

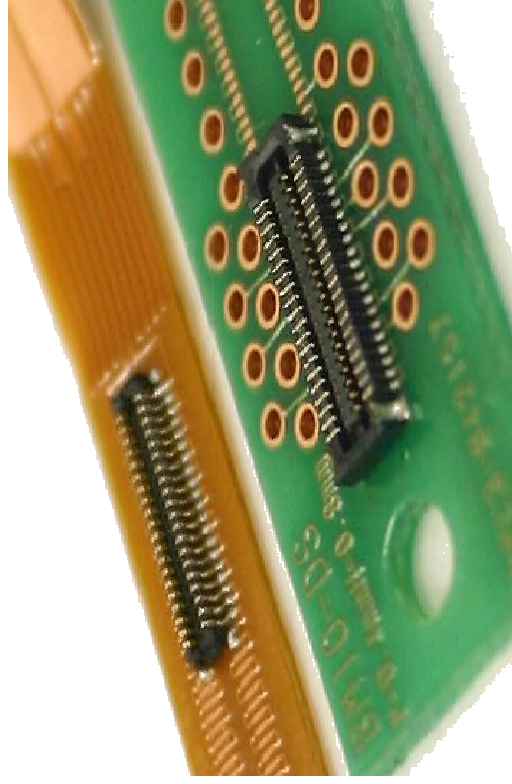


**THE DATASHEET OF  
BM10B(0.8)-40DP-0.4V(51)**



# BM10 Series

0.4 mm Pitch, 0.6 / 0.8 mm Stacking Height, FPC to B



## ◆ Features

1. 2 types of stacking height are available: 0.6 and 0.8 mm
2. Space saving: 2.98 mm depth
3. Highly reliable contact and retention force with clipping contact
4. Clear tactile click with excellent contact design
5. Shock-absorbing configuration with dimple on contact for robust
6. Enhanced self alignment mechanism by guidance ribs (Self align)
7. High PCB retention force with metal fittings
8. Solder wicking prevention
9. Contact protection against dust
10. RoHS compliant, Halogen-free product\*

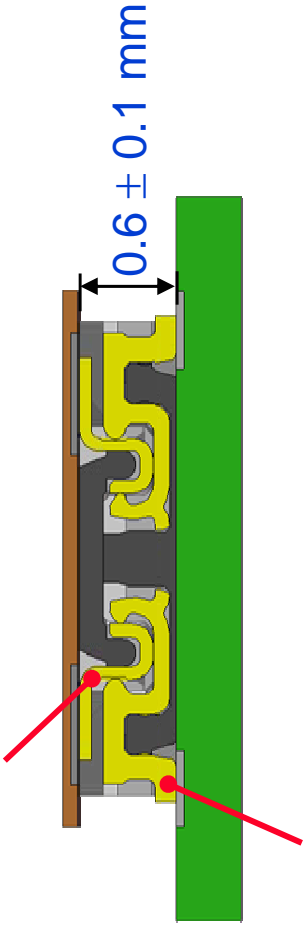
\*This product satisfies halogen free requirements defined as 900 ppm maximum chlorine, 900 ppm maximum bromine, and 1500 ppm maximum total of chlorine and bromine.

Specifications herein are subject to change without notice.  
Contact Hirose for latest specification, drawings, or availabilities.

