

# ISH<sup>®</sup> (Vertical Type)

내고온 · 내진동성이 뛰어난 수직 결합 SMT 커넥터

Product Specifications:		Single-row	Double-row
Pitch (mm max.)		2.0	
Contact Size (mm)		0.5 × 0.4(020)	
Mated Height (mm max.)		(ISH)20.75, (ISHV)19.95	
Width formula (mm)		(ISH)7.6+1.0*?pin, (ISHV)10.5+1.0*?pin	
Operating Temperature		-40 - 125°C	
Vibration Resistance		10G	
Current Rating		4.5A per pin	
Voltage Rating		100V	
Withstand Voltage		AC 1000V/minute	
Plating		Sn	
Housing		Male:glass-filled LCP, Female:PBT	
Pin counts	Range	Up to 20	Up to 40
	Available	-	8*, 10, 20, 26

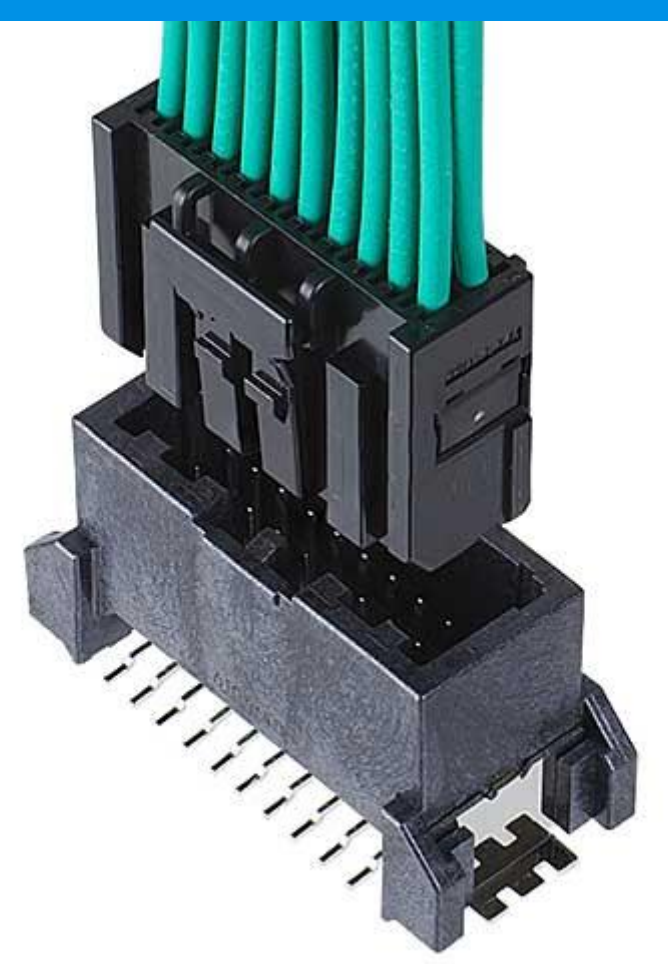
## Applicable Cable Size:

AWG#22,#20  
\*Insulation Diameter 1.6 mm max.

## Applicable Standards (Reference Only):

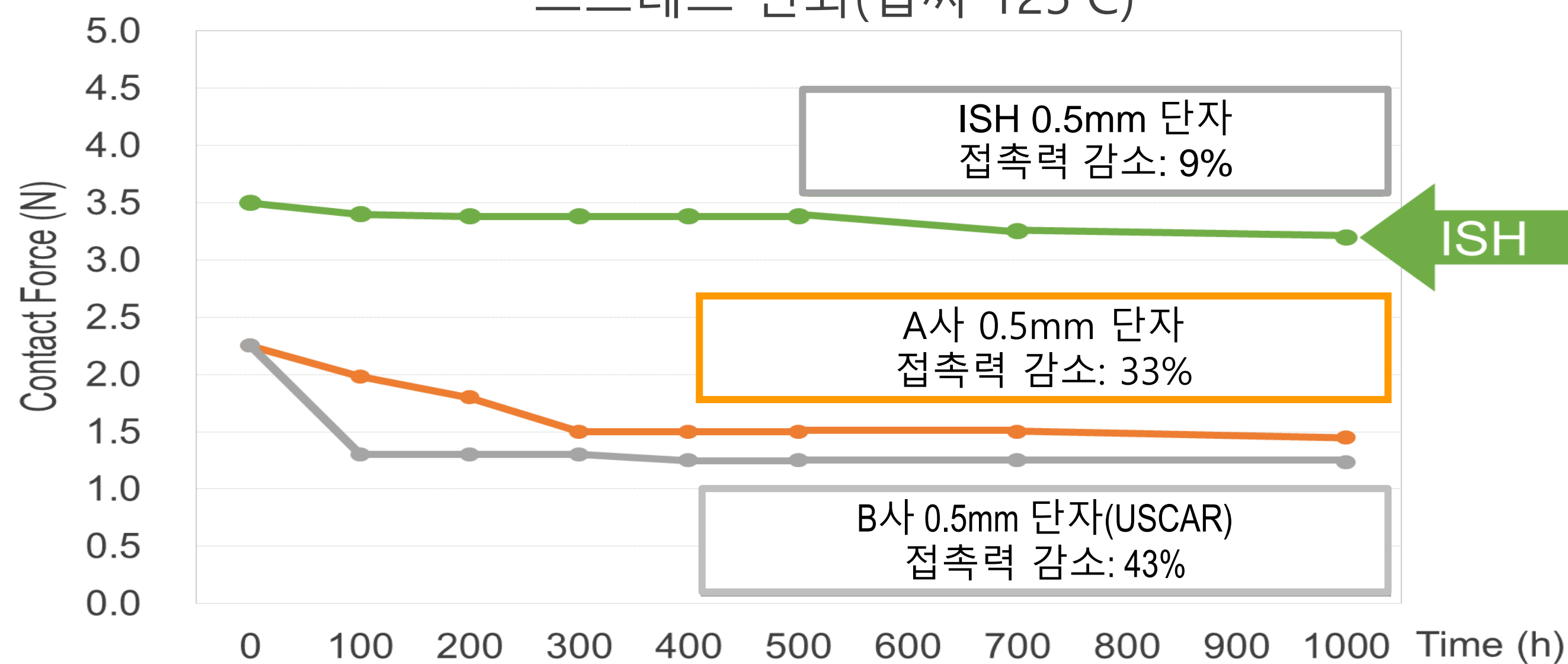
LV214 : 8P (optional)

\*핀수가 없거나 핀수 범위를 벗어나는 경우 문의해 주십시오.  
\*ISH V는 8P가 가용합니다.

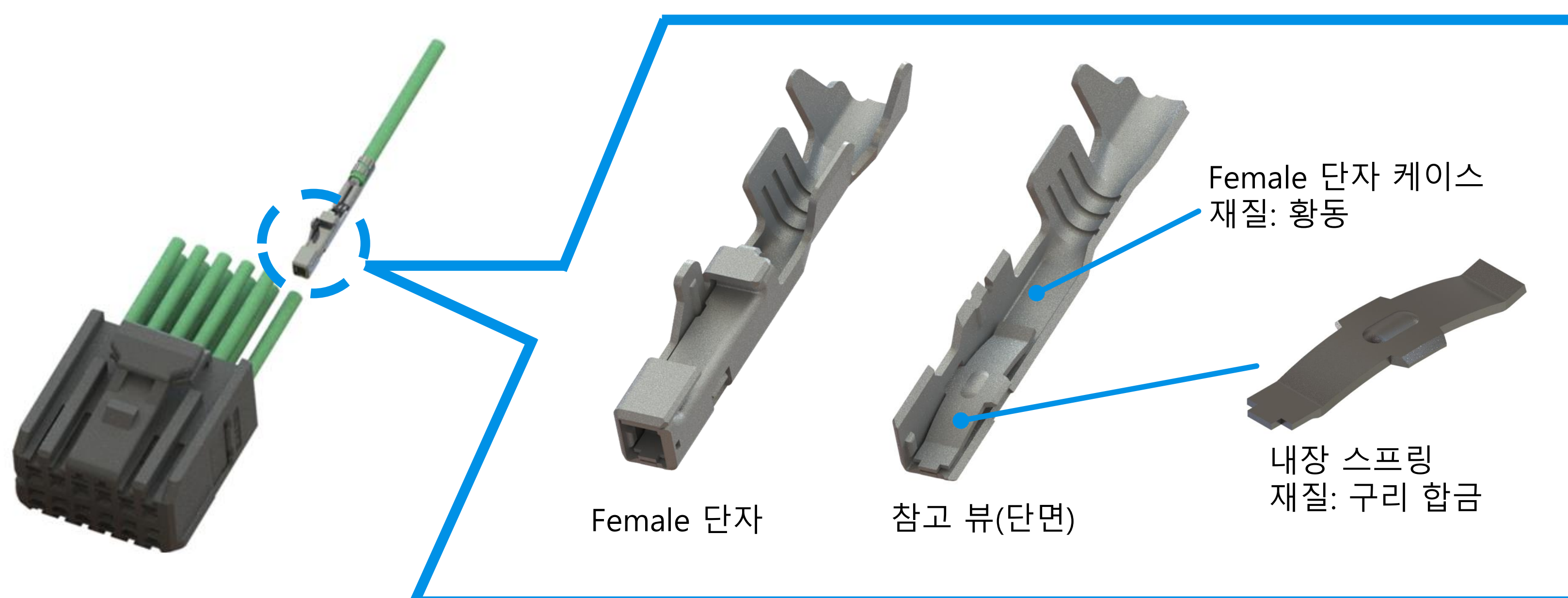


## ▶ 높은 접촉 신뢰성을 추구하는 기기에 최적화된 우수한 내고온성·내진동성

스트레스 완화(섭씨 125°C)



