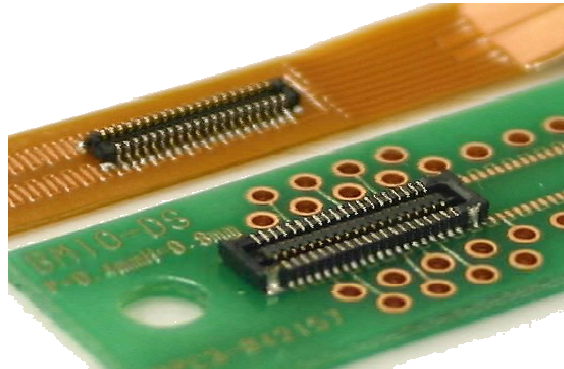


## BM10 Series

0.4 mm Pitch, 0.6 / 0.8 mm Stacking Height, FPC to Board Connector



◀ 0.8 mm stacking height

### ◆ 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 design
4. Clear tactile click with excellent contact design
5. Shock-absorbing configuration with dimple on contact for robustness
6. Enhanced self alignment mechanism by guidance ribs (Self alignment range: 0.3 mm)
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.  
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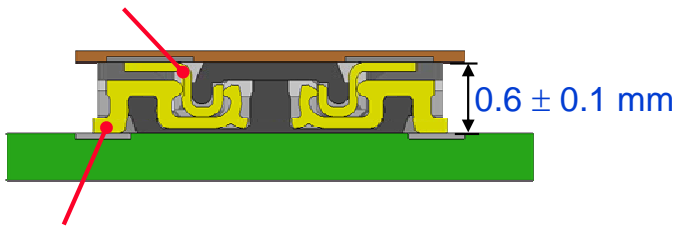
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## Two Types of Stacking Height Variations

### 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)-##DP-0.4V(\*\*)*



Receptacle: *BM10NB(0.8)-##DS-0.4V(\*\*)*

NOTE: ## = number of position  
\*\* = peculiar specification number

### Flexible Board Distance

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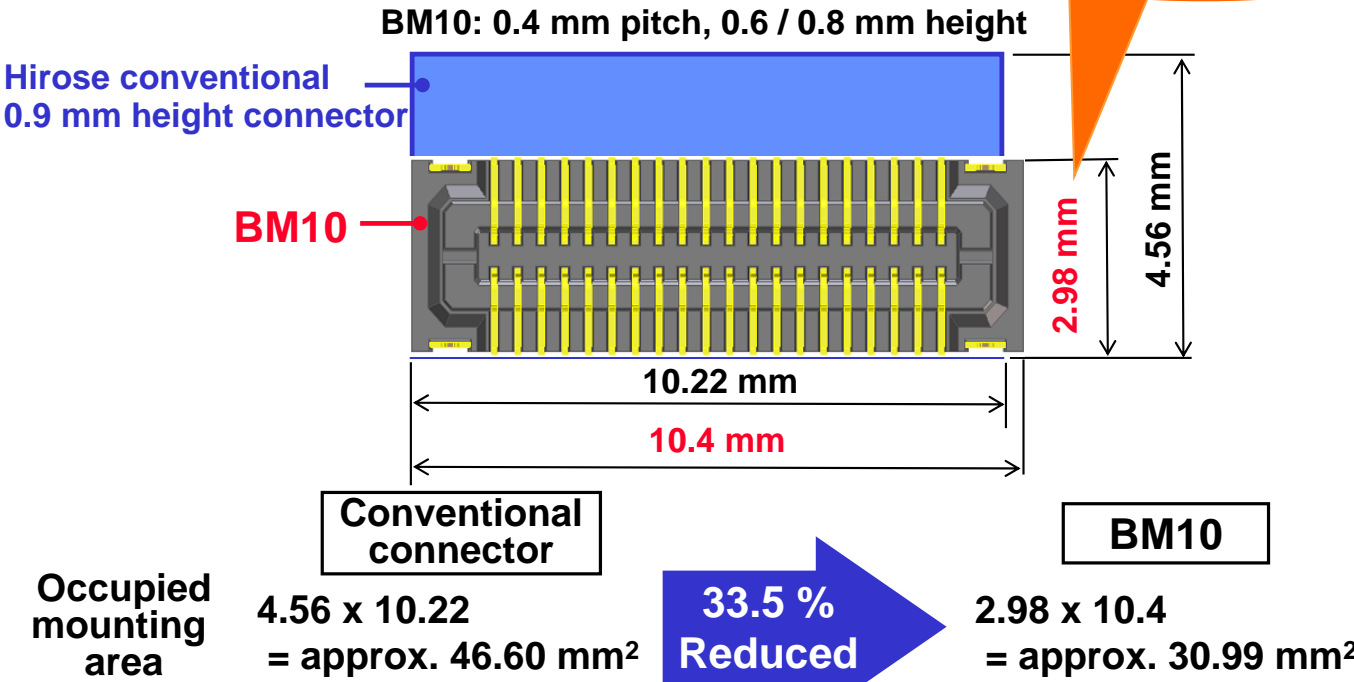
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# Space Saving with Short Depth

