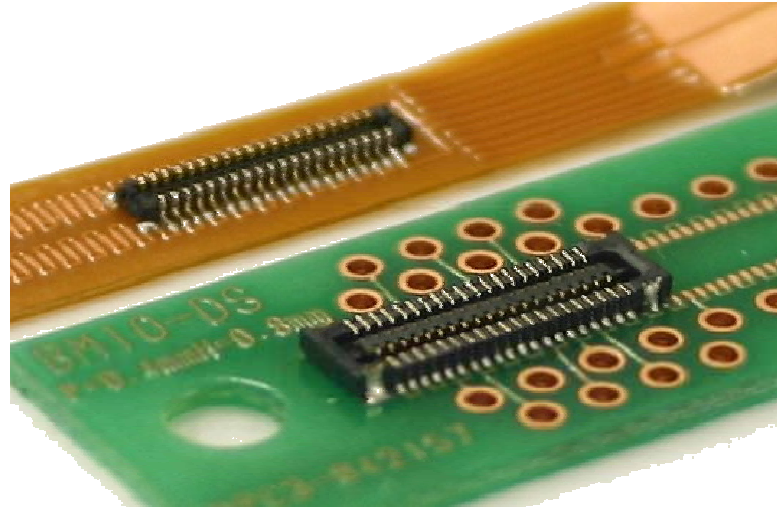


BM10 Series

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



◀ 0.8 mm stacking height

◆ Features

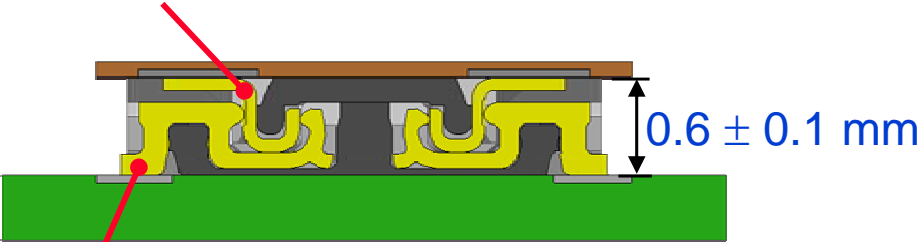
1. 2 types of stacking height are available: 0.6 and 0.8 mm
2. Space saving: 2.98 mm depth
3. Highly reliable contact and retention force with clipping contact design
4. Clear tactile click with excellent contact design
5. Shock-absorbing configuration with dimple on contact for robustness
6. Enhanced 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.