# Two Types of Stacking Height Variations

Cross Section of 0.6 mm Height

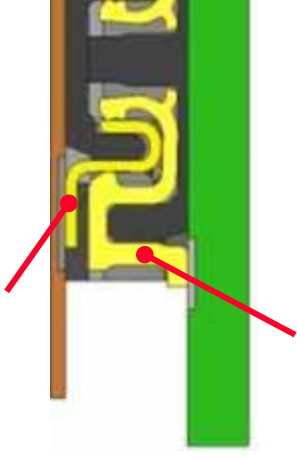
Header: *BM10B(0.6)-##DP-0.4V(\*\*)*



Receptacle: *BM10NB(0.6)-##DS-0.4V(\*\*)*

Cross Section of 0.8 mm Height

Header: *BM10B(0.8)*



Receptacle: *BM10NB(0.8)*

NOTE: #  
\*\*

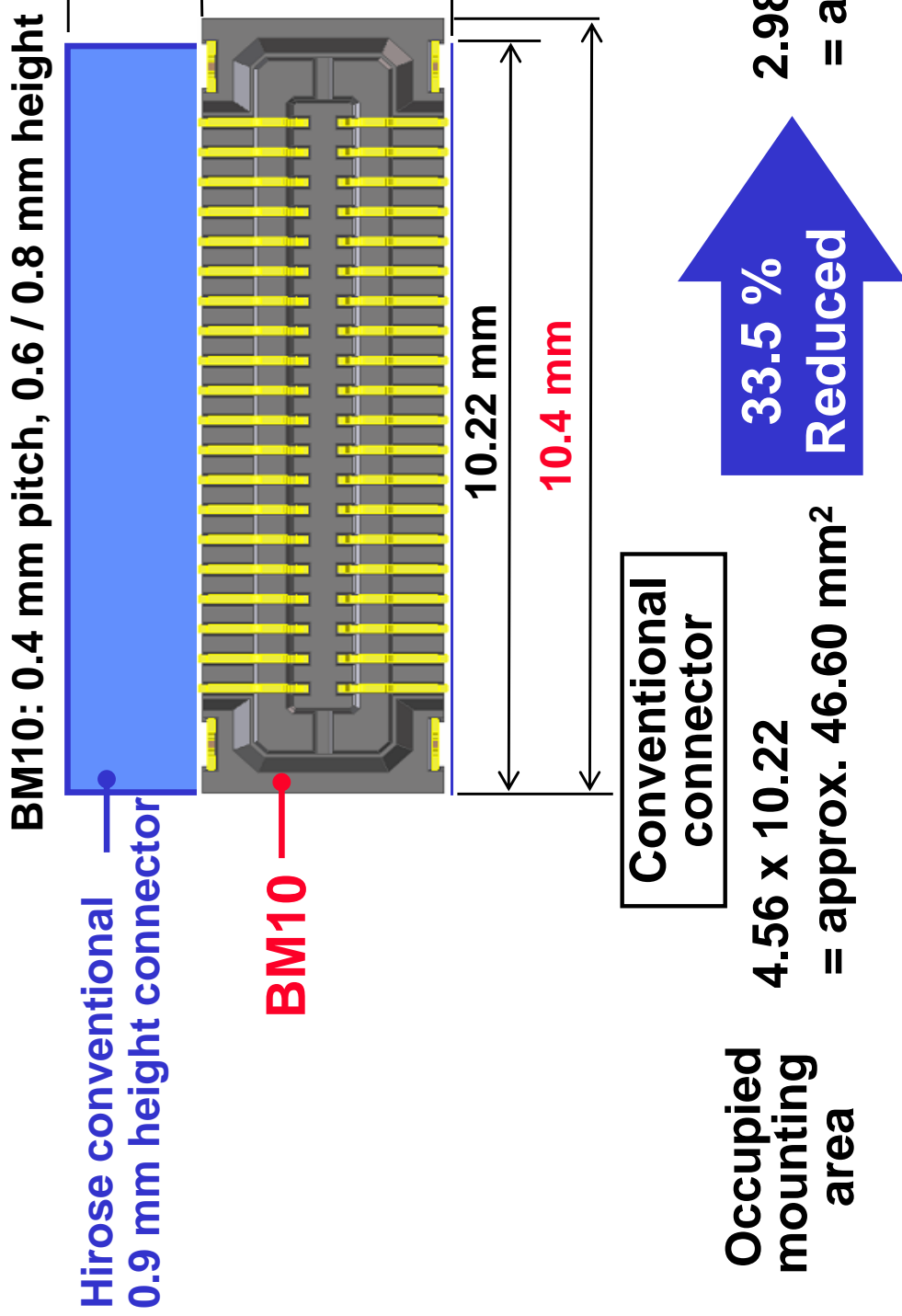
**Flexible Board Distance**

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Issued: Mar. 31, 2014

# Space Saving with Short D

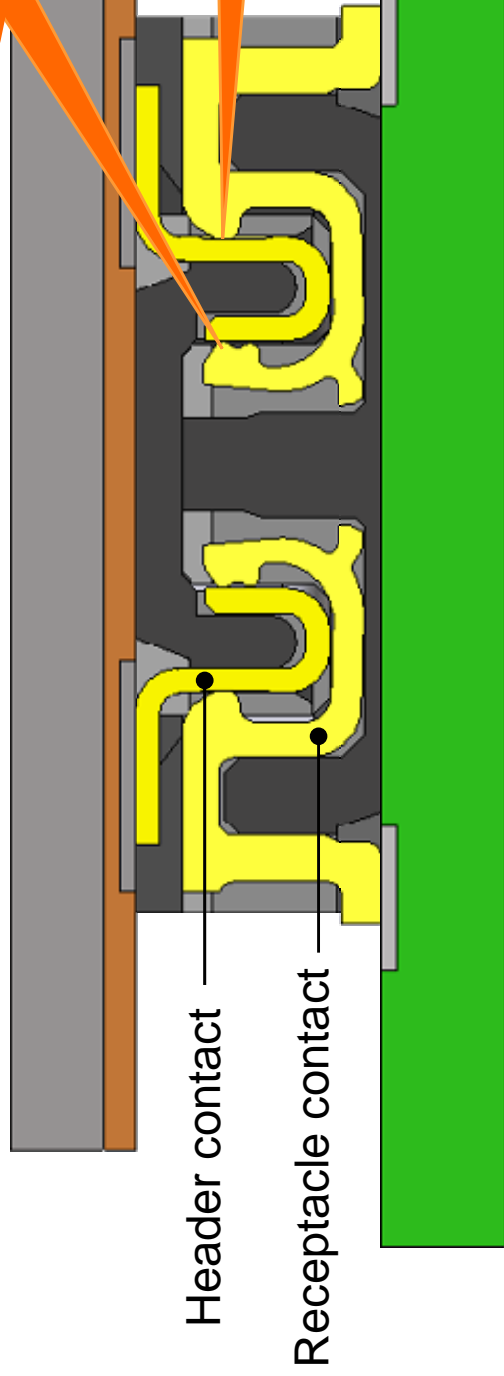
◆ Comparison of occupied mounting area (40 pos.)



