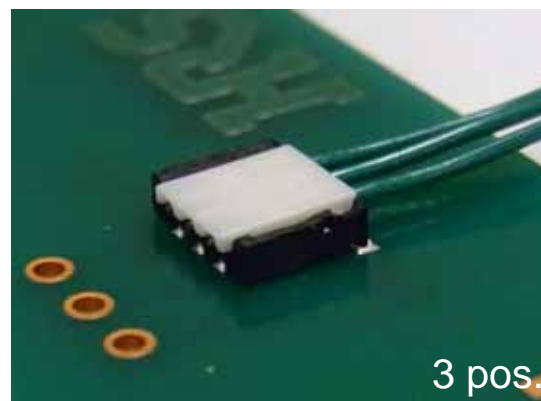
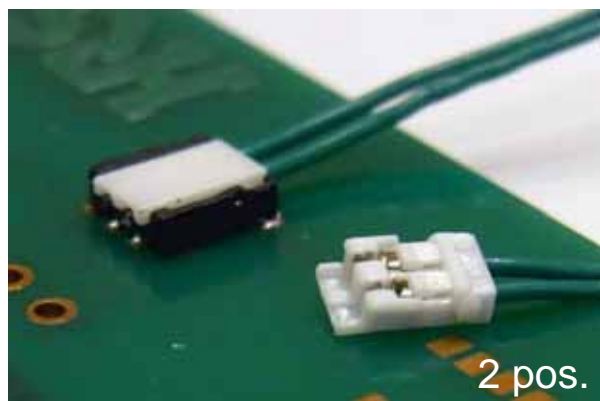