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(**)*



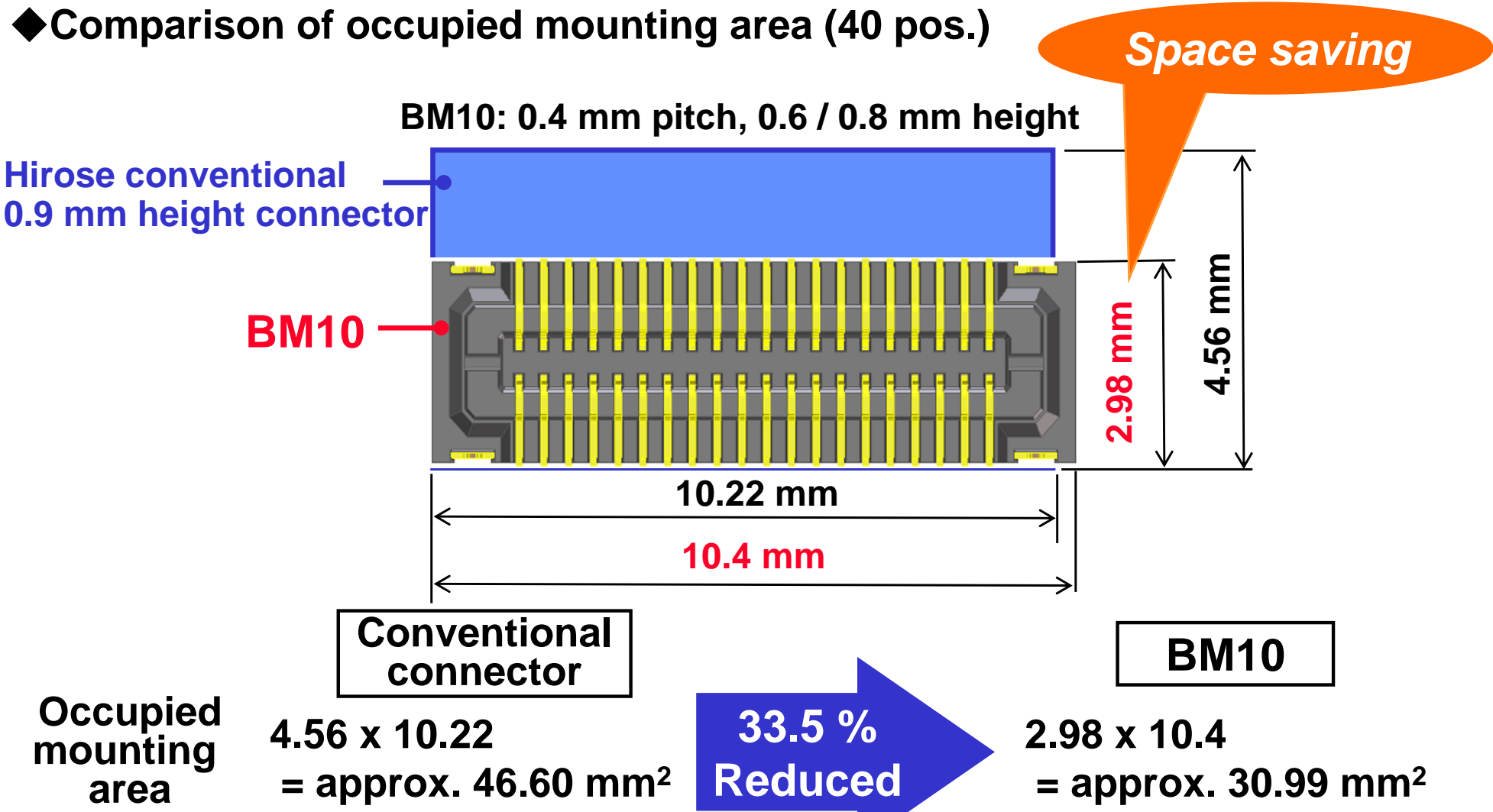
Receptacle: *BM10NB(0.8)-##DS-0.4V(**)*

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

Flexible Board Distance

Space Saving with Short Depth

◆ Comparison of occupied mounting area (40 pos.)



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

Highly Reliable Clipping Contact Design

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

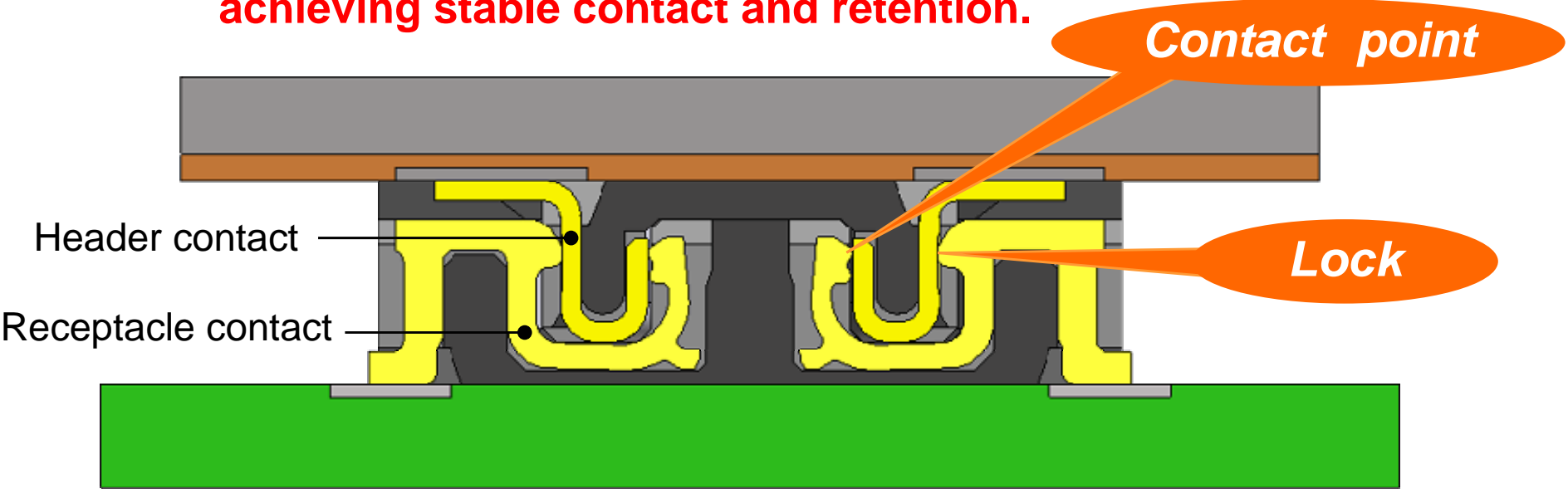
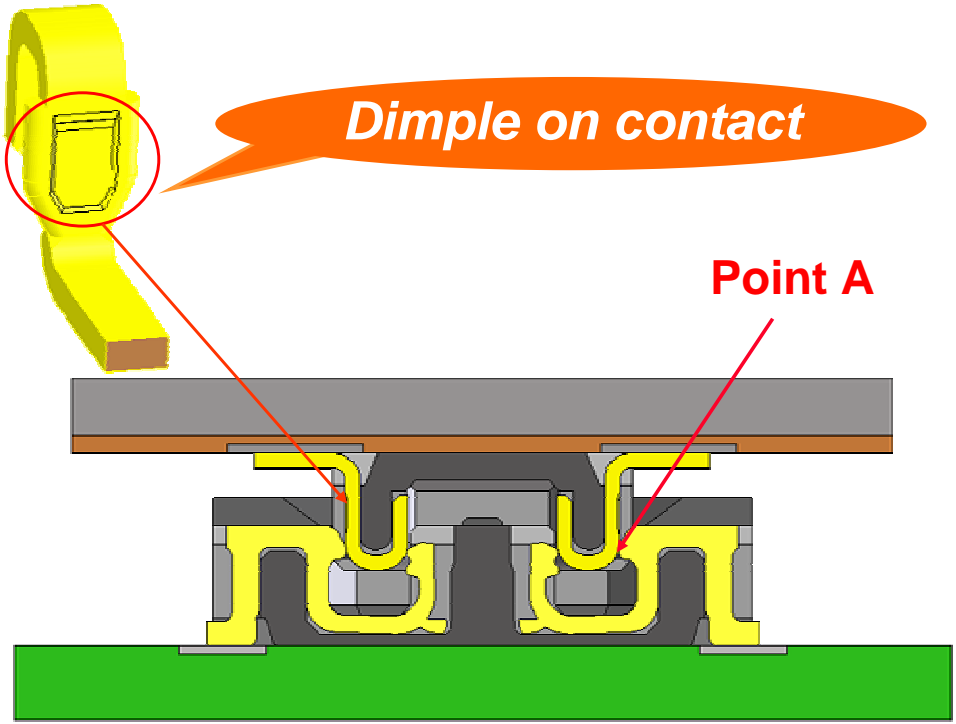