## ▶ 독자적인 스프링 구조 단자에 의한 높은 장기 접촉 신뢰성



## ▶ LV214 규격에 준거, 고온 · 진동 환경에서의 산업 용도 등으로 적합



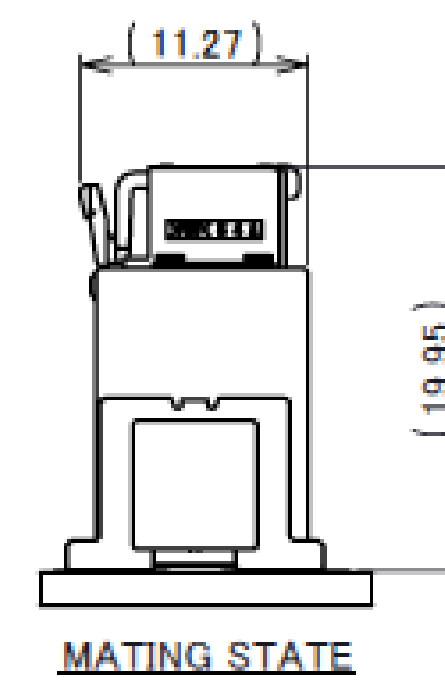
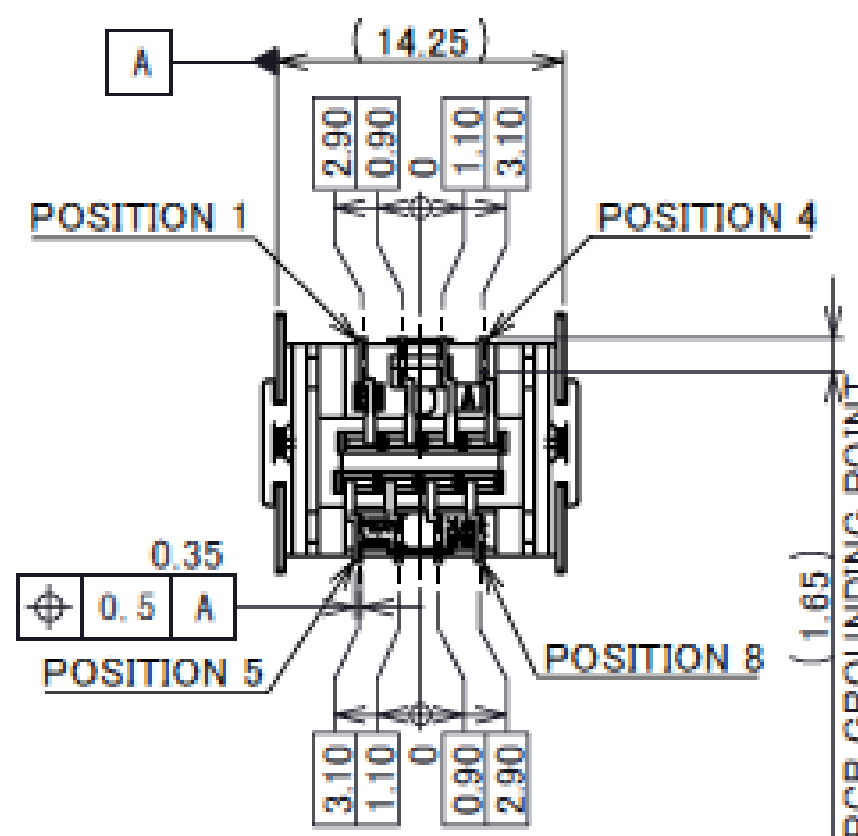
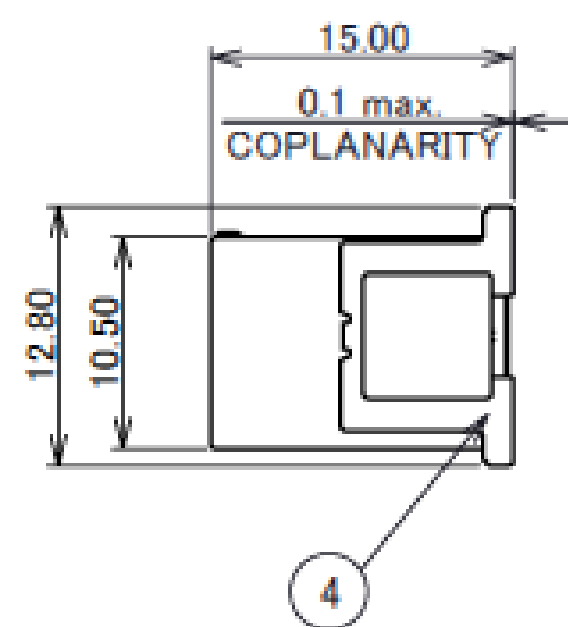
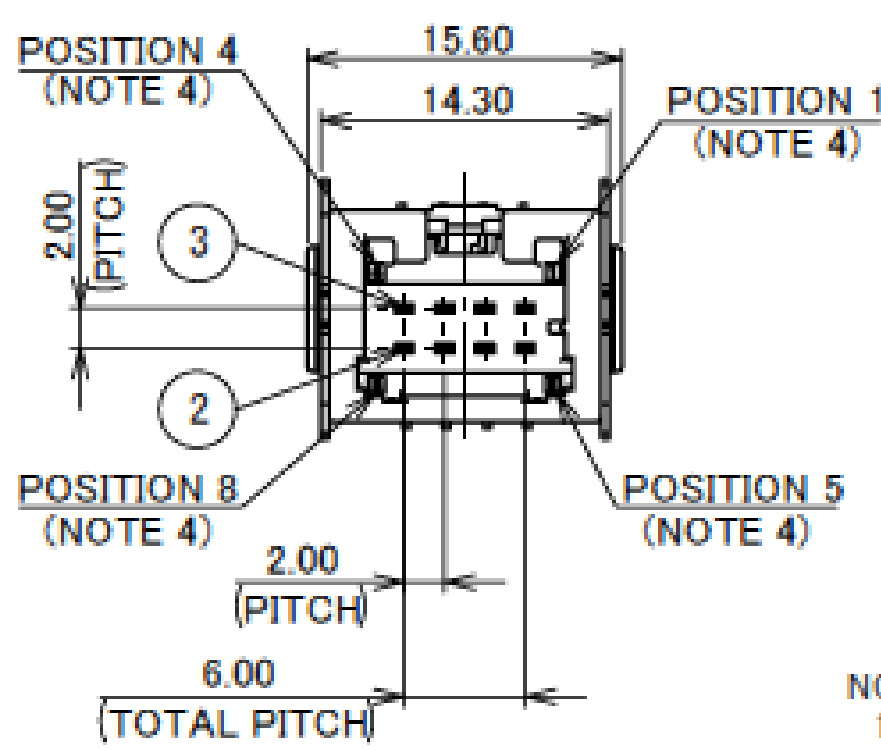
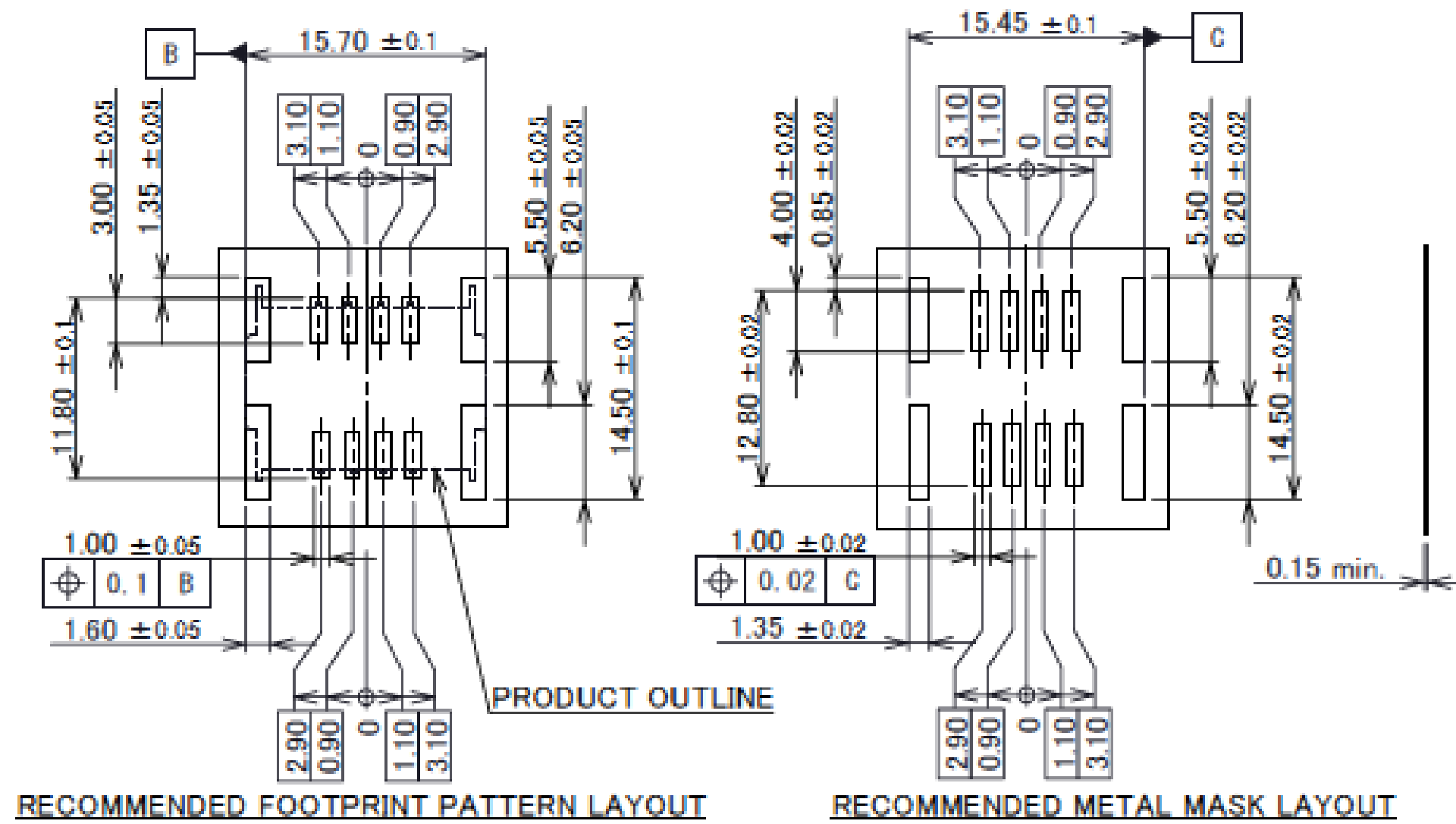
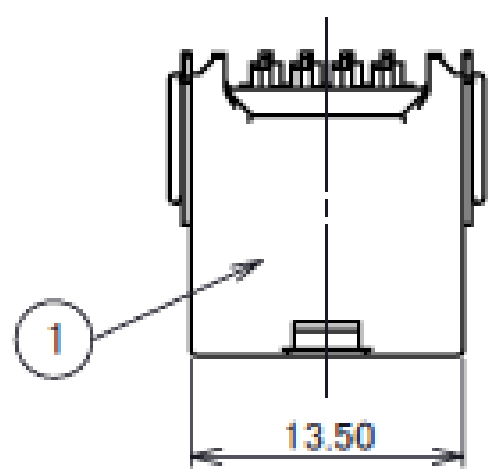
- 헤드램프 제어 장치
- 인버터 및 DC/DC 컨버터
- 배터리 제어 모듈
- 후방 카메라 모듈
- 계기판
- 로봇 장비
- 공장 자동화 장비 등

고온 어플리케이션에 적합

# Component Parts Details

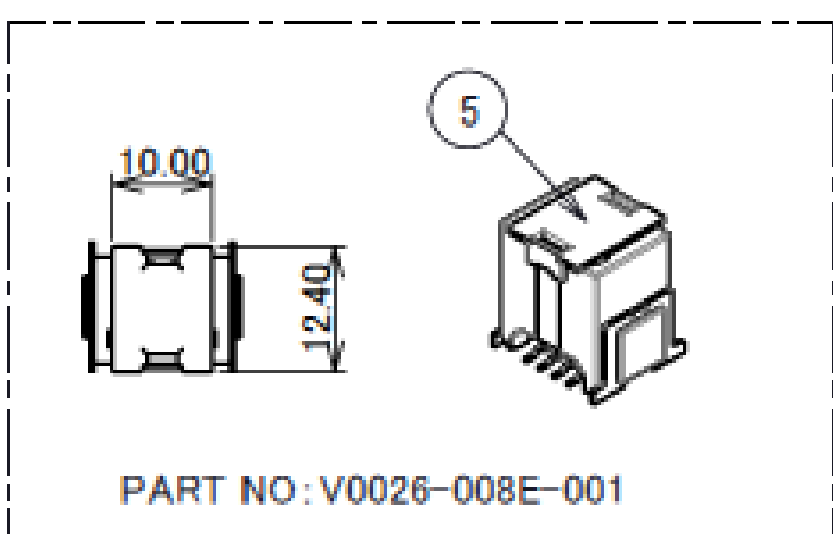
## ISH® (Vertical Type) MALE (8P) ※ISHV:

MALE CONNECTOR	
PART NO.	VACUUM CAP
V0026-008E-001	WITH
◆V0026-008E-002	WITHOUT
◆MARK MEANS NOT AVAILABLE.	



- NOTES
1. APPLICABLE PART NO.:
    - FEMALE HOUSING...V0027-91008-211
    - FEMALE RETAINER...V0116-92008-01
    - FEMALE TERMINAL...VT009-02
  2. COMPLY WITH ELV/RoHS
  3. USE METAL MASK WHICH HAS A THICKNESS OF 0.15mm MIN. WHEN THE MALE CONNECTOR IS MOUNTED ON THE PCB.
  4. POSITION NUMBERS ARE INDICATED.

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
5	VACUUM CAP	GLASS-FILLED LCP	NATURAL
4	HOLD DOWN	BRASS	S <sub>n</sub> REFLOW
3	MALE TERMINAL-2	BRASS	S <sub>n</sub> REFLOW
2	MALE TERMINAL-1	BRASS	S <sub>n</sub> REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK/UL94V-0

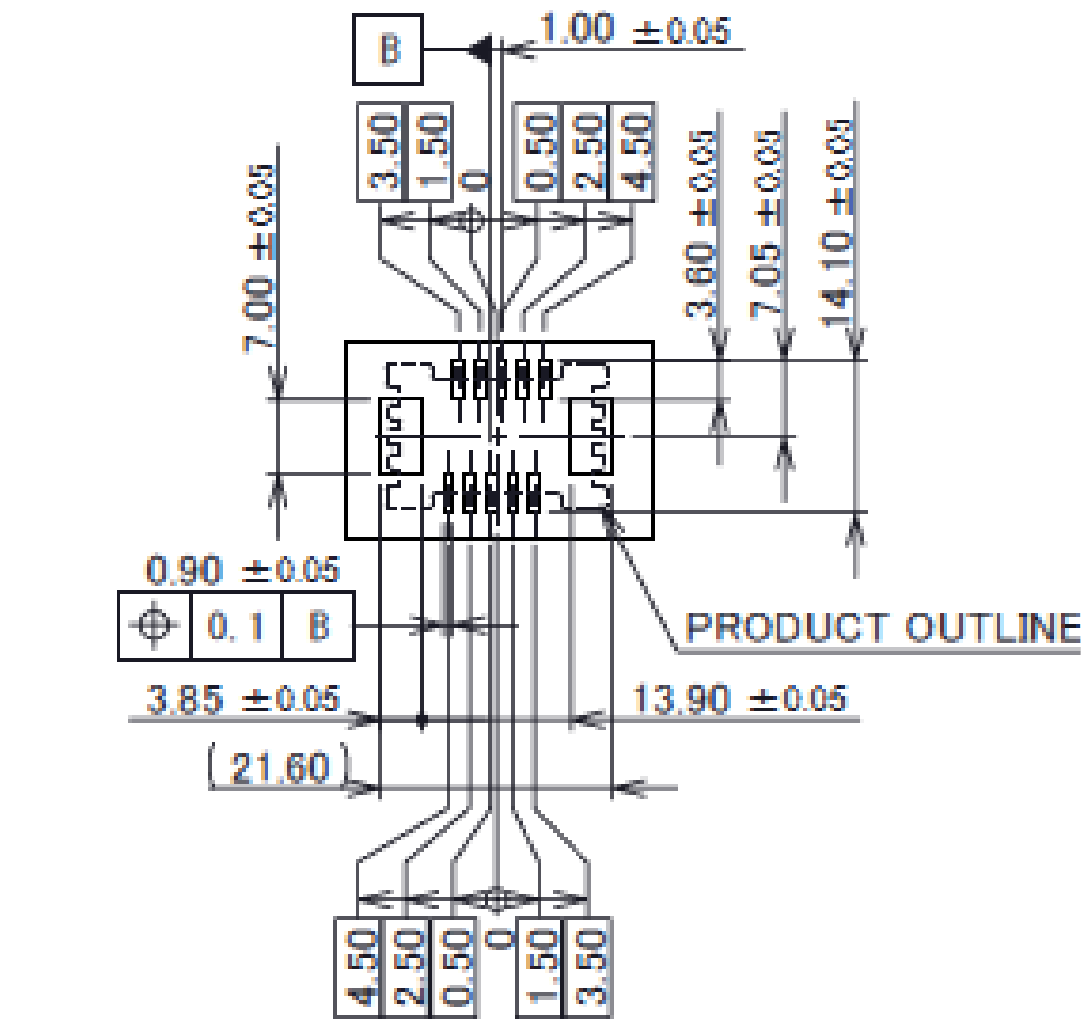
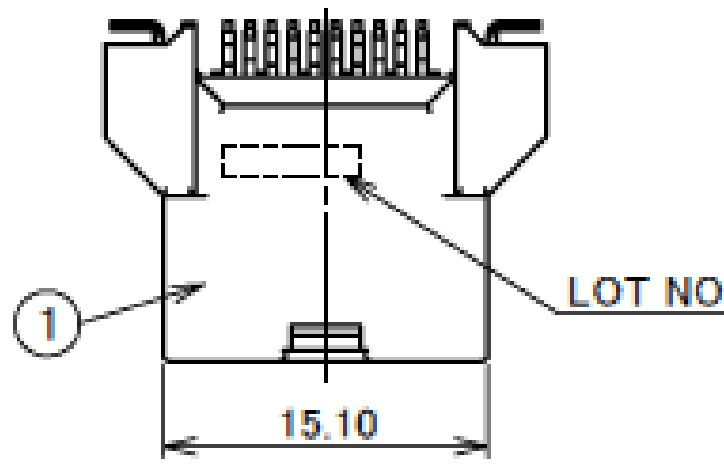




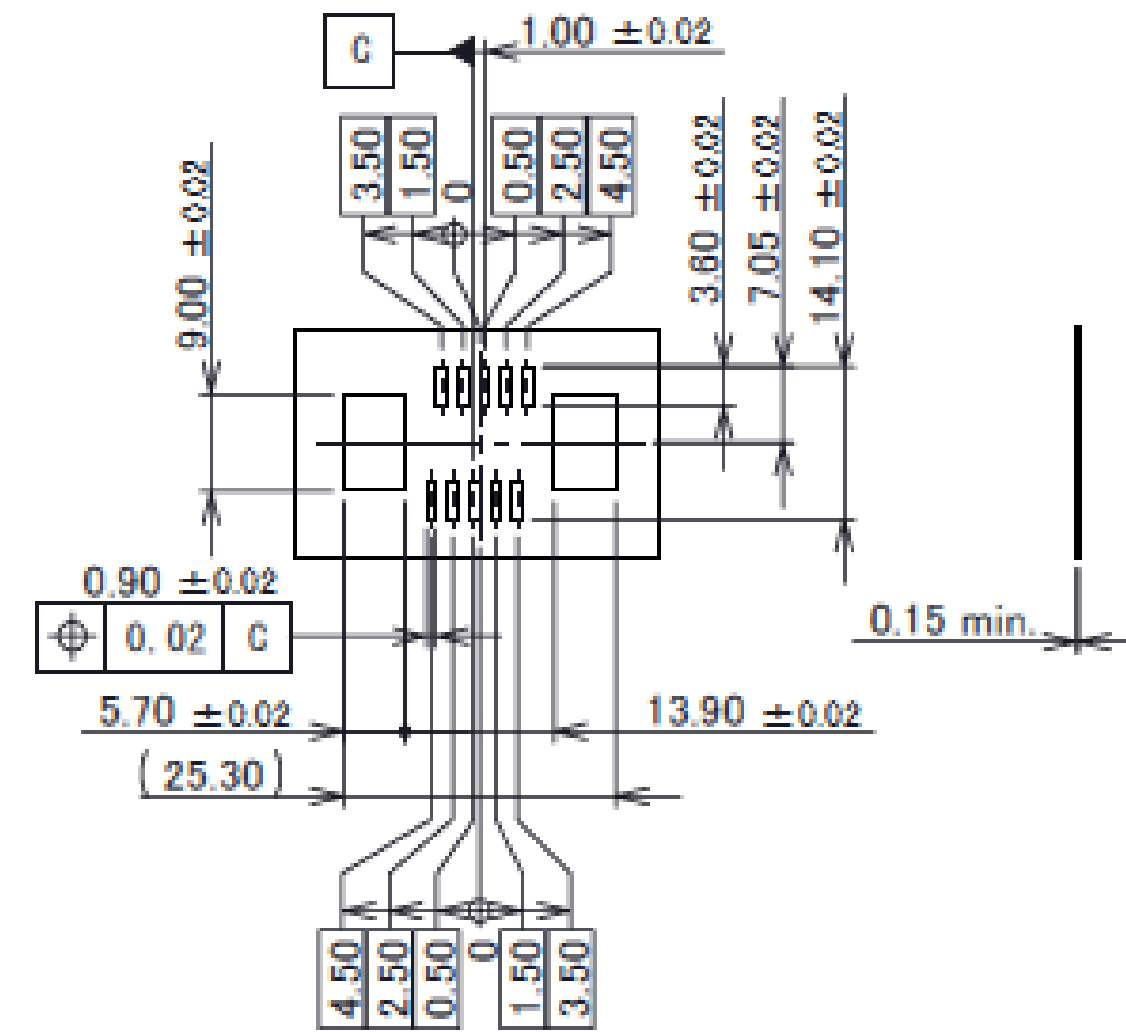
# ISH® (Vertical Type) MALE (10P):