## ◆ Comparison of occupied mounting area (40 pos.)

*Space saving*



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# Highly Reliable Clipping Contact Design

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

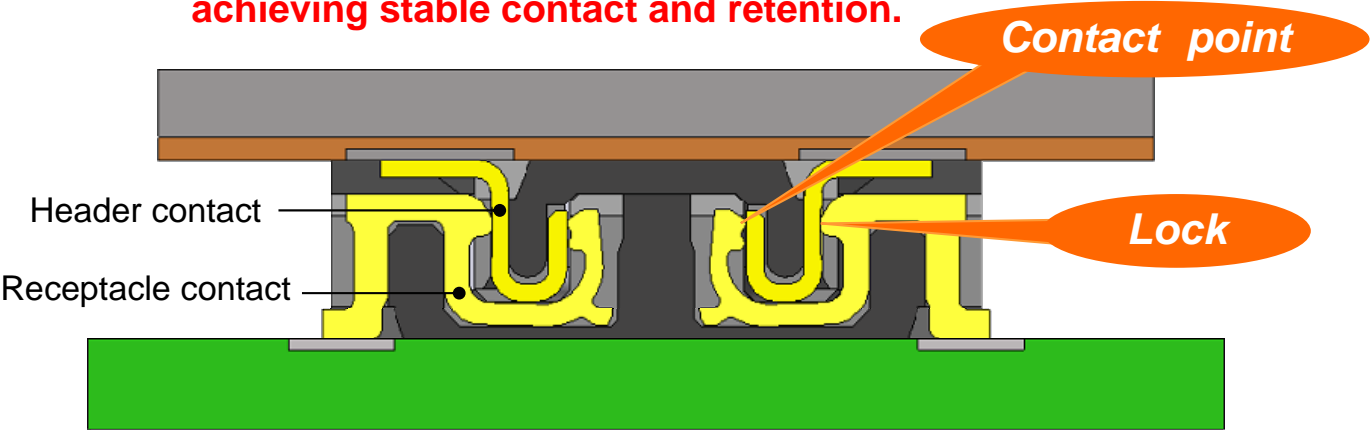


Image: 0.8 mm stacking height

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

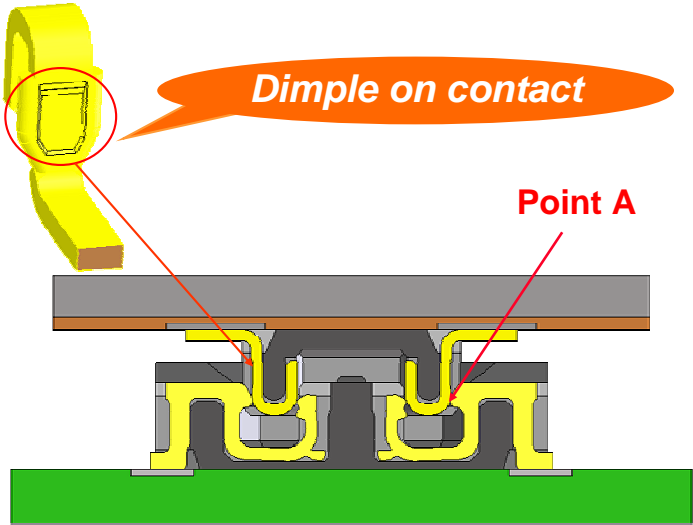
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# Secure Mating & Clear Tactile Click

