salt water with 5 ± 1% density and 35 ± 2°C temp. for 48 hours, cleaning with lukewarm water and dry, and leaving in ambient temperature for 1 hours.

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#### Vibration Test :

Using recommended cable, Connect each connector pin in series, conducting current of 0.1A.  
After that the vibration described below is added.  
\* Amplitude 1.5mm  
\* Sweeping cycle 10~55~10Hz/minute,  
\* Duration of test: 2hours for each of X,Y,Z axis

#### Shock Test :

Using recommended cable, Connect each connector pin in series, conducting current of 0.1A.  
After that , the shock described below is added.  
\* Accelerating rate: 490m/s<sup>2</sup>  
\* Operating time of the test: 11ms  
\* The number of operating times: 3shocks at X,Y,Z axis both In negative and positive direction.

#### Heat Resistance :

The electrical performance shall be measured in ambient temperature after soldering in accordance with the reflow profile Fig 2.

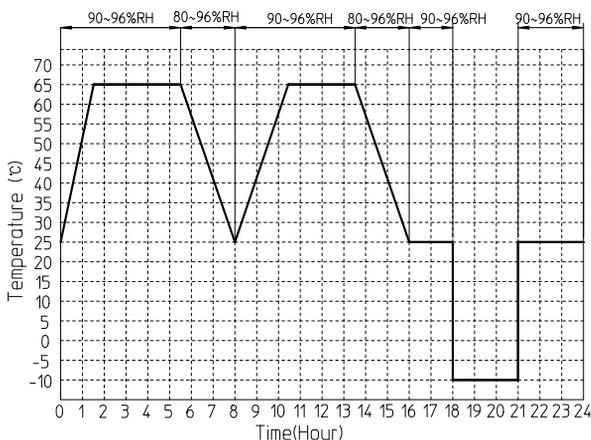
#### Solder Wettability :

Dip a cable in the flux bath 5 to 10 seconds, Afterwards, dip a cable in the solder bath 3 seconds with the temperature of  $245 \pm 5^{\circ}\text{C}$  and measure.

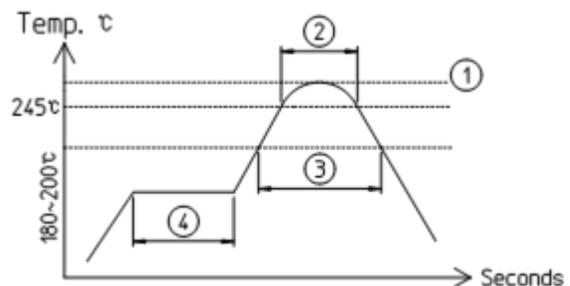
**Table 1. Temperature Cycle**

Step	Temperature(°C)	Time(minites)
1	-40 ± 3	30 - 35
2	5 - 35	10 - 15
3	85 ± 2	30 - 35
4	5 - 35	10 - 15

**Fig 1. Temp. and Humidity Cycle**



**Fig 2. Reflow Profile**



① MAX Temp.250°C    ② Peak time (245°C):10sec.MAX  
③ 220°C time:80sec.    ④ 190°C ± 10°C time:120sec. ± 30sec.

- The specifications shown in this catalogue are subject to change without notice.
- Storage conditions: 35days max in room temperature

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### **Handling Instructions**

#### **-1.Cable jacket peeling length**

**In order to properly insert the cable, cable jacket peeling length needs to be longer than this connector (about 4.3mm).**

**Recommended length is about 5.8mm.**

**Also, please avoid over bending while peeling off the tip of cable jacket.**

#### **-2.Insert cable**

**In order to securely connect cable with connector, core wire needs to pass all the way through the connector and is stuck out.**

**Otherwise, it may cause insufficient engagement which leads to discontinuity.**

**Also, please avoid insert the different size cables which is not listed.**

**It may also cause malfunction.**

**Please insert cable from proper direction and do not insert the cable from opposite direction.**

#### **-3.Cable withdrawal**

**When cable is withdrawn, please slowly pull it off horizontally.**

**Cable may deform if it is pulled off forcibly.**

**Rotating the cable may help withdraw the cable if it is tightly holded.**

#### **-4.Cable re-insertion**

**Please do not re-insert the same cable if it is withdraw.**

**Please use brand new cable or cut the portion where it is already peeled off and peel off the jacket properly once again.**

#### **-5.Cable retention after cable is inserted**

**After cable is inserted into the connector, please avoid putting any stress onto cable until cable is withdrawn(only if withdrawn is necessary).**

#### **-6.Cable AWG change**

**In case cable needs to be changed with different AWG size, please use brand new product. If product is re-used, it may cause insufficient engagement or discontinuity.**

**Even if the core wire is the same, changing the wire type(single, overcoat twisted wire, number of wire, diameter of wire, material, etc) may also lead to the same result.**

#### **-7.Soldering**

**Please follow the recommended reflow condition.**

**Otherwise, it may lead to product malfunction or discontinuity caused by flux scattering around.**

#### **-8.Place of use**

**This product is intended to use inside of device for cabling, Please avoid expose this connector outside of device while it is used.**

#### **-9.Inset something other than cable(out of warranty)**

**Inserting something other than cable within  $\phi 0.54 \sim \phi 0.8\text{mm}$  range is possible, but not intended and out of warranty.**