

# CABLINE® V

공간 절약 및 프리션 록 포함, USB 3.1규격 대응,  
이물 대책에 강한 0.4mm 피치, 수평 결합 타입 세션 동축 커넥터



**Product Specifications:**

Mating type	Horizontal	
Board Pitch (mm)	0.4	
Wiping Length (mm)	0.71	
Mated size (mm)	Height	1.15 Max
	Width	Formula: 4.8 + (0.4*?p)
	Depth	5.65
Pin Counts	Range	Up to 40
	Available	10, 15, 20, 25, 30, 35, 40

**Applicable Cable Size:**

Maximum O.D. (mm)	0.4
Micro-Coaxial for Signal (AWG)	45 ohm: #38 or smaller 50 ohm: #40 or smaller
Twinax (AWG)	#40
Discrete (AWG)	#36 or smaller

**Applicable Standards (Reference Only):**

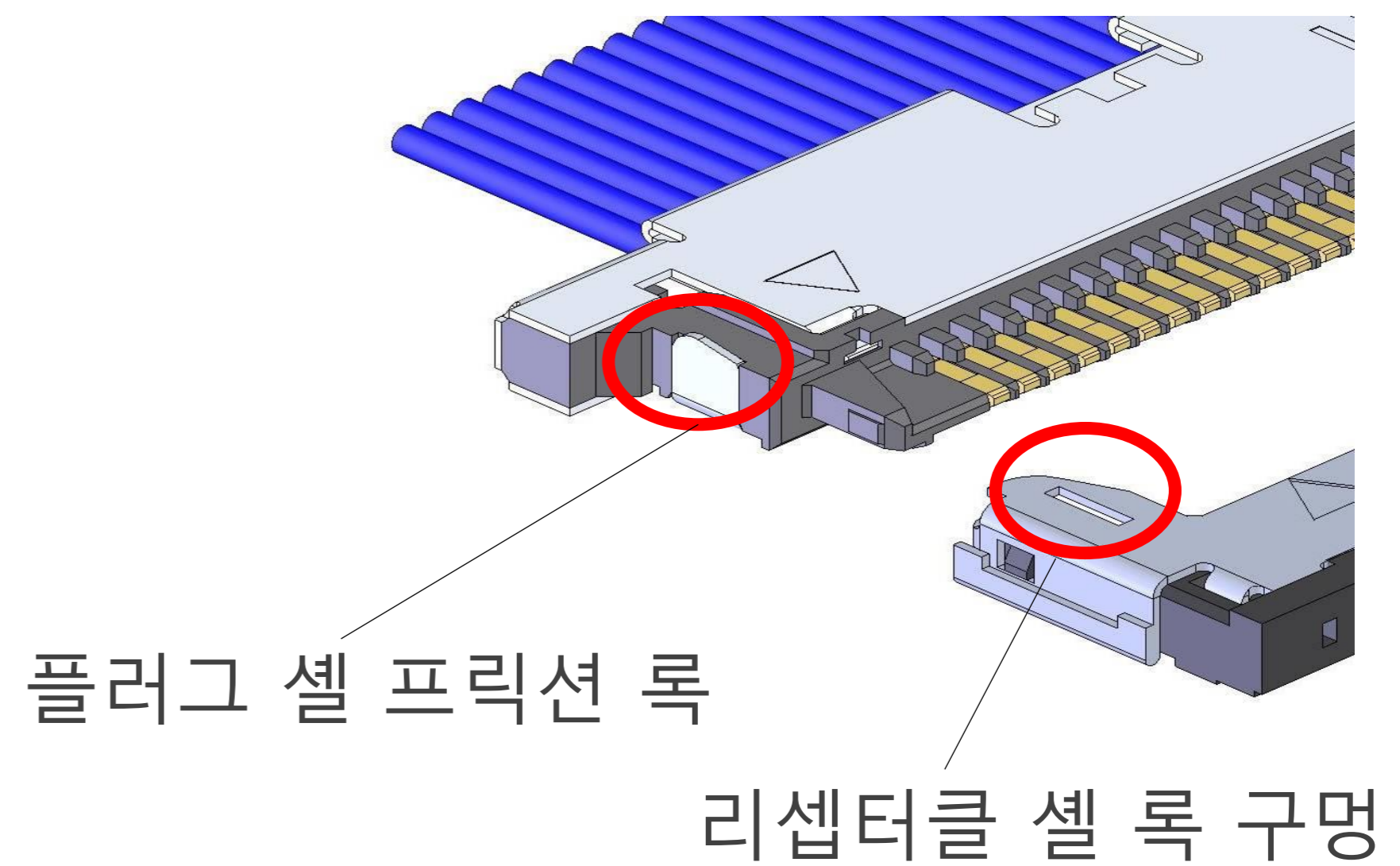
USB 3.1 Gen 1 (5 Gbps) V-By-One HS 1.4 (4 Gbps)  
eDP (2.7 Gbps) MiPi standards

\*기재가 되어있지 않은 핀 수의 대응 여부에 대해서는 문의해 부탁드립니다.

▶ 프리션 록 방식을 채택하여 깊이 치수, 길이 치수가 작고, 작은 공간 상에서 부품 배치에 유리함

길이 치수(mm)	4.8+(0.4*?p)
깊이 치수(mm)	5.65

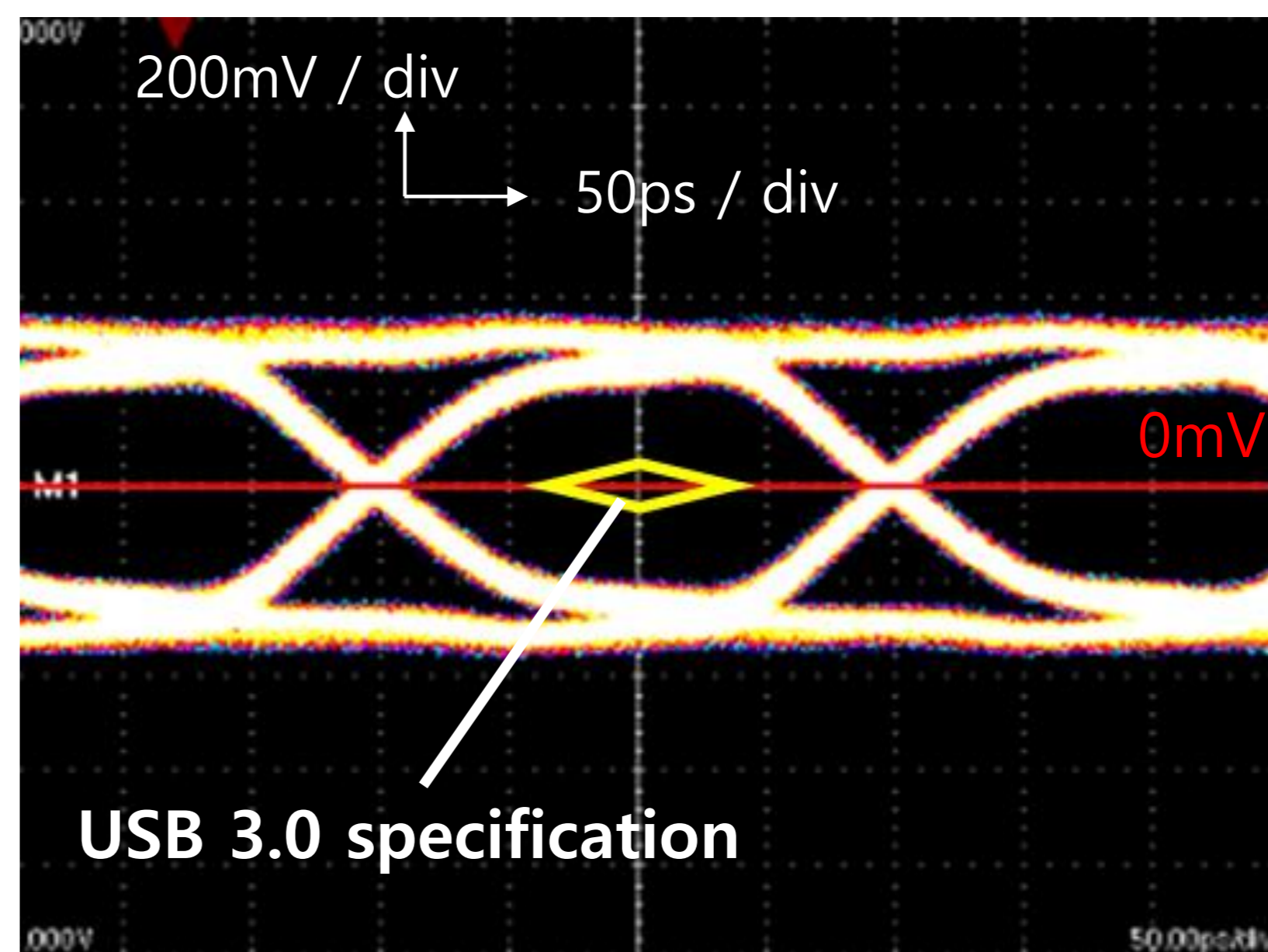
CABLINE V 35p 결합 유지력	
프리션 록 부착 타입	12N
프리션 록 미부착 타입	8N