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# Highly Reliable Clipping Contact

**Receptacle contact encloses entire header contact achieving stable contact and retention.**

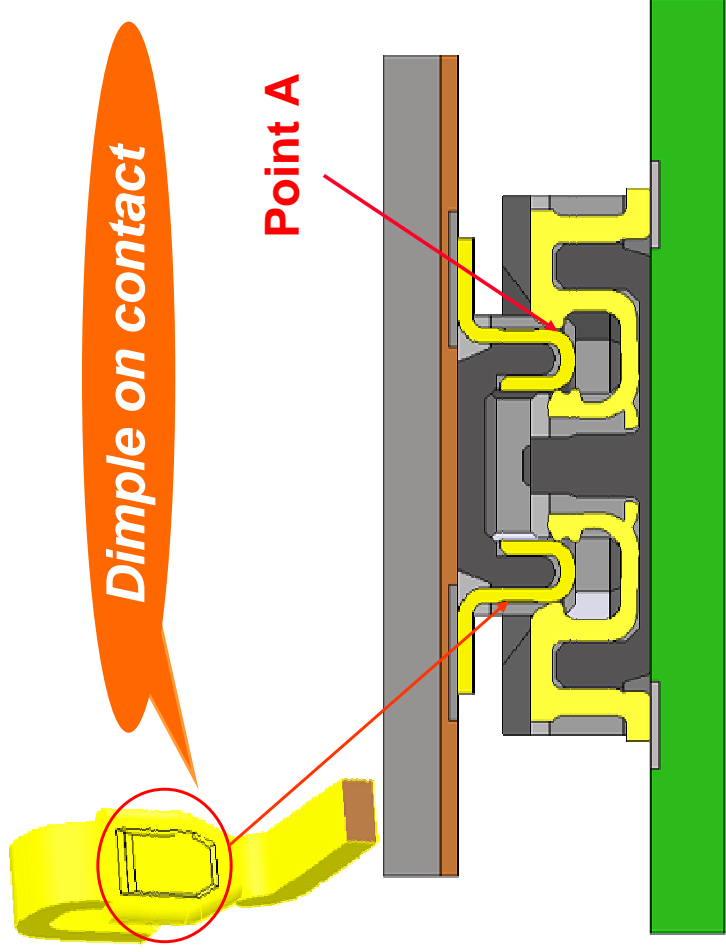


**Low Profile  
&  
Stable Contact and Retention Force**

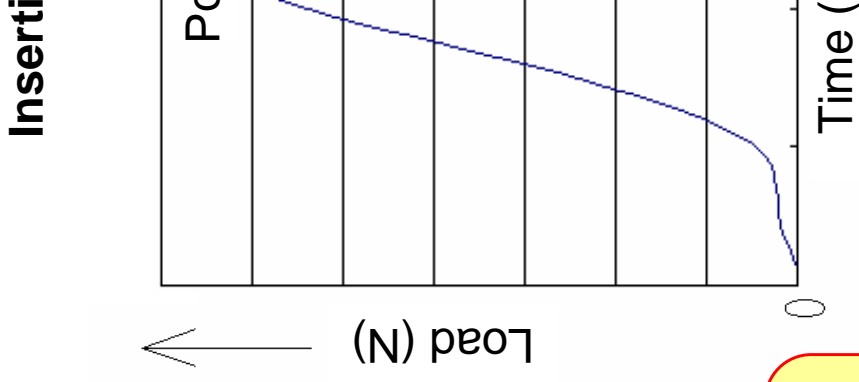
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# Secure Mating & Clear Tactile

**Contact design to provide clear click**



**The load between contacts reaches a peak at the point A, which is released at the dimple on contact. The drastic drop of the load generates clear tactile click.**