Image: 0.8 mm stacking height

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

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.

Insertion force

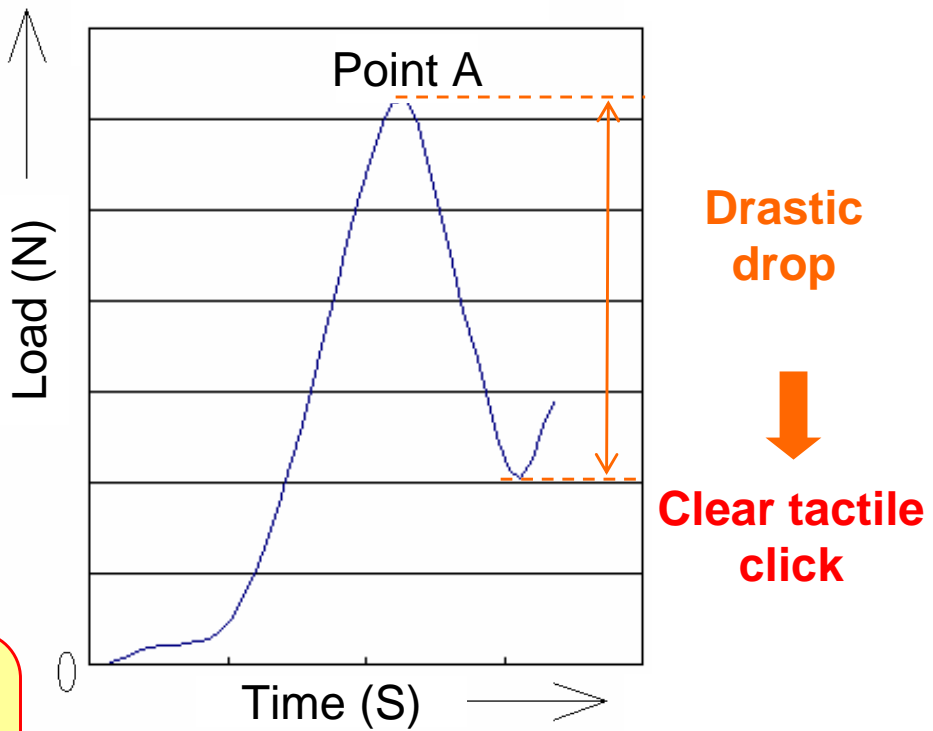


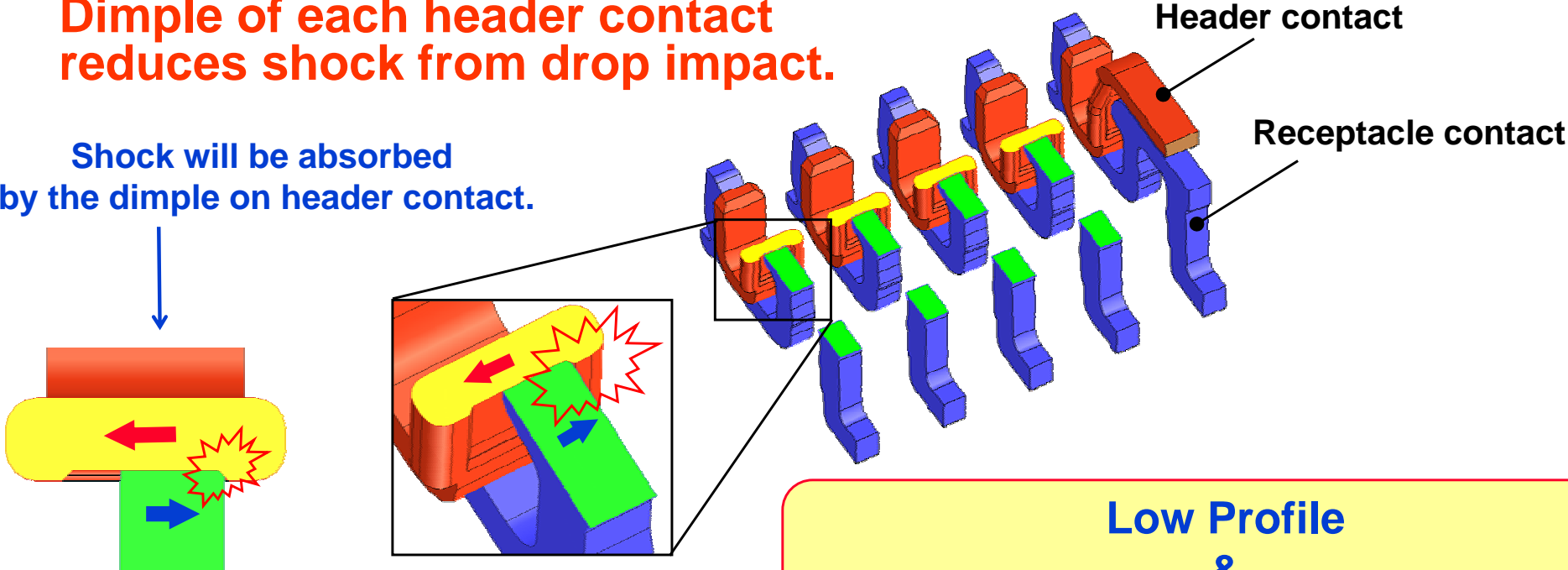
Image: 0.8 mm stacking height

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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