DF57 Series

1.2 mm Pitch, Low Profile “Swing Lock”
Wire to Board Connector for Power Supply

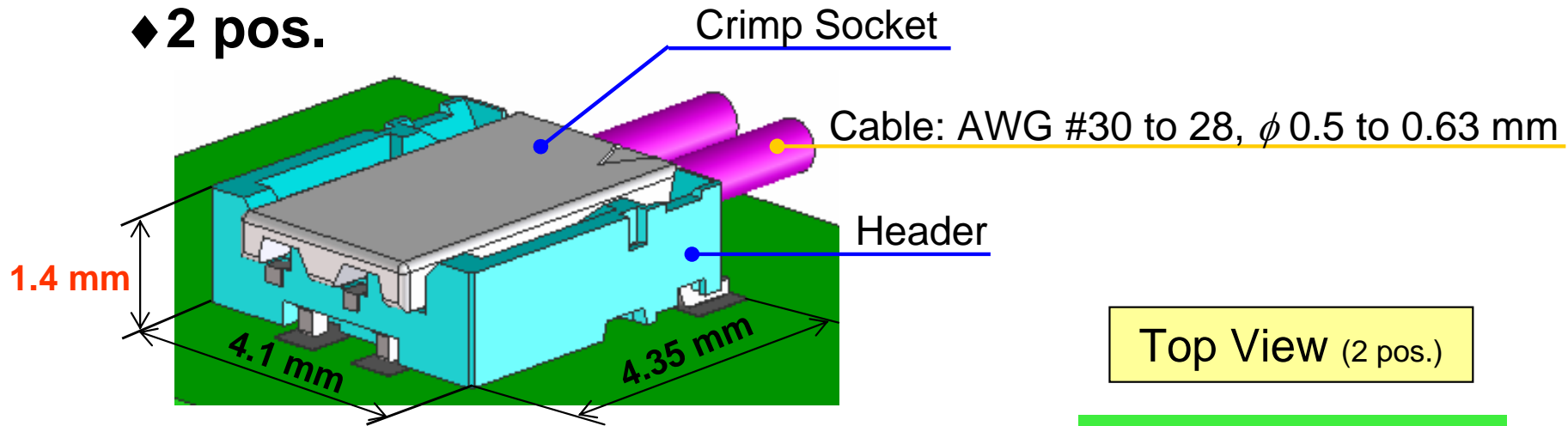


◆ Features

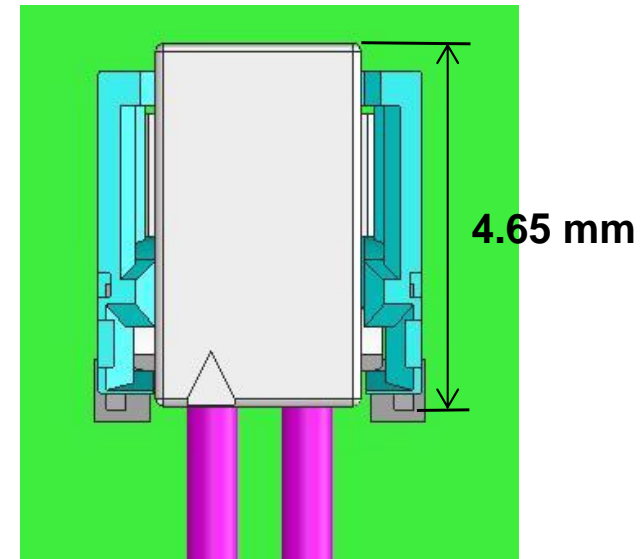
1. 1.2 mm pitch, 1.4 mm height, low profile connector
2. “Swing lock”; Both positive and friction locks are provided for cable pull force resistance
3. High current capability; 2.5 Amps (2 pos. with AWG#28 cable)
4. Solder wicking prevention
5. High contact lance strength
6. 0.5 to 0.63 mm dia., AWG#30 to 28 cable is applicable
7. RoHS compliant

1.2 mm Pitch, Low Profile Connector

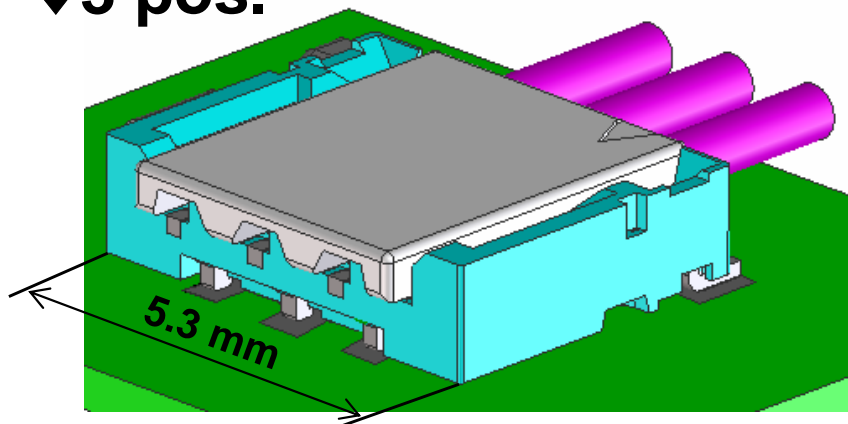
◆ 2 pos.



Top View (2 pos.)



◆ 3 pos.

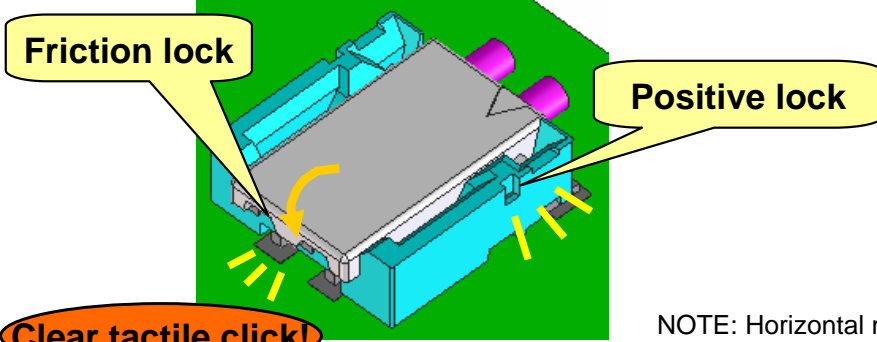
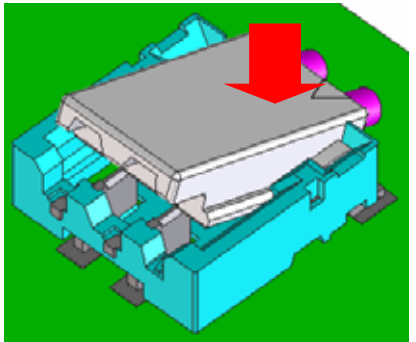


“Swing Lock”

◆ Hirose’s unique double lock design

Mating Operation

- 1. Insert the cable side first.
- 2. Press down at the lever side.