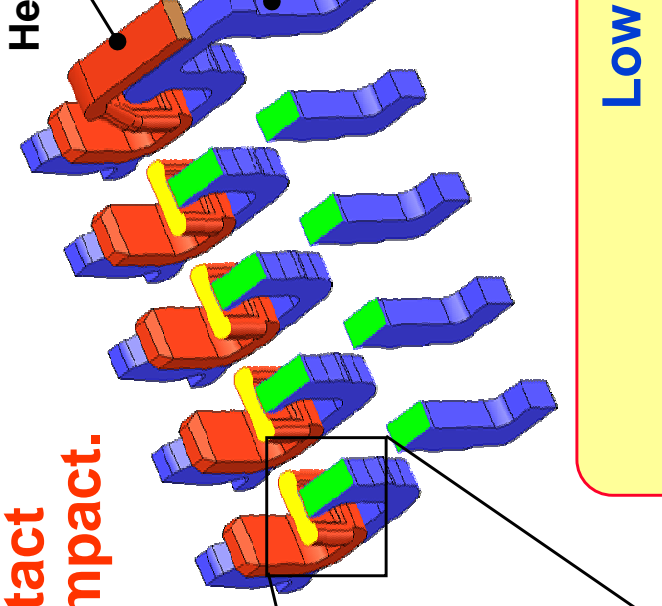
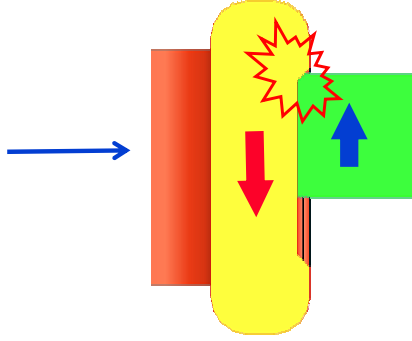


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# Shock Absorbing Contact Design

**Dimple of each header contact reduces shock from drop impact.**

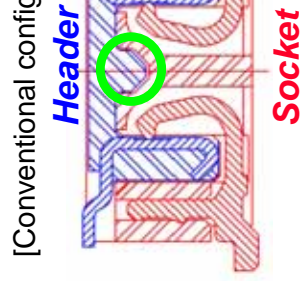
Shock will be absorbed by the dimple on header contact.



**Low Robust Structure P**

## ◆ Comparison with conventional configuration

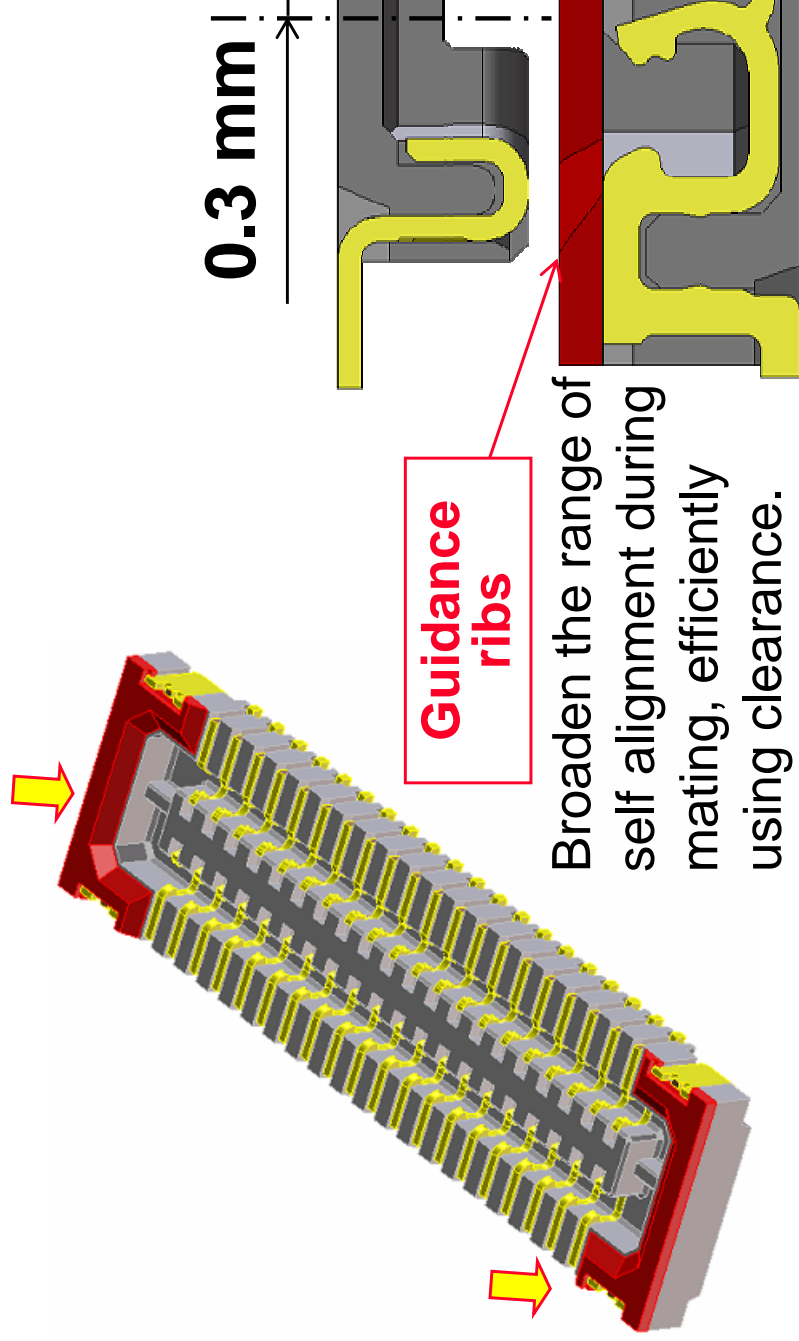
Due to the reduced height of the BM10 Series, shock reduction feature in the housing design cannot effectively be used. Hirose innovative contact design reduces shock and damage due to dropping.