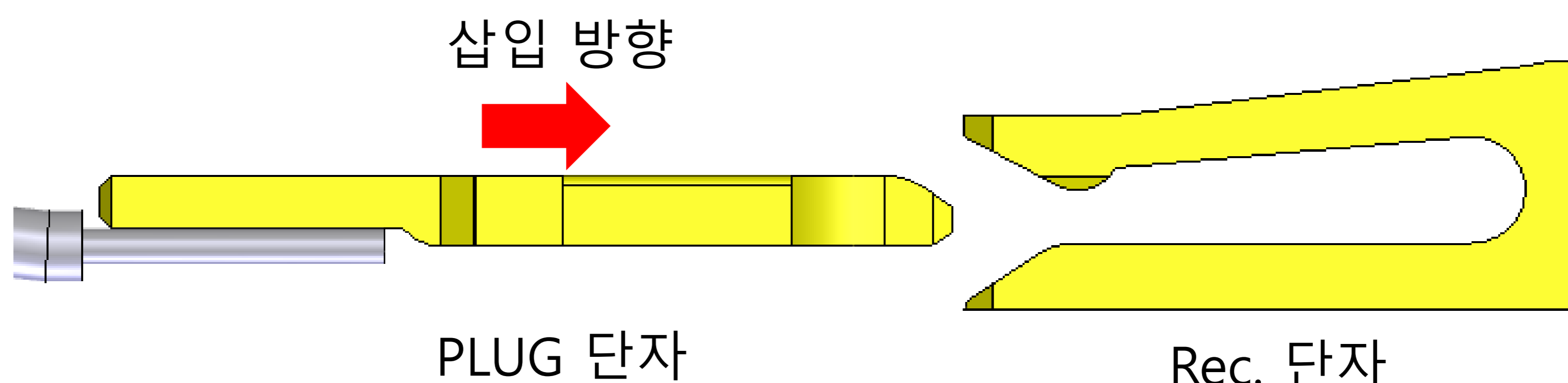
▶ USB 3.1(5 Gbps/lane) 고속 전송 내부 접속에 최적화

아이 패턴(차동)  
비트 전송률: 5Gbps  
상승 시간: 60ps(10-90%)  
입력 전압: 800mVp-p

\*시험 데이터에 대한 상세 사항은 I-PEX Connectors로 문의 부탁드립니다.



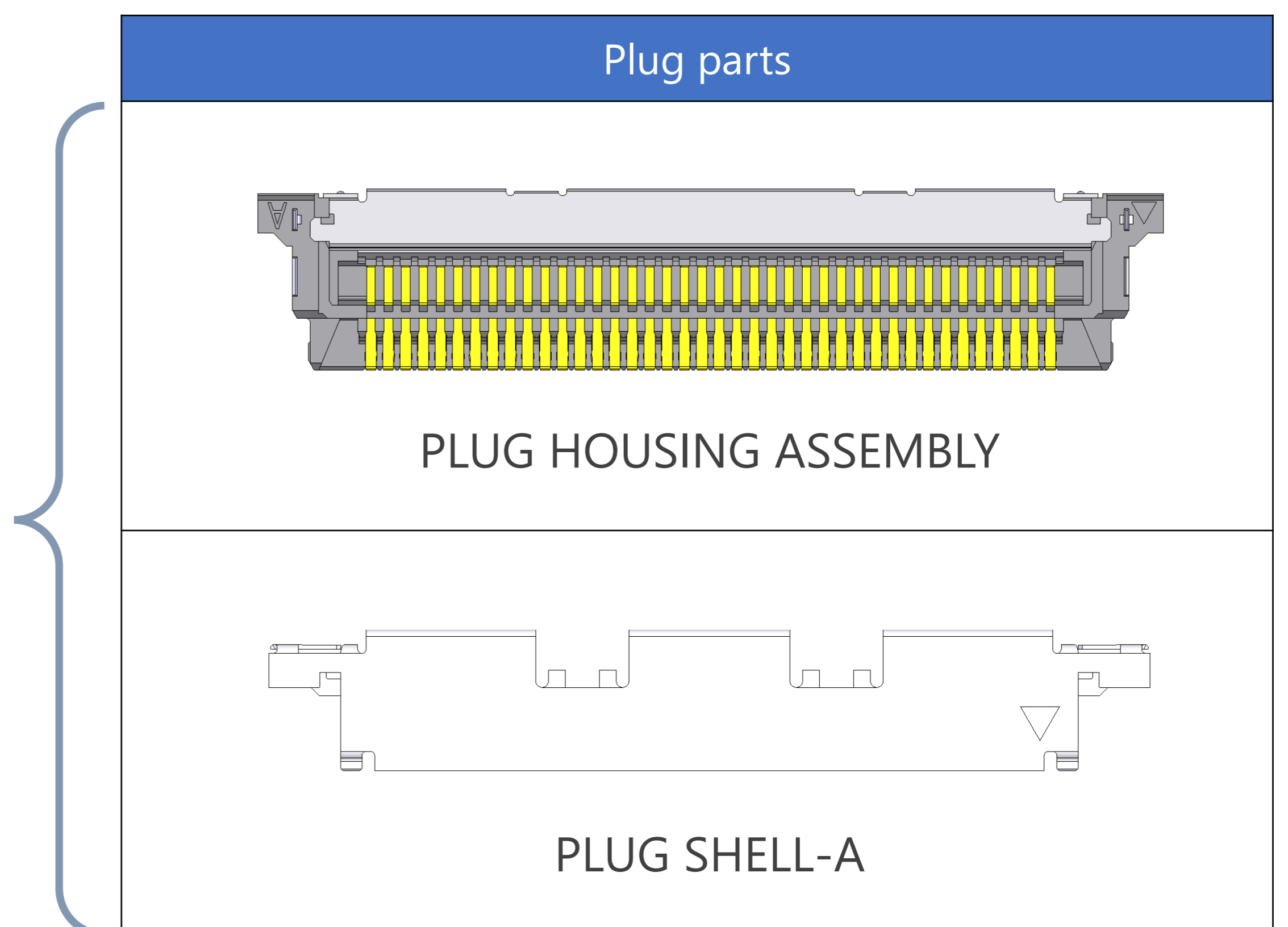
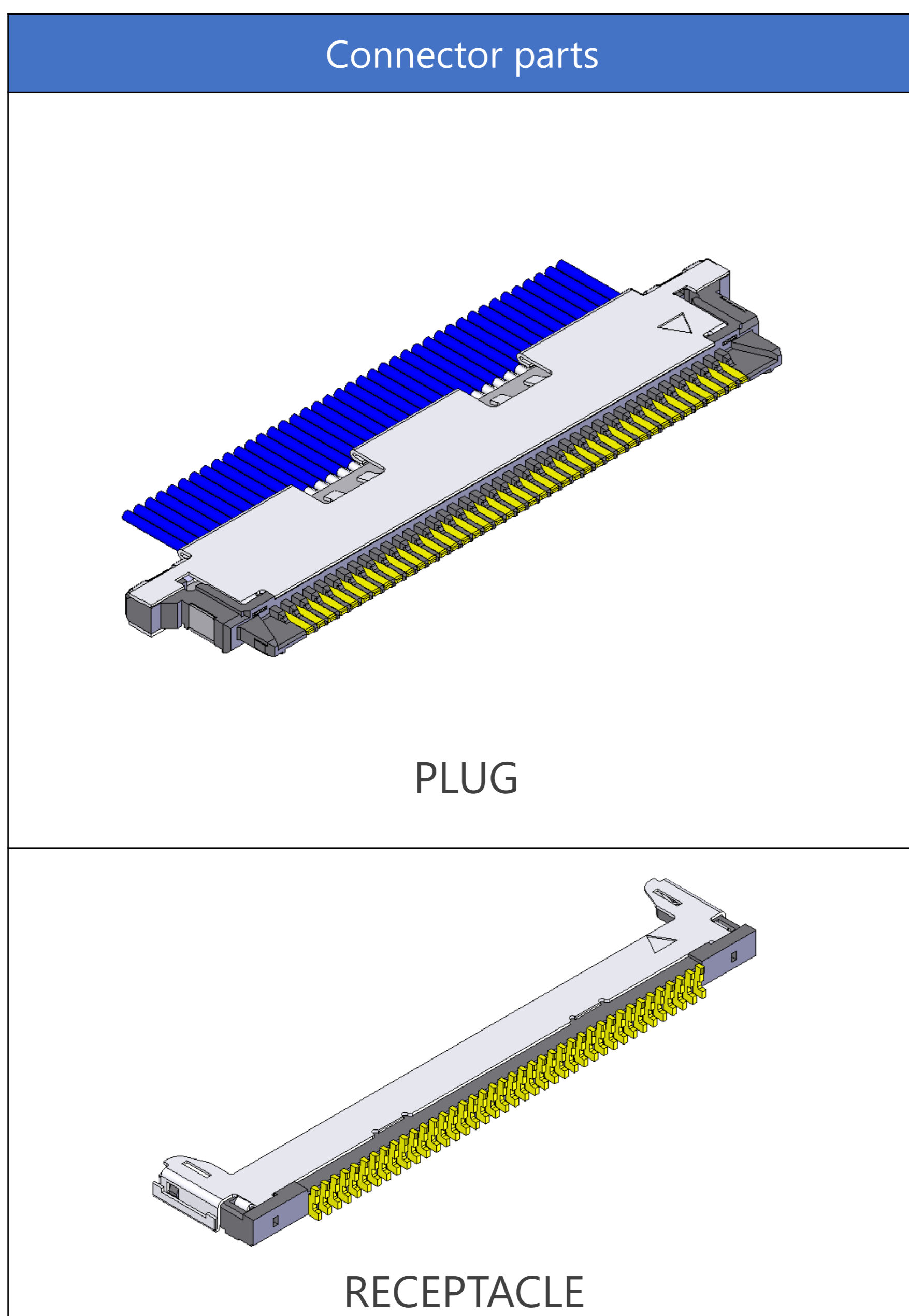
▶ 단자가 튜닝 포크 타입 디자인 되어있어, 와이핑력이 뛰어나며 이물 대책에 강함



삽입 시마다 접촉면이 와이핑되어 접촉 안정성을 향상시킵니다.