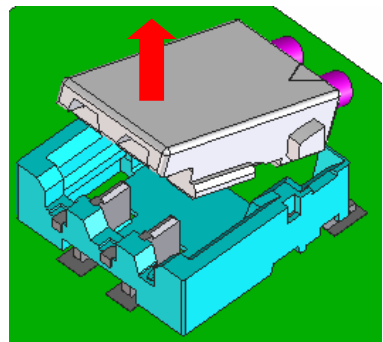
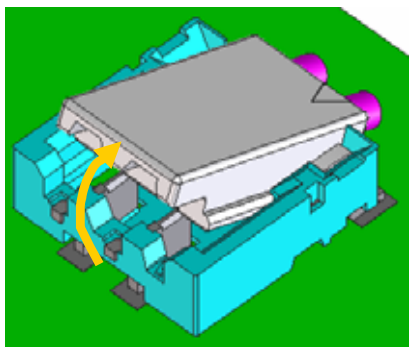
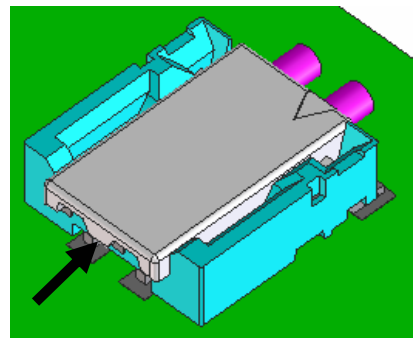


Clear tactile click!

NOTE: Horizontal mating could damage the connector.

Unmating Operation

- 1. Hook the lever.
- 2. Pull up and friction lock is released.
- 3. Positive lock is released and removal completes.

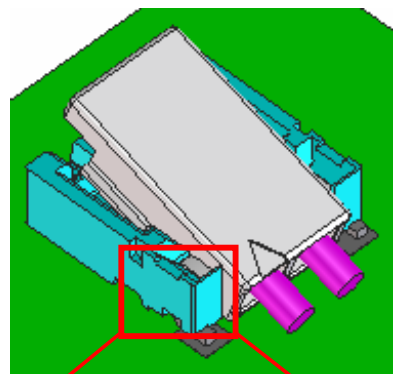


Two locks, **positive lock** and **friction lock** are provided in this small connector.

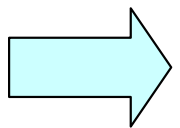
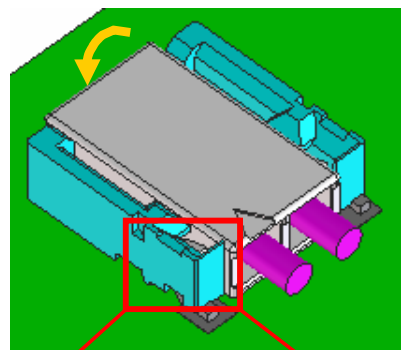
Positive Lock Structure

