

0.8mm Pitch



Connectors

HDRA series

0.8 mm Pitch Connectors

Outline

HDRA series connectors have been developed based on the HDR series products for high speed signal interfaces such as SCSI-III, VHDCI and PCI.

Features

- Conforms to the United States ANSI/SFF8441 standards
- Provided with high performance EMI/ESD-shielded structure
- Mounted with locks or screws
- Low profile
- Sequence structure

Principal Applications

Server, Router, Notebook type personal computers and their peripheral equipment, and mobile equipment

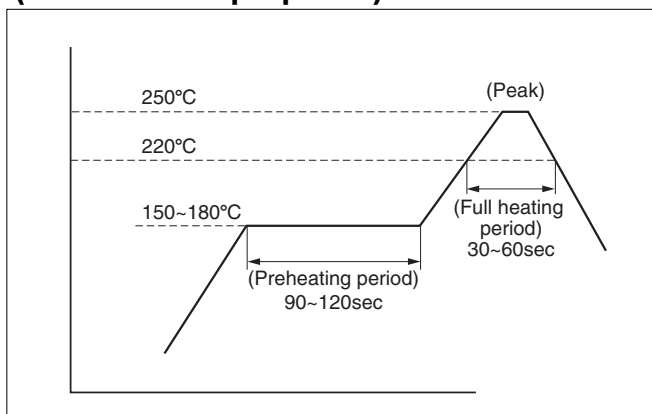
Electrical Characteristics

Rated voltage	30V AC (r.m.s.)
Rated current	0.3 A
Insulation resistance	Over 500 megohms at 100V DC
Dielectric withstanding voltage	250V AC (r.m.s.)
Contact resistance	70 milliohms or less (for combination of MA or MA1 and LFDT) 100 milliohms or less (for combination with MA1 and W1LFDT)

Document Disclaimer

- When placing orders with us, minimum order quantities are set for every product.
- Be sure to contact us before starting preliminary design of PCBs using our connectors.
- The specifications and information shown in the catalog are subject to change without notice.

Reflow temperature profile (for reference purposes)

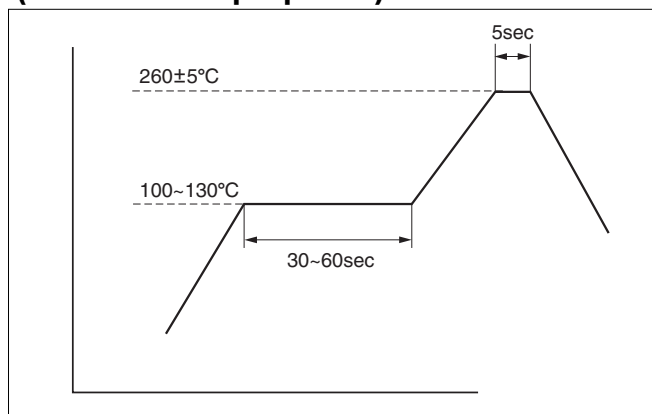


The reflow temperature profile shown in this drawing is for reference purposes. This profile depends on requirements such as reflow equipment, soldering paste, and PCB size. Thus, this profile may not meet with your specific situation. Please evaluate your PCB-mounting soldering and set your own reflow temperature profile.

●Applicable products

HDRA series SMT type for PCB

Flow temperature profile (for reference purposes)



The flow temperature profile as shown above is for reference purposes. This profile depends on requirements such as the PCB size. Thus, this profile may not meet with your specific situation. Please evaluate your PCB-mounting soldering and set your own flow temperature profile.

●Applicable products

HDRA series through hole type for PCB

Product List



IDC type male connector for cable
HDRA-E36MA+



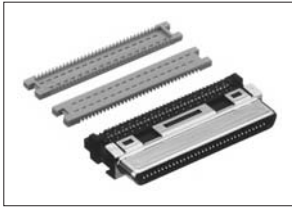
IDC type male connector for cable
HDRA-E68MA+



IDC type male connector for cable
HDRA-E68M()1+



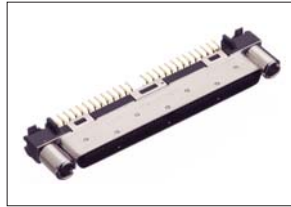
IDC type male connector for cable
HDRA-E100M()1+



IDC type female connector for cable
HDRA-E68FAG1+



Straddle SMT type male connector for PCB
HDRA-E68MT+



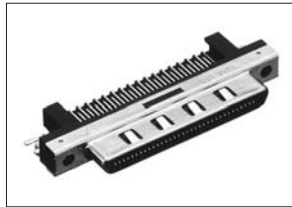
Straight through hole type male connector for PCB
HDRA-EC100MDT()+



Straight DIP type female connector for PCBs
HDRA-EC68FDT()+



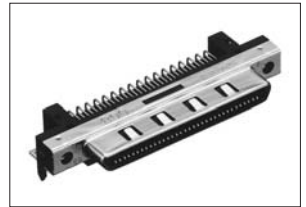
Straight DIP type female connector for PCBs
HDRA-EC100FDT()+



Right-angle through hole type female connector for PCB
HDRA-E68LFDT-OM18+



Right-angle through hole type female connector for PCB
HDRA-E68LFD1T()+



Right-angle through hole type female connector for PCB
HDRA-EC68LFDT()-()+



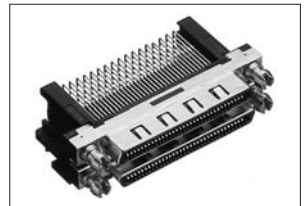
Right-angle through hole type female connector for PCB
HDRA-EC100LFDT()-()+



Right-angle through hole type female connector for PCB
HDRA-EA36LFDT()+



Right-angle through hole type female connector for PCB
HDRA-E100LFDT()-()+



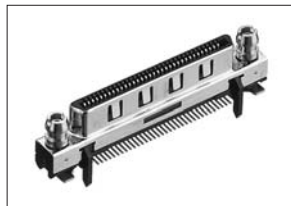
Right-angle through hole type female connector for PCB
HDRA-E68W1LFDT()+



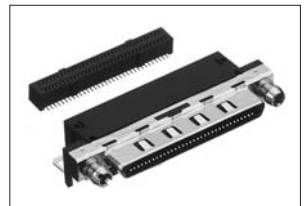
Right-angle through hole type female connector for PCB
HDRA-E68W()LFDT1EC()+



Right-angle through hole type female connector for PCB
HDRA-E100W()LFDT1EC()+



Straight SMT type female connector for PCB
HDRA-E68FYT()+



Right-angle SMT type female connector for PCB
HDRA-ED68LFZGT()-()+



Right-angle SMT type female
connector for PCB
HDRA-ED136LFZGT()-()+



EMI-shielded vertical plastic
housing for standard cable
HDRA-E68LGKP()



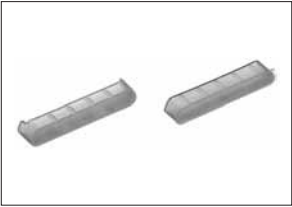
EMI-filtered vertical metallic
housing
HDRA-E100LPA



EMI-filtered vertical metallic
housing
HDRA-E100LPW()



EMI-shielded vertical plastic
housing
HDRA-E36LPTH



Dust-proof cap
HDRA-E68()-CP

A-
H|

IDC type male connector for cable HDRA-E36MA+

0.8mm pitch connector

For cable

IDC

ANSI/SFF8441

RoHS

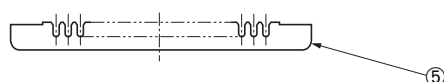
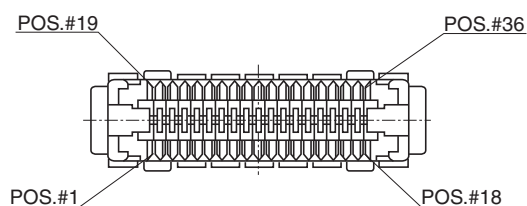
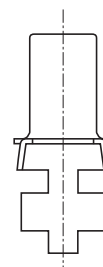
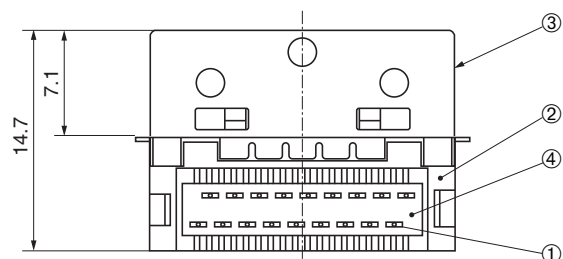
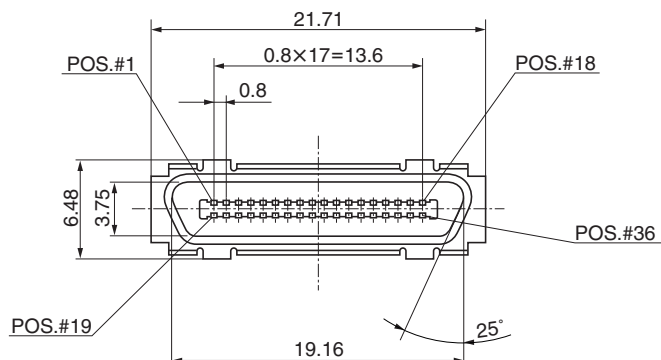


● Configuration of product Part No.

HDRA- E 36 M A+

① ② ③ ④

- ① Series name
- ② No. of contacts: 36
- ③ Type of contact
M: IDC type, male
- ④ Compatible cable
A: AWG#30(7/0.1), dia. 0.58 mm



● Components

①	Contacts
②	Insulator
③	Shell
④	Spacer
⑤	Cable housing

Mating connector: HDRA series right-angle through hole type or straddle SMT type female connector

For use with housings: HDRA series upright housing, HDRA-E36LPTH

IDC type male connector for cable HDRA-E68MA+

RoHS

0.8mm pitch connector

For cable

IDC

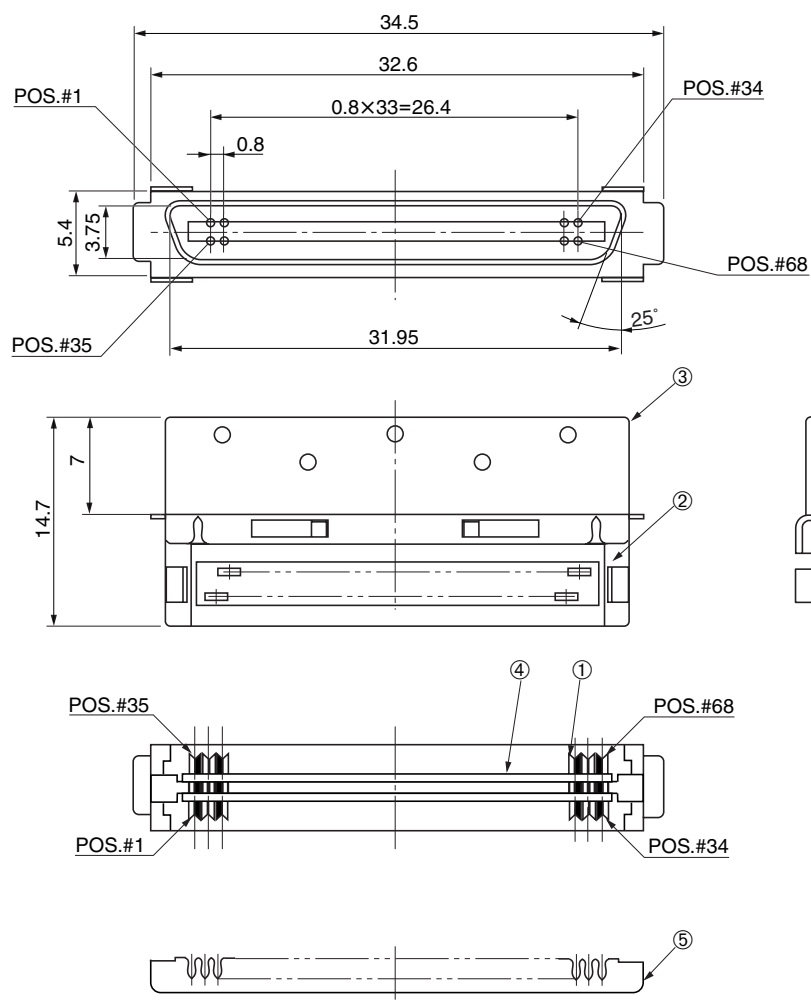
ANSI/SFF8441



● Configuration of product Part No.