## 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.

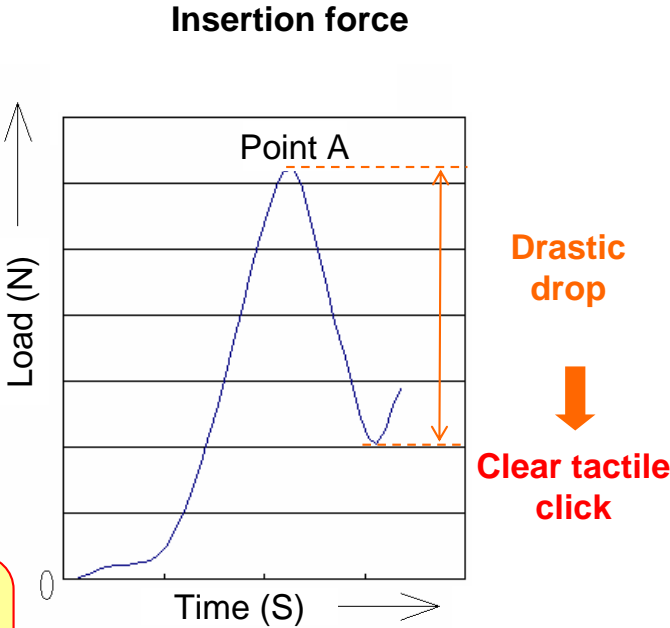


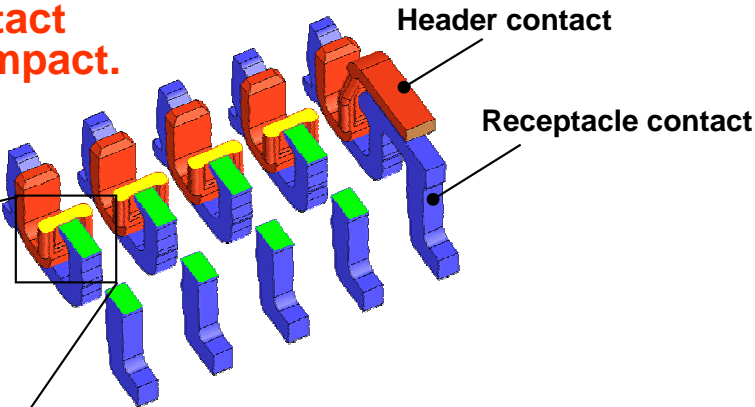
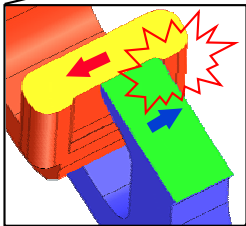
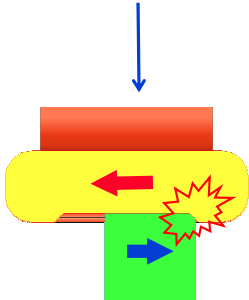
Image: 0.8 mm stacking height

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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.