Patent Pending

Before mating

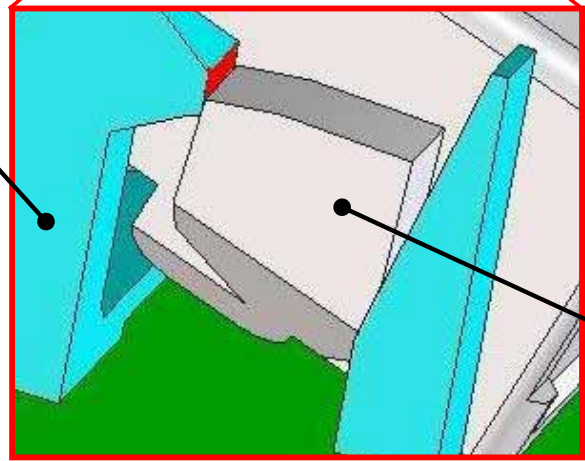


Mated

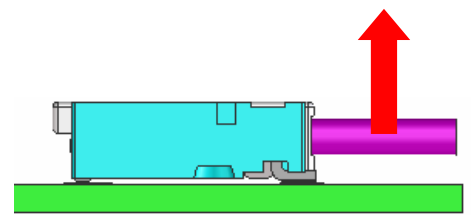
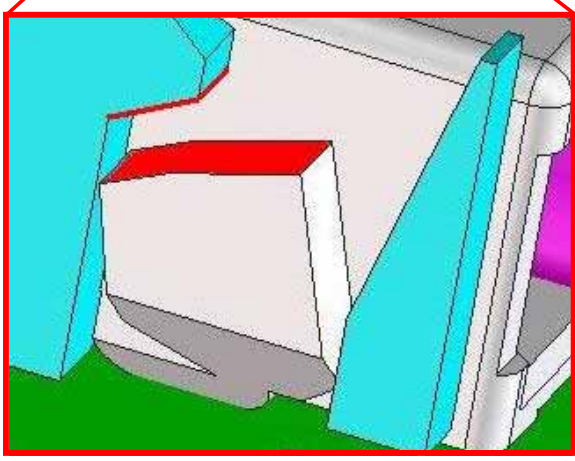


Cross section

Header



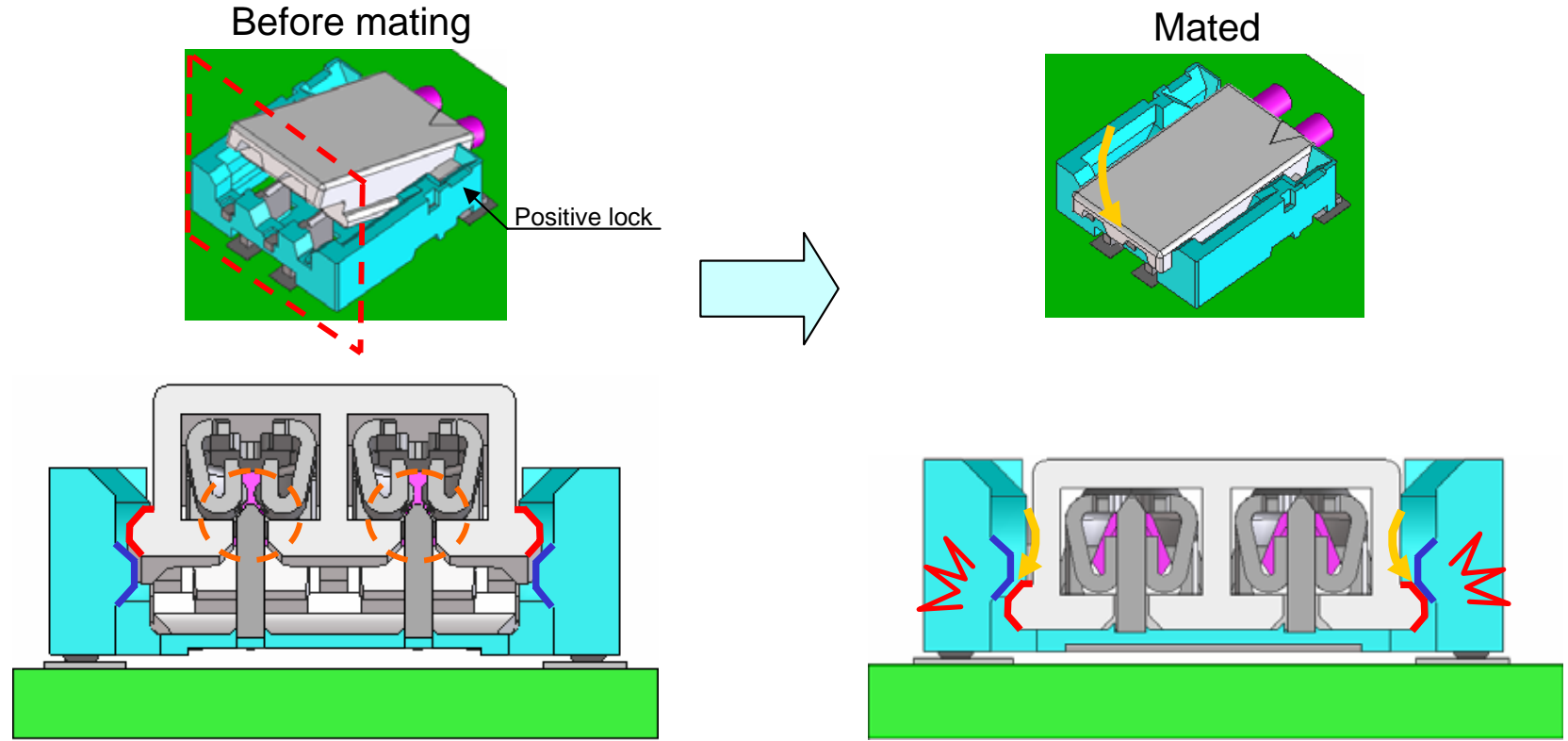
Socket



Header catching the lock on socket endures Min. 5 N force applied by cable pull up.