HDRA- E 68 MA+

- ① Series name
② No. of contacts: 68
③ Type of contact
M: IDC type, male
④ Compatible cable
A: AWG#30 (7/0.1), dia. 0.58 mm



● Components

①	Contacts
②	Insulator
③	Shell
④	Spacer
⑤	Cable housing

Mating connector: HDRA series right-angle through hole type or straddle SMT type female connector

For use with housings: HDRA series upright housing, HDRA-E68LGKPA

IDC type male connector for cable HDRA-E68M()1+

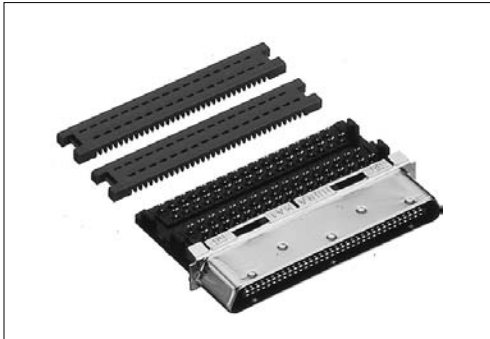
0.8mm pitch connector

For cable

IDC

ANSI/SFF8441

RoHS

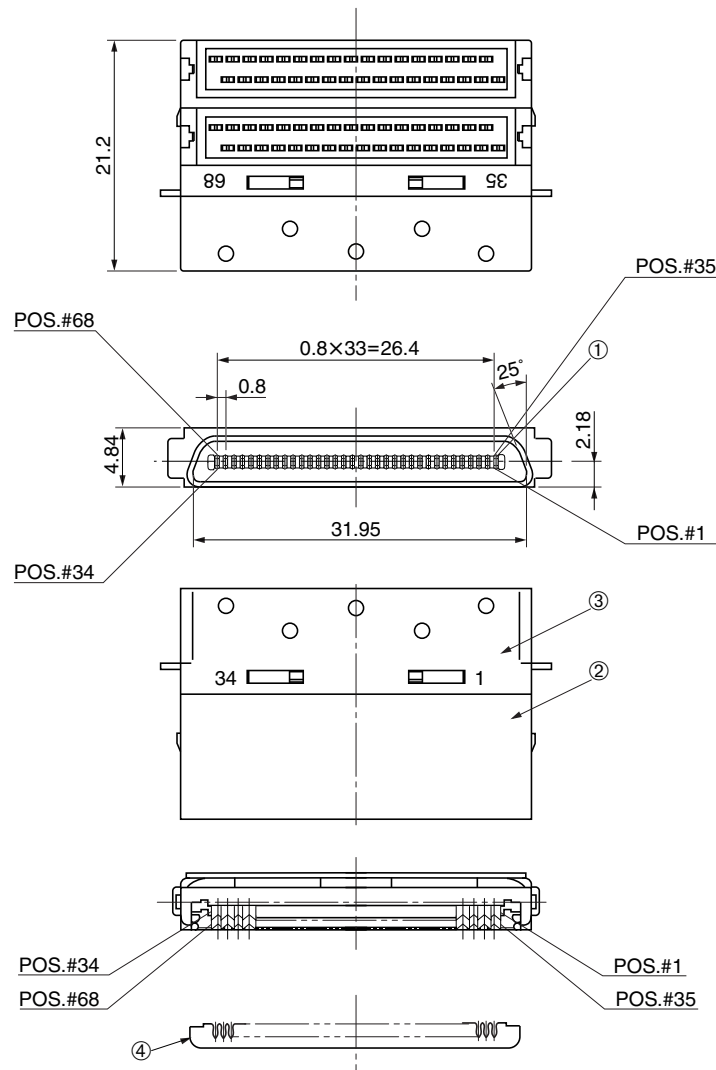


● Configuration of product Part No.

HDRA- E 68 M () 1+

- ① Series name
 ② No. of contacts: 68
 ③ Type of contact
 M: IDC type, male
 ④ Compatible cable
 Blank: AWG#30 (1/0.254), dia. 0.58 mm
 A : AWG#30 (7/0.1), dia. 0.58 mm
 C : AWG#34 (7/0.064), dia. 0.44 mm

- ⑤ IDC method
 1: One side IDC



● Components

①	Contacts
②	Insulator
③	Shell
④	Cable housing

Mating connector: HDRA series right-angle through hole type or straddle SMT type female connector

For use with housings: HDRA series vertical housing, HDRA-E68LGKP ()

Required tool: Termination tool: FHAT-0027, IDC tool: FLPT-0021A, Hand presser: RPS-K4 (Refer to page Tool-10)

IDC type male connector for cable HDRA-E100M()1+

RoHS

0.8 mm pitch connector

For cable

IDC

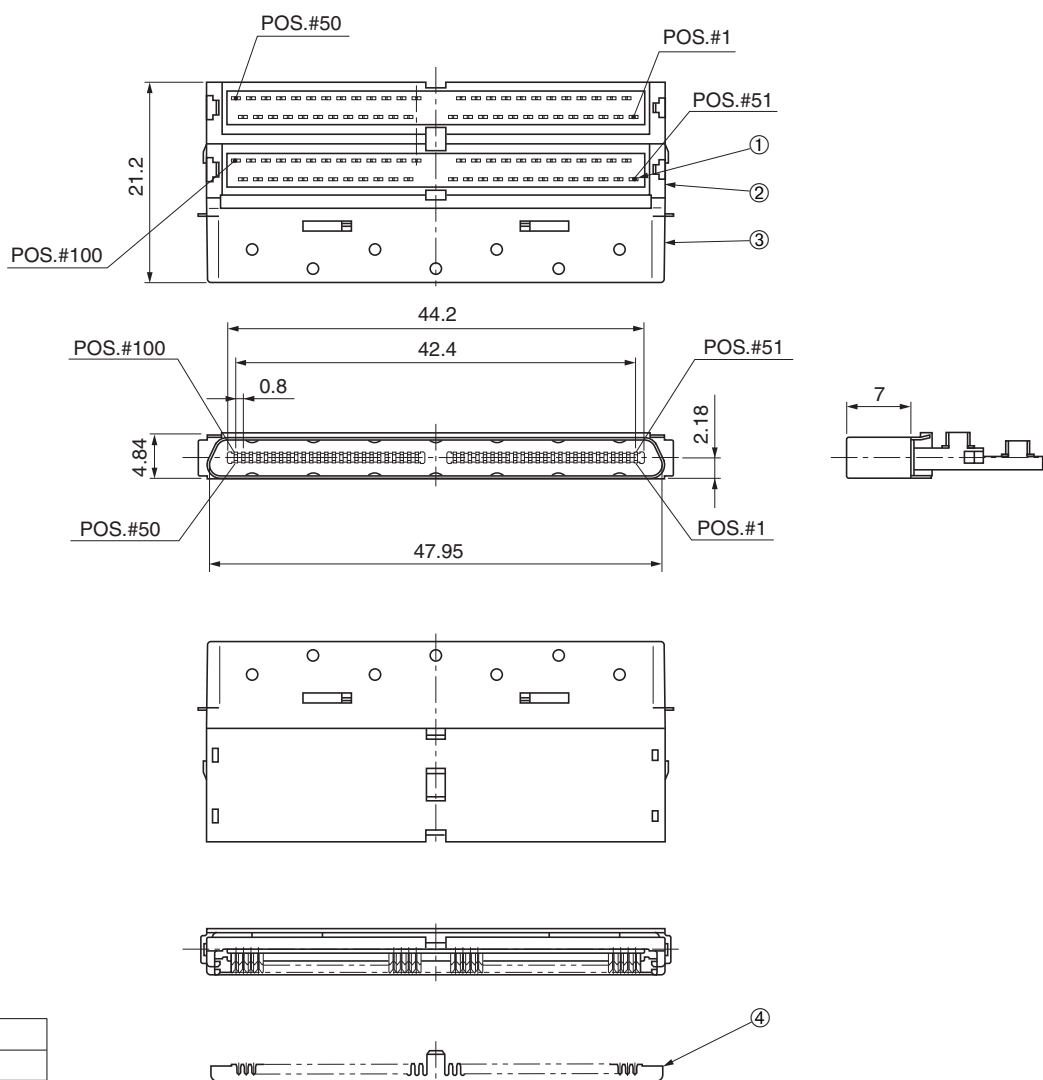
ANSI/SFF8441



● Configuration of product Part No.

HDRA- E 100 M () 1+

- ① Series name
② No. of contacts: 100
③ Type of contact
M: IDC type, male
④ Compatible cable
Blank: AWG#30 (1/0.254), dia. 0.58 mm
A : AWG#30 (7/0.1), dia. 0.58 mm



● Components

①	Contacts
②	Insulator
③	Shell
④	Cable housing

Mating connector: HDRA series right-angle through hole type female connector

For use with housings: HDRA series vertical housing, HDRA-E100LPA, HDRA-E100LPW()

Required tool: Termination tool: FHAT-0038A, IDC tool: FLPT-0021A, Hand presser: RPS-K4 (Refer to page Tool-10)

IDC type female connector for cable HDRA-E68FAG1+

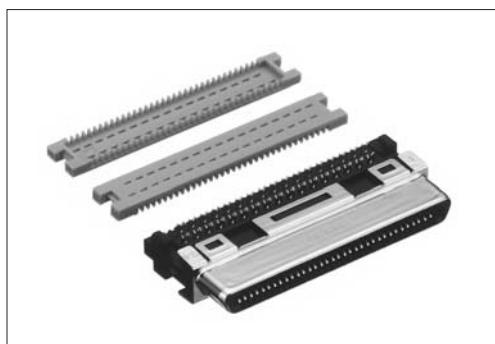
RoHS

0.8 mm pitch connector

For cable

IDC

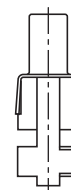
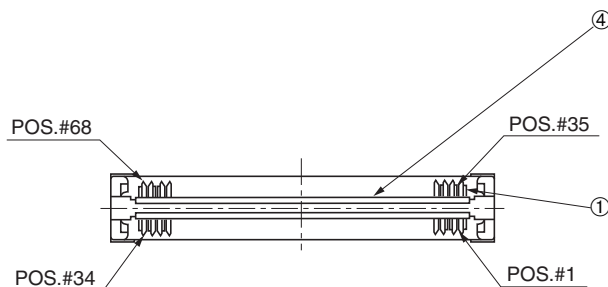
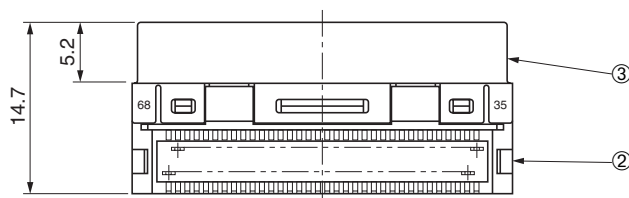
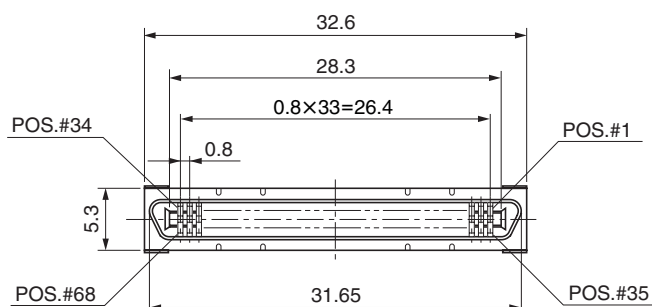
ANSI/SFF8441



● Configuration of product Part No.