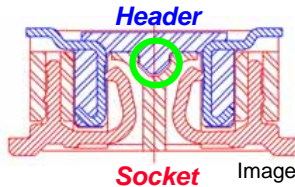


**Low Profile & Robust Structure Protects Against Shock**

**◆ 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.

[Conventional configuration]

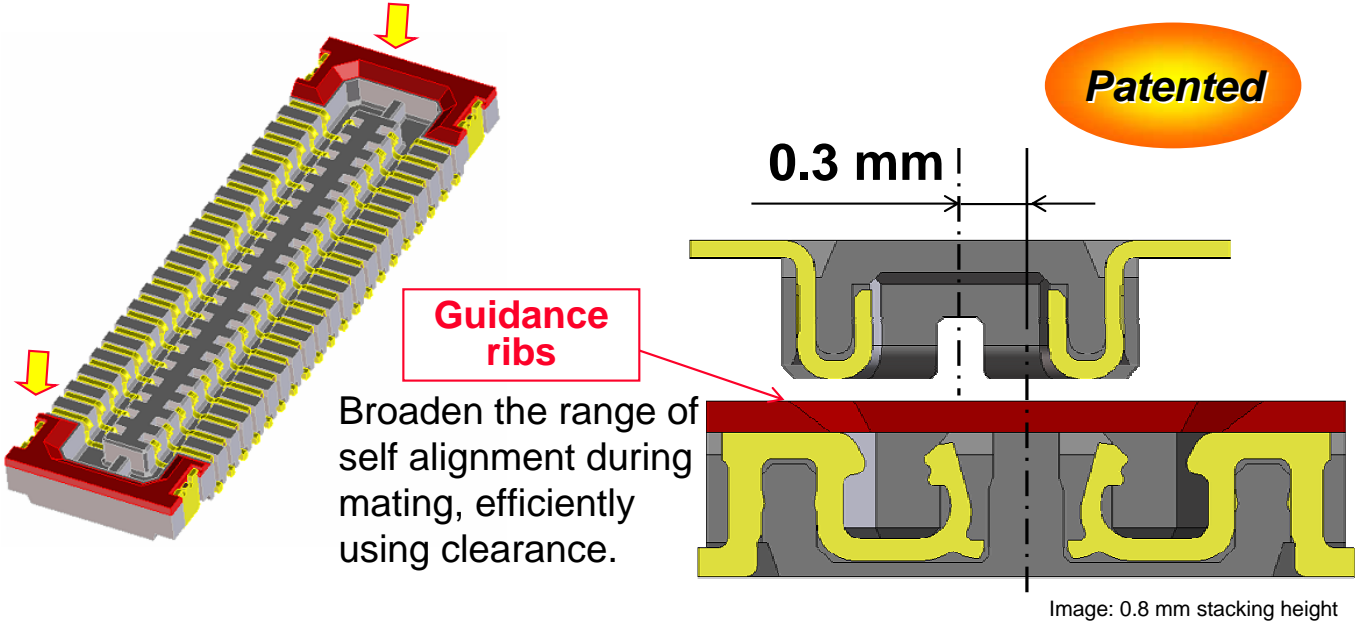


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# Guide Ribs for Wide Self Alignment Range



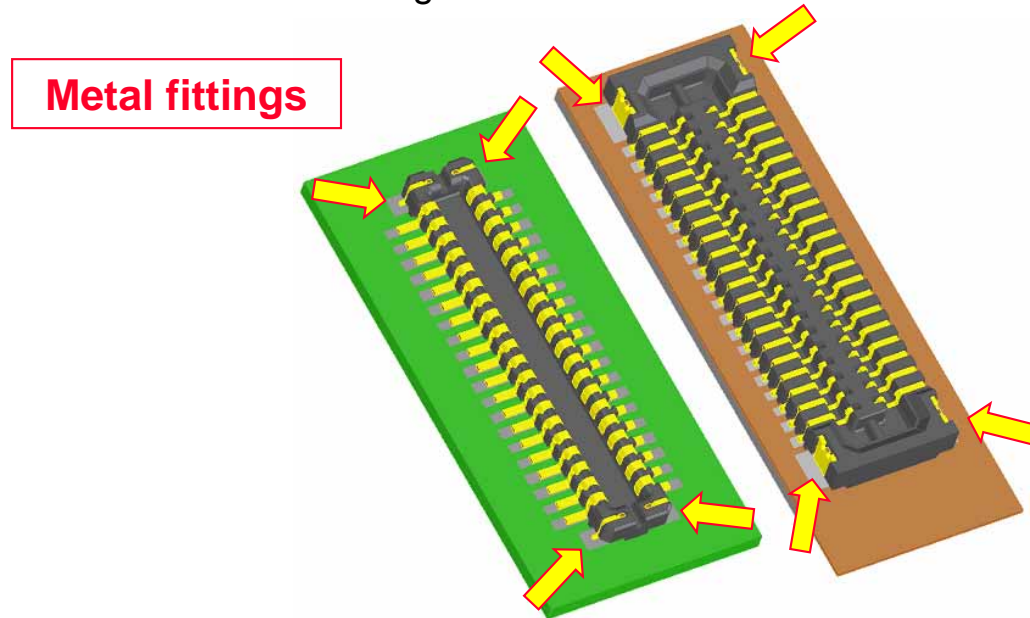
**Self alignment range: 0.3 mm in X, Y direction**