Accidental socket removal by cable pull is avoidable.

Friction Lock Structure



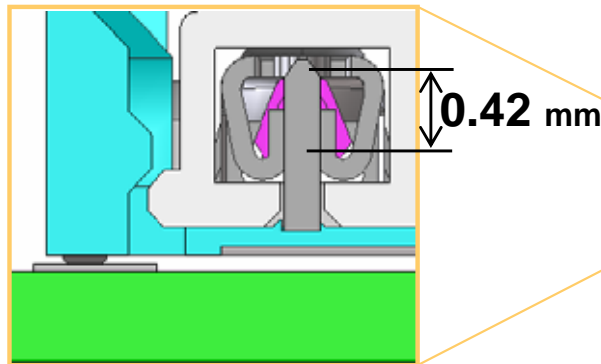
-Just inserting the positive lock does not conduct electricity for safety.

-Sudden decline of load toward mating direction generates clear click feeling, preventing incomplete lock.

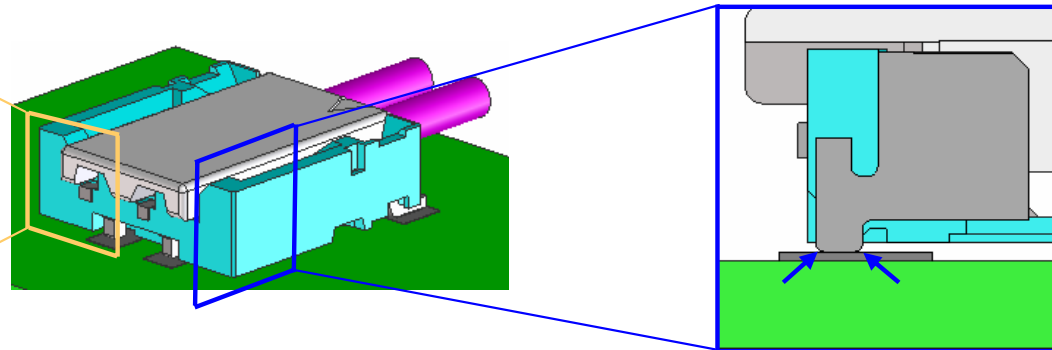
-Friction lock prevents the socket from floating after mated.

DF57 Contact Features

◆ Long effective mating length



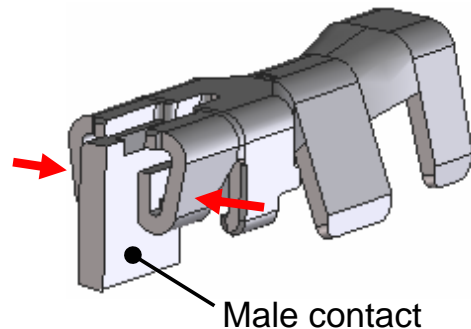
◆ Molded in contacts prevents solder wicking



No clearance between housing and the contacts, avoiding solder wicking.

◆ High current capability

Rated Current for 2 pos. with AWG#28 cable: 2.5 Amps



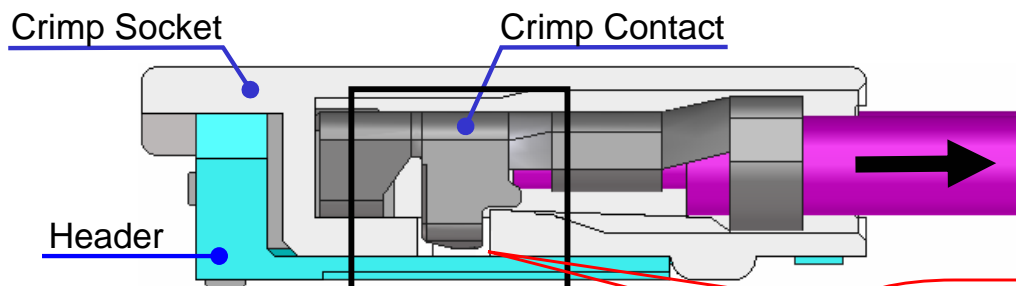
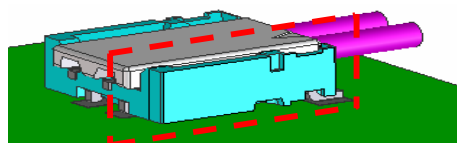
-Controlled contact force decreases contact resistance, achieving high current capability