HDRA- E 68 F A G1+

- | | | | | |
|---------------|-----------------------|--------------------|---------------------------------|--------------------------------|
| ① | ② | ③ | ④ | ⑤ |
| ① Series name | ② No. of contacts: 68 | ③ Type of contact | F: IDC type, female | ⑤ Contact plating |
| | | ④ Compatible cable | A: AWG#30 (7/0.1), dia. 0.58 mm | G1: 0.76 μm or more Gold plate |



● Components

①	Contacts
②	Insulator
③	Shell
④	Spacers
⑤	Cable housing

Mating connector: HDRA series right-angle through hole type or straddle SMT type male connector

Straddle SMT type male connector for PCB HDRA-E68MT+

RoHS

0.8mm pitch connector

For PCB

Straddle SMT

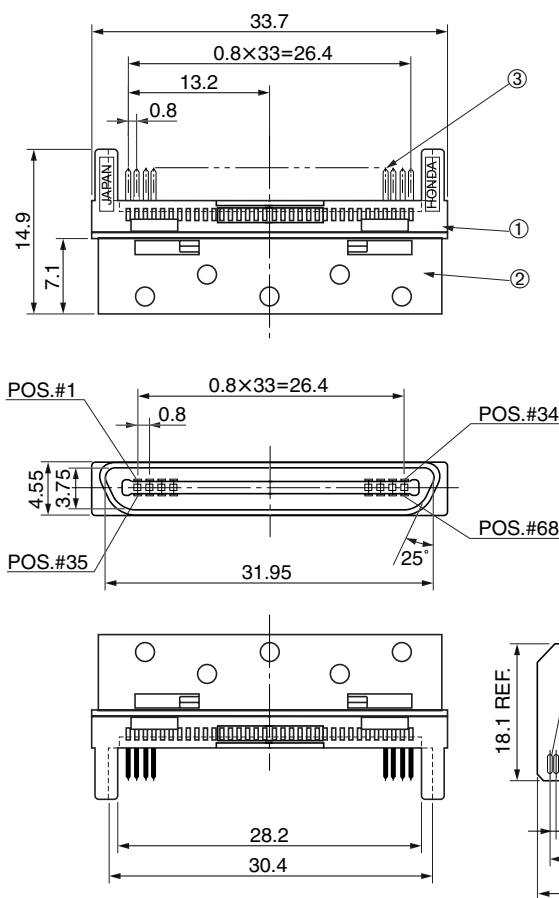
ANSI/SFF8441



● Configuration of product Part No.

HDRA- E 68 MT+

- ① Series name
② No. of contacts: 68
③ Type of contact
MT: Straddle SMT type, male



Recommended PCB layout
t=0.8mm

● Components

①	Insulator
②	Shell
③	Contacts

Mating connector: HDRA series through hole type or straddle SMT type female connector

Straight DIP type female connector for PCBs

HDRA-EC68FDT-()+

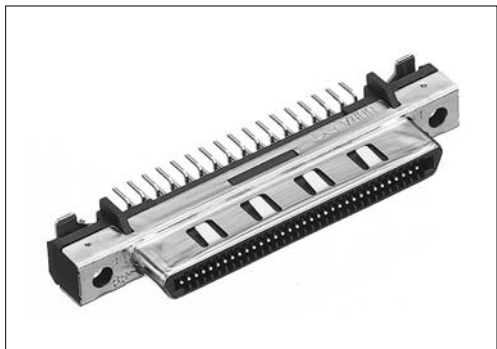
0.8 mm pitch connector

For PCBs

Straight DIP

EMI-filtered countermeasures

RoHS

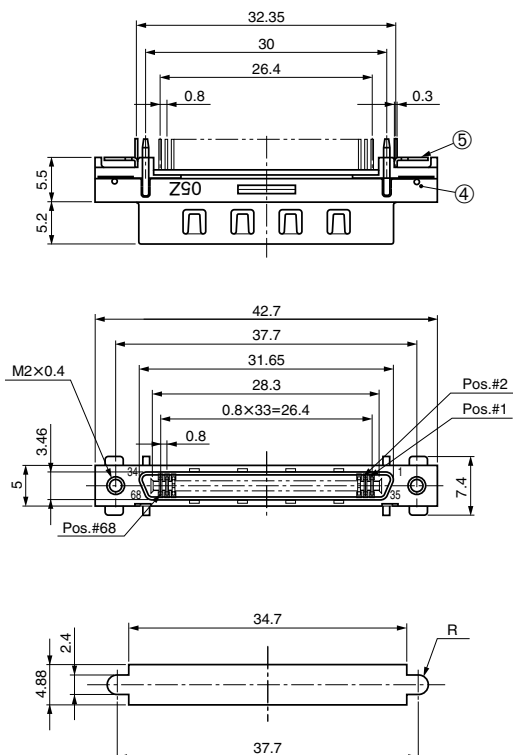


● Configuration of product Part No.

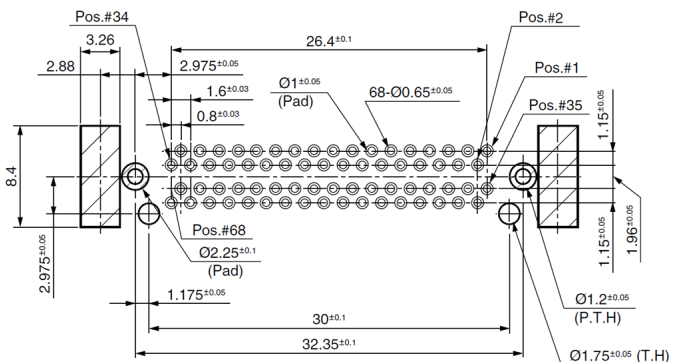
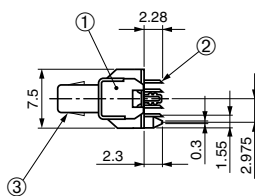
HDRA- EC 68 FD T- ()+

① ② ③ ④ ⑤

- ① Series name
- ② No. of contacts: 68
- ③ Form of contact
FD: Straight, DIP type, female
- ④ With ground lock pin
- ⑤ Lock screw
SLD: Provided
Blank: None



Recommended panel cut-out dimensions



Recommended PCB layout

● Components

①	Insulator
②	Contact
③	Shell
④	Sqr.nut
⑤	Hold down

Mating connector: HDRA series male connectors

Straight DIP type female connector for PCBs

HDRA-EC100FDT-()+

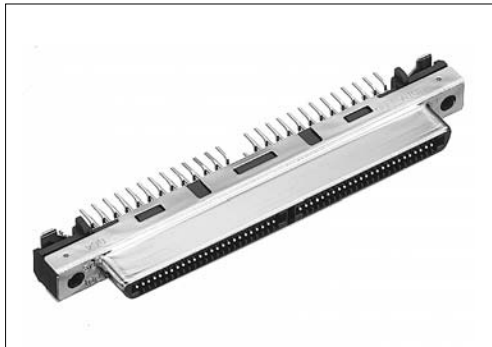
RoHS

0.8 mm pitch connector

For PCBs

Straight DIP

EMI-filtered countermeasures

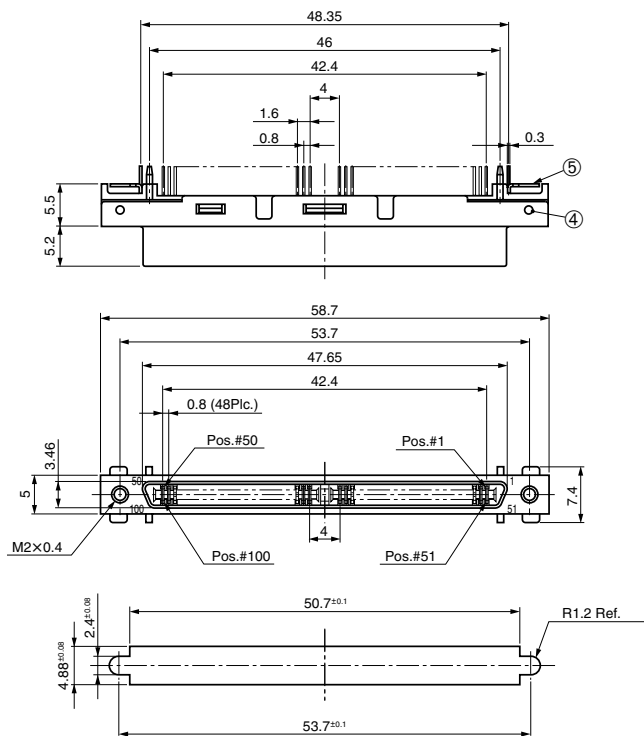


● Configuration of product Part No.

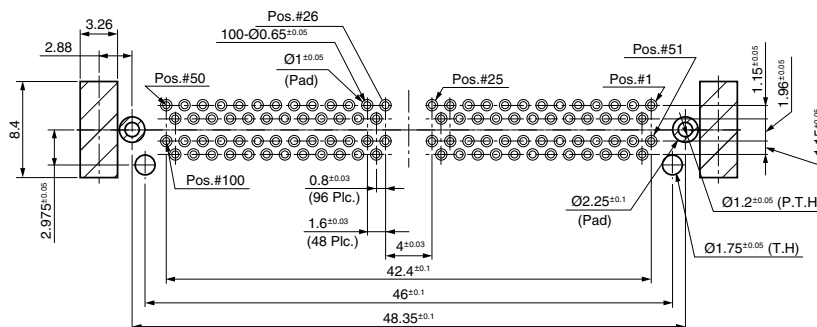
HDRA- EC 100 FD T- ()+

① ② ③ ④ ⑤

- ① Series name
- ② No. of contacts: 100
- ③ Form of contact
FD: Straight, DIP type, female
- ④ With ground lock pin
- ⑤ Lock screw
SLD: Provided
Blank: None