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Issued: Mar. 31, 20

# Guide Ribs for Wide Self Alignment



**Self alignment range: 0.3 mm**



**Smooth and easy mating**

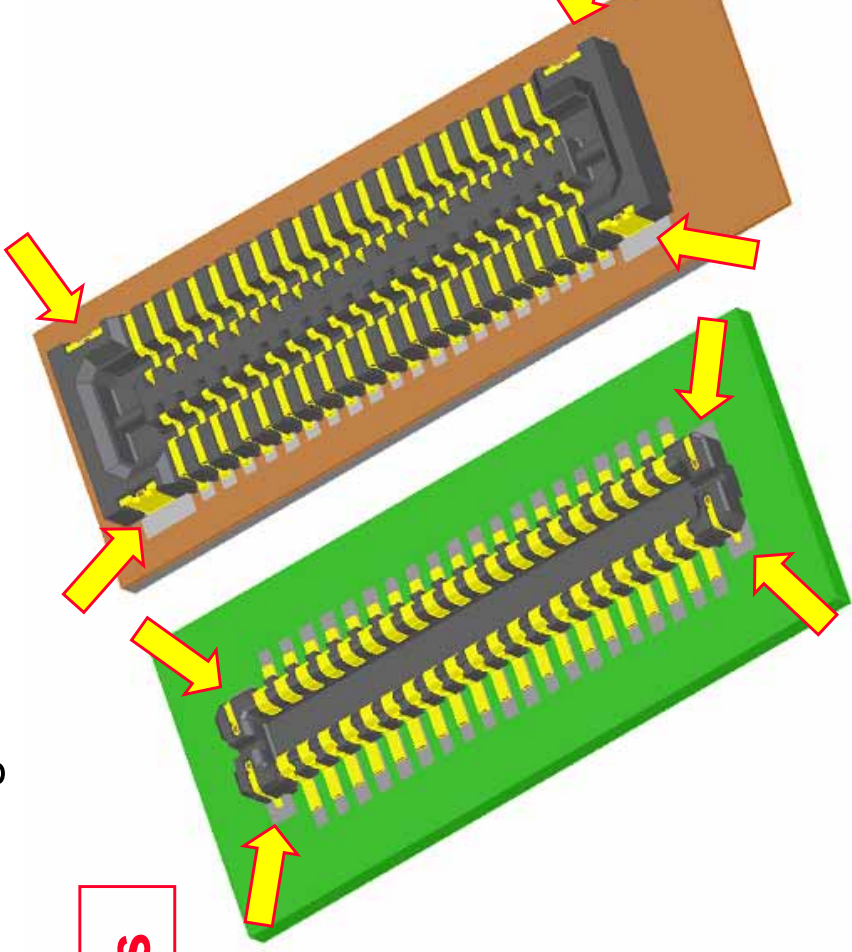
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# High PCB Retention Force with Metal Fittings

Space saving design, yet high PCB retention force against stress with metal fittings available at 4-corner of each contact