-Blade male contact is hard to deform

Lance Structure

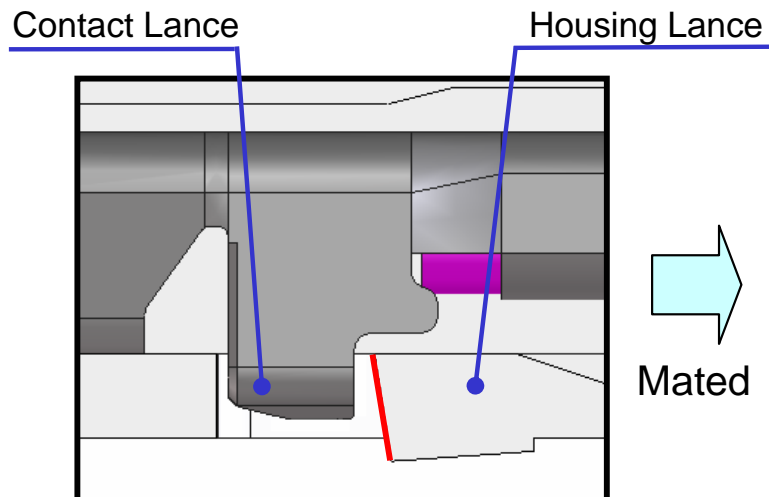
Lance is provided to the socket bottom.

Patent Pending



Cavity of housing lance faces to the header mated, preventing dust intrusion to the contact.

◆ Lance strength

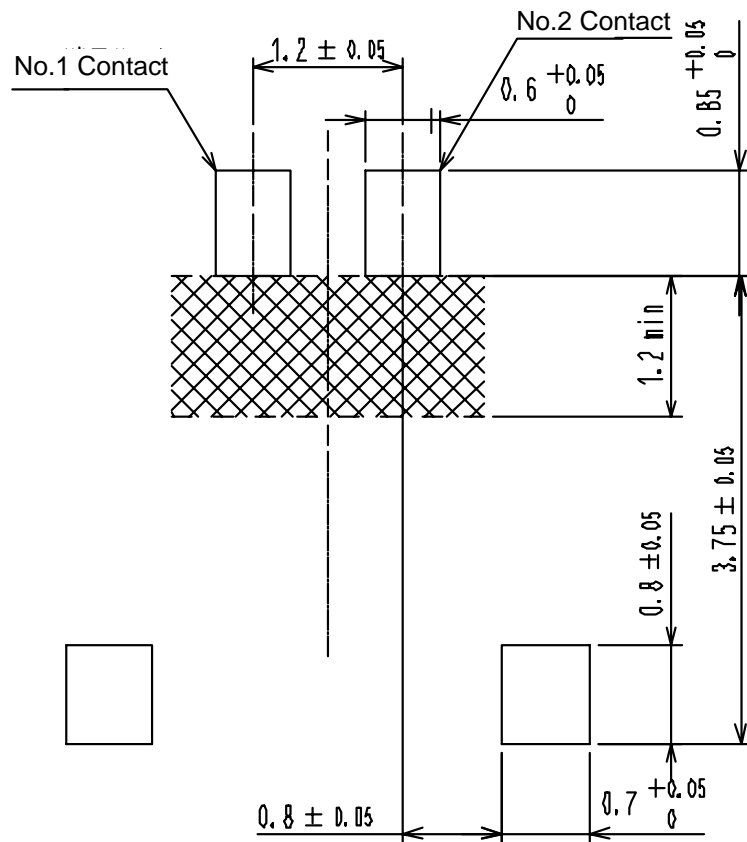


Projected housing lance toward the bottom is pushed up when mated, increasing the hooked area for additional lance strength.