Recommended panel cut-out dimensions



Recommended PCB layout

● Components

①	Insulator
②	Contact
③	Shell
④	Sqr.nut
⑤	Hold down

Mating connector: HDRA series, male connector

Right-angle through hole type female connector for PCB HDRA-E68LFD1T-()+

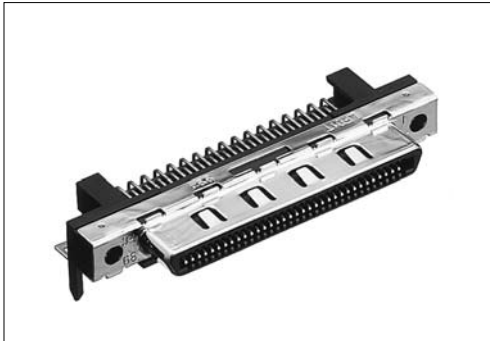
RoHS

0.8mm pitch connector

For PCB

Right-angle Through hole

ANSI/SFF8441



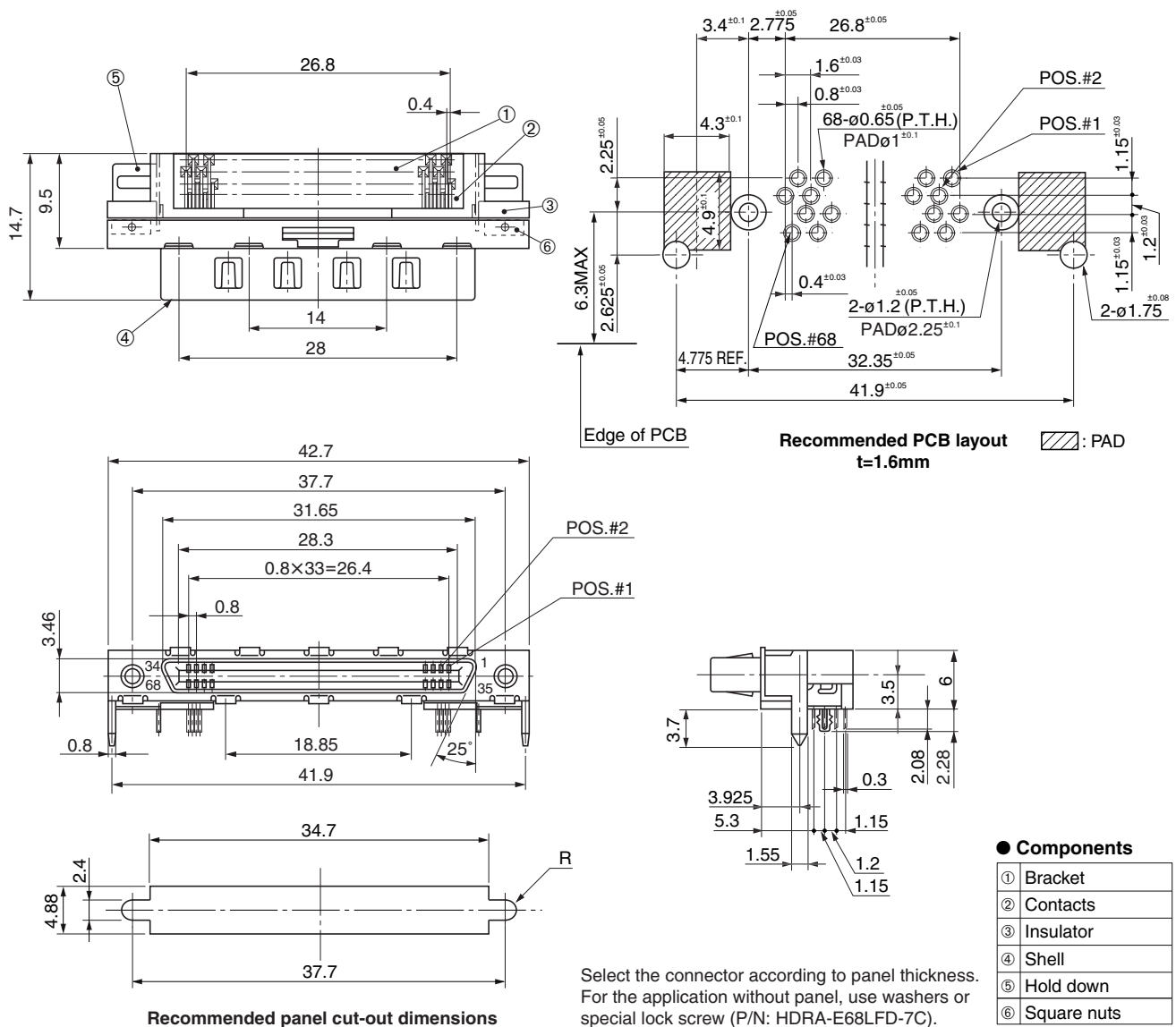
● Configuration of product Part No.

HDRA-E 68 LFD 1 T -()+

① ② ③ ④ ⑤ ⑥

- ① Series name
- ② No. of contacts: 68
- ③ Type of contact:
LFD: Right-angle through hole type, female
- ④ Provided with shell and panel contact blade
- ⑤ Provided with board lock pin

- ⑥ Lock screw
Blank: None
SL : Provided
(Thickness of panel: 1.12mm)



● Components

①	Bracket
②	Contacts
③	Insulator
④	Shell
⑤	Hold down
⑥	Square nuts

Mating connector: HDRA series IDC type male cable connector, or straddle SMT type male connector

Right-angle through hole type female connector for PCB HDRA-EC100LFD T ()-()+

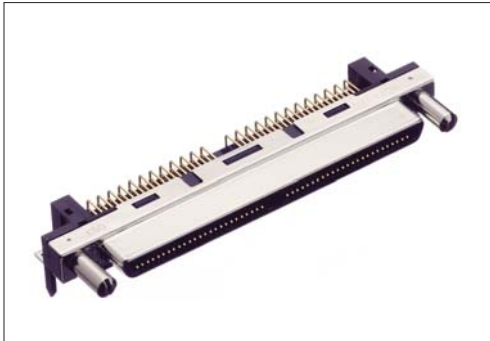
0.8mm pitch connector

For PCB

Right-angle Through hole

EMI shielded

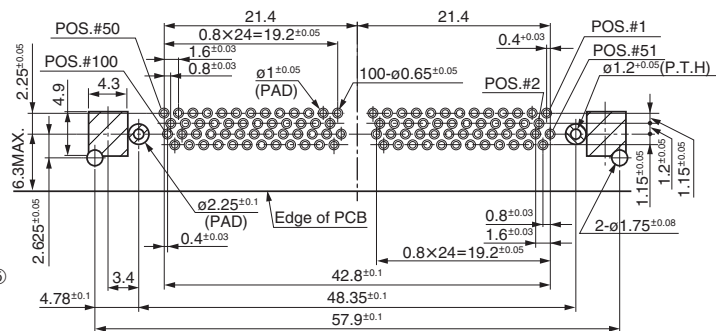
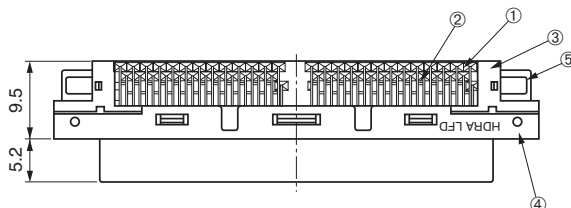
RoHS



● Configuration of product Part No.

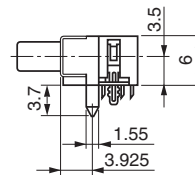
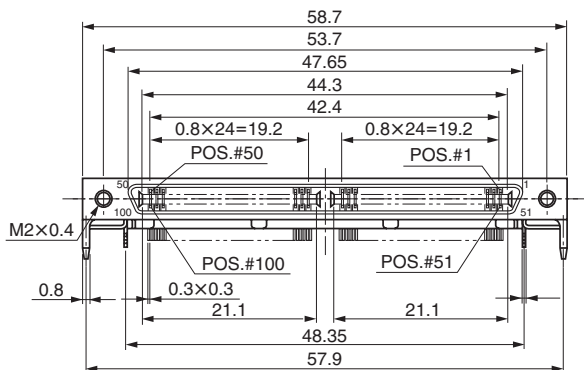
HDRA- EC 100 LFD T ()-()+

- | | |
|--|----------------------------|
| ① Series name | ⑥ Lock screw |
| ② No. of contacts: 100 | Blank: None |
| ③ Type of contact | SL : Provided |
| LFD: Right-angle through hole type, female | (Panel thickness: 1.12 mm) |
| ④ With ground contact | GP : Guide pin |
| ⑤ Through hole length | |
| Blank: 2.08 mm | |
| 1 : 3.4 mm (under planning) | |



Recommended PCB layout
t=1.6mm

▨ : PAD



● Components

①	Bracket
②	Contacts
③	Insulator
④	Shell
⑤	Hold downs

Select the connector according to panel thickness.
For the application without panel, use washers or special lock screw (P/N: HDRA-E68LFD-7C).

Mating connector: HDRA series male connector

Right-angle through hole type female connector for PCB HDRA-EA36LFD T-()+

RoHS

0.8mm pitch connector

For PCB

Right-angle Through hole

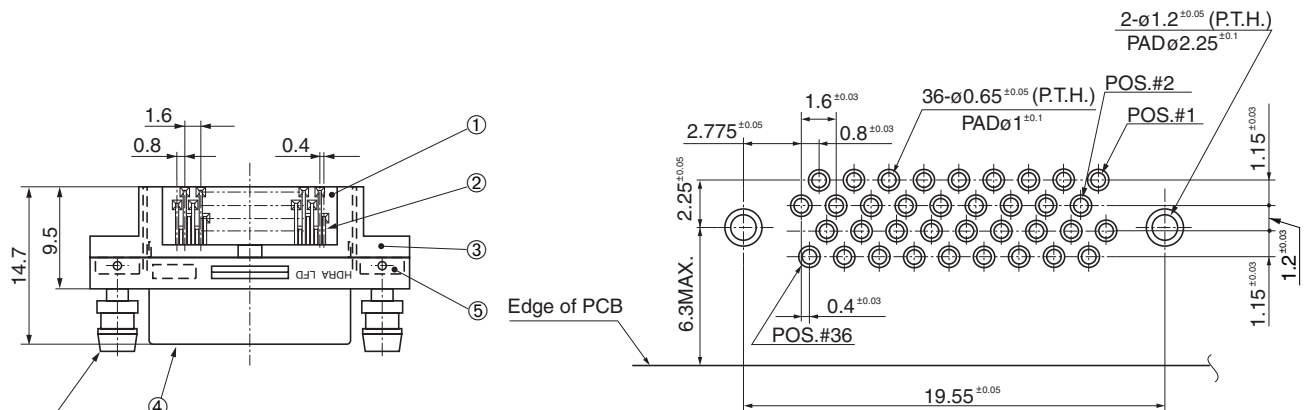
ANSI/SFF8441



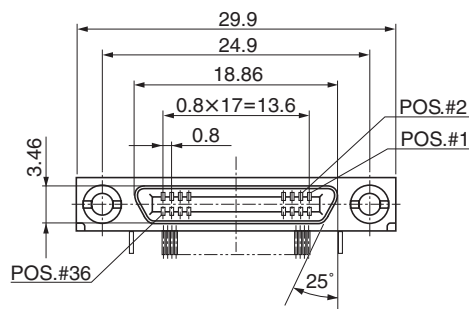
● Configuration of product Part No.

HDRA- EA 36 LFD T-()+

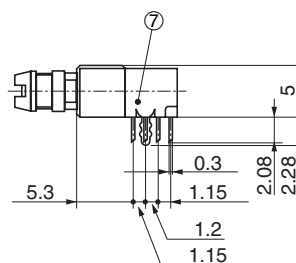
- ① Series name
- ② No. of contacts: 36
- ③ Type of contact
LFD: Right-angle through hole type, female
- ④ Provided with board lock mechanism
- ⑤ Lock screw
Blank: None
SL : Provided (Thickness of panel: 1.12 mm)



Recommended PCB layout
t=1.6mm



Recommended panel cut-out dimensions



● Components

①	Bracket
②	Contacts
③	Insulator
④	Shell
⑤	Square nuts
⑥	Lock screw
⑦	Board lock pin

Select the connector according to panel thickness.
For the application without panel, use washers or special lock screw (P/N: HDRA-E68LFD-7C).

Mating connector: HDRA series IDC type male cable connector

Note ● Jack screw is not available at present.