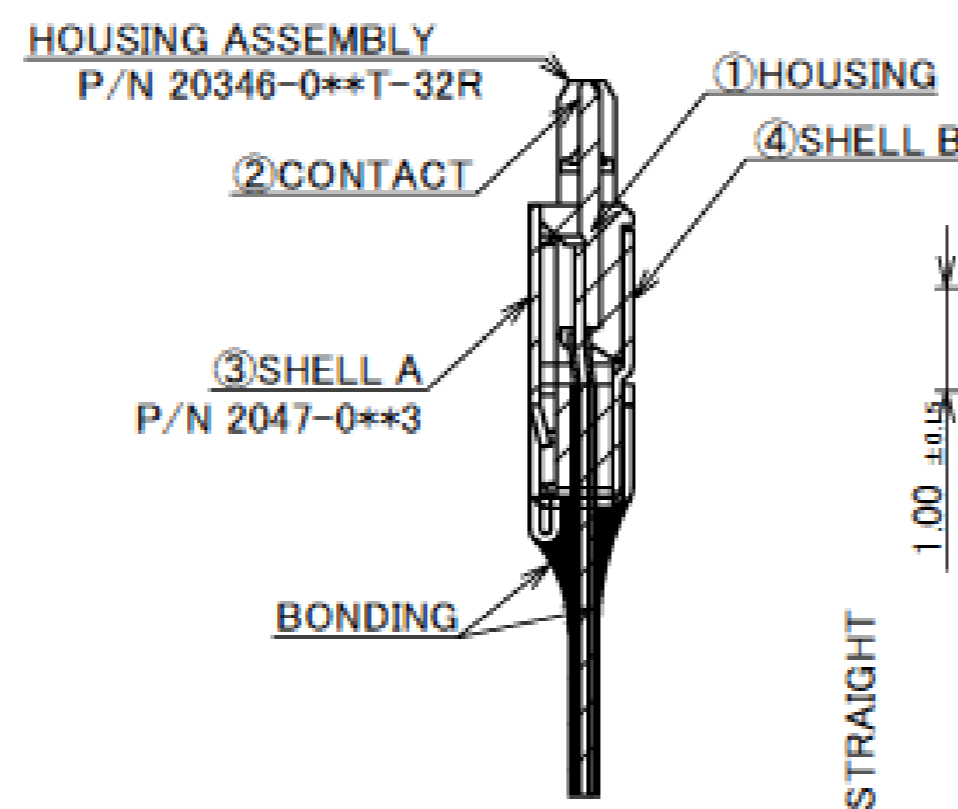
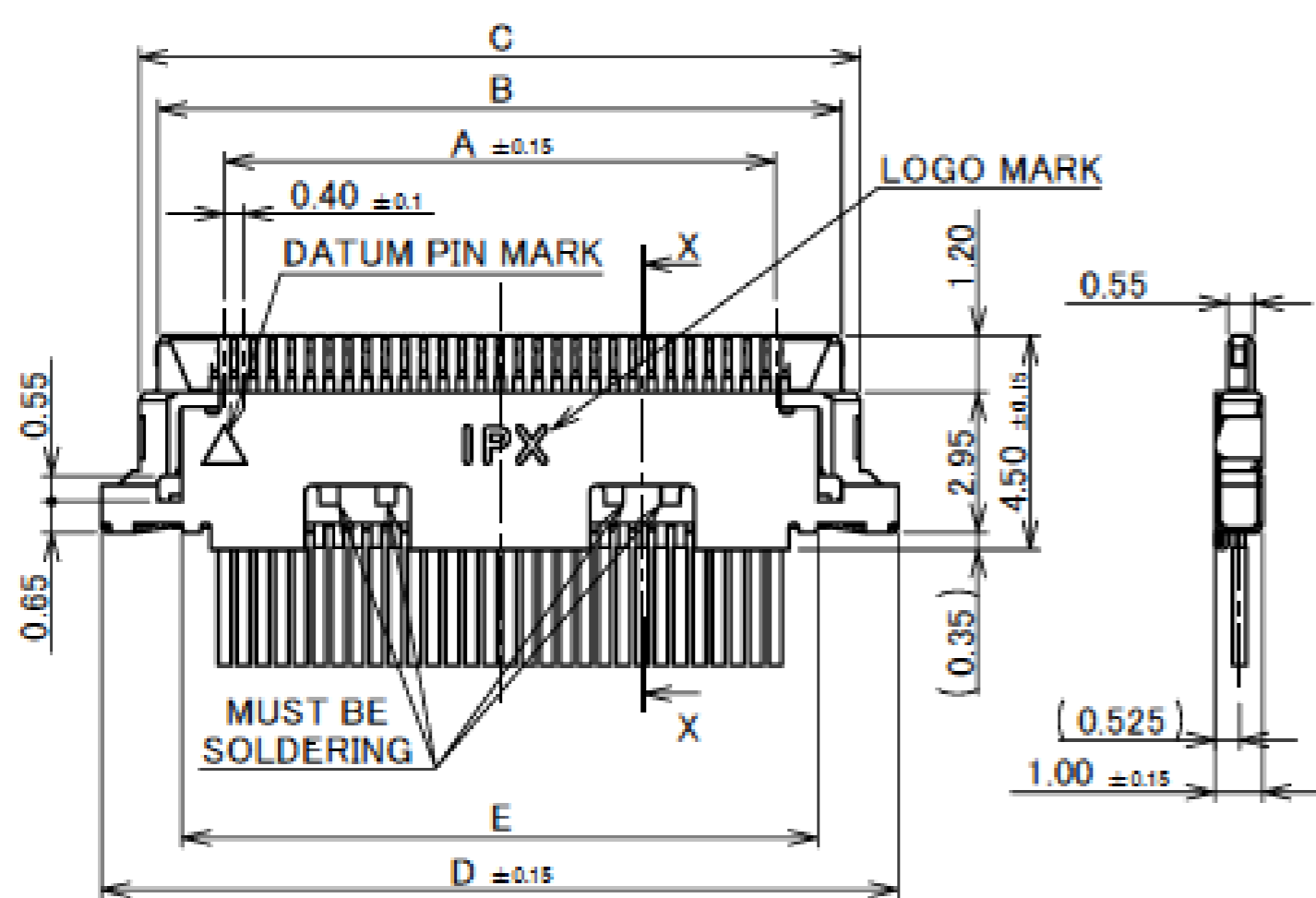
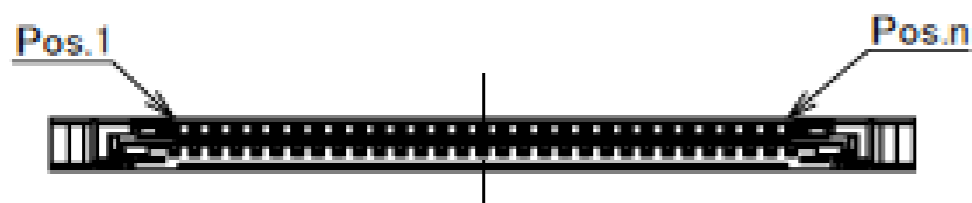
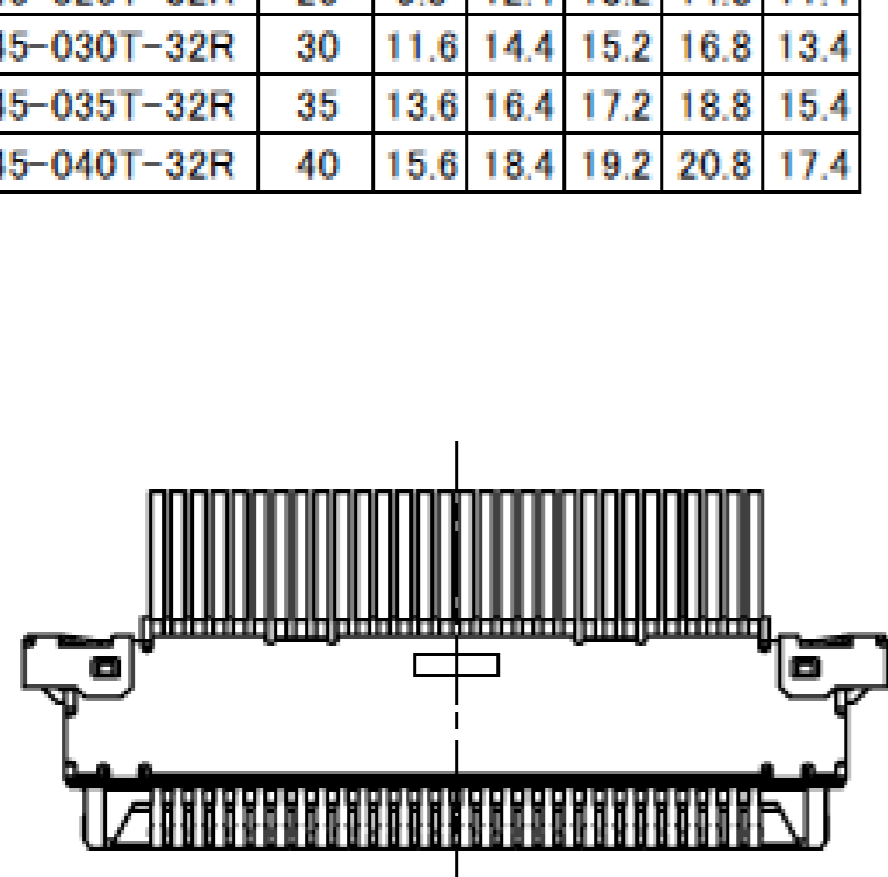
# Component Parts Details