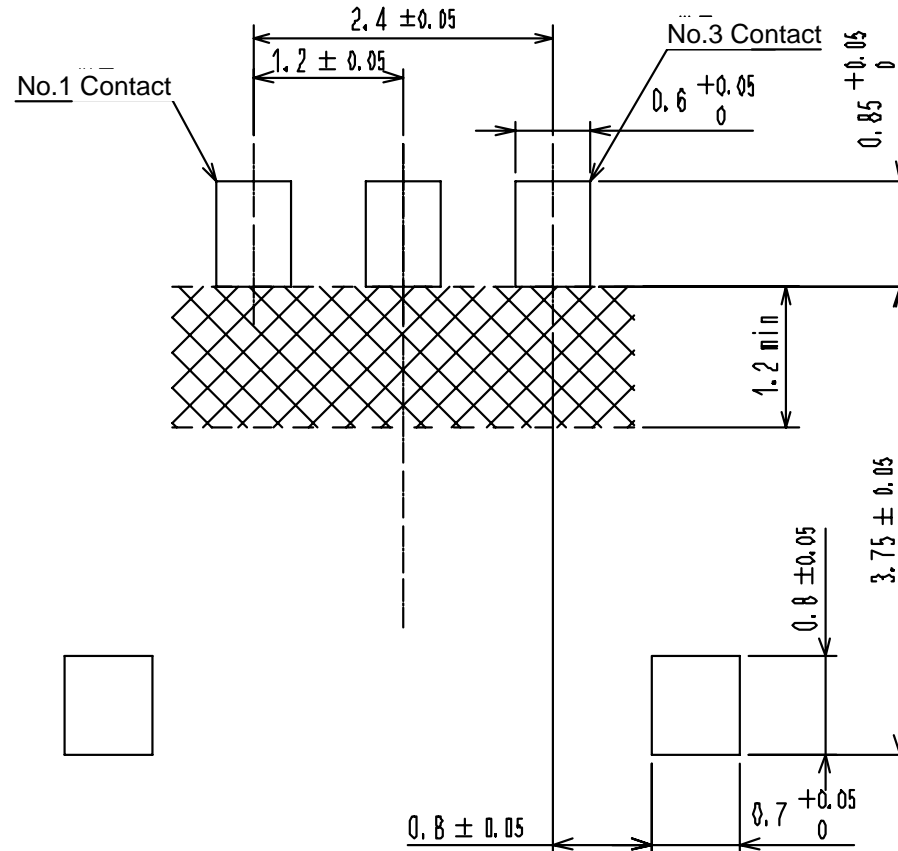
→ High lance strength prevents contact pulling loose during wiring.

Recommended PCB Layout

◆ 2 pos.



◆ 3 pos.



NOTES  No conductive trace.

Application Example

Mobile Phone



Modules

- LED module
- Touch panel
- Small sized battery
- Small sized motor
- Vibrator etc.

Notebook PC



Industrial Robot



Digital Camera



LCD TV



LED Lighting



Specifications

◆ Material and Finish

| COMPONENT | | MATERIAL | FINISH / REMARKS |
|----------------|--------|-----------------|--------------------------------------|
| Housing | Header | LCP | UL94V-0, Black |
| | Socket | PBT | UL94V-0, White |
| Header Contact | | Brass | Tin-plated over Nickel under plating |
| Crimp Contact | | Phosphor bronze | Tin-plated |
| Metal Fitting | | Brass | Tin-plated over Nickel under plating |

◆ Performance Characteristics

| | | |
|-----------------------|------------------------------------|------------------------------------|
| Rated Current | 2 pos. | AWG#28: 2.5 Amps, AWG#30: 1.5 Amps |
| | 3 pos. | AWG#28: 2.0 Amps, AWG#30: 1.5 Amps |
| Rated Voltage | 50 V AC / DC | |
| Operating Temperature | - 35 °C to + 85 °C | |
| Contact Resistance | 10 m Ω MAX. at 20 mV, 1 mA | |
| Insulation Resistance | 100 M Ω MIN. (100 V DC) | |
| Withstanding Voltage | 500 V AC for 1 minute | |
| Applicable Cable | AWG#28 to 30, φ 0.5 to 0.63 mm | |
| Durability | 30 cycles (Insertion / Withdrawal) | |

◆ Varieties

2 and 3 pos. (4 pos. is under development. 5 and 6 pos. is under study.)