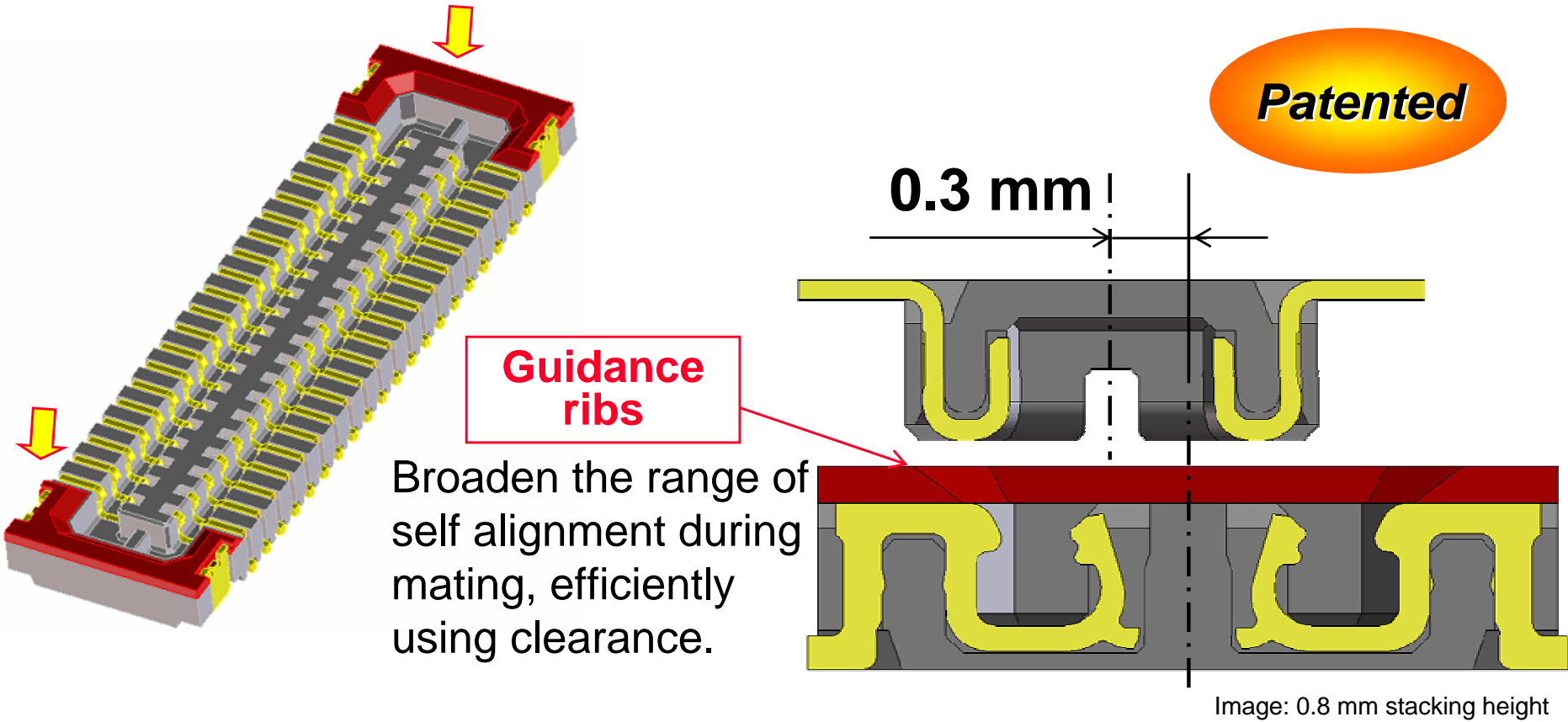
◆ **Comparison with conventional configuration**
 Due to the reduced height of the BM10 Series, shock reduction feature in the housing design cannot effectively be used. Hirose innovative contact design reduces shock and damage due to dropping.