PART NO.	VACUUM CAP
V0019-010E-001	WITH
◆V0019-010E-002	WITHOUT

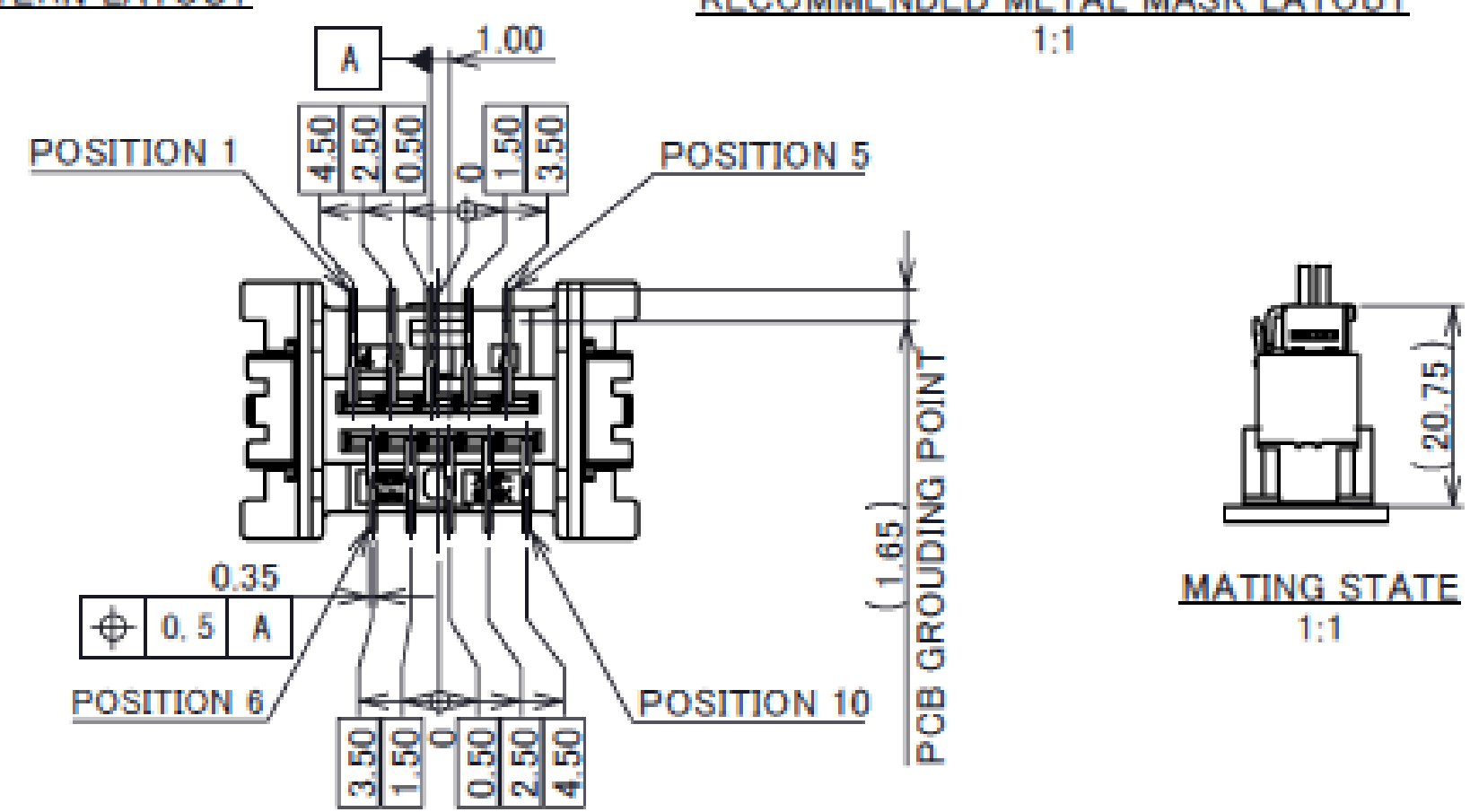
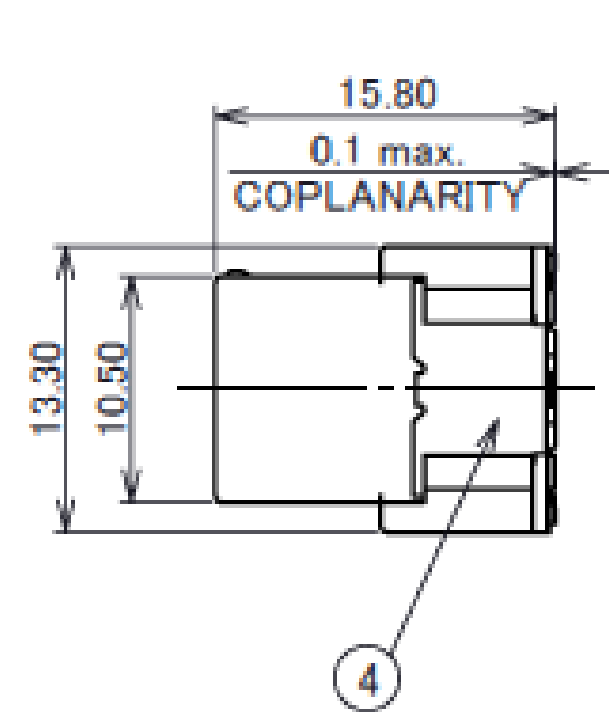
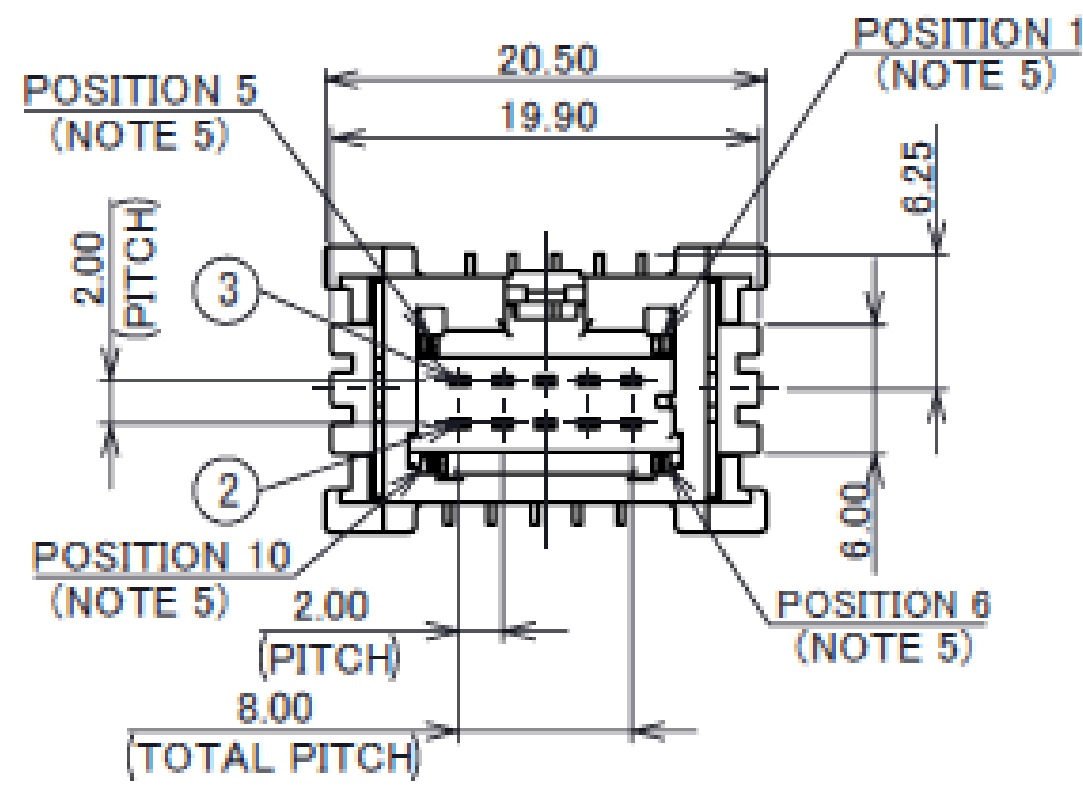
◆MARK MEANS NOT AVAILABLE



RECOMMENDED FOOTPRINT PATTERN LAYOUT 1:1



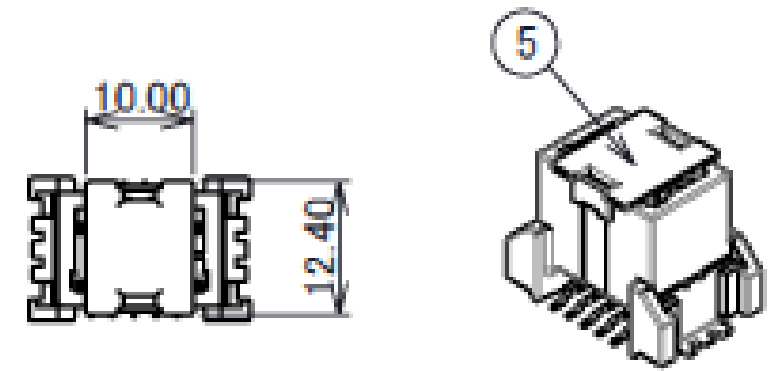
RECOMMENDED METAL MASK LAYOUT 1:1



### NOTES

- 1.APPLICABLE PART NO.:
  - FEMALE HOUSING...V0020-91010-211
  - FEMALE RETAINER...V0020-92010-211
  - FEMALE TERMINAL...VT009-02
- 2.COMPLY WITH ELV/RoHS.
- 3.HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL(HDM-0020)
- 4.USE METAL MASK WHICH HAS A THICKNESS OF 0.15mm MIN. WHEN THE MALE CONNECTOR IS MOUNTED ON THE PCB.
- 5.POSITION NUMBERS ARE INDICATED.

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
5	VACUUM CAP	GLASS-FILLED LCP	NATURAL
4	HOLD DOWN	BRASS	Sn REFLOW
3	MALE TERMINAL-2	BRASS	Sn REFLOW
2	MALE TERMINAL-1	BRASS	Sn REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK / UL94V-0

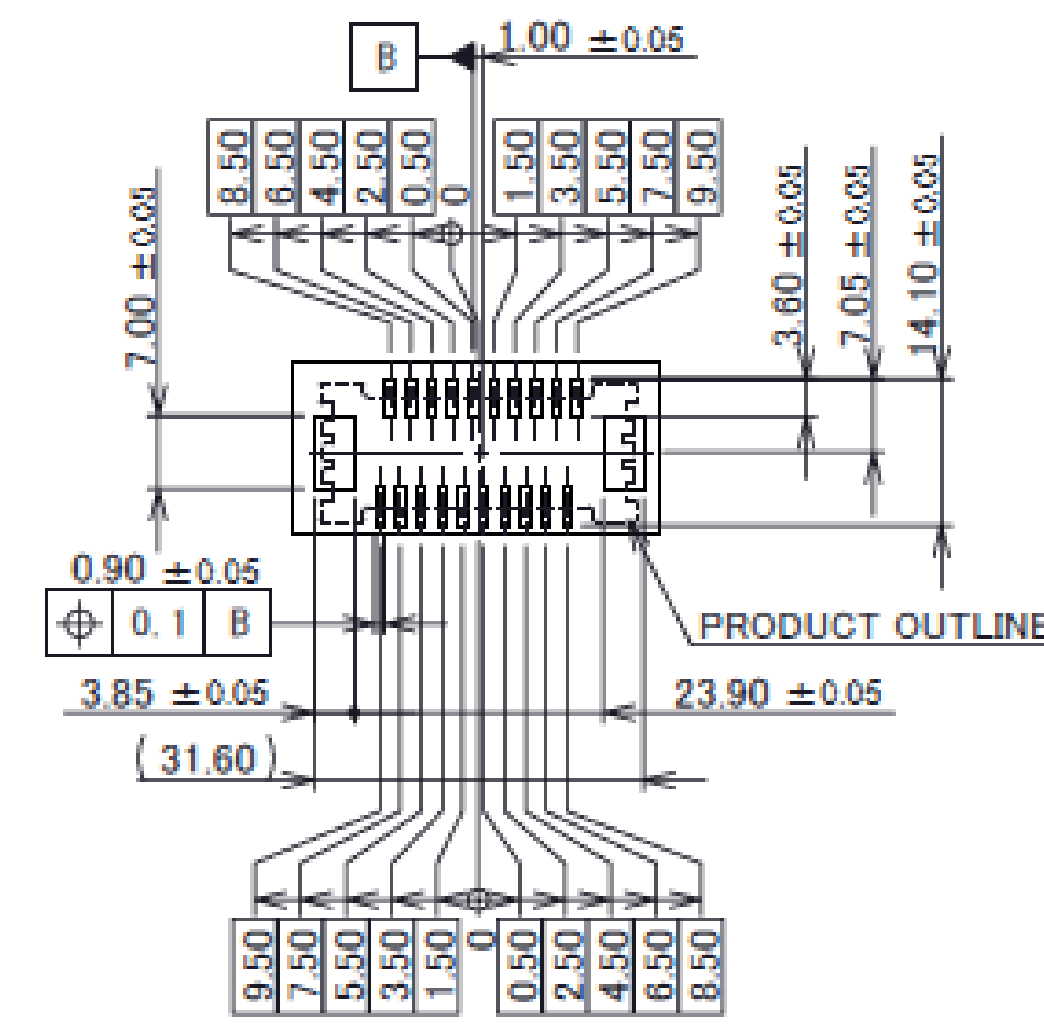
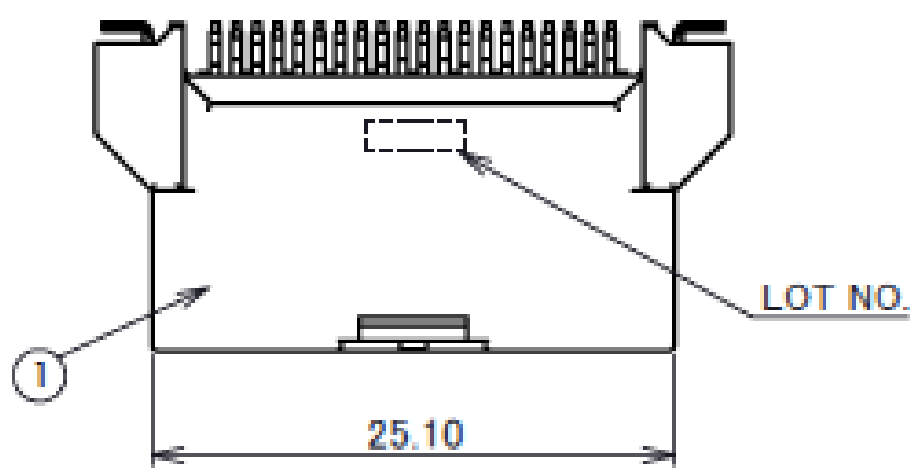