## Component Parts

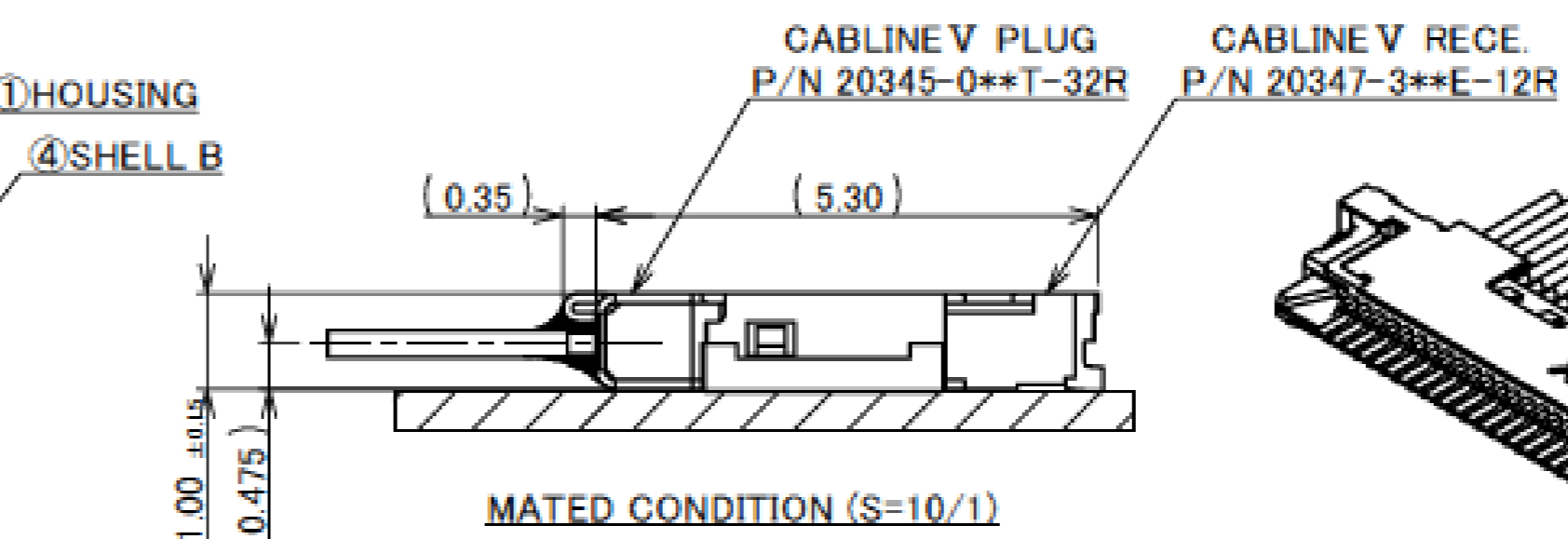


# Plug for Cable Assembly

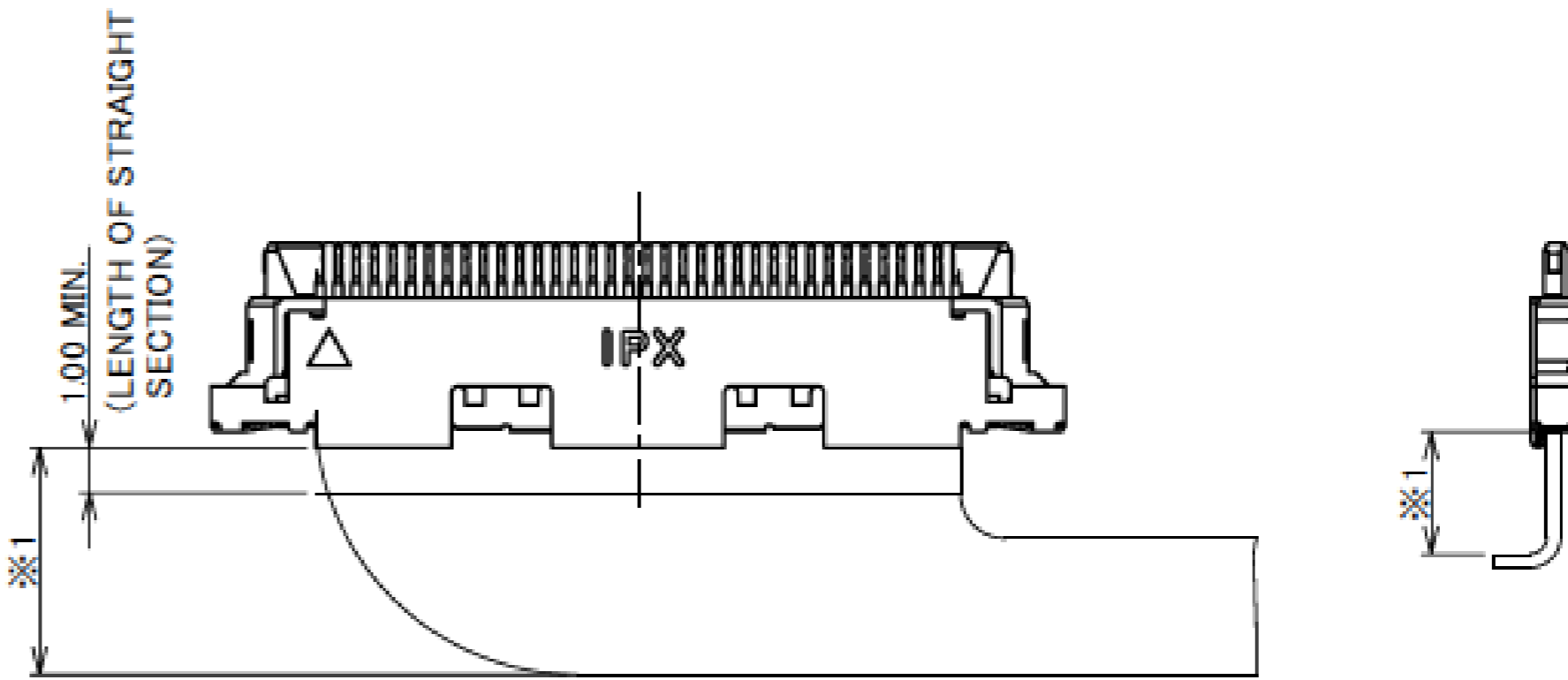
Recommended P/N		20345-0**T-32R				
PART NO.	POS.	A	B	C	D	E
20345-010T-32R	10	3.6	6.4	7.2	8.8	5.4
20345-015T-32R	15	5.6	8.4	9.2	10.8	7.4
20345-020T-32R	20	7.6	10.4	11.2	12.8	9.4
20345-025T-32R	25	9.6	12.4	13.2	14.8	11.4
20345-030T-32R	30	11.6	14.4	15.2	16.8	13.4
20345-035T-32R	35	13.6	16.4	17.2	18.8	15.4
20345-040T-32R	40	15.6	18.4	19.2	20.8	17.4



SECT X-X  
(S=10/1)



MATED CONDITION (S=10/1)