[Conventional configuration]
Header

Socket Image: DF40

The diagram shows a cross-section of a conventional configuration with a blue header and a red socket. A green circle highlights the contact area. The header is taller than the socket, and the contact is at the top of the header.

Guide Ribs for Wide Self Alignment Range



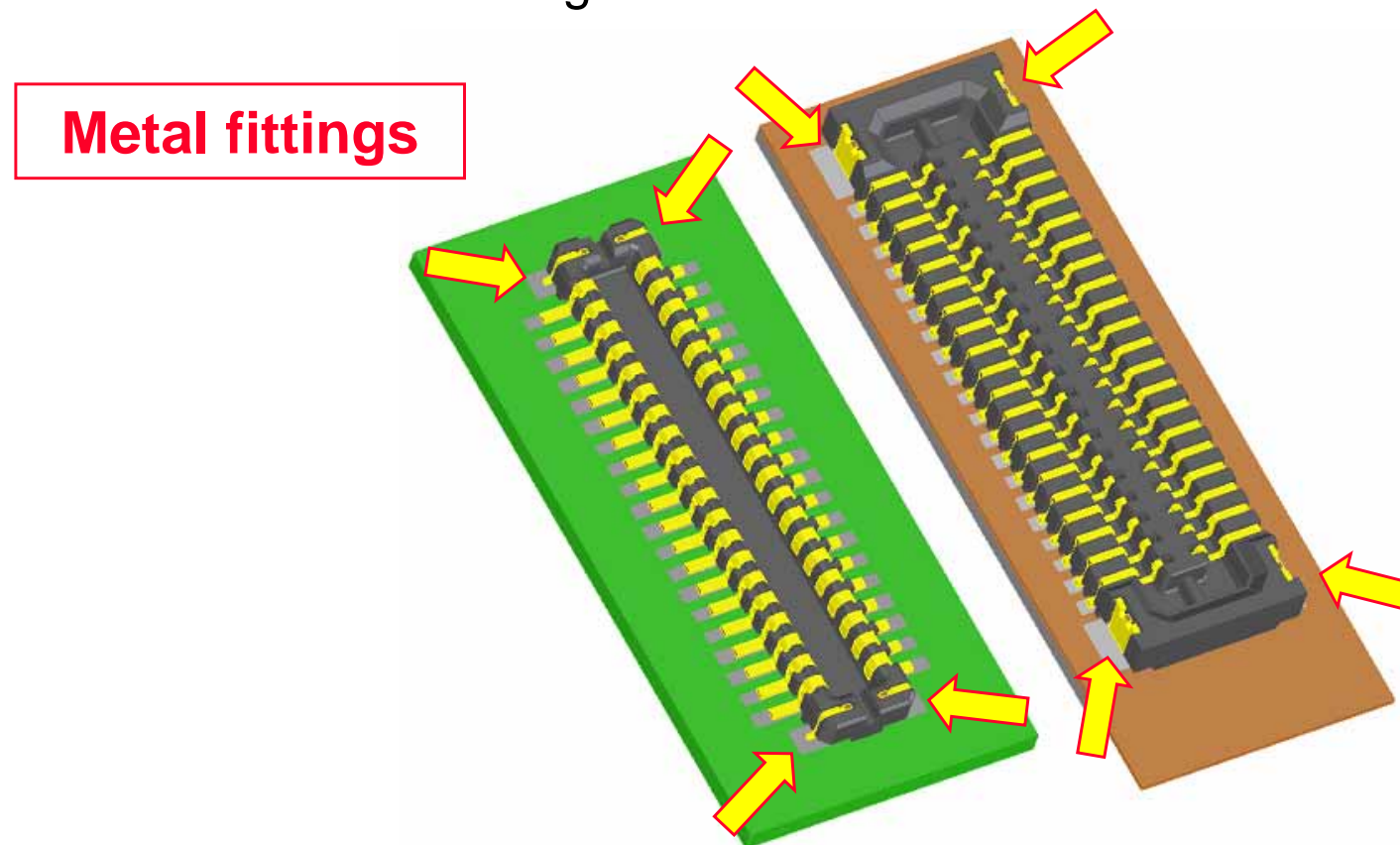
Self alignment range: 0.3 mm in X, Y direction

➔ Smooth and easy mating operation

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

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.**

Solder Wicking Prevention

[Reflow condition for Nickel barrier evaluation]

Temperature profile: Max 260 °C, Oxygen density: Max 1000 ppm (N₂ reflow)