PART NO: V0019-010E-001

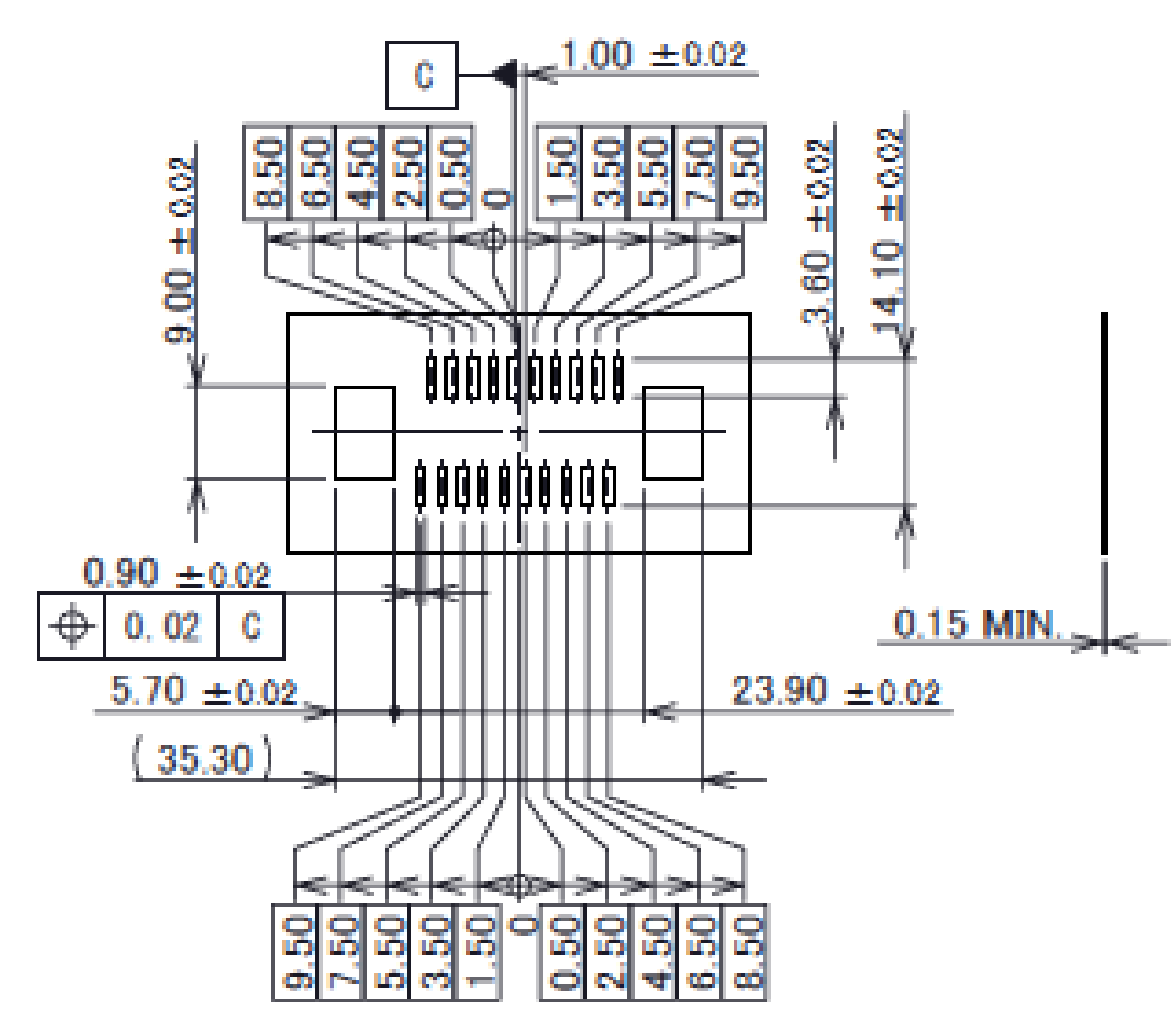
Rev.0

# ISH® (Vertical Type) MALE (20P):

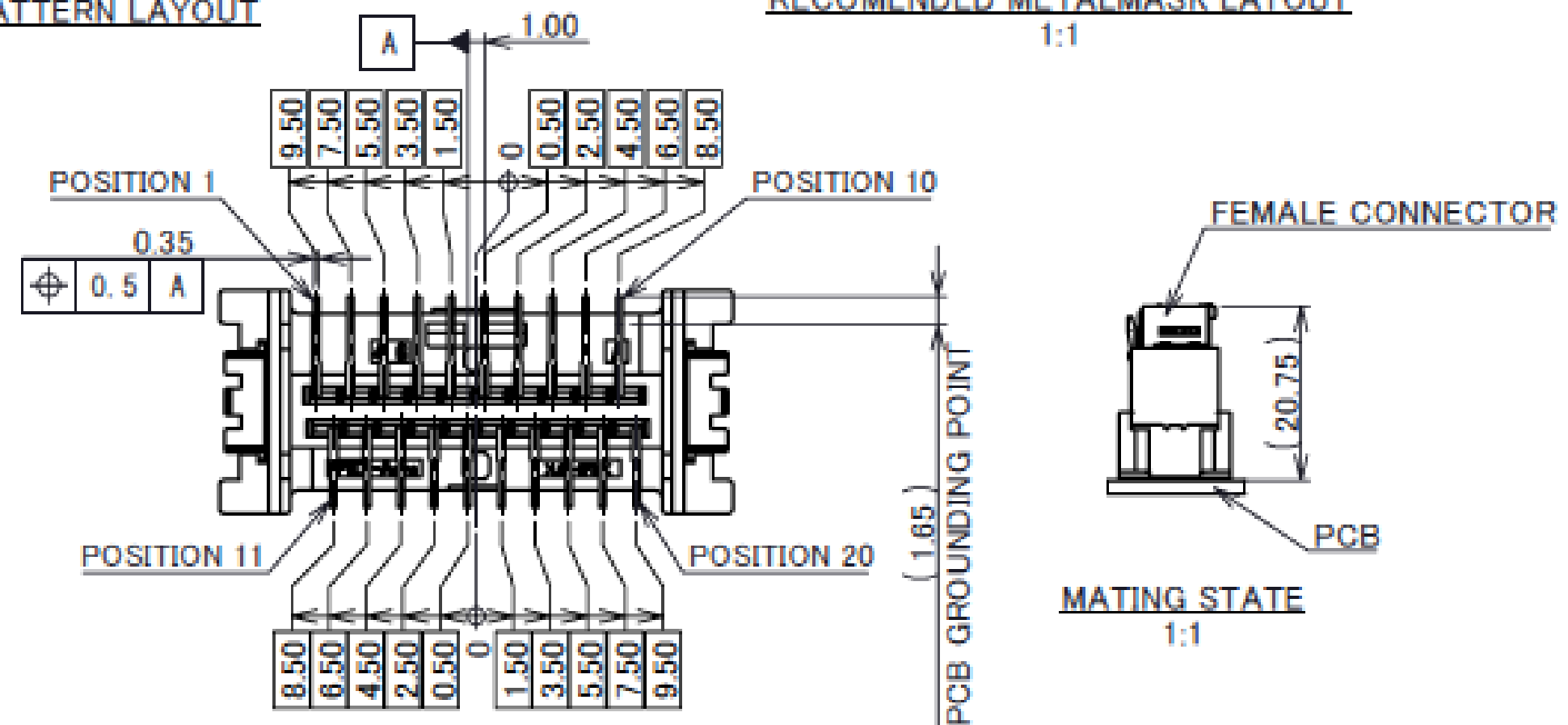
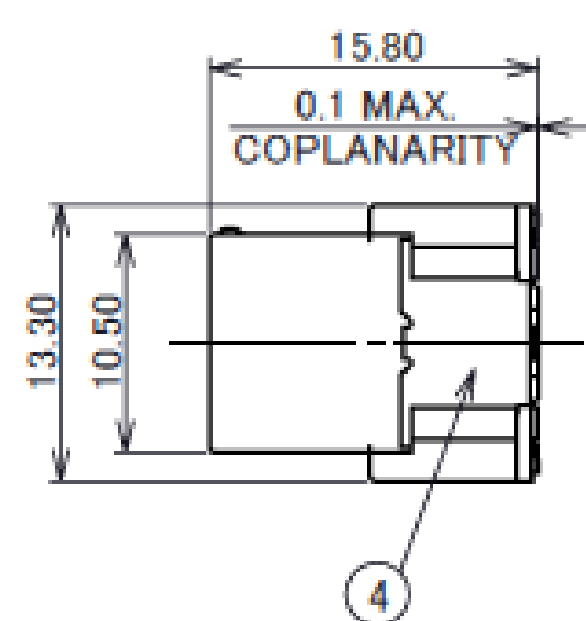
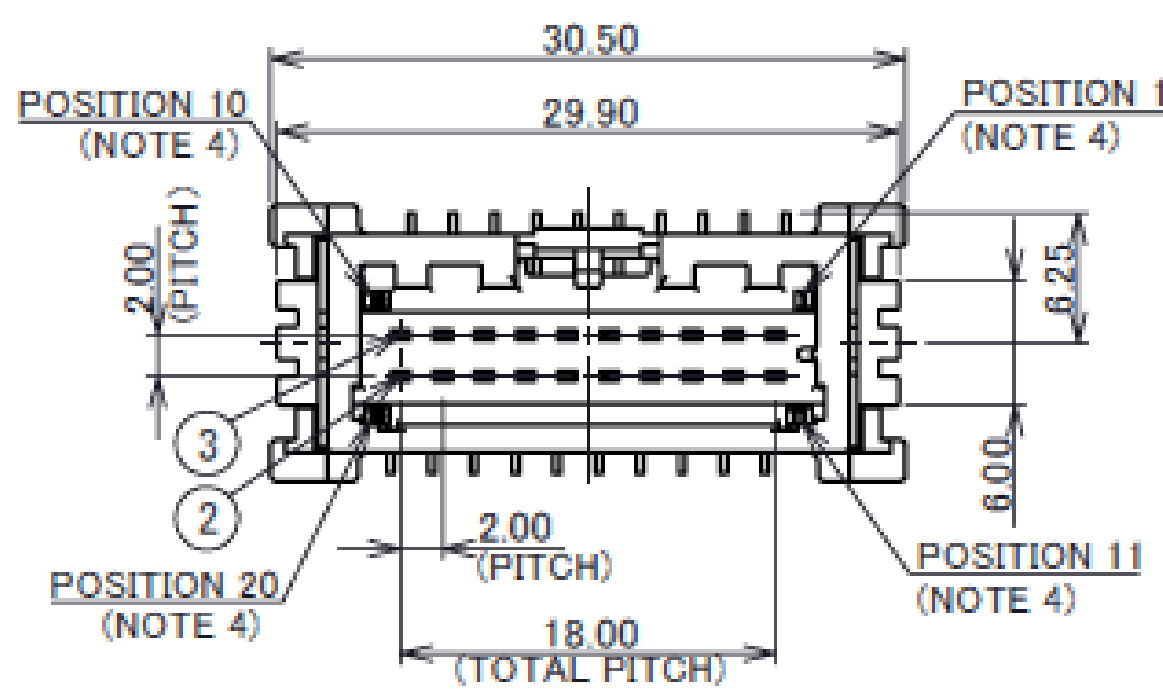
PART NO.
V0019-020E-001
V0019-020E-002



RECOMMENDED FOOTPRINT PATTERN LAYOUT 1:1



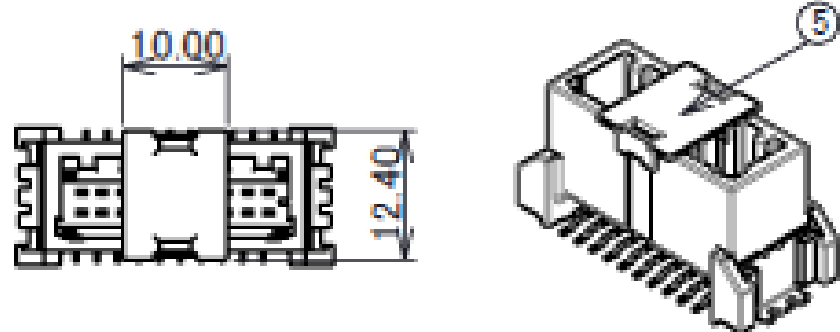
RECOMMENDED METAL MASK LAYOUT 1:1



### NOTES

- 1.APPLICABLE PART NO.:
  - FEMALE HOUSING...V0020-91020-211
  - FEMALE RETAINER...V0020-92020-211
  - FEMALE TERMINAL...VT009-02
- 2.COMPLY WITH ELV/RoHS.
- 3.USE METAL MASK WHICH HAS A THICKNESS OF 0.15mm MIN. WHEN THE MALE CONNECTOR IS MOUNTED ON THE PCB.
- 4.POSITION NUMBERS ARE INDICATED.