**Metal fittings**



**Metal fittings protect contacts from stress by mating/unmating & drop impact.**

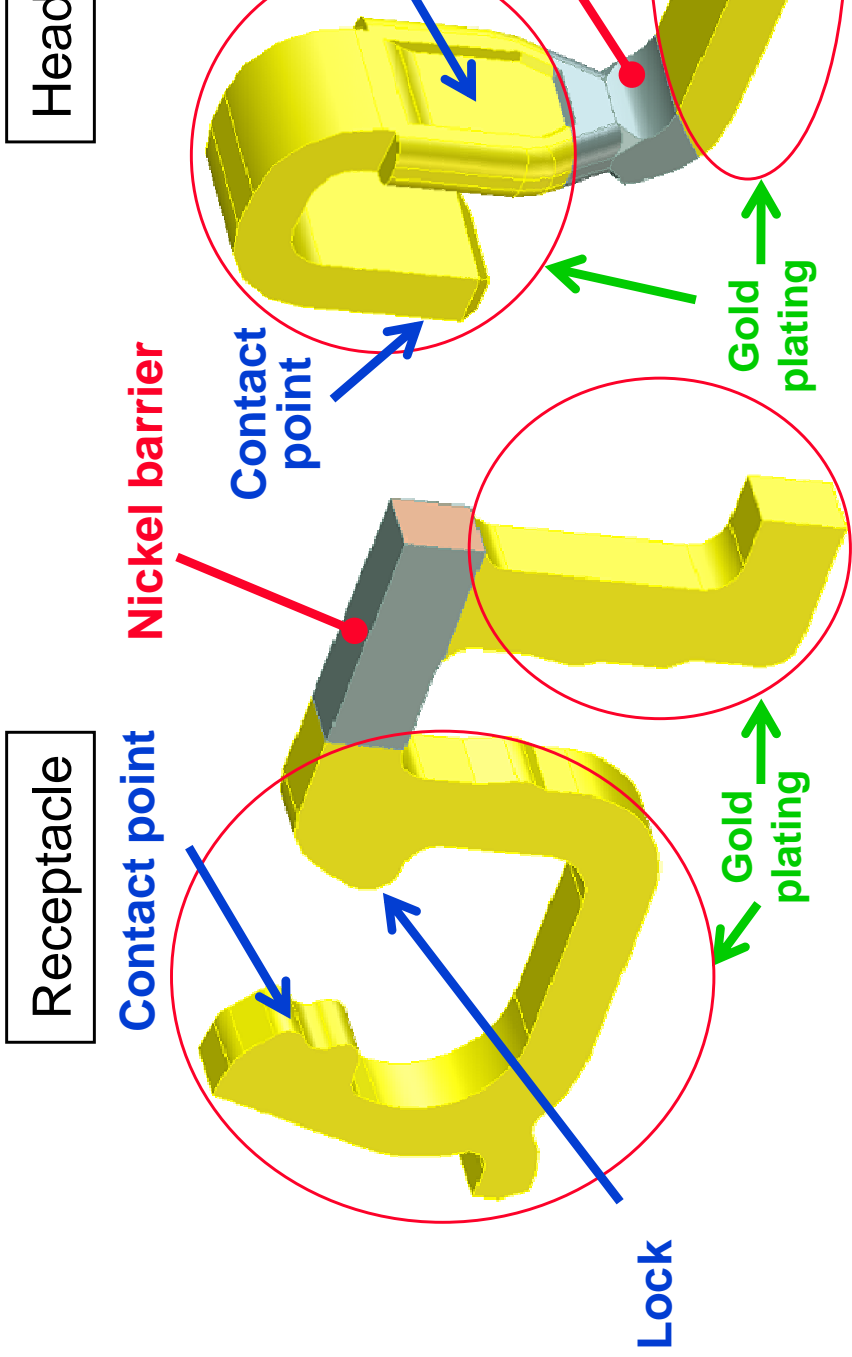
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# Solder Wicking Prevention