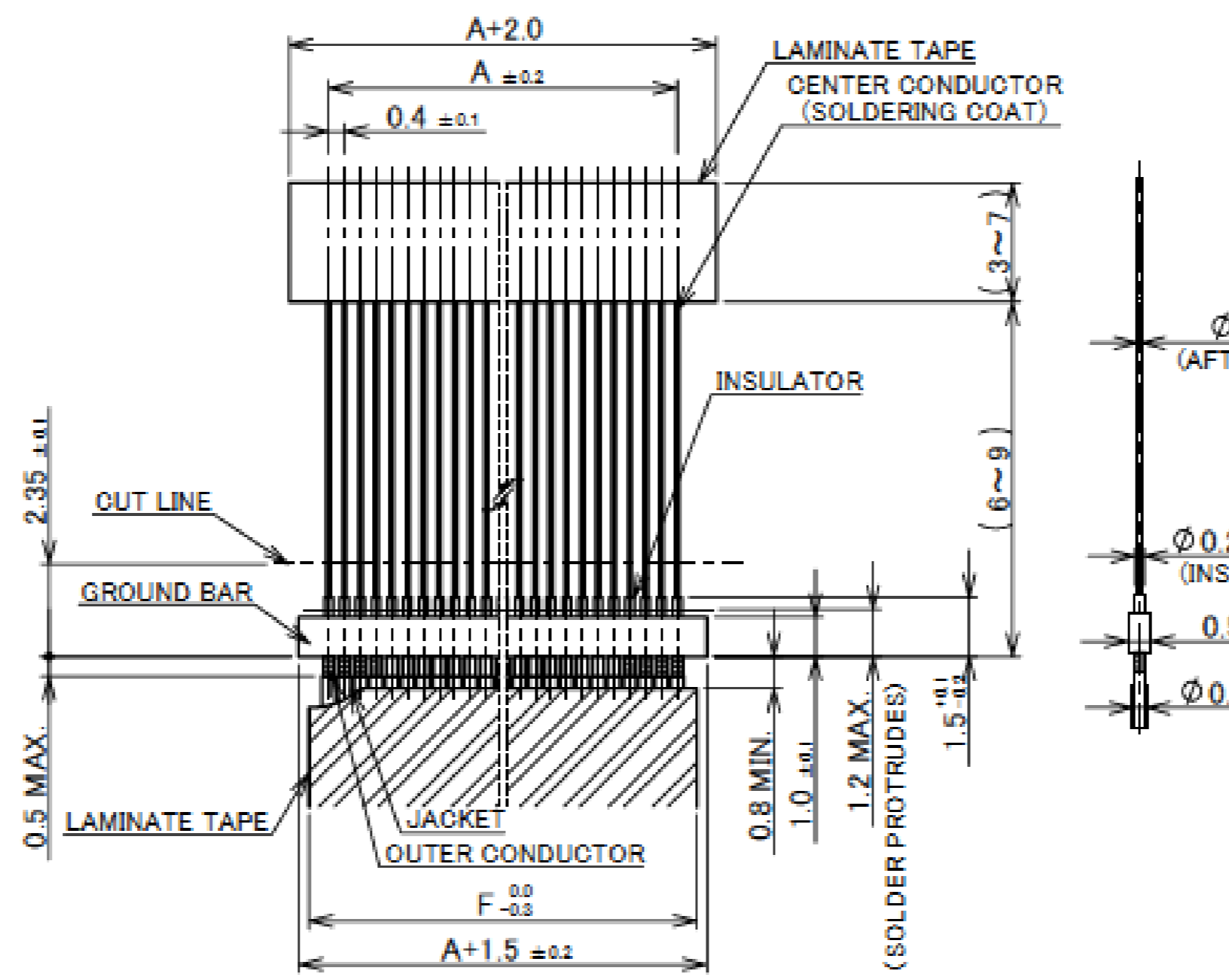
REFERENCE CABLE BENDING DIMENSIONS

※1 : THE BEND DIMENSIONS MAY VARY BASED ON THE SIZE AND QUANTITY OF CABLES. PLEASE CONFIRM THE MINIMUM BENDING RADIUS WITH I-PEX OR THE HARNESS MANUFACTURER.

NO.	DISCRIPTION	MATERIAL	FINISH . REMARKS
4	SHELL B	PHOSPHOR BRONZE	Sn 1.00 μm MIN. OVER Ni 1.00 μm MIN.
3	SHELL A	SUS	Sn 1.00 μm MIN. OVER Ni 0.50 μm MIN.
2	CONTACT	BRASS	ALL OVER: Ni 1.00 μm MIN. UNDER PLATING CONTACT AREA: Au 0.10 μm MIN. SOLDERING AREA: Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0. BRACK

Rev.30

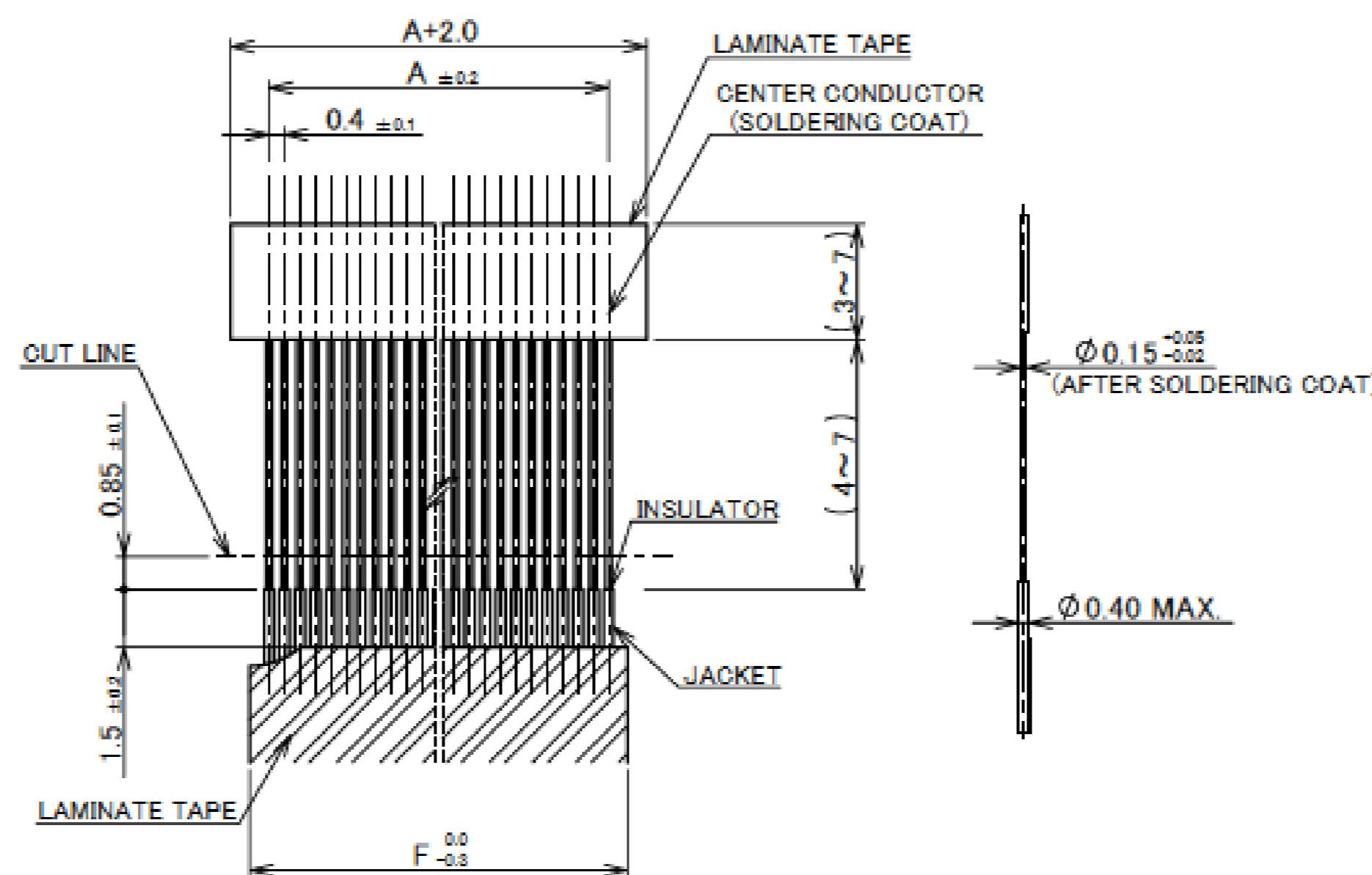
PART NO.	POS.	A	F
20345-010T-32R	10	3.6	4.6
20345-015T-32R	15	5.6	6.6
20345-020T-32R	20	7.6	8.6
20345-025T-32R	25	9.6	10.6
20345-030T-32R	30	11.6	12.6
20345-035T-32R	35	13.6	14.6
20345-040T-32R	40	15.6	16.6



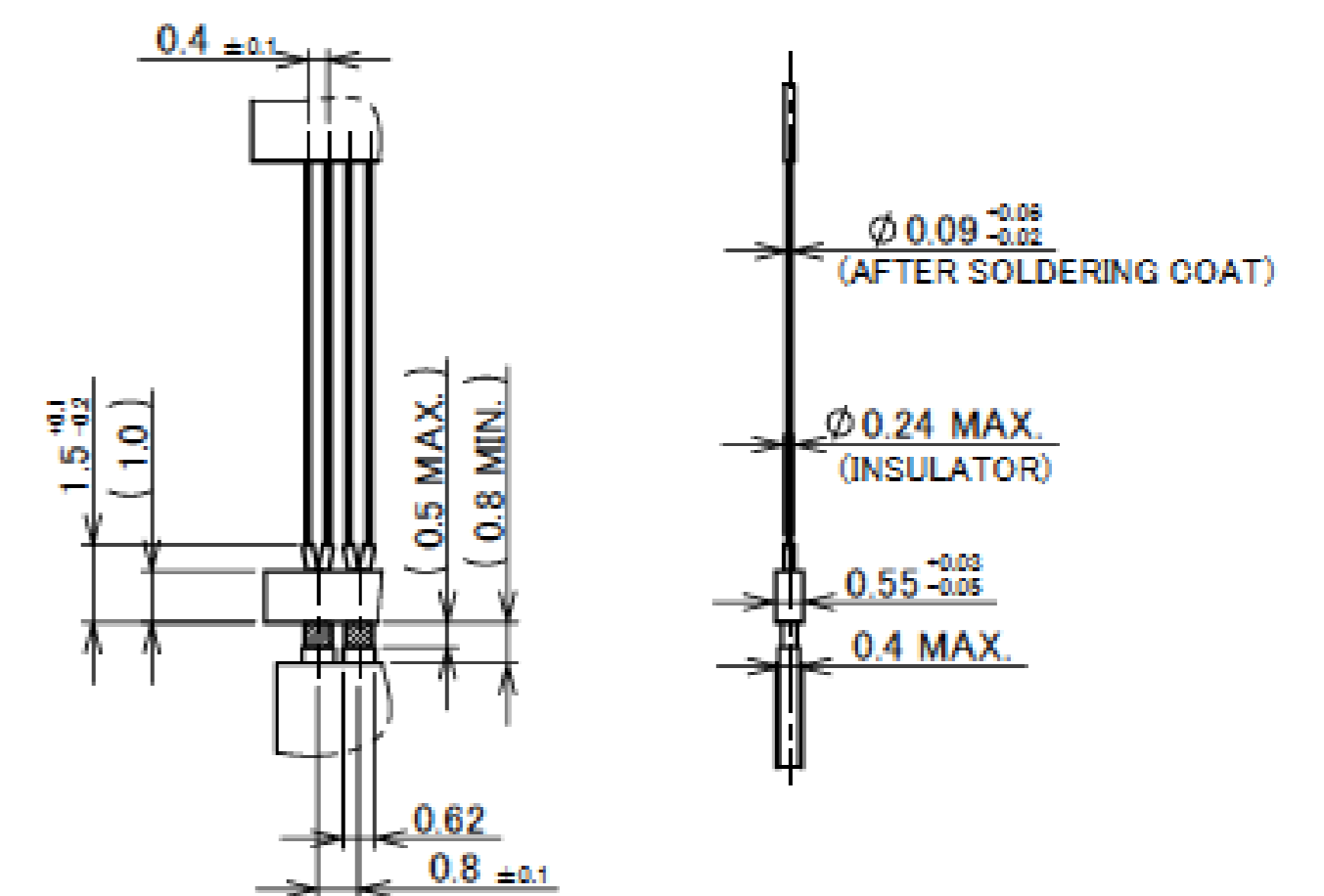
RECOMMENDED MICRO-COAXIAL CABLE

MICRO-COAXIAL CABLE DIMENSION

	a
#40	0.09
#42	0.075
#44	0.063



RECOMMENDED DISCRETE WIRE (AWG#36)