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
5	VACUUM CAP	GLASS-FILLED LCP	NATURAL
4	HOLD DOWN	BRASS	Sn REFLOW
3	MALE TERMINAL-2	BRASS	Sn REFLOW
2	MALE TERMINAL-1	BRASS	Sn REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK/UL94V-0



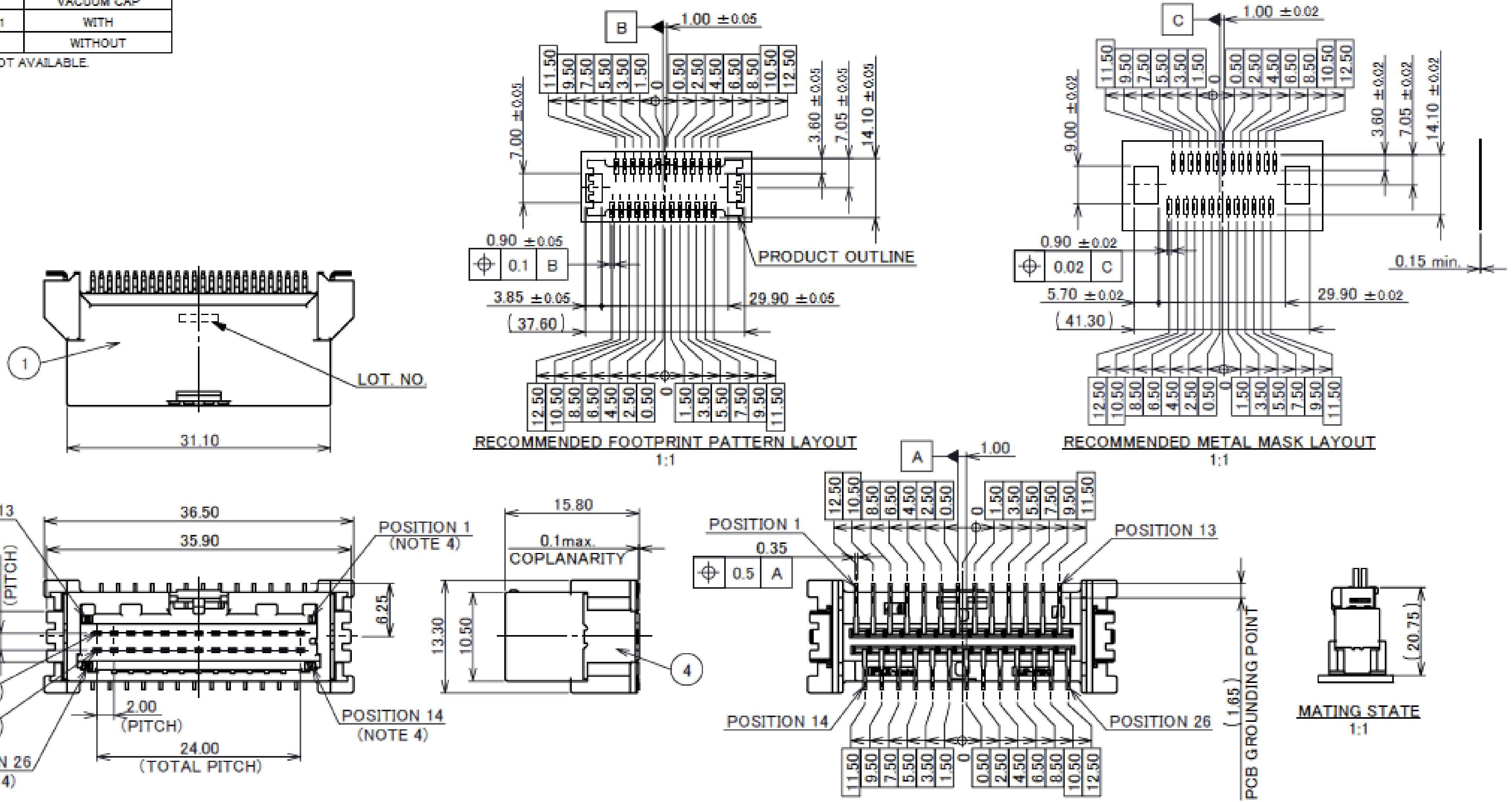
PART NO:V0019-020E-001

Rev.0

# ISH® (Vertical Type) MALE (26P):

PART NO.	VACUUM CAP
◆V0019-026E-001	WITH
V0019-026E-002	WITHOUT

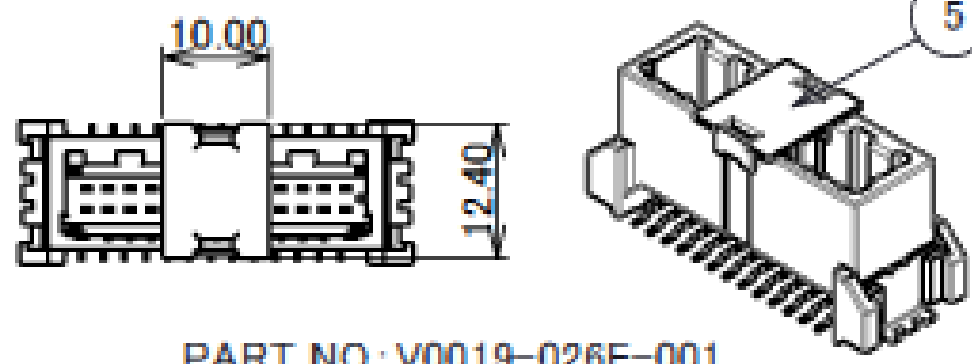
◆MARK MEANS NOT AVAILABLE.



### NOTES

1. APPLICABLE PART NO.:
  - FEMALE HOUSING --- V0020-91026-211
  - FEMALE RETAINER --- V0020-92026-211
  - FEMALE TERMINAL --- VT009-02
2. COMPLY WITH ELV/RoHS
3. USE METAL MASK WHICH HAS A THICKNESS OF 0.15mm MIN. WHEN THE MALE CONNECTOR IS MOUNTED ON THE PCB.
4. POSITION NUMBERS ARE INDICATED.

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
5	VACUUM CAP	GLASS-FILLED LCP	NATURAL
4	HOLD DOWN	BRASS	Sn REFLOW
3	MALE TERMINAL-2	BRASS	Sn REFLOW
2	MALE TERMINAL -1	BRASS	Sn REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK

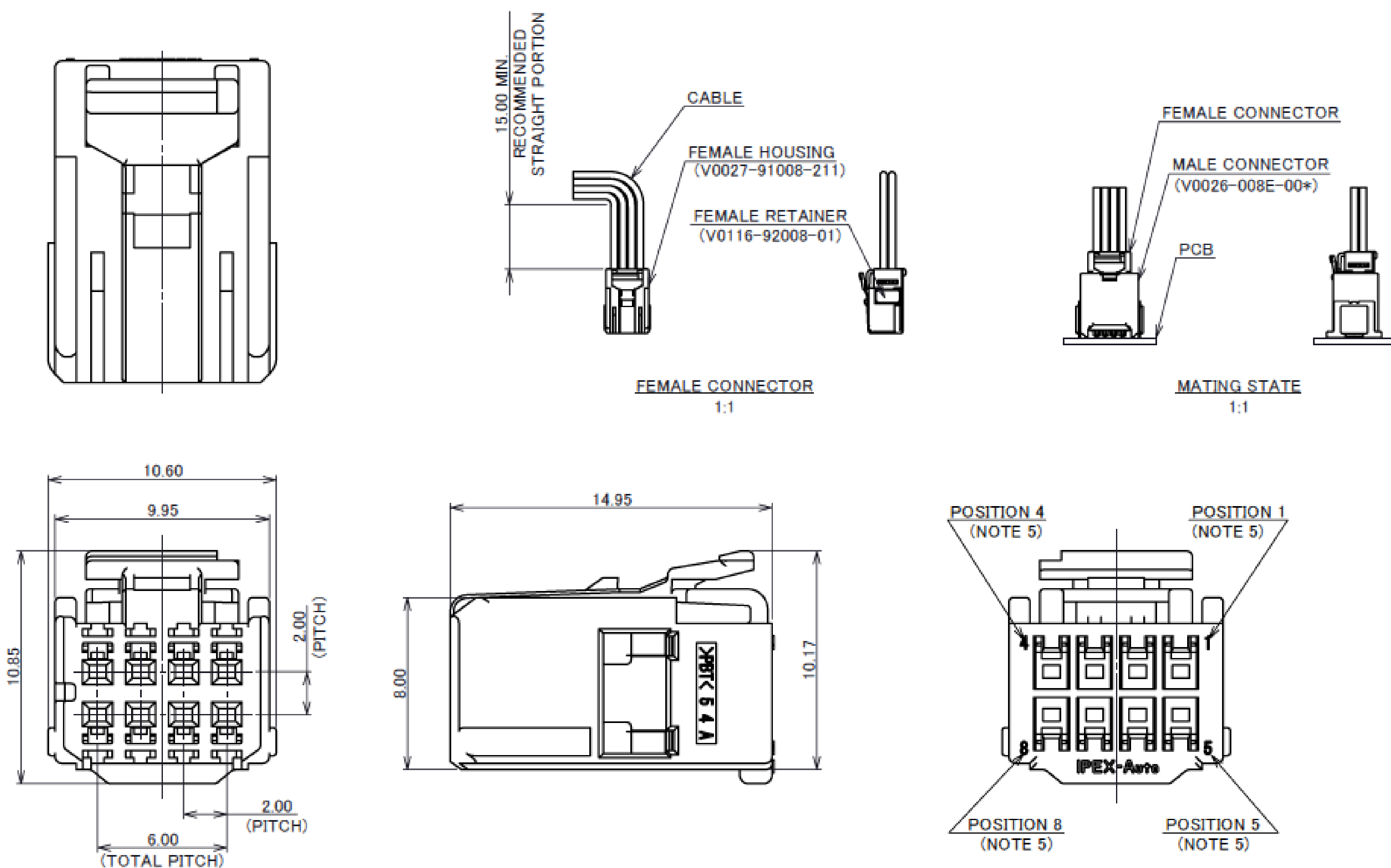


PART NO: V0019-026E-001

Rev.0

# ISH® (Vertical Type) FEMALE (8P) ※ISHV :

PART NO.	LOCK TYPE	KEY CODING	COLOR	FOR REAR COVER
V0027-91008-211	NORMAL ROCK	-	BLACK	N/A



NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
1	FEMALE HOUSING	PBT	BLACK

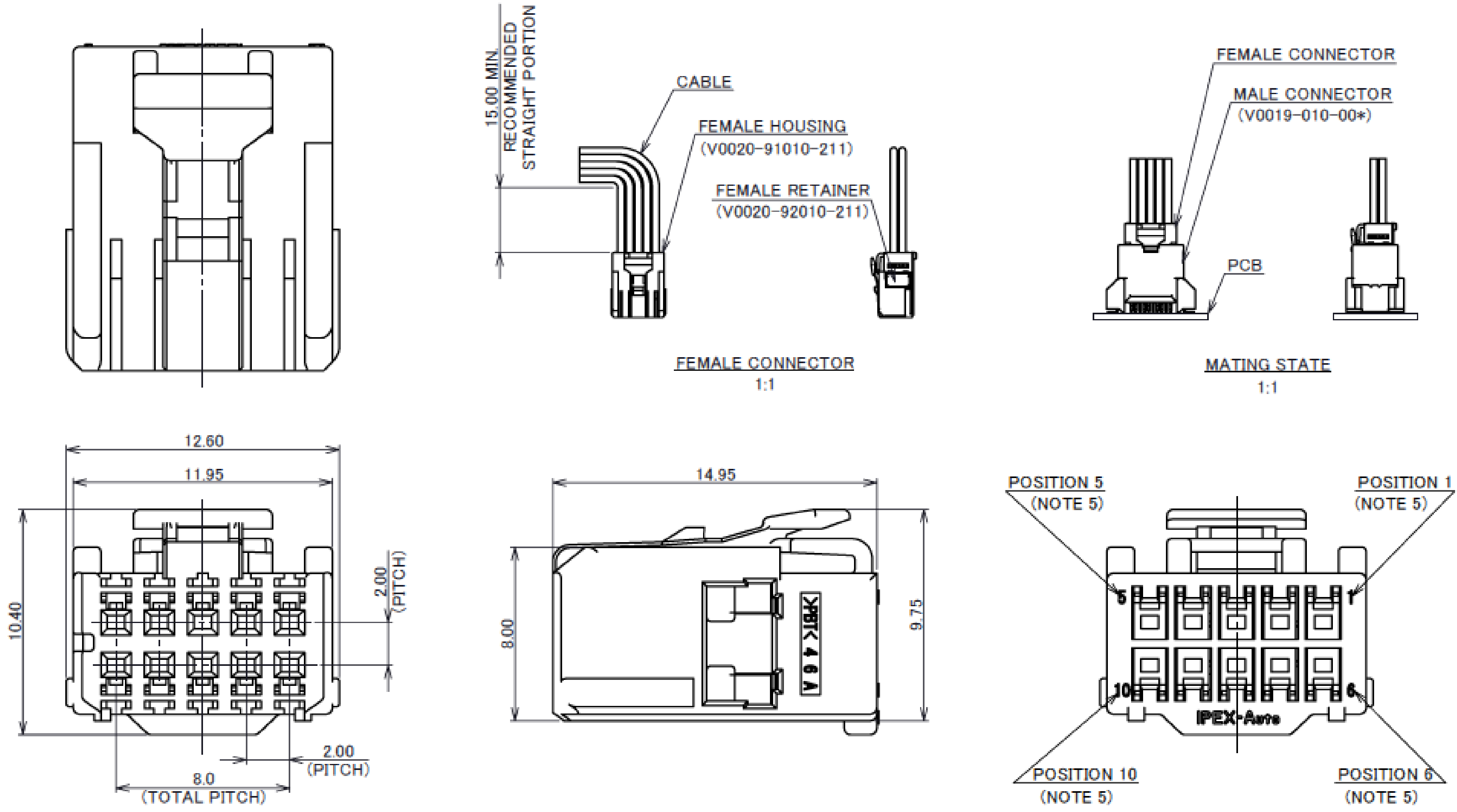
### NOTES

1. APPLICABLE PART NO.:
  - FEMALE TERMINAL --- VT009-02
  - FEMALE RETAINER --- V0116-92008-01
2. MATERIAL: PBT
3. COMPLY WITH ELV/RoHS
4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]
5. POSITION NUMBERS ARE INDICATED.

Rev.0

# ISH® (Vertical Type) FEMALE (10P):

PART NO.	LOCK TYPE	KEY CODING	COLOR	FOR REAR COVER
V0020-91010-211	NORMAL LOCK	-	BLACK	N/A



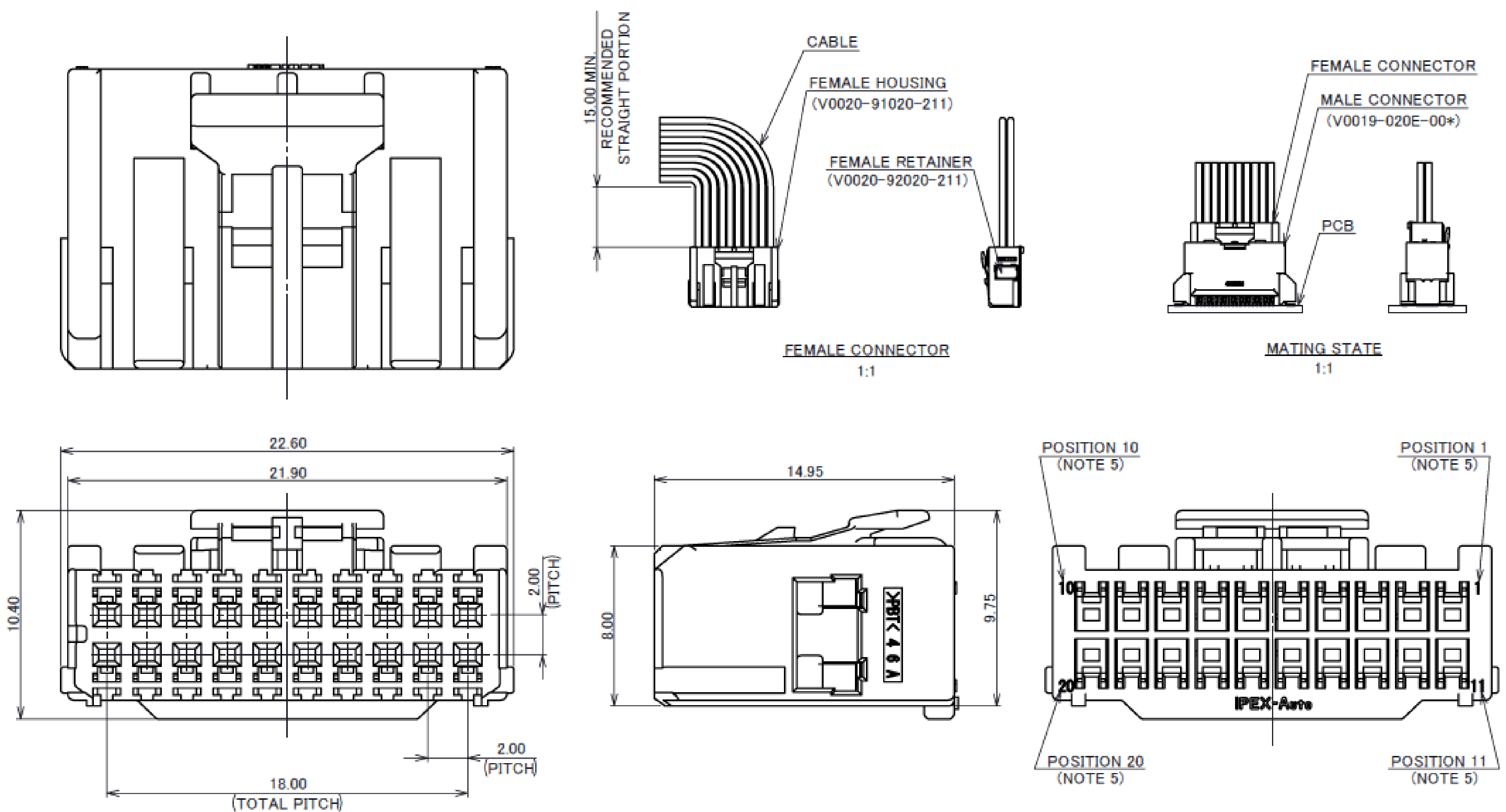
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
①	FEMALE HOUSING	PBT	BLACK

- NOTES
- APPLICABLE PART NO.:  
 - FEMALE TERMINAL --- VT009-02  
 - FEMALE RETAINER --- V0020-92010-211
  - MATERIAL: PBT
  - COMPLY WITH ELV/REHS.
  - HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]
  - POSITION NUMBERS ARE INDICATED.