**➔ Smooth and easy mating operation**

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## High PCB Retention Force with Metal Fittings

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



 **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 (N<sub>2</sub> reflow)

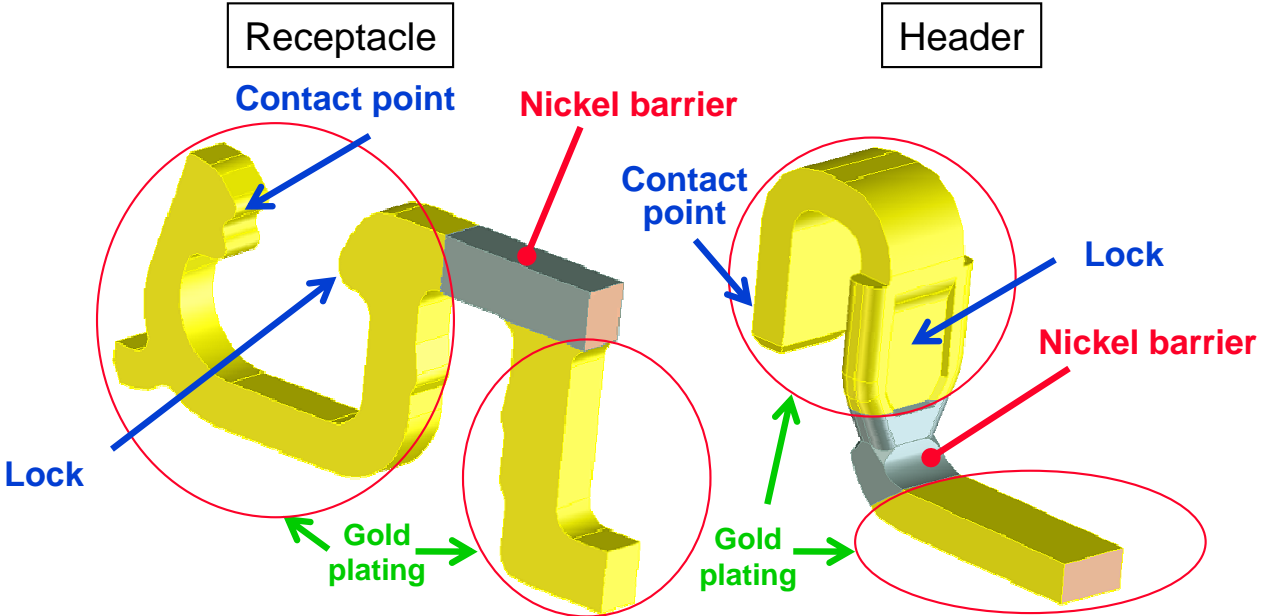


Image: 0.8 mm stacking height

**Nickel barrier prevents solder wicking.**

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## Contact Protection Against Dust

### Lower the risk of dust adhesion

Contact area is enclosed in the housing, protected against solder waste and flux.