Right-angle through hole type female connector for PCB HDRA-E100LFD T ()-()+

RoHS

0.8 mm pitch connector

For PCB

Right-angle Through hole

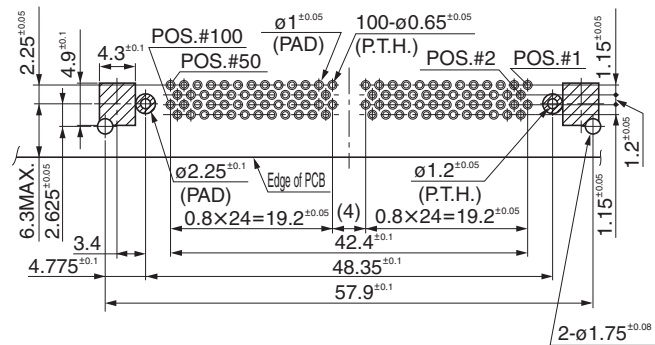
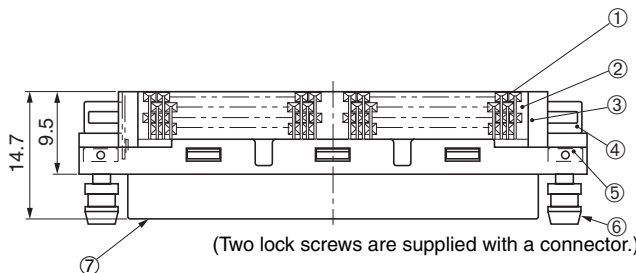
ANSI/SFF8441



● Configuration of product Part No.

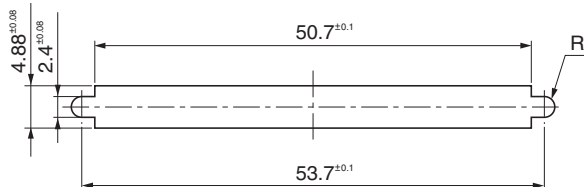
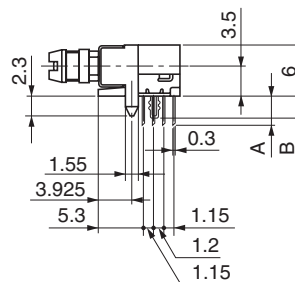
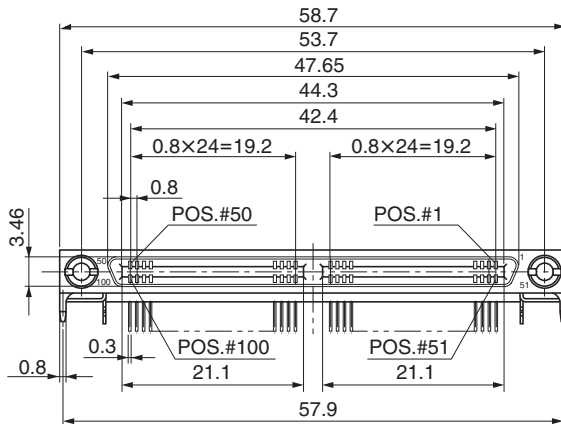
HDRA- E 100 LFD T ()-()+

- | | |
|---------------------------|---|
| ① Series name | ⑤ Length of contacts and board lock pins |
| ② No. of contacts: 100 | Blank: A-2.08 mm contacts |
| ③ Type of contact | B-2.28 mm board lock pins |
| LFD: Right-angle | 1 : A-3.4 mm contacts |
| through hole type, female | B-2.6 mm board lock pins |
| ④ With board lock pin | ⑥ Lock screws |
| | Blank: None |
| | SL : provided (Thickness of panel: 1.12 mm) |



Recommended PCB layout
t=1.6mm

▨: PAD



Recommended panel cut-out dimensions

● Components

①	Contacts
②	Brackets
③	Insulator
④	Hold downs
⑤	Square nuts
⑥	Lock screws
⑦	Shell

Select the connector according to panel thickness.
For the application without panel, use washers or
special lock screw (P/N: HDRA-E68LFD-7C).

Mating connector: HDRA series IDC type male connector

Right-angle through hole type female connector for PCB HDRA-E68W1LFD T-()+

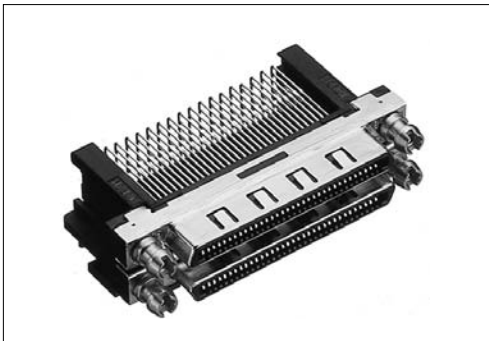
RoHS

0.8mm pitch connector

For PCB

Right-angle Through hole

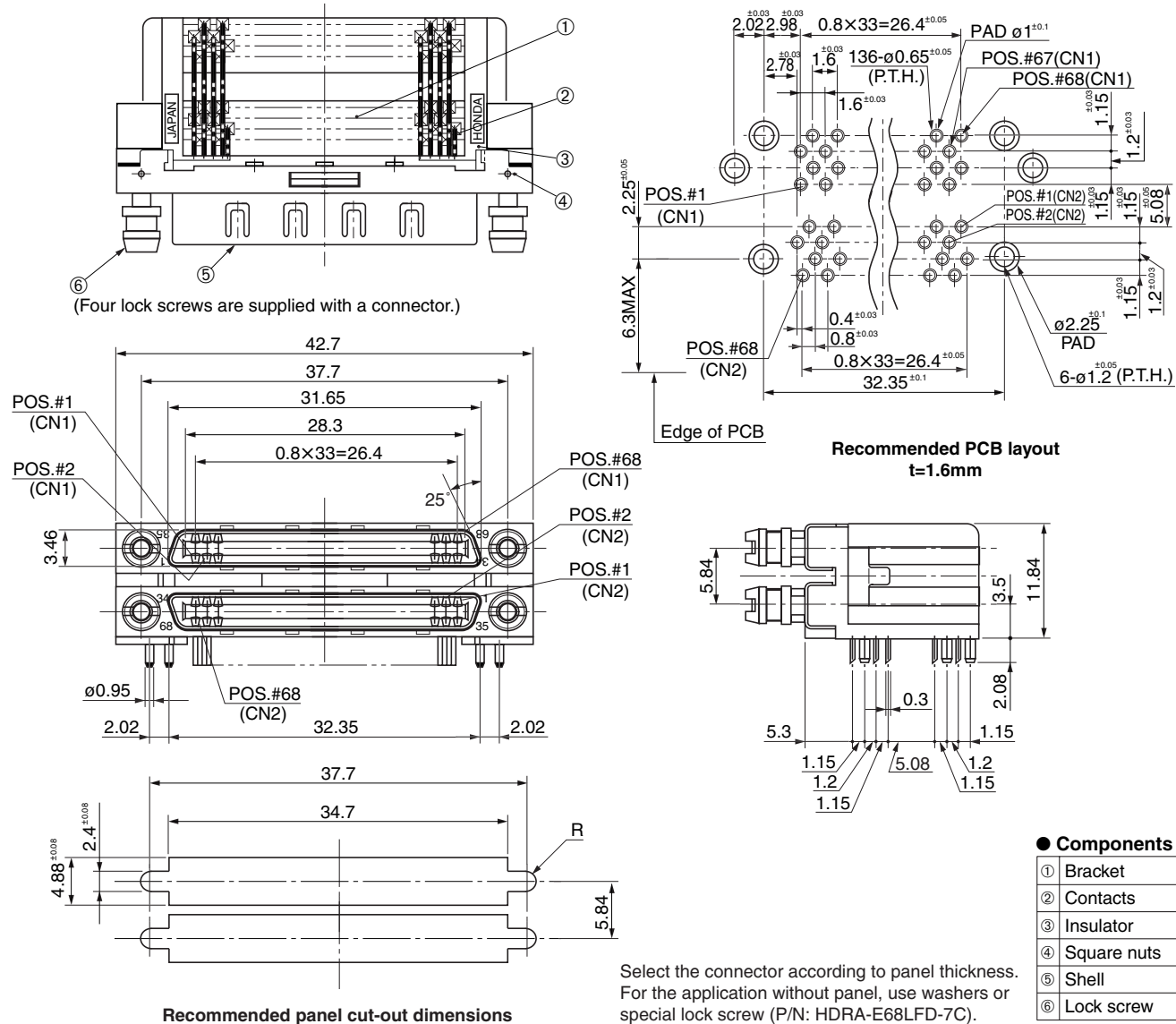
ANSI/SFF8441



● Configuration of product Part No.

HDRA- E 68 W 1 LFD T- ()+

- ① Series name
② No. of contacts: 136 (68×2)
③ No. of stacks: 2
④ Type of contact
LFD: Right-angle through hole type, female
⑤ With location peg
⑥ Lock screw
Blank: None
SL : Provided (Thickness of panel: 1.12 mm)



Mating connector: HDRA series IDC type male cable connector, or straddle SMT type male connector

Right-angle through hole type female connector for PCB HDRA-E68W()LFDT1EC-()+

0.8mm pitch connector

For PCB

Right-angle Through hole

ANSI/SFF8441

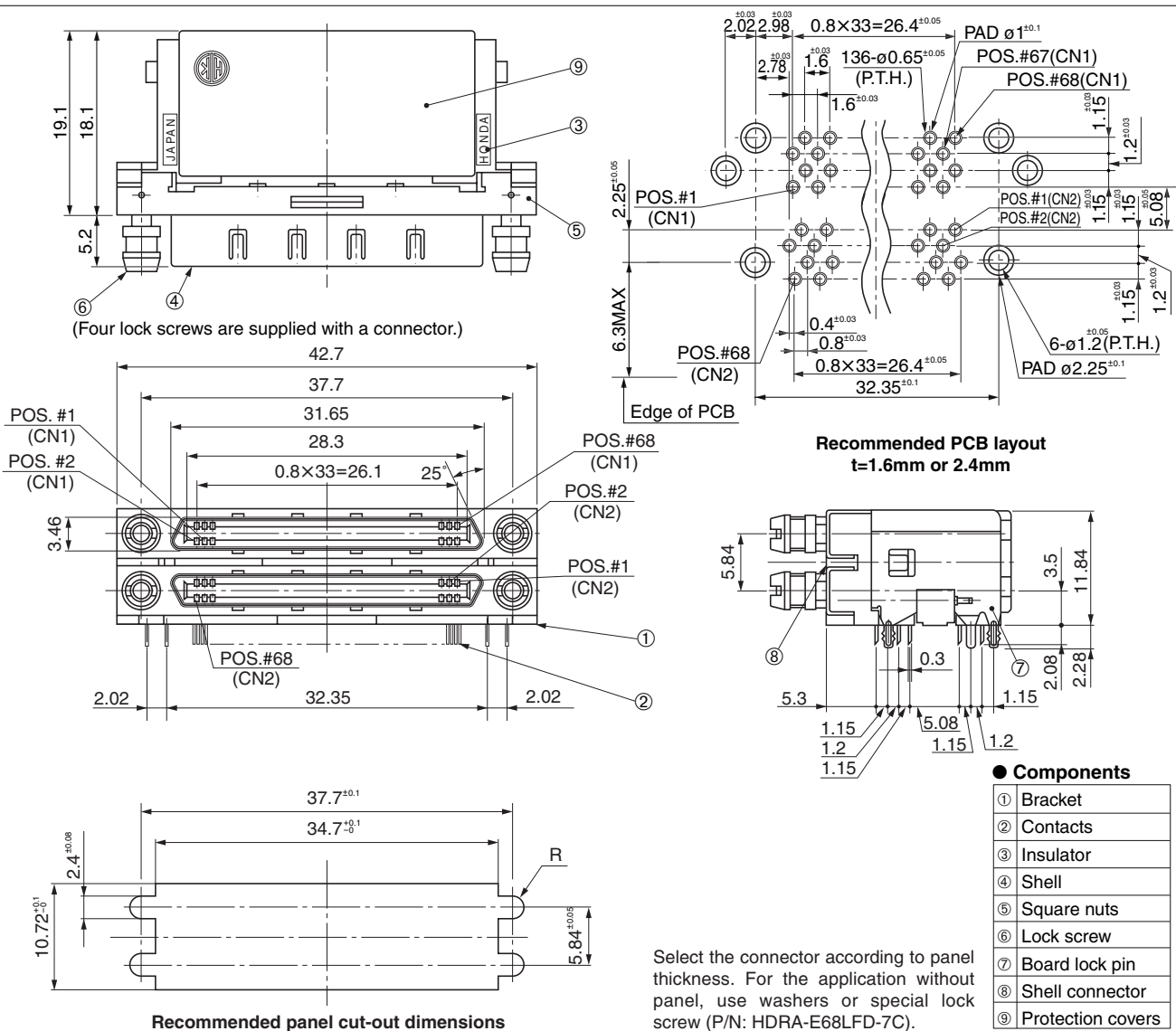
RoHS



● Configuration of product Part No.