Rev.0

# ISH® (Vertical Type) FEMALE (20P):

PART NO.
V0020-91020-211



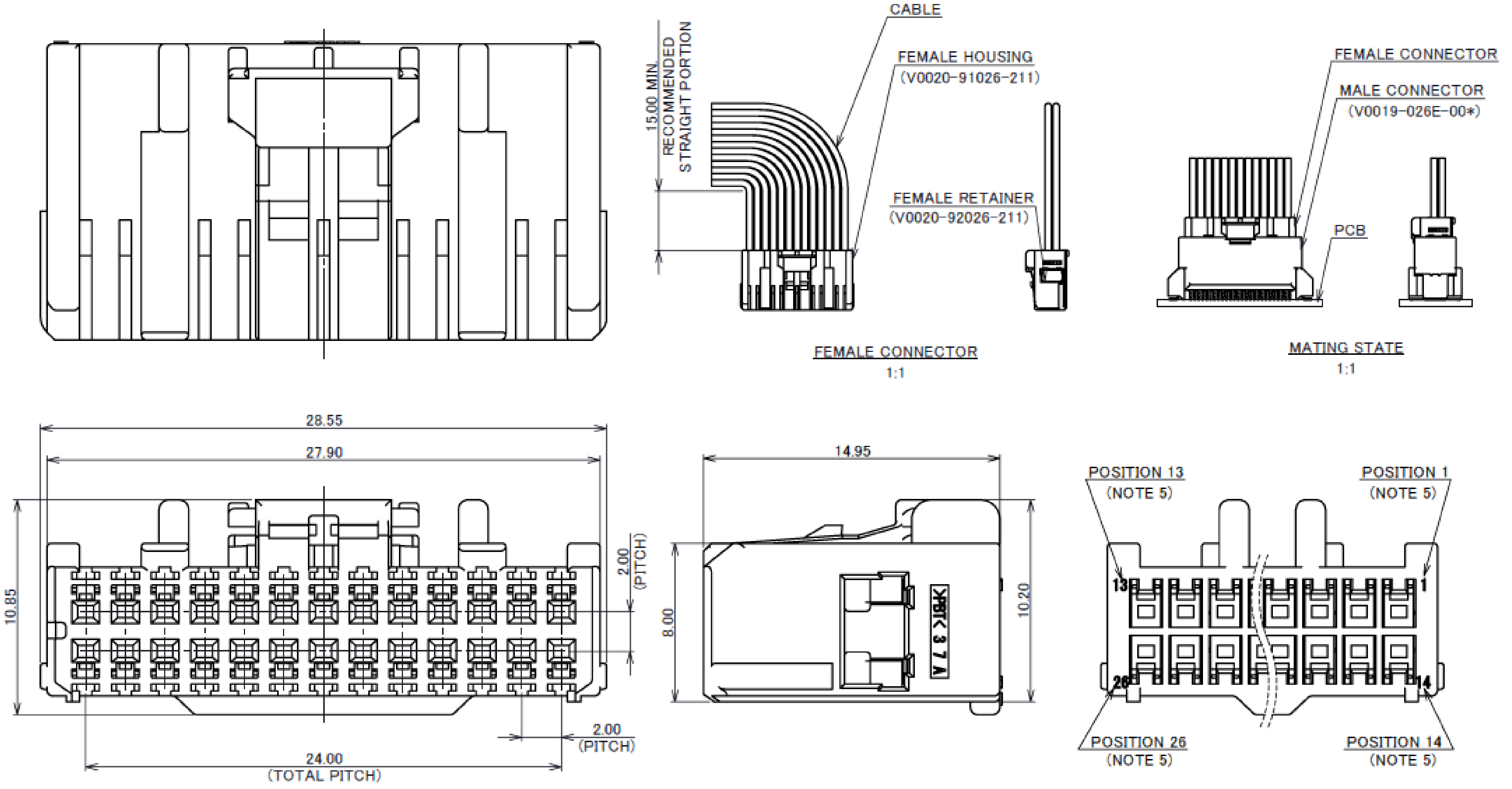
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
1	FEMALE HOUSING	PBT	BLACK

- NOTES
- APPLICABLE PART NO.:  
 - FEMALE TERMINAL --- VT009-02  
 - FEMALE RETAINER --- V0020-92020-211
  - MATERIAL: PBT
  - COMPLY WITH ELV/REHS.
  - HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]
  - POSITION NUMBERS ARE INDICATED.

Rev.0

# ISH® (Vertical Type) FEMALE (26P):

PART NO.
V0020-91026-211



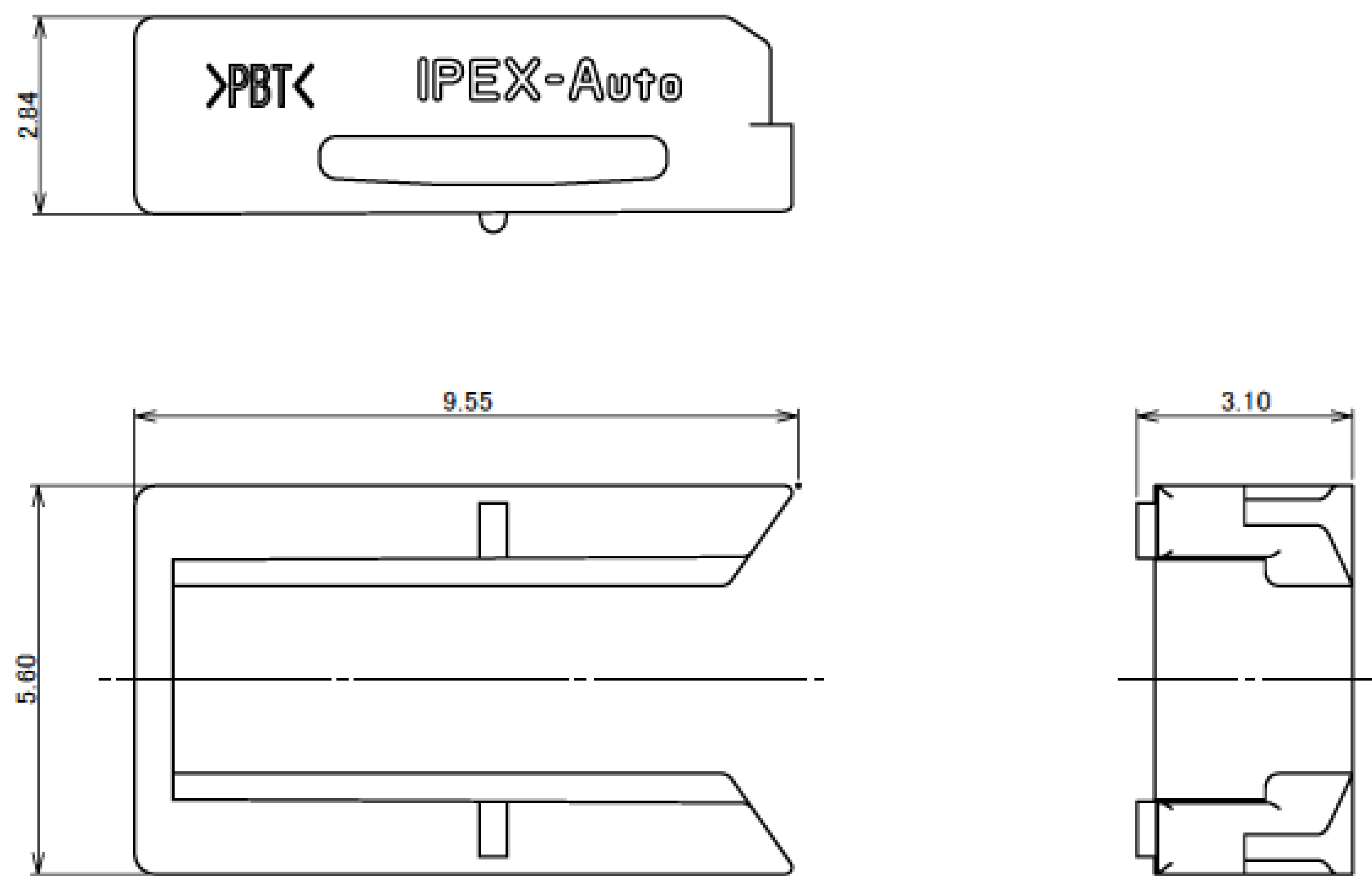
1	FEMALE HOUSING	PBT	BLACK
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

- NOTES
1. APPLICABLE PART NO.:  
 - FEMALE TERMINAL --- VT009-02  
 - FEMALE RETAINER --- V0020-92026-211
  2. MATERIAL: PBT
  3. COMPLY WITH ELV/RoHS.
  4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]
  5. POSITION NUMBERS ARE INDICATED.

Rev.0

# ISH® (Vertical Type) FEMALE RETAINER (8P) ※ISHV :

PART NO.
V0116-92008-01



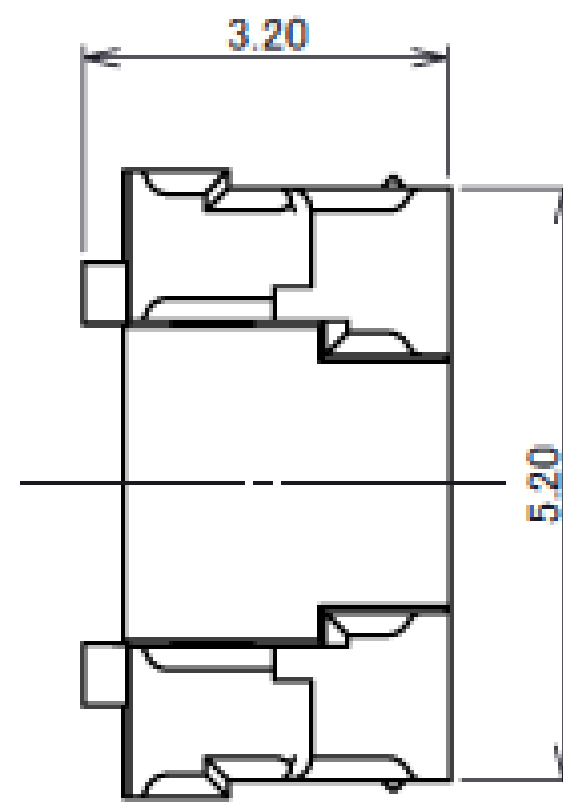
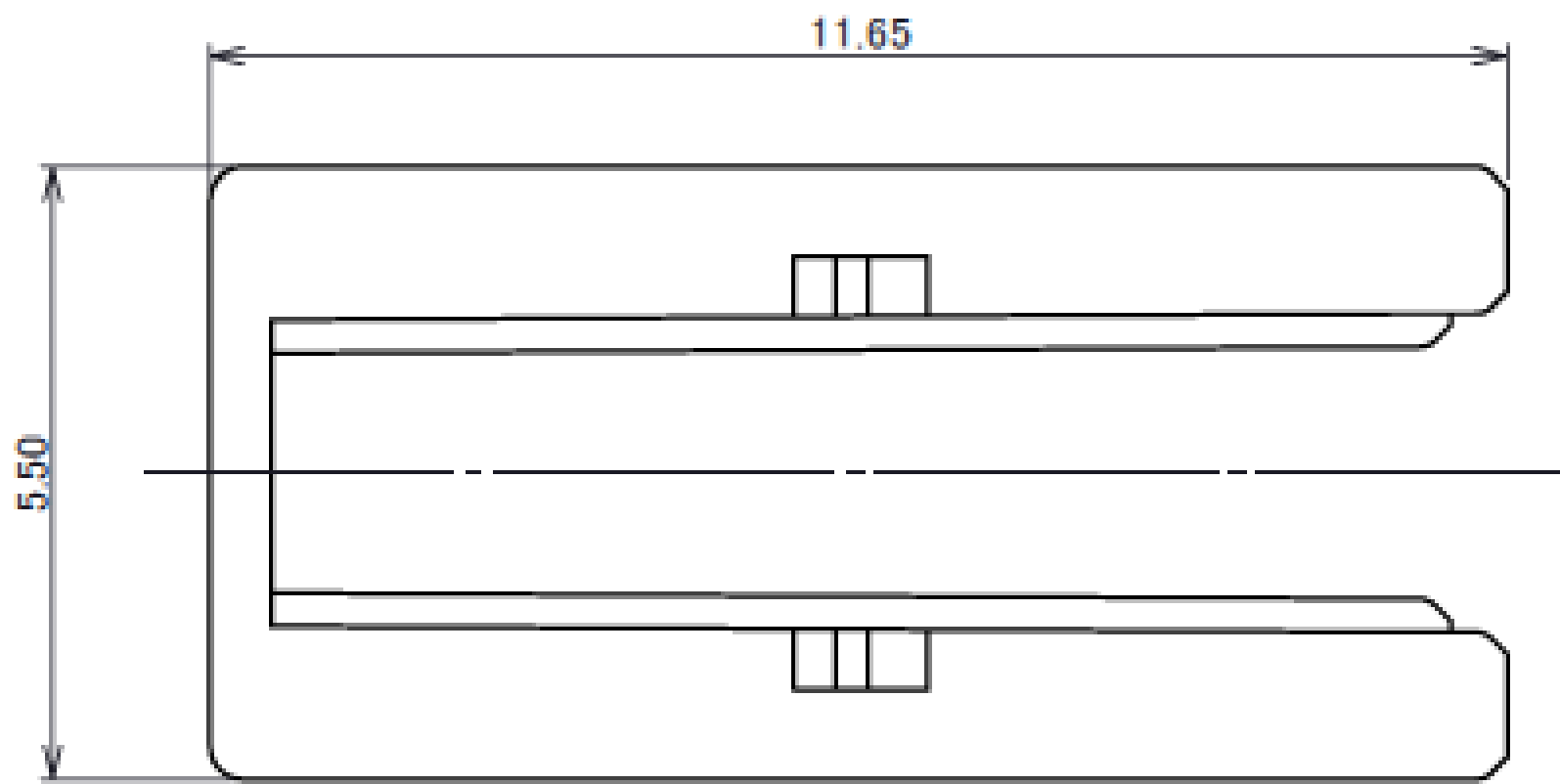
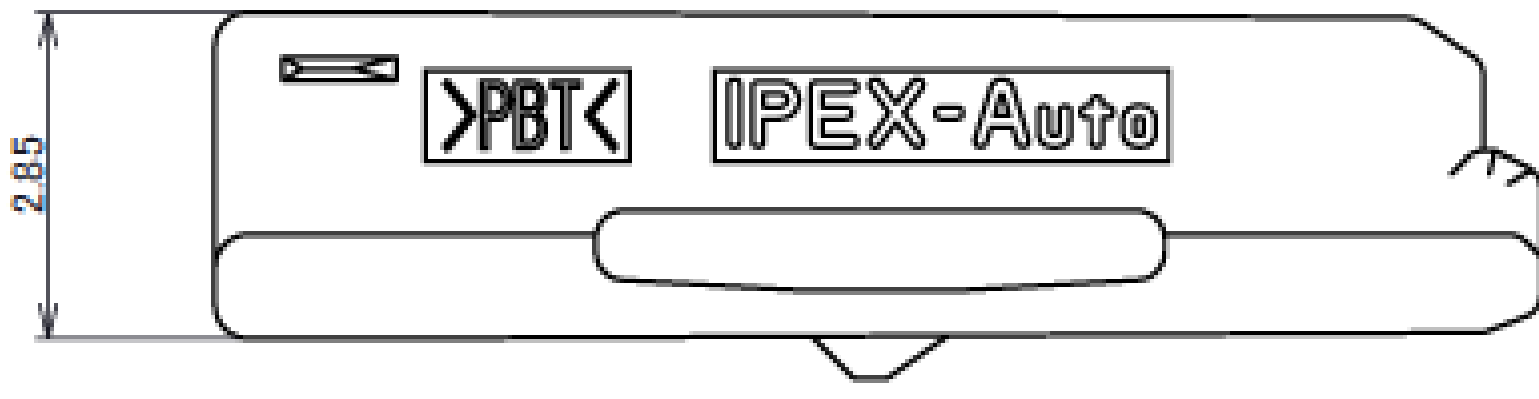
- NOTES
1. APPLICABLE PART NO.:  
 - FEMALE HOUSING --- V0116-91008-\*\*  
 V0027-91008-211
  2. MATERIAL: PBT
  3. COMPLY WITH ELV/RoHS.
  4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]