## [Reflow condition for Nickel barrier evaluation]

Temperature profile: Max 260 °C, Oxygen density: Max 1000 ppm



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Issued: Mar. 31, 20

# Contact Protection Against

**Lower the risk of dust adhesion**

**Contact area is enclosed in the housing, protecting solder waste and flux.**



Receptacle

Housing

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Issued: Mar. 31, 2024

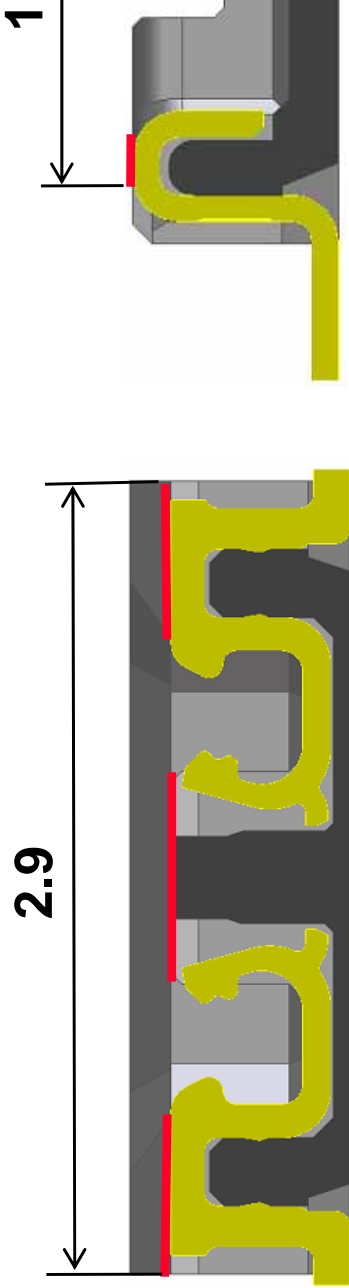
# Wide Vacuum Pick up Area for Automate

Wide vacuum pick up area, even with space sa

Small nozzle opening without air leakage



Wide nozzle opening with air leakage



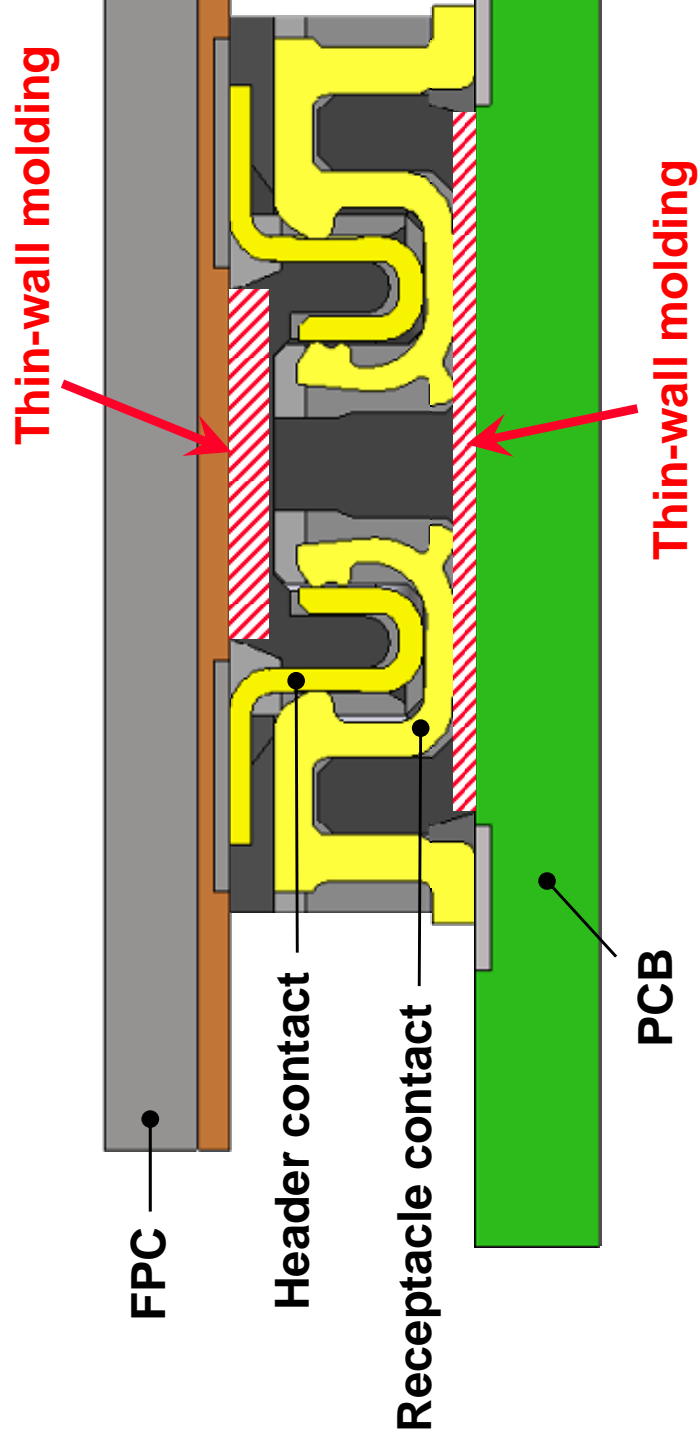
**Suitable nozzle design and pick-up method will be different depending on the machine. Consult the machine manufacturer for suitable nozzle design and pick-up method.**