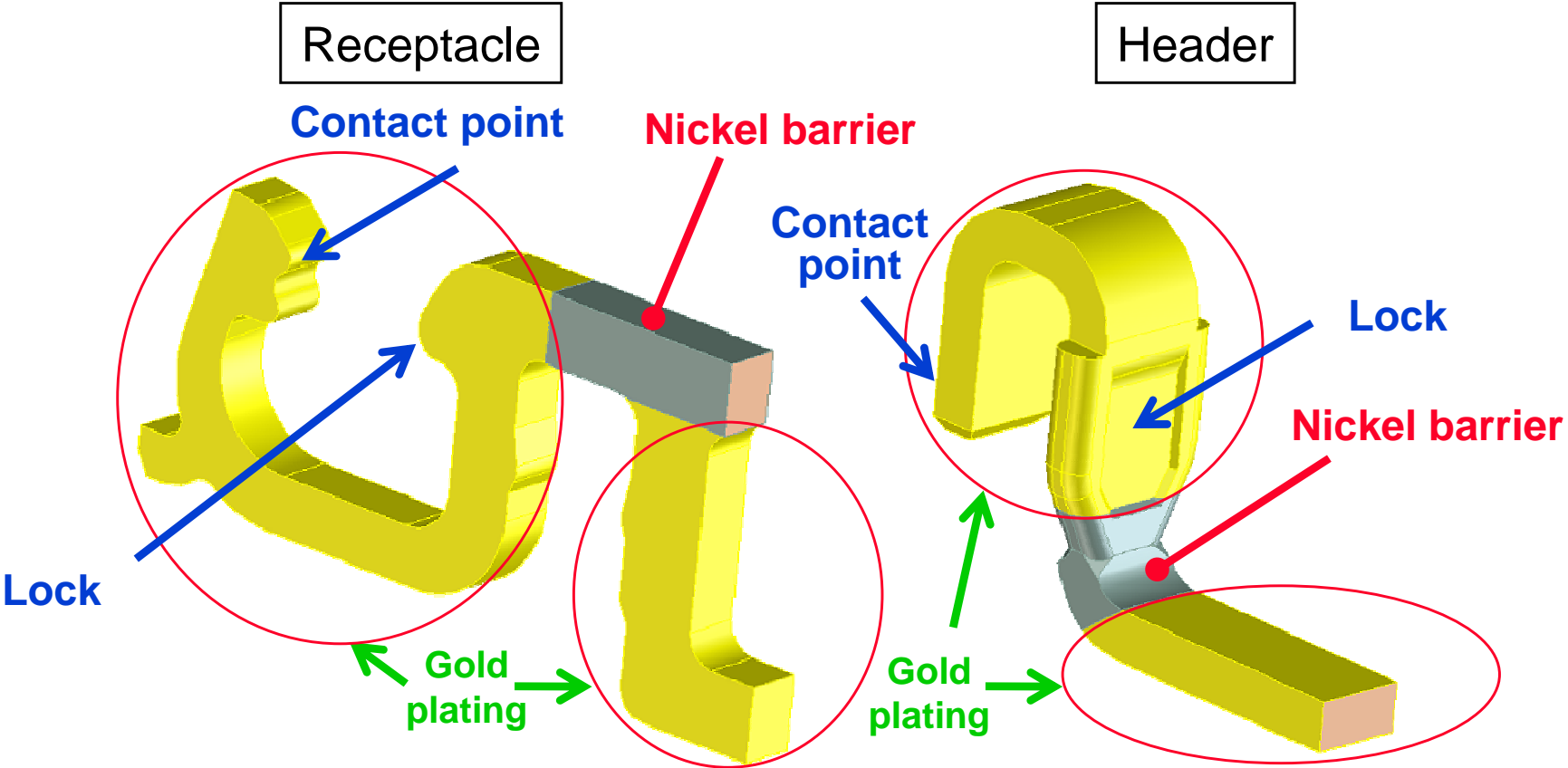


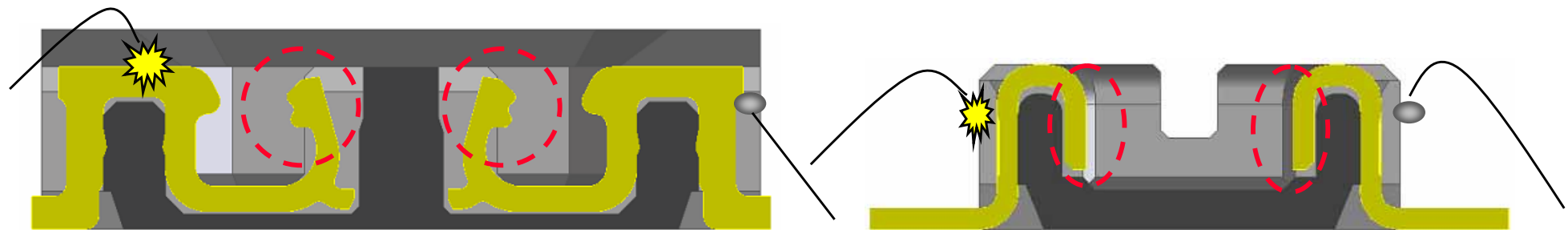
Image: 0.8 mm stacking height

Nickel barrier prevents solder wicking.