1	FEMALE RETAINER	PBT	BLACK
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

Rev.0

# ISH® (Vertical Type) FEMALE RETAINER (10P):

PART NO.
V0020-92010-211



**NOTES**

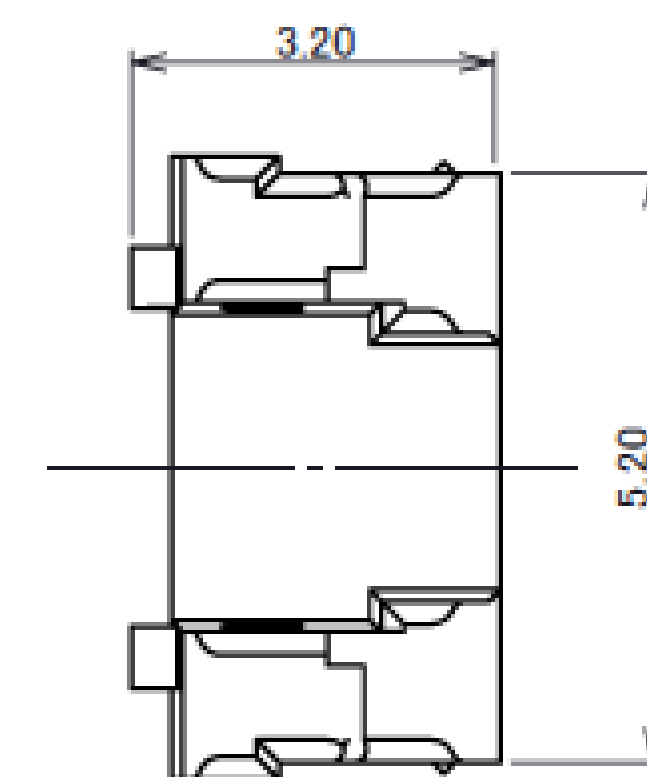
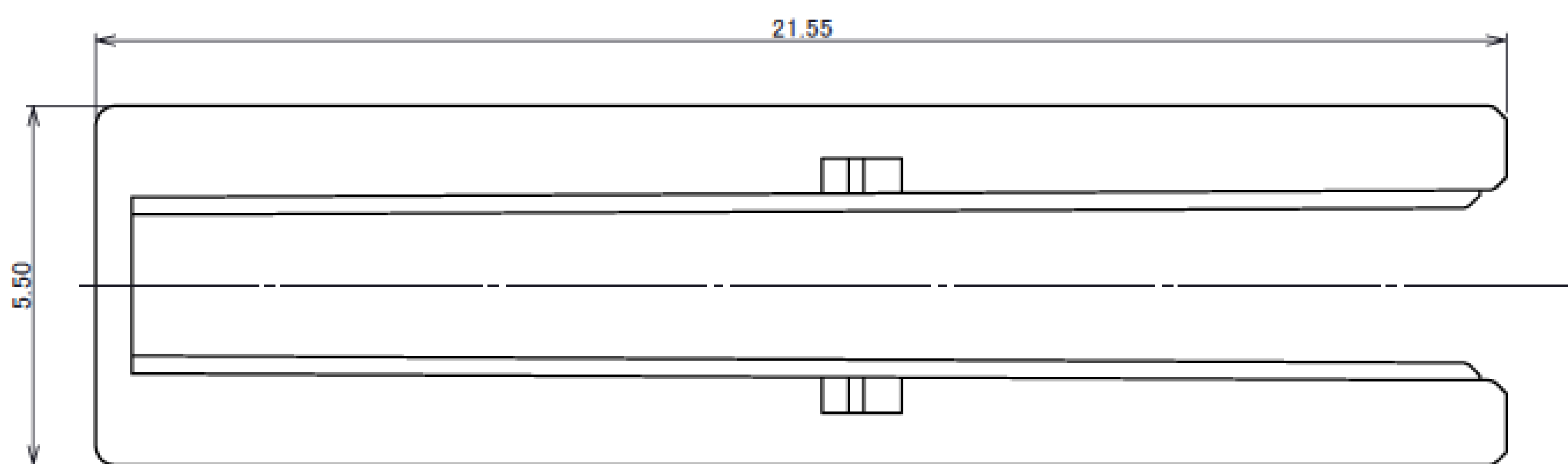
1. APPLICABLE PART NO.:  
-FEMALE HOUSING- V0020-91010-211
2. MATERIAL: PBT
3. COMPLY WITH ELV/RoHS.
4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]

1	FEMALE RETAINER	PBT	BLACK
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

Rev.0

# ISH® (Vertical Type) FEMALE RETAINER (20P):

PART NO.
V0020-92020-211



**NOTES**

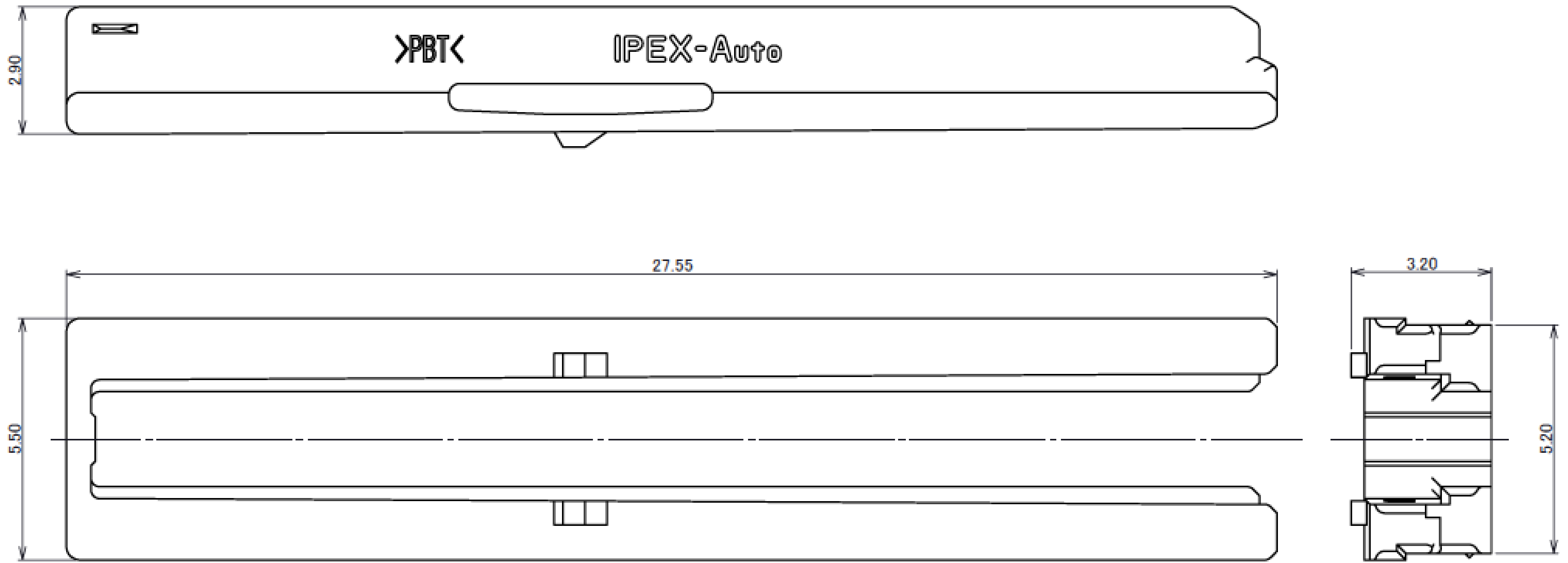
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-FEMALE HOUSING- V0020-91020-211
2. MATERIAL: PBT
3. COMPLY WITH ELV/RoHS.
4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]

1	FEMALE RETAINER	PBT	BLACK
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

Rev.0

# ISH® (Vertical Type) FEMALE RETAINER (26P):

PART NO.
V0020-92026-211



### NOTES

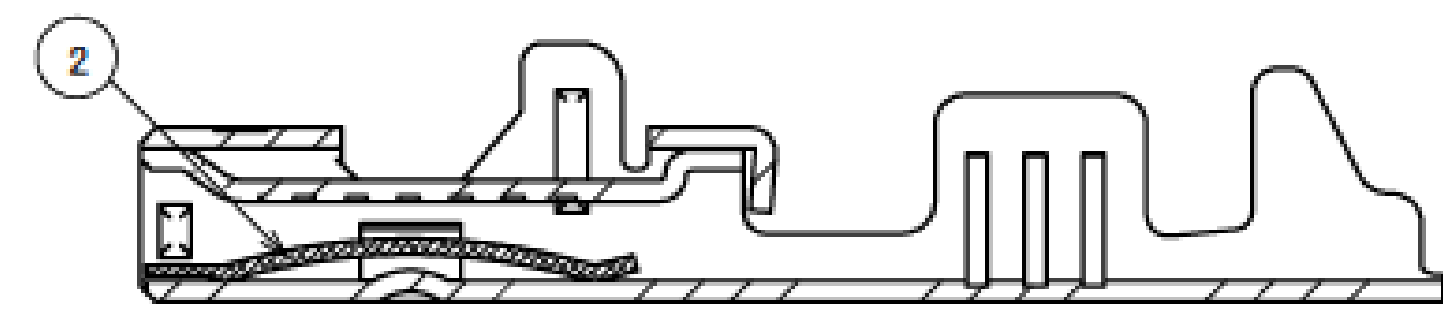
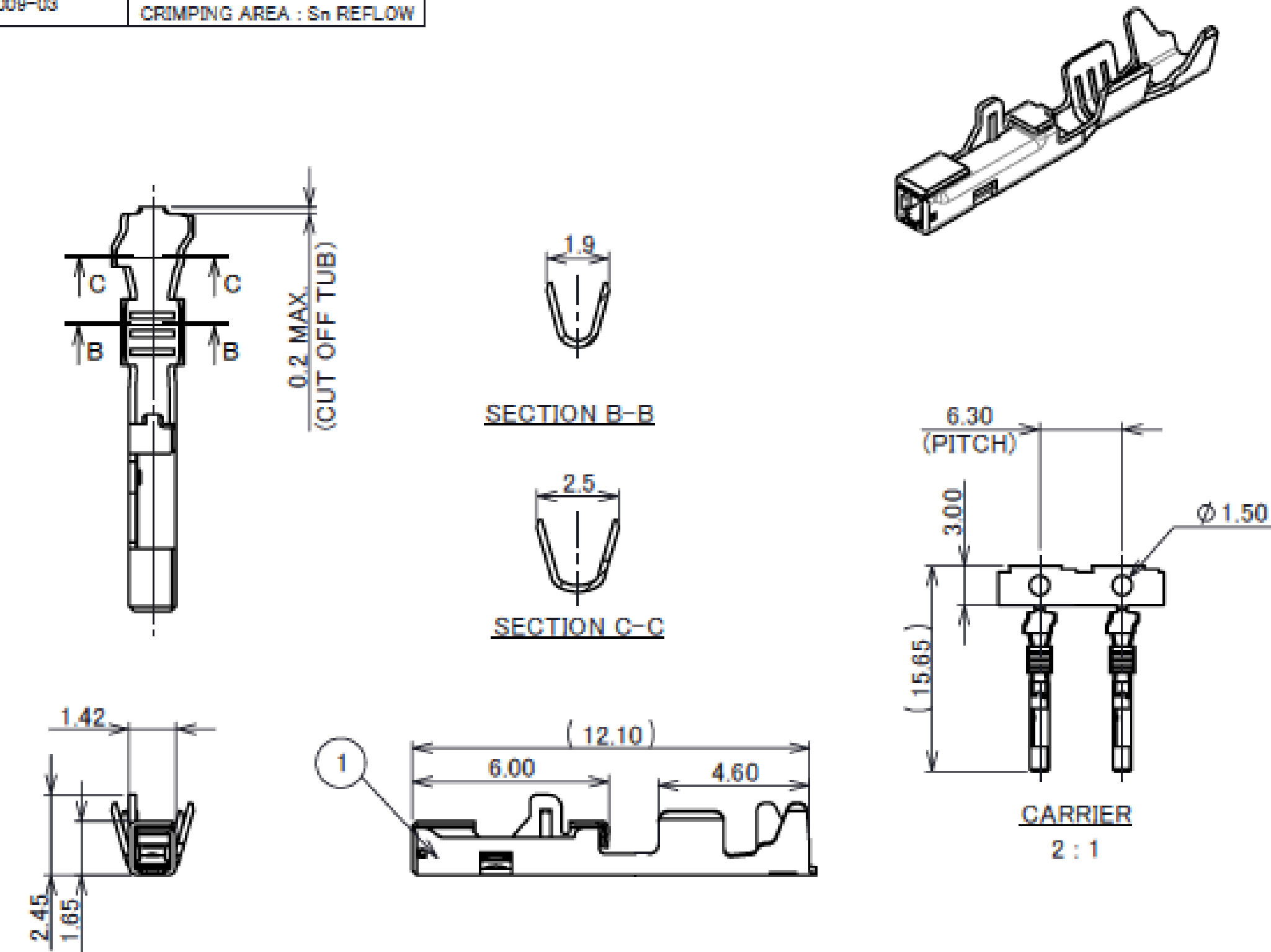
1. APPLICABLE PART NO.:  
\*FEMALE HOUSING\* V0020-91026-211
2. MATERIAL: PBT
3. COMPLY WITH ELV/RoHS
4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
1	FEMALE RETAINER	PBT	BLACK