HDRA- E 68 W () LFD T1 E C-()+

- | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ |
|--|---|---|---|---|--|---|---|---|
| ① Series name | | | | | ⑥ Earth lock pin (provided with board lock mechanism) | | | |
| ② No. of contacts: 136 (68×2) | | | | | | | | |
| ③ No. of stacks: 2 | | | | | ⑦ Provided with shell connection reinforcement | | | |
| ④ Length of contact, through hole
1: 2.08 (PCB: 1.6 mm thick)
2: 3.4 (PCB: 2.4 mm thick) | | | | | ⑧ Provided with protection cover for contacts and bends | | | |
| ⑤ Type of contact
LFD: Right-angle through hole type, female | | | | | ⑨ Lock screw
Blank: None
SL : Provided (Thickness of panel: 1.12 mm) | | | |



Mating connector: HDRA series IDC type male cable connector, or straddle SMT type male connector

Straight SMT type female connector for PCB

HDRA-E68FYT-()+

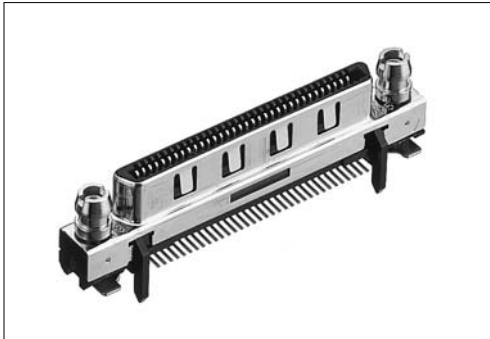
0.8mm pitch connector

For PCB

Straight SMT

ANSI/SFF8441

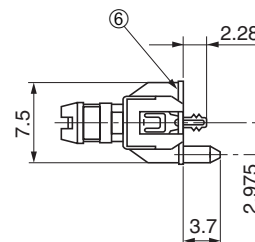
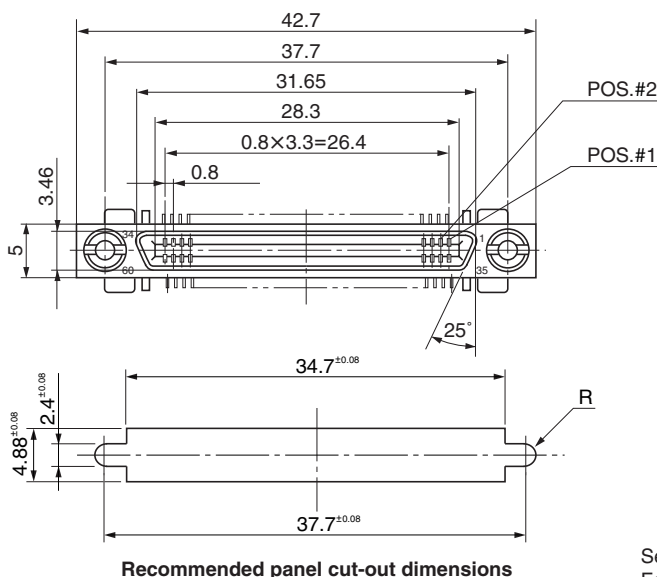
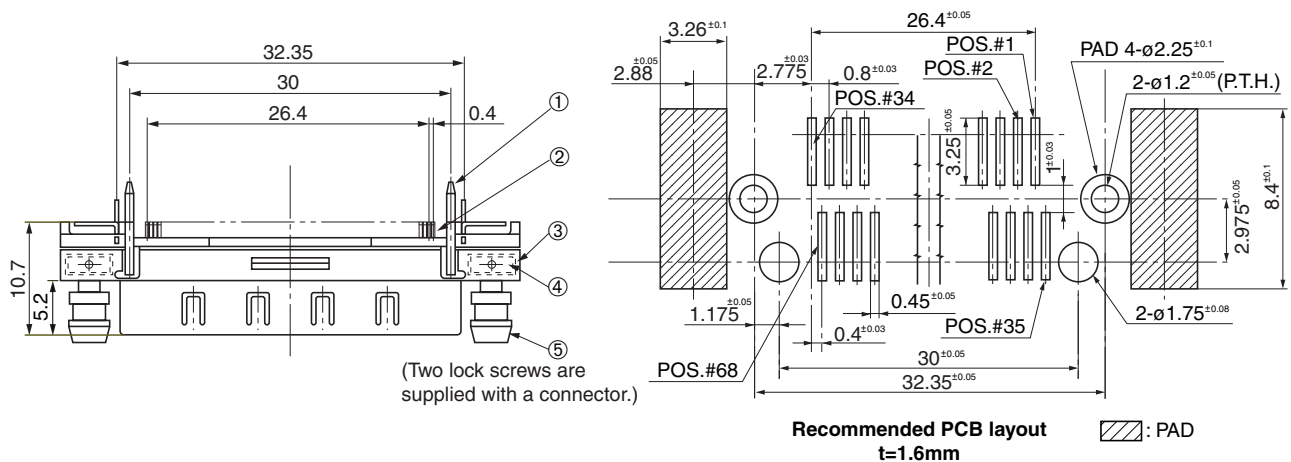
RoHS



● Configuration of product Part No.

HDRA- E 68 FY T- ()+

- | | |
|--------------------------------------|-------------------------------|
| ① Series name | ⑤ Lock screw |
| ② No. of contacts: 68 | Blank: None |
| ③ Type of contact | SL : Provided |
| FY: Straight SMT type, female | (Thickness of panel: 1.12 mm) |
| ④ Provided with board lock mechanism | |



● Components

①	Insulator
②	Contacts
③	Shell
④	Square nuts
⑤	Lock screw
⑥	Hold down

Select the connector according to panel thickness.
For the application without panel, use washers or special lock screw (P/N: HDRA-E68LFD-7C).

Mating connector: HDRA series IDC type male cable connector, or straddle SMT type male connector

Right-angle SMT type female connector for PCB

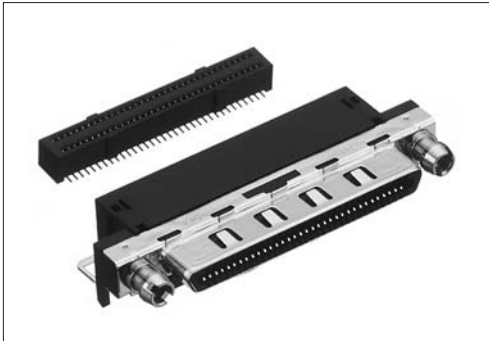
HDRA-ED68LFZGT()-()+

For PCB

Right-angle SMT

ANSI/SFF8441

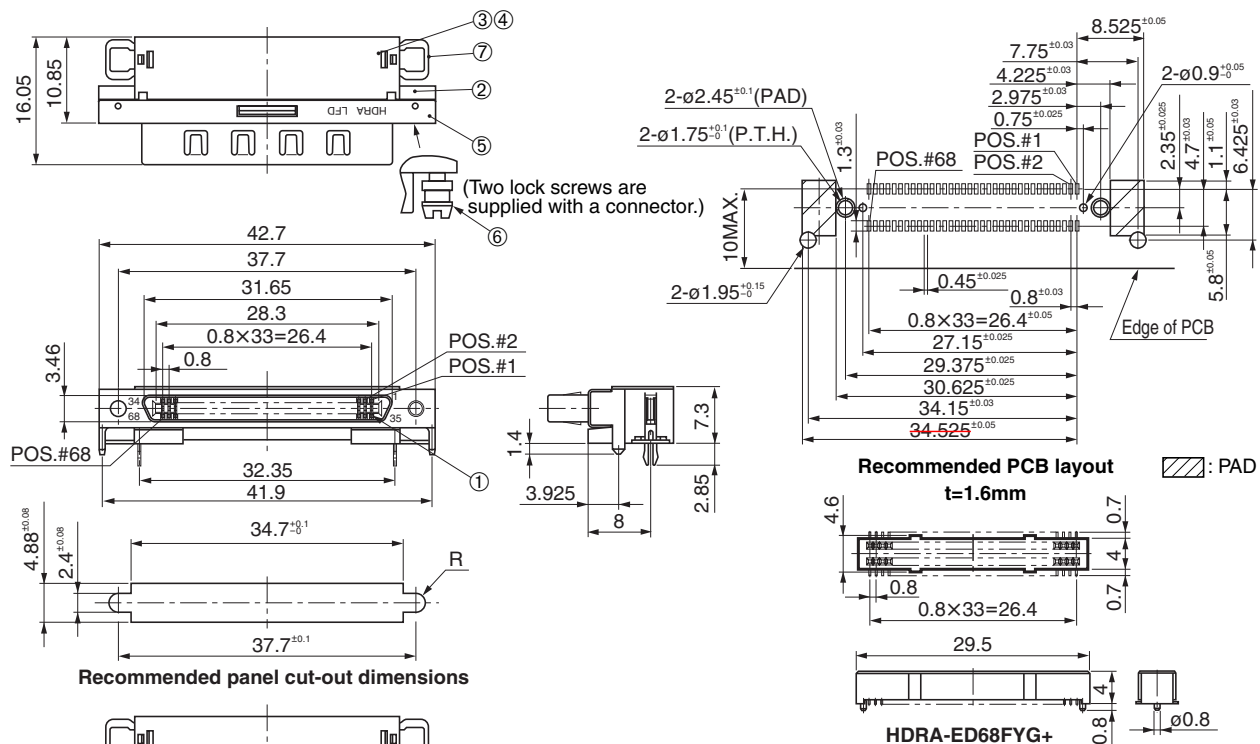
RoHS



● Configuration of product Part No.

HDRA- ED 68 LFZ G T () - () +

- | | |
|------------------------------------|-------------------------------|
| ① Series name | ⑥ Form of shell |
| ② No. of contacts: 68 | Blank : Standard shell |
| ③ Type of contact | A : Shell with flange for EMI |
| LFZ: Right-angle, female | ⑦ Lock screws |
| ④ Contact plating | L: Provided |
| G: 0.76 μ m Gold plate | |
| ⑤ Ground lock pins with hold downs | |

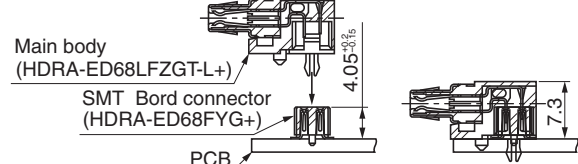


● Components

① Contacts	⑤ Shell
② Insulator A	⑥ Lock screws
③ Insulator B	⑦ Hold downs
④ Insulator C	

Select the connector according to panel thickness. For the application without panel, use washers or special lock screw (P/N: HDRA-E68LFD-7C).

Mounting Method of Right-angle SMT type Female Connector for PCB



After board connectors are mounted on a PCB, mate them with the main body, and solder hold downs and ground lock pins.