Contact Protection Against Dust

Lower the risk of dust adhesion

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



Receptacle

Header

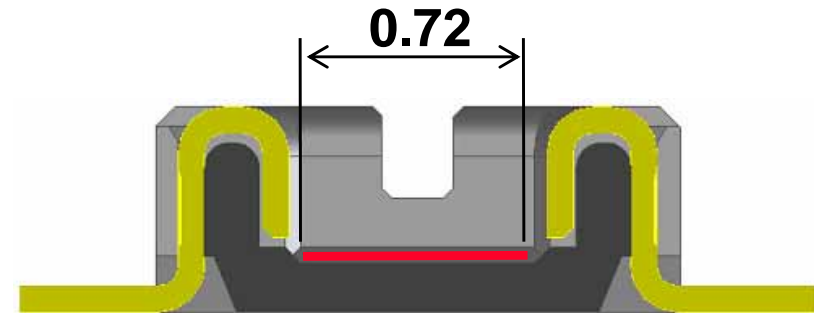
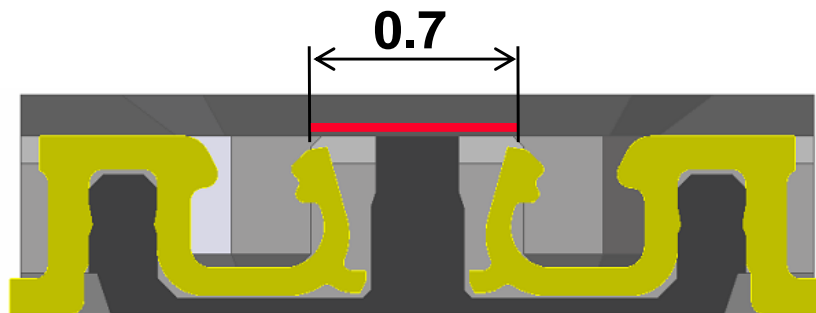
Image: 0.8 mm stacking height

Wide Vacuum Pick up Area for Automatic Mounting

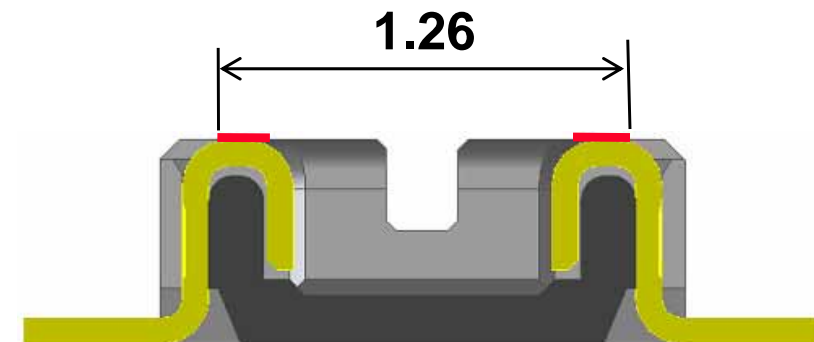
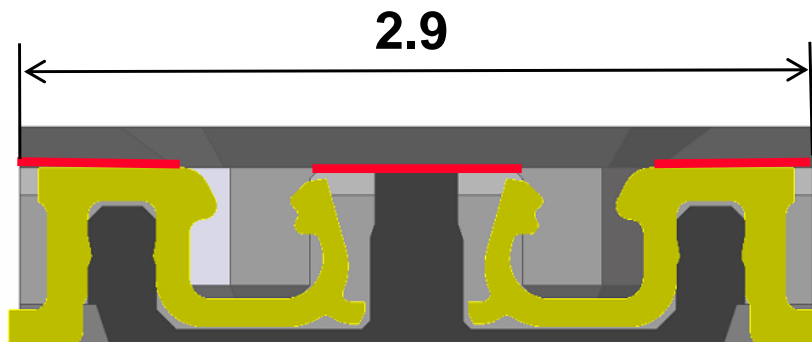
Wide vacuum pick up area, even with space saving design.