RECOMMENDED TWINAX CABLE DIM (AWG#40)

Rev.30

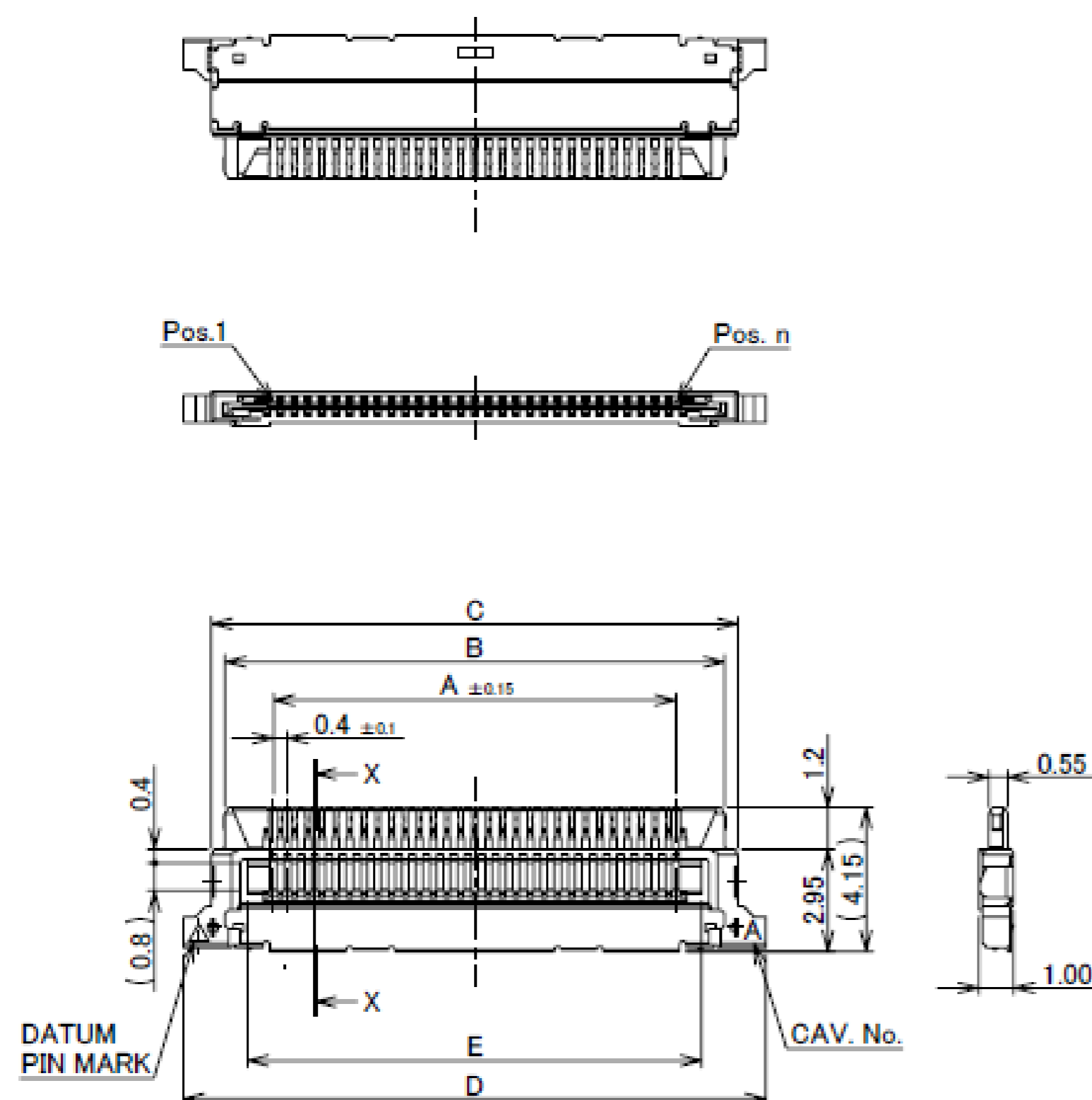
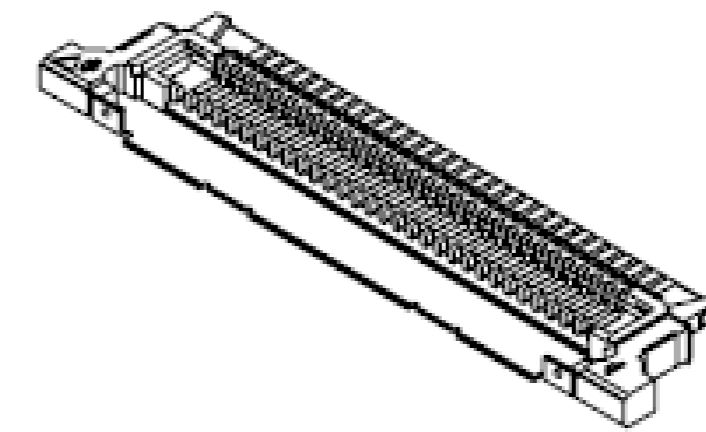
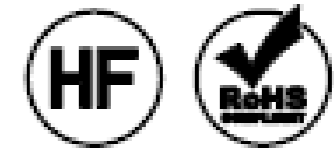
# Plug for Cable Assembly

ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL CABLE : AWG# 44,42,40 DISCRETE WIRE : AWG# 36 TWINAX CABLE : AWG# 40
RATING VOLTAGE	100V AC (PER CONTACT PIN) ※THIS IS THE RATED VOLTAGE OF THE CONNECTOR. PLEASE NOTE THAT THE RATED VOLTAGE MAY VARY IN THE HARNESS DEPENDING ON THE CABLES USED.
RATING AMPERAGE (FOR CONTACT)	0.1A AC/DC [AWG#44] (PER CONTACT PIN / UP TO 40 CONTACTS) 0.24A AC/DC [AWG#42] (PER CONTACT PIN / UP TO 40 CONTACTS) 0.3A AC/DC [AWG#40] (PER CONTACT PIN / UP TO 40 CONTACTS) 0.8A AC/DC [AWG#36] (PER CONTACT PIN / UP TO 12 CONTACTS) ※TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION.
OPERATING TEMPERATURE	233~358K(-40°C~+85°C)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 235mohm MAX.(AWG#36) / AFTER TEST : <math>\triangleleft</math>40mohm MAX. 560mohm MAX.(AWG#40) 650mohm MAX.(AWG#42) 1040mohm MAX.(AWG#44)
GROUND SHELL RESISTANCE	INITIAL : 50mohm MAX. / AFTER TEST : <math>\triangleleft</math>40mohm MAX.
INSULATION RESISTANCE	INITIAL : 1000Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER TEST)	10P : 20.0N MAX. 15P : 22.5N MAX. 20P : 25.0N MAX. 25P : 27.5N MAX. 30P : 30.0N MAX. 35P : 32.5N MAX. 40P : 35.0N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	10P : 4.0N MIN. 15P : 5.0N MIN. 20P : 5.5N MIN. 25P : 6.0N MIN. 30P : 7.0N MIN. 35P : 8.0N MIN. 40P : 8.5N MIN.
CABLE RETENTION FORCE	10P : 4.90N MIN. 15P : 7.35N MIN. 20P : 9.80N MIN. 25P : 12.25N MIN. 30P : 14.70N MIN. 35P : 17.15N MIN. 40P : 19.60N MIN.
PRODUCT SPECIFICATION	P/N : 20345-0**T-32R *** PRS-1461
TEST REPORT	P/N : 20345-0**T-32R *** TR-08068
INSTRUCTION MANUAL	HIM-03005
ASSEMBLY MANUAL	ASM-03002
APPEARANCE CRITERIA NO.	QLS-A***

Rev.30

# Plug Housing Assembly

Recommended P/N	20346-0**T-32R					
PART NO.	POS.	A	B	C	D	E
20346-010T-32R	10	3.6	6.4	7.2	8.8	5.1
20346-015T-32R	15	5.6	8.4	9.2	10.8	7.1
20346-020T-32R	20	7.6	10.4	11.2	12.8	9.1
20346-025T-32R	25	9.6	12.4	13.2	14.8	11.1
20346-030T-32R	30	11.6	14.4	15.2	16.8	13.1
20346-035T-32R	35	13.6	16.4	17.2	18.8	15.1
20346-040T-32R	40	15.6	18.4	19.2	20.8	17.1