Mating connector: HDRA series IDC type male cable connector, or straddle SMT type male connector

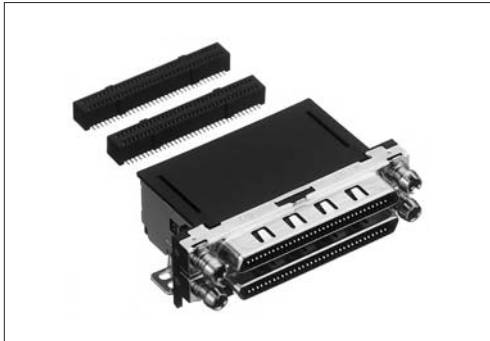
Right-angle SMT type female connector for PCB HDRA-ED136LFZGT()-()+

For PCB

Right-angle SMT

ANSI/SFF8441

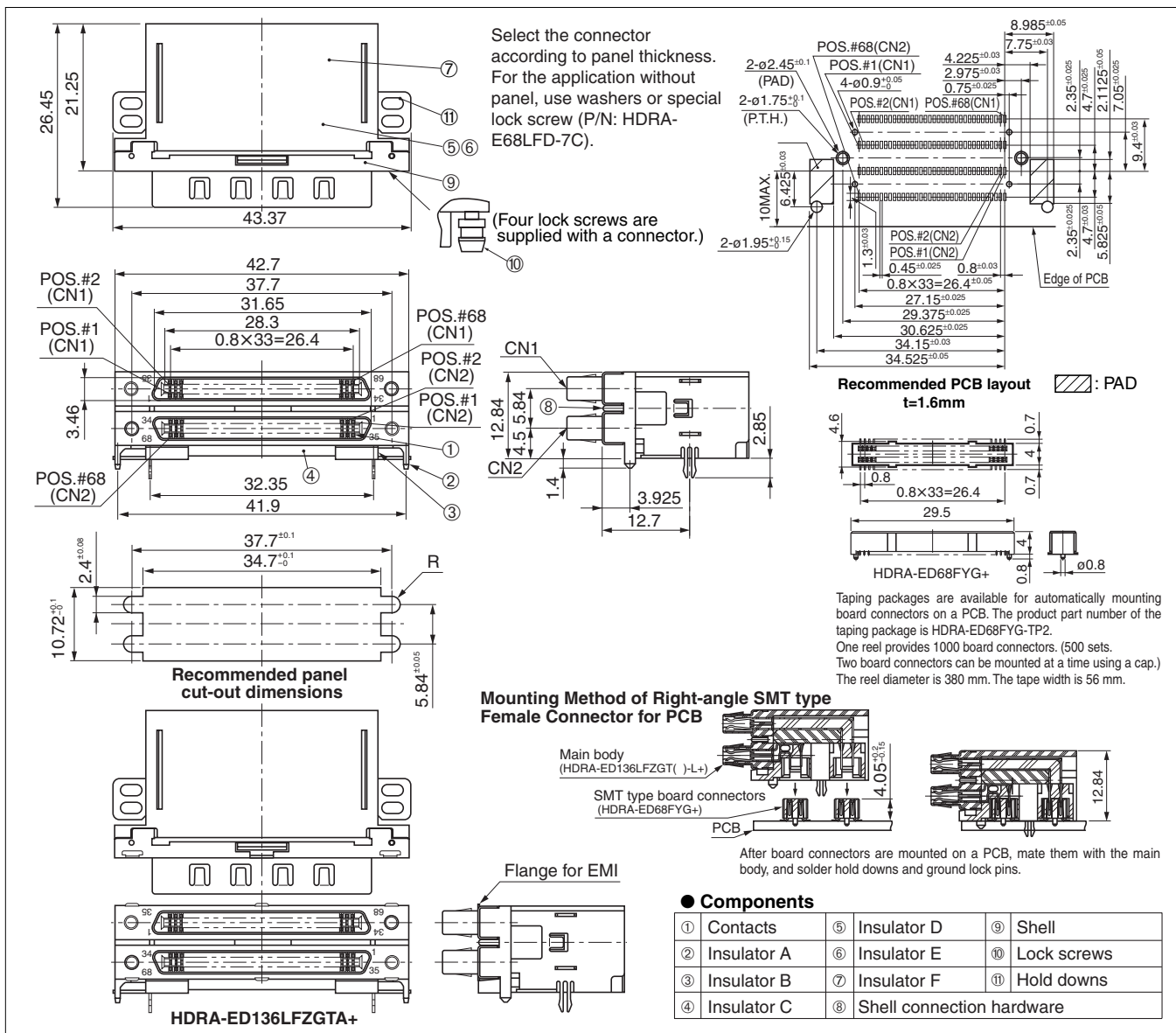
RoHS



● Configuration of product Part No.

HDRA- ED 136 LFZ G T ()- ()+

- | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |
|--------------------------------------|---|---|---|---------------|--|---|
| ① Series name | | | | | ⑥ Form of shell | |
| ② No. of contacts: 136 | | | | | Blank: Standard shell | |
| ③ Type of contact | | | | | A: Shell with flange for EMI | |
| LFZ: Right-angle SMT type,
female | | | | ⑦ Lock screws | | |
| | | | | L: Provided | | |
| ④ Contact plating | | | | | (Panel thickness: t = 1.12 mm or less) | |
| G: 0.76 μm Gold plate | | | | | | |
| ⑤ Ground lock pins with hold downs | | | | | | |



Mating connector: HDRA series IDC type male cable connector, or straddle SMT type male connector

EMI-shielded vertical plastic housing for standard cable HDRA-E68LGKP()

RoHS

0.8mm pitch connector

Vertical housing

EMI shielded

ANSI/SFF8441

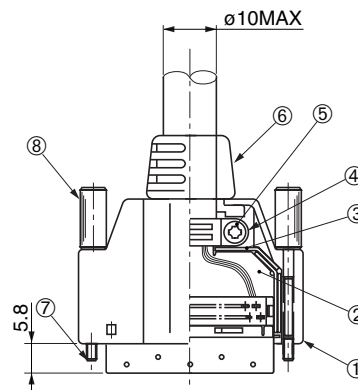
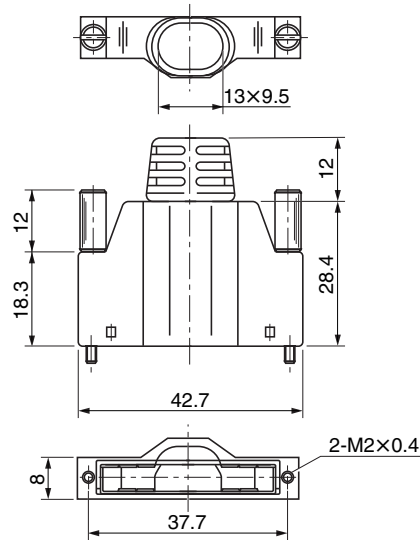


● Configuration of product Part No.

HDRA- E 68 LGKP ()

- ① Series name
 ② No. of contacts: 68
 ③ A: Vertical cable holding type
 C: Vertical ultrasonic welding type
 E: Vertical ultrasonic welding type
 F: Vertical ultrasonic welding type
 Outside diameter of cable is shown in the dimension table.

HDRA-E68LGKPA

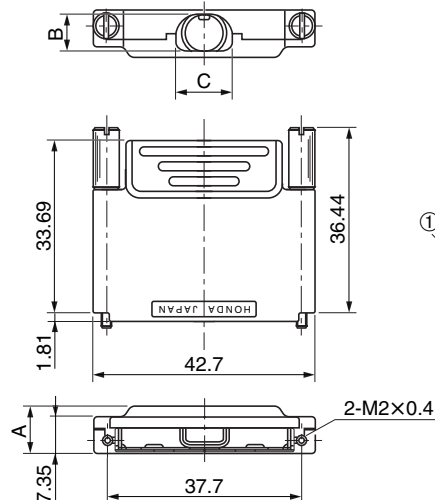


Thumb screw with plastic cap should be tightened by hand. For screw driver assembly use the product (P/N: HDRA-E68LGKPE3) with metal thumb screws attached.

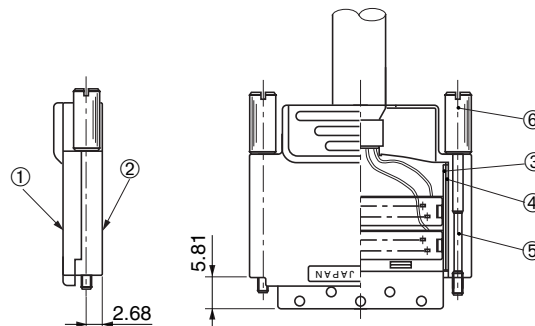
● Components

①	Cover
②	Inner shell A
③	Inner shell B
④	Cable clamp
⑤	Screw
⑥	Bushing
⑦	Thumb screw
⑧	Cap (plastic)

HDRA-E68LGKPC, LGKPE, LGKPF



The following figure shows HDRA-E68LGKPF.



● Components

①	Cover A
②	Cover B
③	Shell A
④	Shell B
⑤	Thumb screw
⑥	Cap (plastic)

Part No.	A	B	C
HDRA-E68LGKPC	11.5	9.5	10.5x9.5
HDRA-E68LGKPE	9.5	7.5	
HDRA-E68LGKPF	9	7.2	10.5

For use with connectors: HDR series IDC type cable connector : -LGKPA for MA, -LGKPC/-LGKPE for MA1, and -LGKPF for MC1

Required tools (for LGKPC, LGKPE and LGKPF): Clamp caulking tools: FLPT-0017B (Refer to page Tool-10)

Ultrasonic welder, Housing holding jig, Sonic welder

EMI-filtered vertical metallic housing HDRA-E100LPA

RoHS

0.8 mm pitch connector

Housing

Vertical

EMI filtered

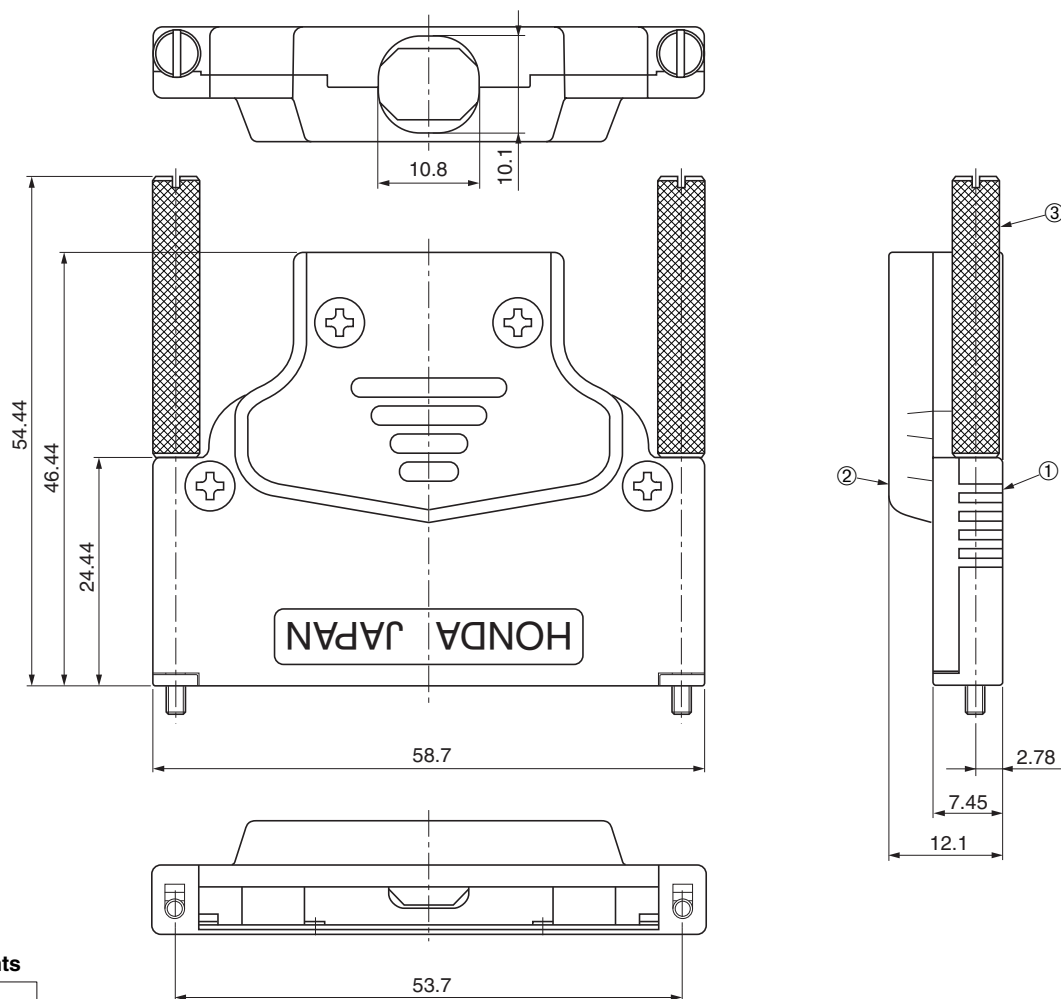


● Configuration of product Part No.