Image: 0.8 mm stacking height

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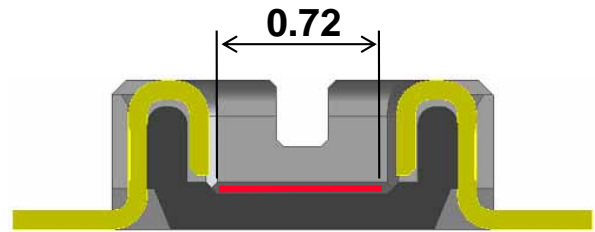
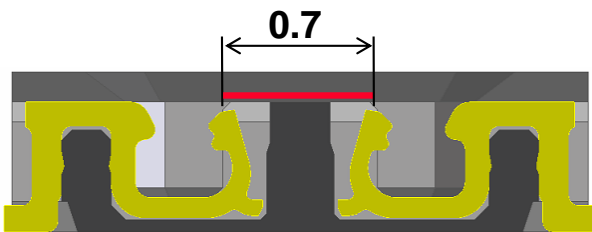
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## Wide Vacuum Pick up Area for Automatic Mounting

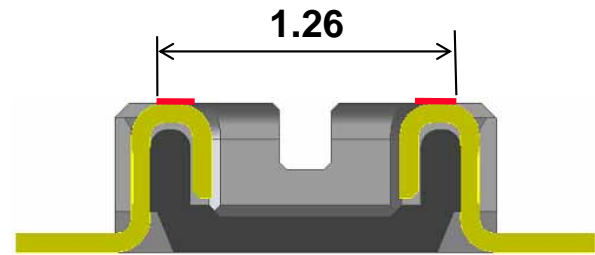
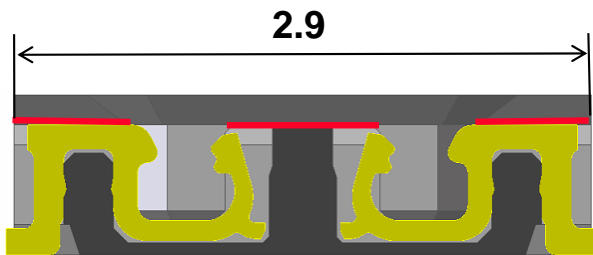
Wide vacuum pick up area, even with space saving design.

Image: 0.8 mm stacking height

Small nozzle opening without air leakage



Wide nozzle opening with air leakage



Suitable nozzle design and pick-up method will be different depending on mounting machines or mounting conditions. Consult mounting machine manufacturers for details.

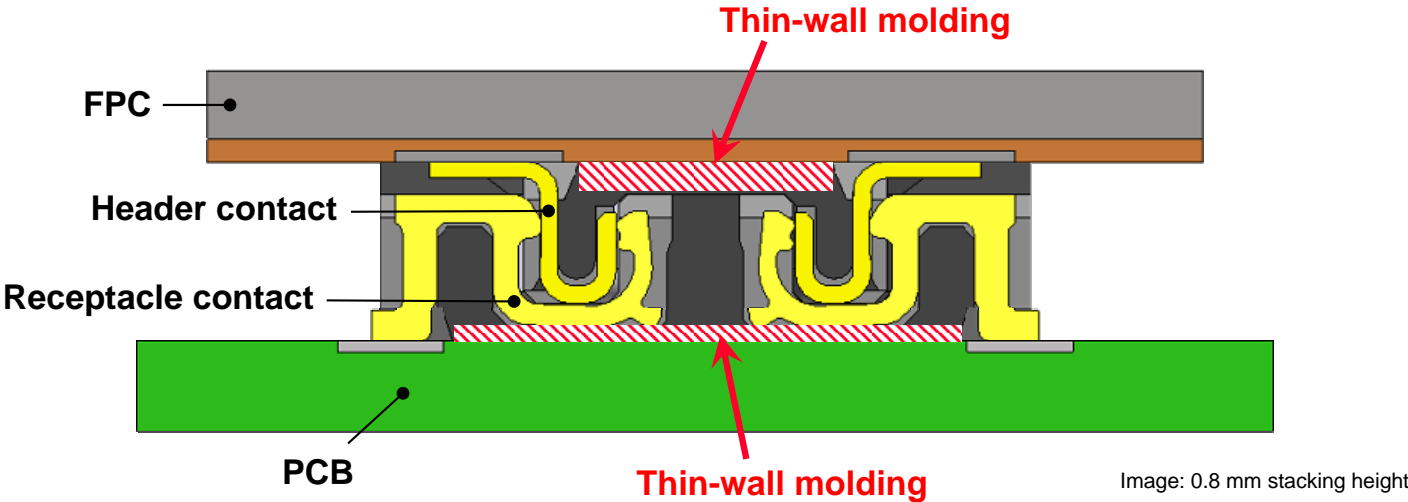
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# Super Low Profile Design with Advanced Molding Technology