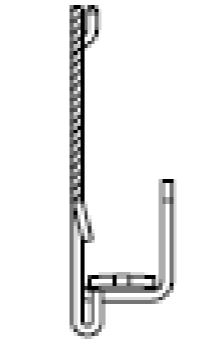
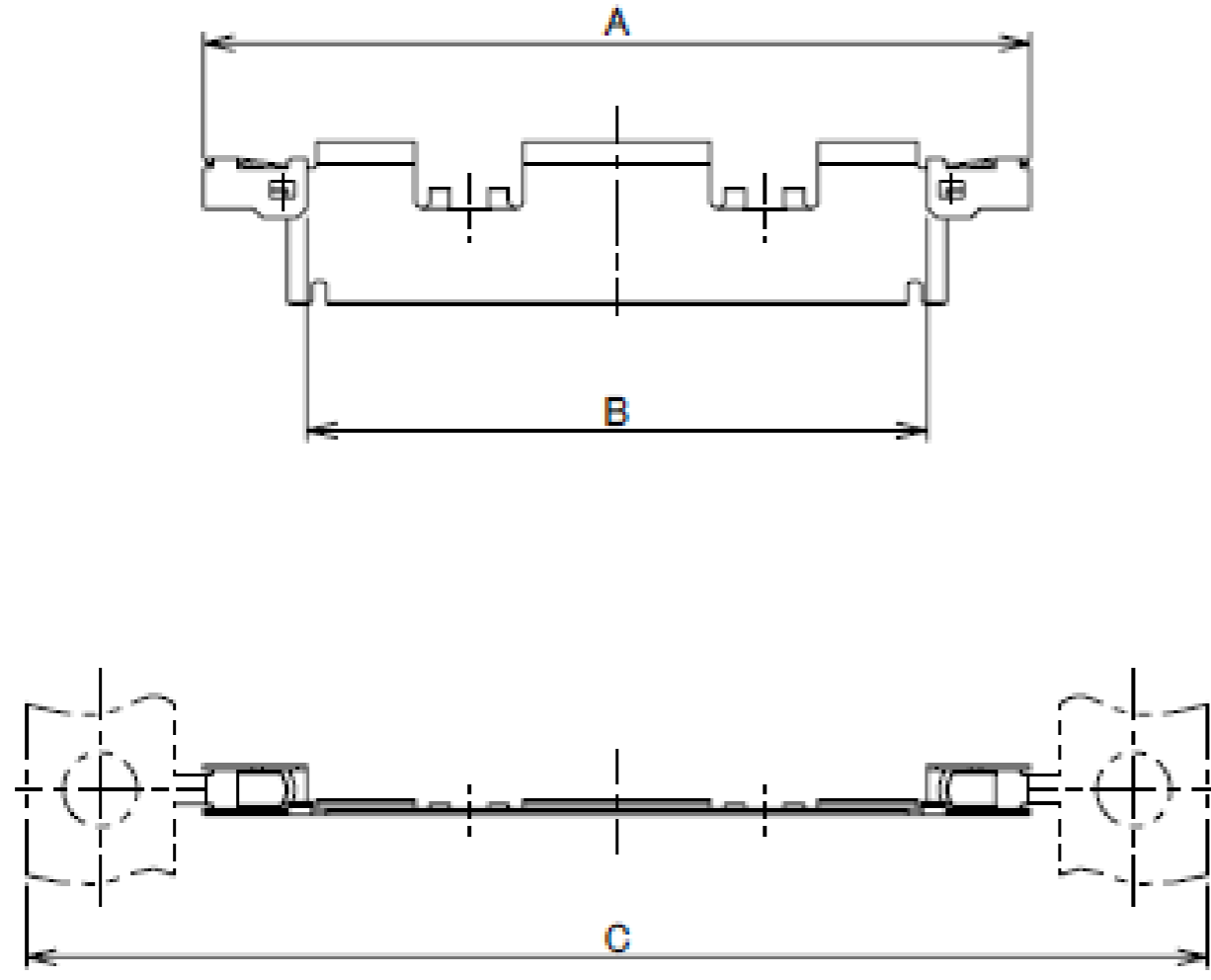
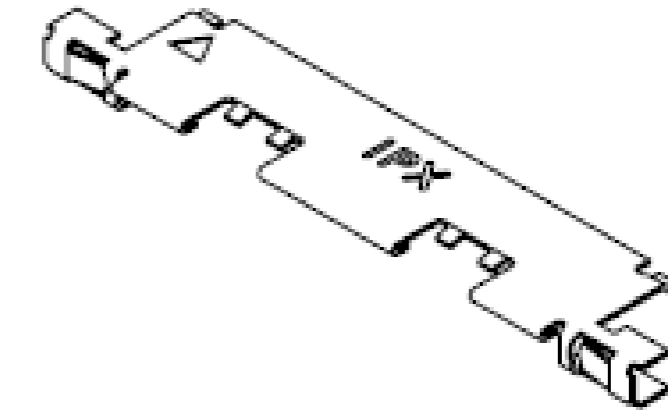
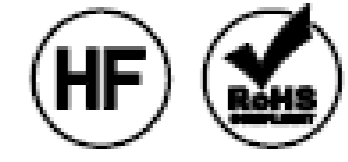


NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	SHELL B	PHOSPHOR BRONZE	Sn 1.00 $\mu$ m OVER Ni 1.00 $\mu$ m MIN.
2	CONTACT	BRASS	ALL OVER: Ni 1.00 $\mu$ m MIN. UNDER PLATING CONTACT AREA: Au 0.10 $\mu$ m MIN. SOLDERING AREA: Au 0.03 $\mu$ m MIN.
1	HOUSING	LCP	UL94V-0, BRACK

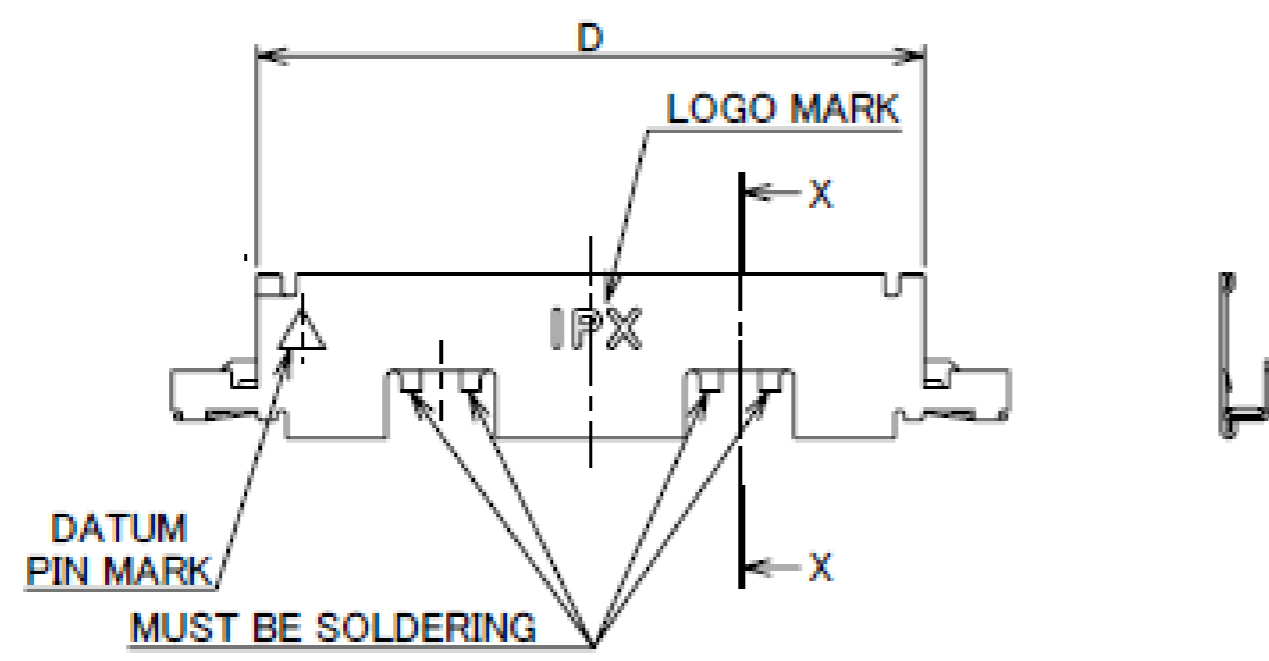
Rev.22

# Plug Shell-A

Recommended P/N		2047-0**3			
PART NO.	A	B	C	D	
2047-0103	8.8	4.6	19.5	5.4	
2047-0153	10.8	6.6	19.5	7.4	
2047-0203	12.8	8.6	19.5	9.4	
2047-0253	14.8	10.6	27.5	11.4	
2047-0303	16.8	12.6	27.5	13.4	
2047-0353	18.8	14.6	27.5	15.4	
2047-0403	20.8	16.6	27.5	17.4	



SECT. X-X  
(S=10/1)