HDRA- E 100 LP A

① ② ③ ④

- ① Series name
- ② No. of contacts: 100
- ③ Type of housing: Vertical type
- ④ Compatible cable
A: Outside diameter of cable is 9.8 mm



● Components

①	Housing A
②	Housing B
③	Lock screws

For use with connectors: HDRA-E100M()1+

EMI-filtered vertical metallic housing HDRA-E100LPW()

RoHS

0.8 mm pitch connector

Housing

Vertical

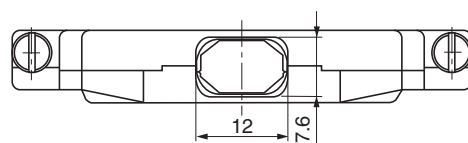
EMI filtered



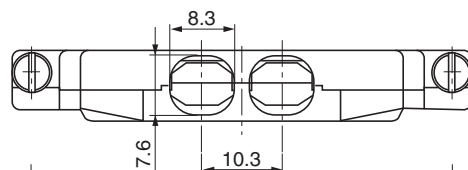
● Configuration of product Part No.

HDRA- E 100 LP W ()

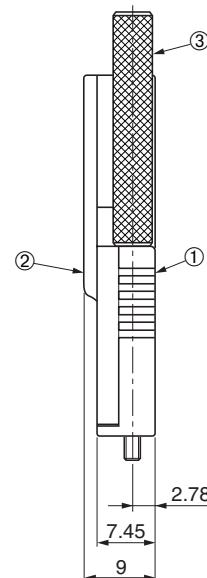
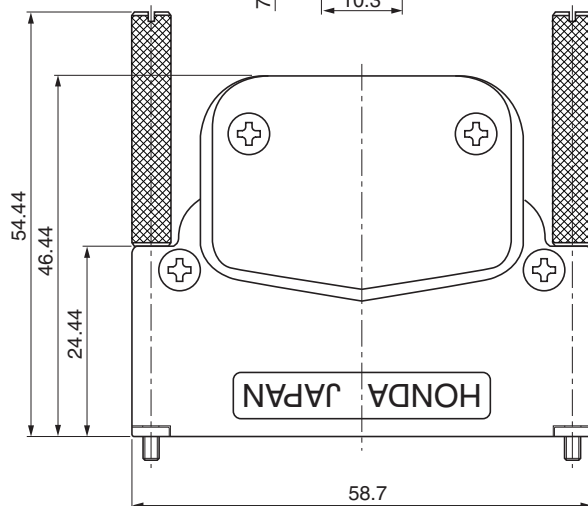
- ① Series name
② No. of contacts: 100
③ Type of housing: Vertical type
④ Compatible cable and form of through hole
B : Two holes are available for two cables. Outside diameters of cable are 6.9 mm
C : One hole is available for one cable. Outside diameter of cable is 9.6 mm



HDRA-E100LPWC



HDRA-E100LPWB



● Components

①	Housing A
②	Housing B
③	Lock screws

For use with connectors: HDRA-E100M()1+

EMI-shielded vertical plastic housing HDRA-E36LPTH

0.8mm pitch connector

Vertical housing

EMI shielded

ANSI/SFF8441

RoHS



● Configuration of product Part No.

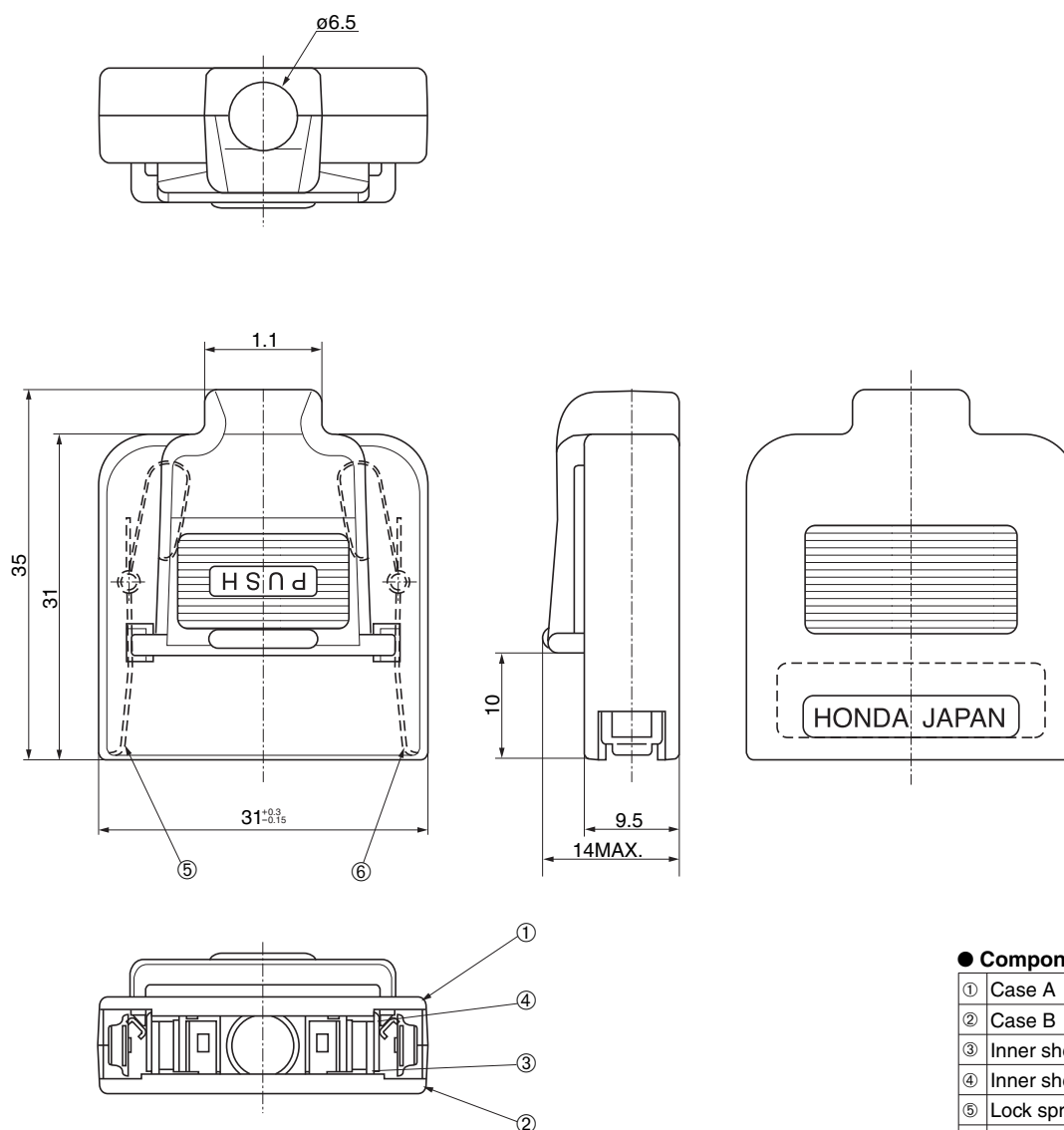
HDRA- E 36 LPTH

① ② ③

① Series name

② No. of contacts: 36

③ Type of housing: Vertical type



● Components

①	Case A
②	Case B
③	Inner shell A
④	Inner shell B
⑤	Lock spring A
⑥	Lock spring B

For use with connectors: HDRA-E36M(+)

Mating connectors: HDRA -EA36LFDT+ + Lock screw (HDR-E14LMY-SL-02C) panel:0.5-0.8mm thick

-EA36FT-NS+ + Lock screw (HDR-E14LMY-SL-02C) panel:0.5-0.8mm thick

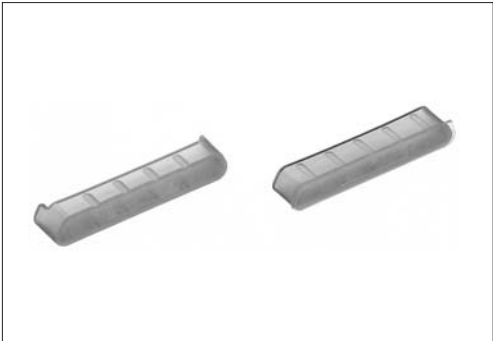
Required tools: Clamp caulking tools: FLPT-0024A (Refer to page Tool-10) Ultrasonic welder, Housing holding jig, Sonic welder

Dust-proof cap
HDRA-E68()-CP

Accessories

Cap

RoHS

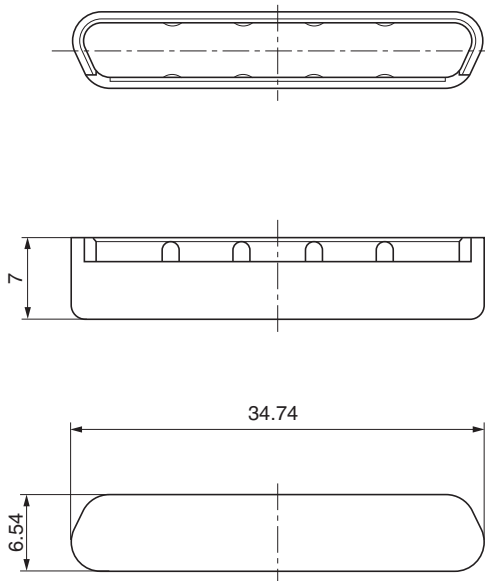


● Configuration of product Part No.

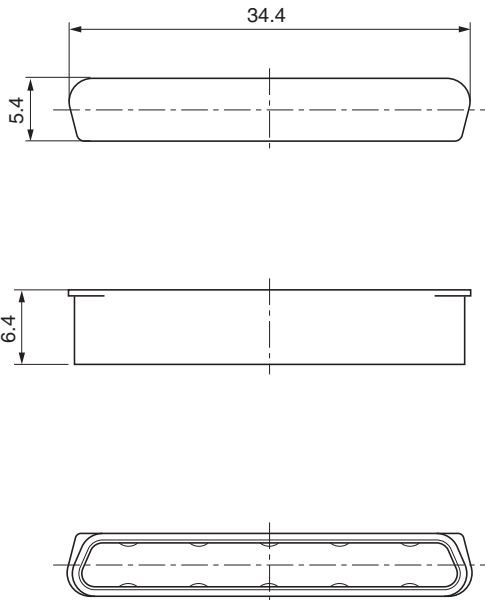
HDRA- E 68 ()- CP

- ① Series name
② No. of contacts: 68
③ M: For male connector
F: For female connector
④ Cap

HDRA-E68M-CP



HDRA-E68F-CP



For use with housings: HDRA-E68LGKPC~F

Others

Wire
wrapping

Crimping

Soldering

IDC

Press-in

SMT

Through
hole