Image: 0.8 mm stacking height

Small nozzle opening without air leakage



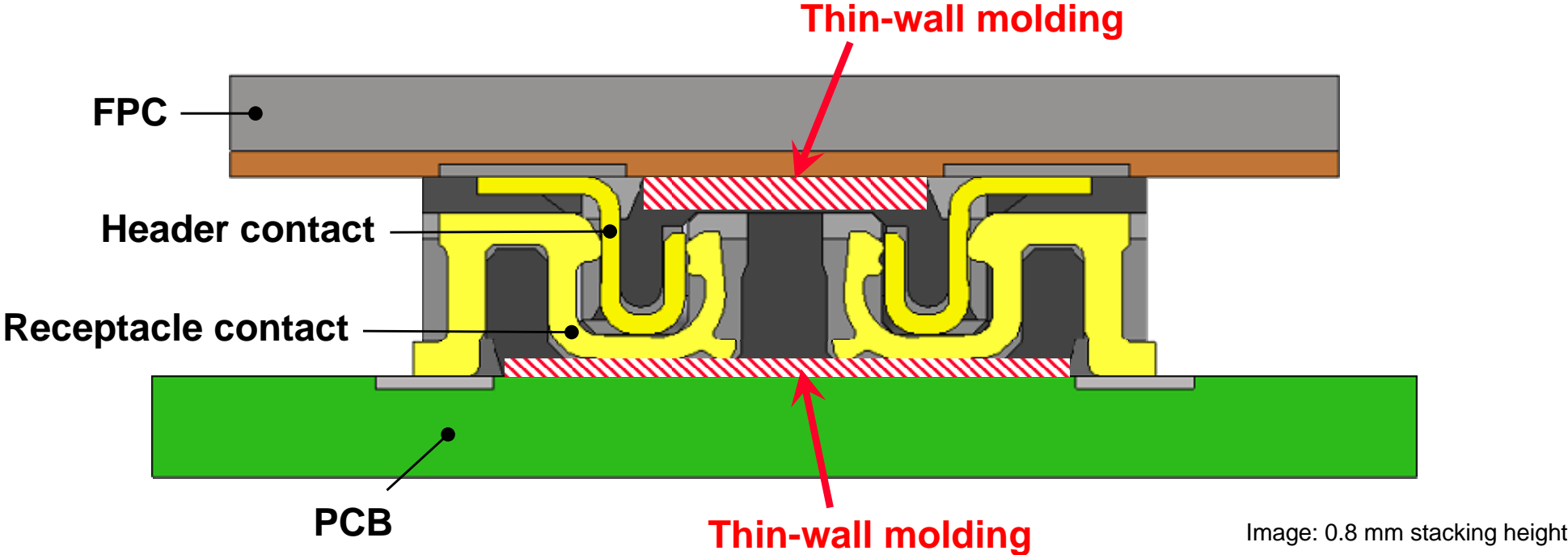
Wide nozzle opening with air leakage



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

Super Low Profile Design with Advanced Molding Technology

Super low profile, yet providing high density mounting



Thin-wall molding realizes excellent insulation with PCB!!

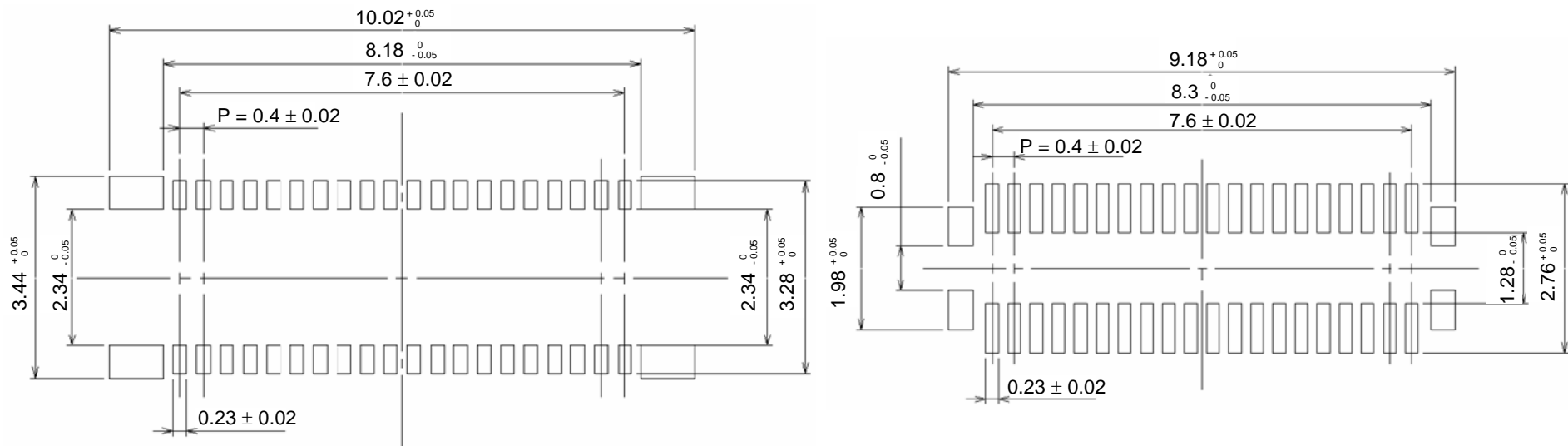
Recommended PCB Pattern

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

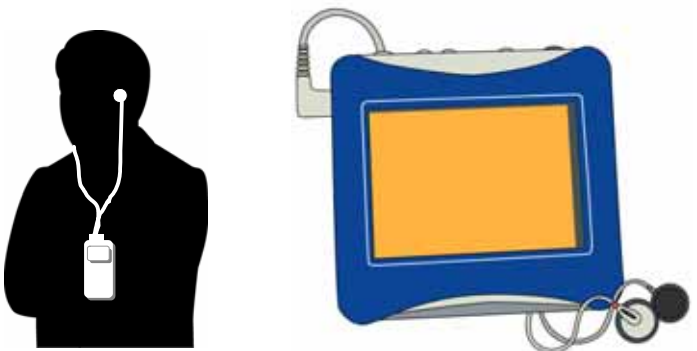
Header



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

Application Examples

Portable audio



Notebook PC



Mobile phone



DSC, DVC



PDA



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Issued: Mar. 31, 2010

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.)