*Super low profile, yet providing high density mounting*



**Thin-wall molding realizes excellent insulation with PCB!!**

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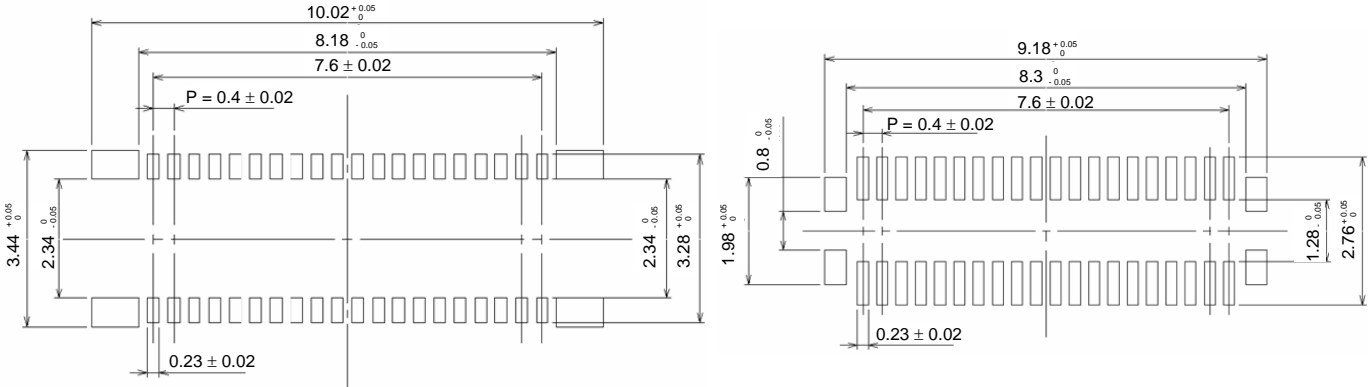
# Recommended PCB Pattern

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

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

Receptacle

Header

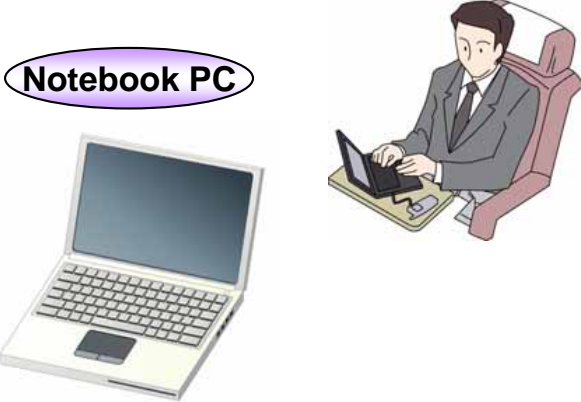


**BM10 saves more space than the other competitive products defining no conductive area even with shorter depth.**

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# Application Examples



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# Specifications

## ■ Material and Finish

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

\*NOTE: 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.

## ■ 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 1000 Hz) |
| 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 carrying.

## ■ Varieties:

**0.8 mm height: 10, 16, 20, 24, 30, 34, 40, 44, 50 and 60 pos.** (Under development: 80 pos.)

**0.6 mm height: 10, 20, 24 and 50 pos.** (Under development: 16, 30, 34, 40, 60 and 80 pos.)

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