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Issued: Mar. 31, 20

# Super Low Profile Design with Advanced Molding Techn

*Super low profile, yet providing high dens*



**Thin-wall molding realizes excellent insulation v**

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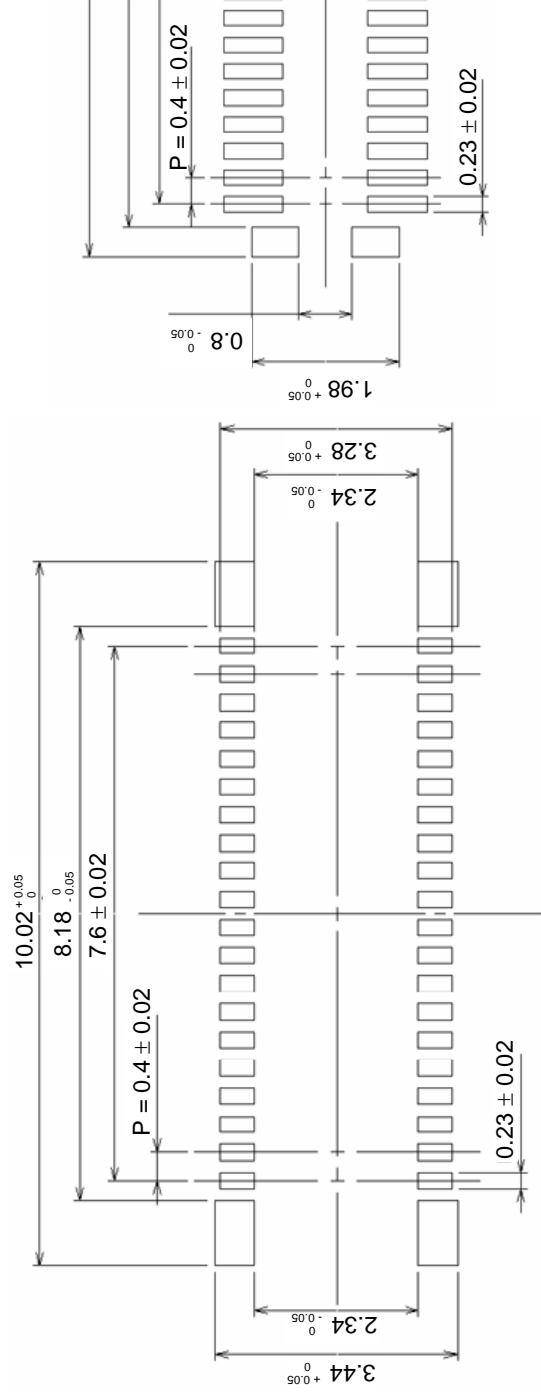
# Recommended PCB Pattern

Underneath the connector is available for pattern providing flexibility to PCB layout.

- ◆ 40 pos. (Same PCB pattern is available to 0.6 / 0.8 mm stacking)

Receptacle

Header



**BM10 saves more space than the other competitive defining no conductive area even with shorter c**

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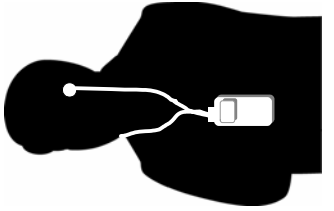
# Application Examples

Portable audio



Notebook P

Mobile phone



DSC, DVC



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# Specifications

## ■ Material and Finish

| COMPONENT     | MATERIAL        | FINISH/REMARKS |
|---------------|-----------------|----------------|
| Housing       | LCP*            | UL94V-0, Black |
| Contact       | Phosphor bronze | Gold-plate     |
| Metal fitting | Phosphor bronze | Gold-plate     |

\*NOTE: This product satisfies halogen free requirements defined as 900 ppm maximum chlorine and 900 ppm maximum bromine, and 1500 ppm maximum total of chlorine and bromine.

## ■ Performance Characteristics

|                       |                                      |
|-----------------------|--------------------------------------|
| Current Capacity      | 0.3 A                                |
| Rated Voltage         | 30 V AC                              |
| Operating Temperature | - 35 to + 85 °C*                     |
| Contact Resistance    | 100 mΩ Max. (100 mA DC or 100 mA AC) |
| Withstanding Voltage  | 100 V AC, 1 minutes                  |
| Insulation Resistance | 50 MΩ Min. (100V DC)                 |
| Durability            | 10 times (Insertion/ Withdrawal)     |

NOTE\*: Include the temperature rising by current

## ■ Varieties:

**0.8 mm height: 10, 16, 20, 24, 30, 34, 40, 44, 50 and 60 pos.**  
**0.6 mm height: 10, 20, 24 and 50 pos.** (Under development: 16, 30, 34, 40, 44, 50 and 60 pos.)

Specifications herein are subject to change without notice.  
 Contact Hirose for latest specification, drawings, or availabilities.

Issued: Mar. 31, 2016

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- [View BM10B\(0.8\)-40DP-0.4V\(51\) on WIN SOURCE](#)
- [Hirose Electric Co Ltd Information](#)

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- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
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- ✓ Alternative Solution
- ✓ Excess Inventory Management