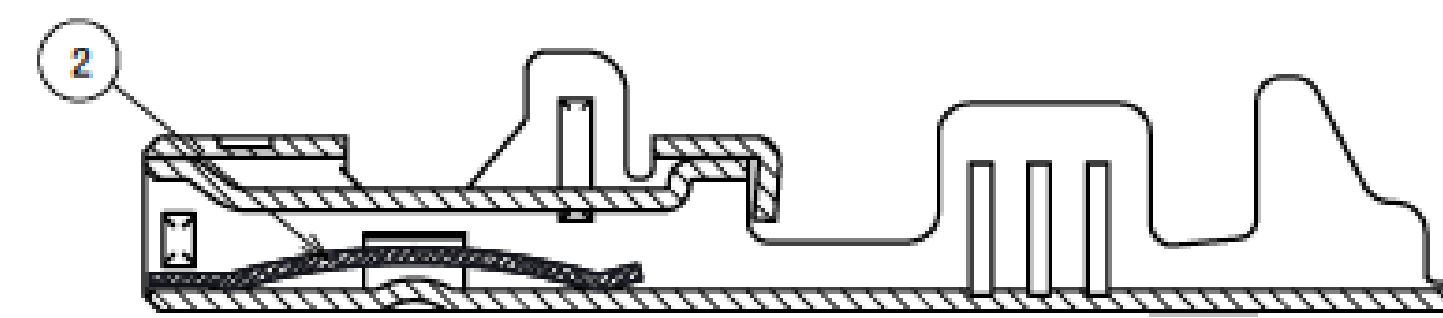
Rev.0

# ISH® (Vertical Type) TERMINAL:

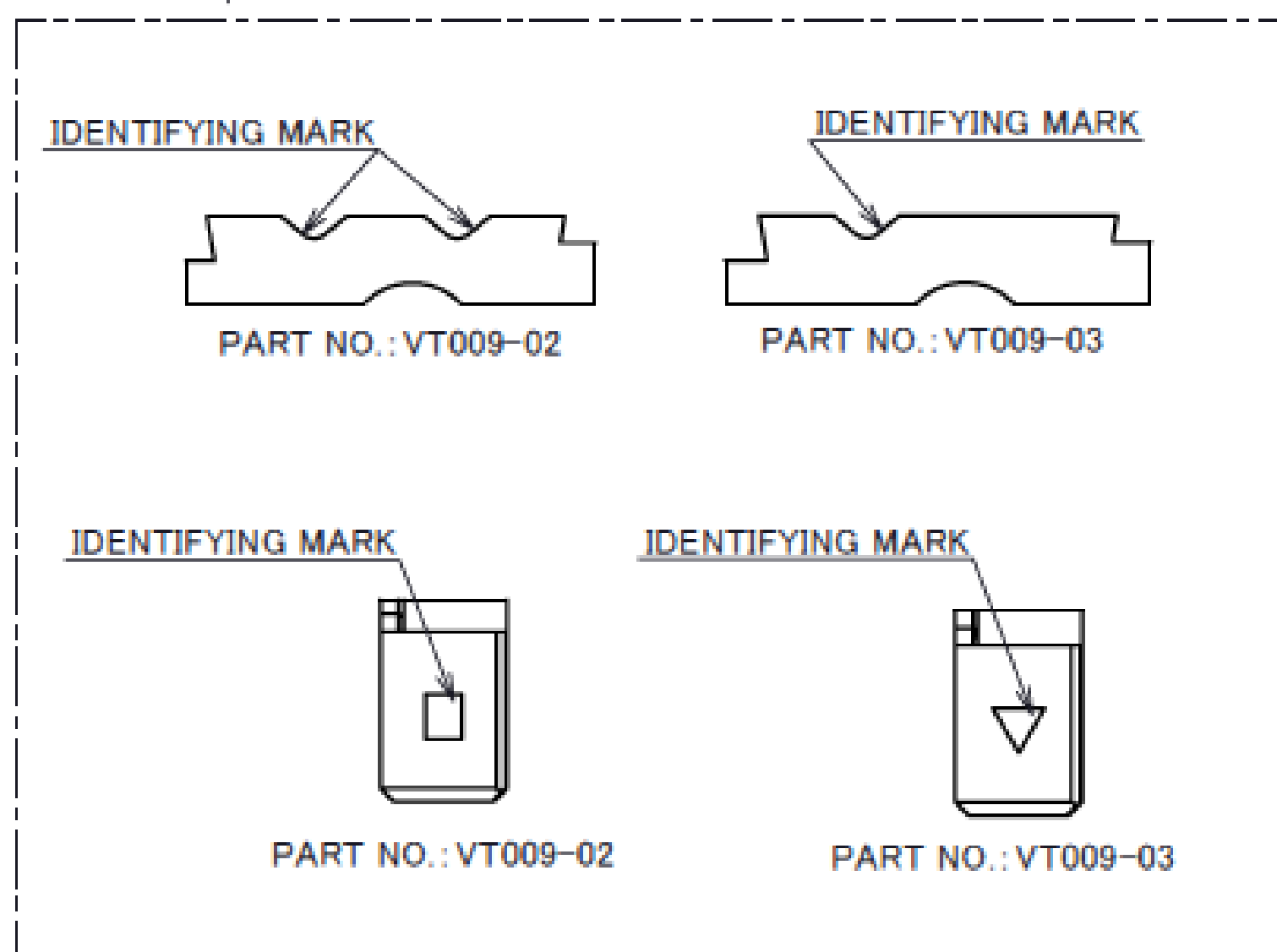
PART NO.	PLATING
VT009-02	Sn REFLOW
VT009-03	CONTACT AREA : Au PLATING CRIMPING AREA : Sn REFLOW



PART NO.: VT009-02



PART NO.: VT009-03  
SECTION A-A  
10 : 1



### NOTE

1. APPLICABLE FEMALE HOUSING: ISH CONNECTOR SERIES
2. APPLICABLE CABLE SIZE: 0.3mm<sup>2</sup> / 0.5mm<sup>2</sup> (FINISHED  $\phi$  1.60mm MAX.)
3. COMPLY WITH ELV/RoHS.
4. TERMINAL CRIMP SPECIFICATION MUST BE COMPLIANT WITH HANDLING MANUAL [HDM-0020].

2	SPRING	COPPER ALLOY	VT009-02 PLATING : Sn REFLOW VT009-03 PLATING : Au PLATING
1	BODY	BRASS	VT009-02 PLATING : Sn REFLOW VT009-03 PLATING : Au PLATING CONTACT AREA : Au PLATING CRIMPING AREA : Sn REFLOW
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

Rev.0



# Custom Products Available

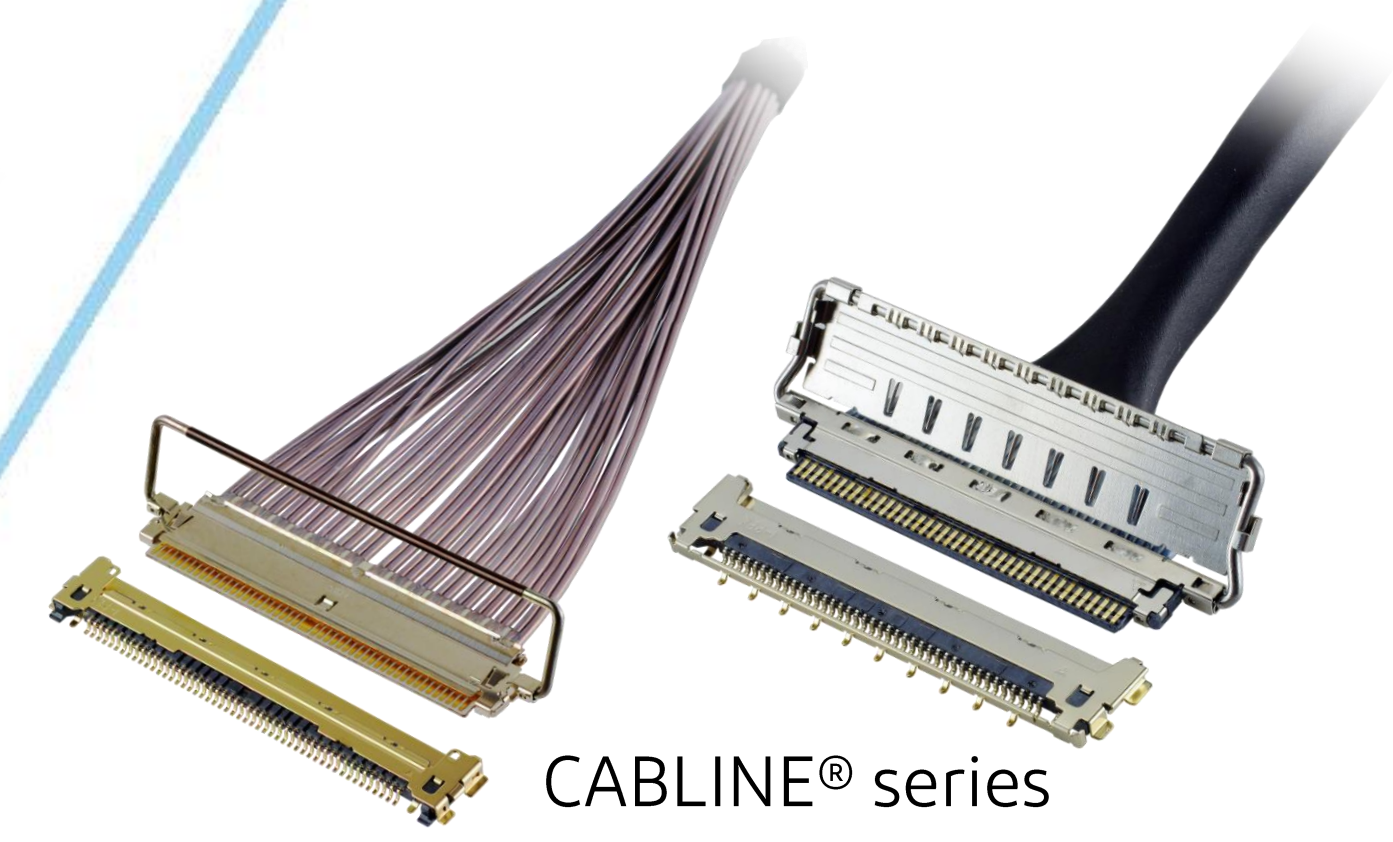
## RF Connector

MHF® series



## Micro-coaxial/Twinax/Discrete Wire Connector

CABLINA® series

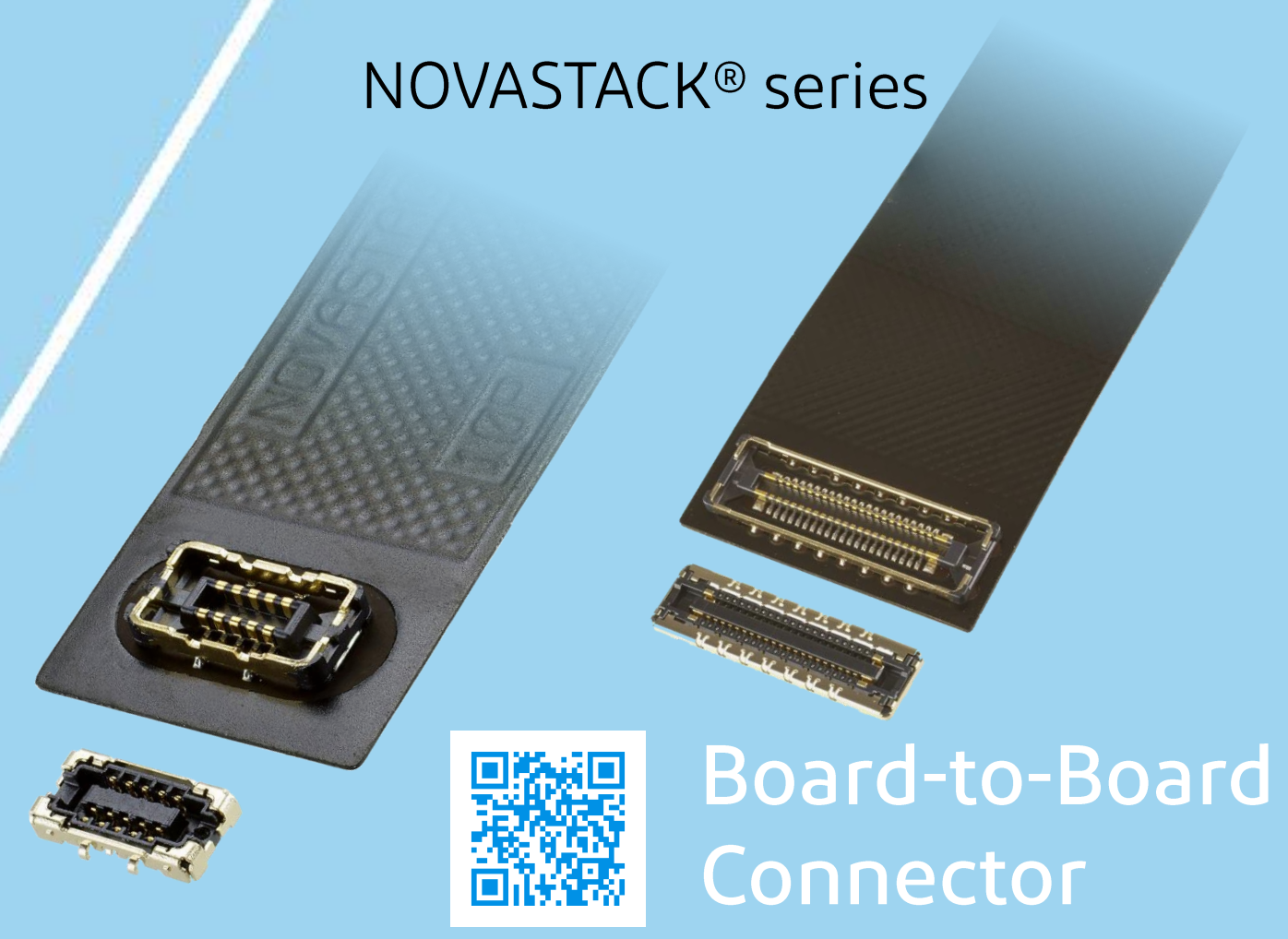


## Optical Module

LIGHTPASS® series



NOVASTACK® series



## Board-to-Board Connector



## Power Connector/Terminal

AP series

ISH® series



MINIFLEX® series

EVAFLEX® series



## FPC FFC Connector



Inquiry



MINIDOCK® series

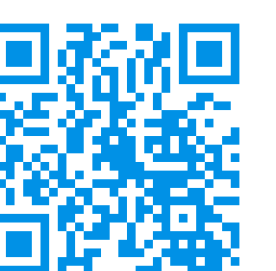


## I/O Connector

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Contact your sales representative or more detailed information.

[www.i-pex.com](http://www.i-pex.com)



# I-PEX

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