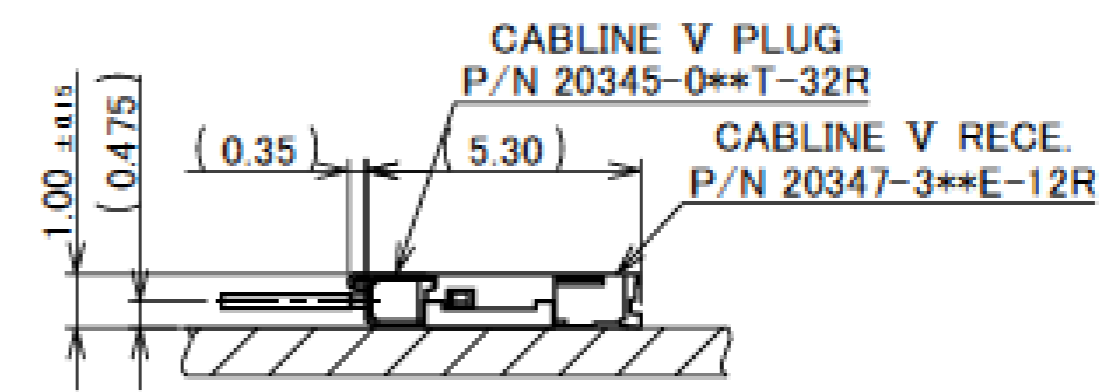
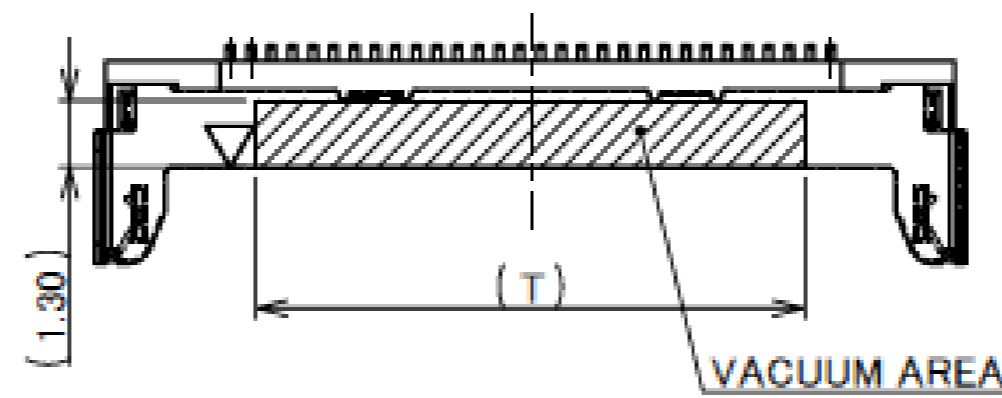
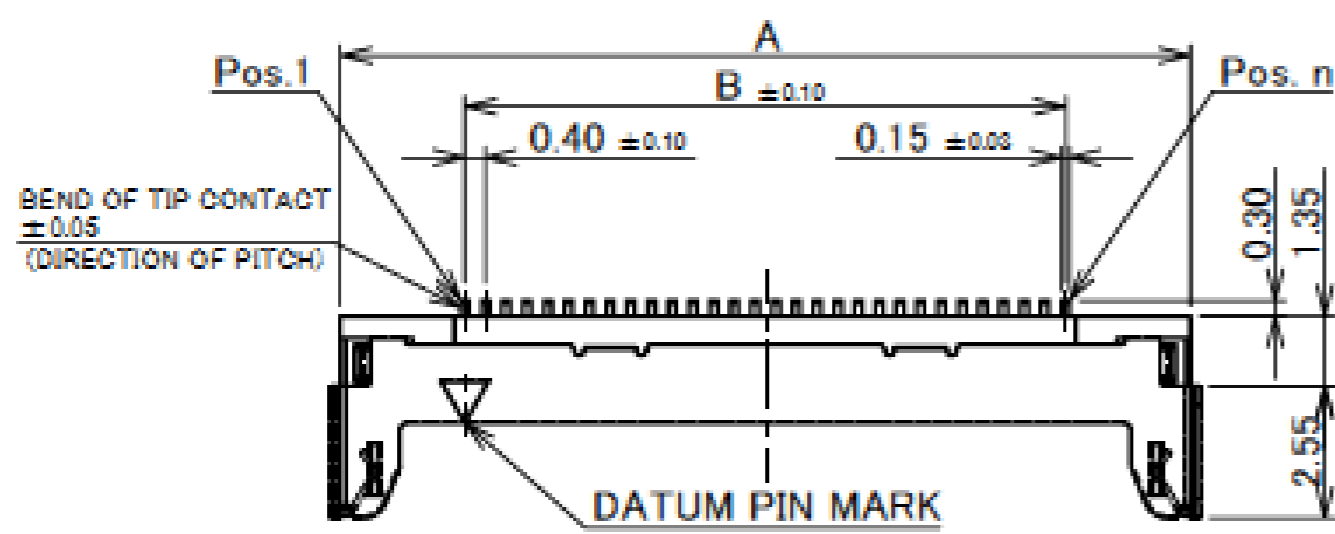


NO.	DISCRIPTION	MATERIAL	FINISH, REMARKS
1	SHELL A	SUS	Sn 1.00 μm MIN. OVER Ni 0.50 μm MIN.

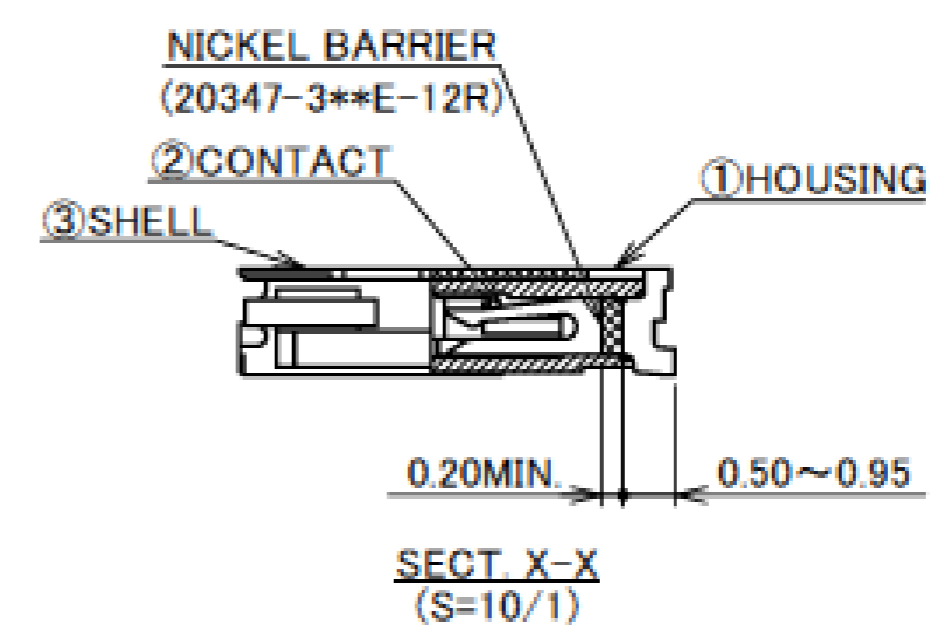
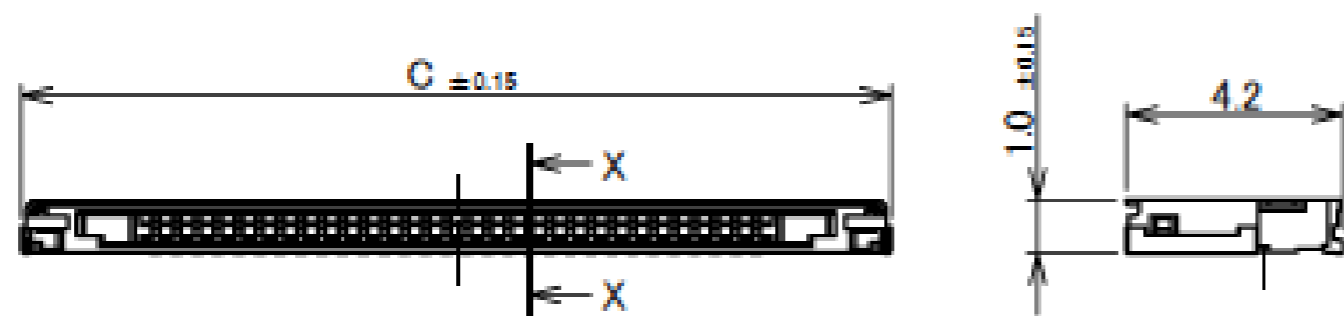
Rev.21

# Receptacle Assembly

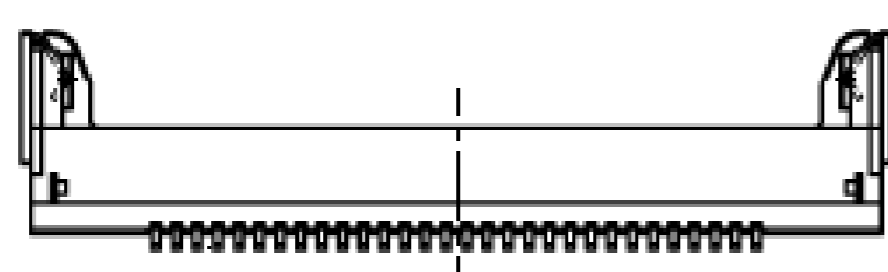
Recommended P/N		20347-3**E-12R			
PART NO.	POS.	A	B	C	T
20347-310E-12R	10	8.40	3.60	8.80	2.60
20347-315E-12R	15	10.40	5.60	10.80	4.60
20347-320E-12R	20	12.40	7.60	12.80	6.60
20347-325E-12R	25	14.40	9.60	14.80	8.60
20347-330E-12R	30	16.40	11.60	16.80	10.60
20347-335E-12R	35	18.40	13.60	18.80	12.60
20347-340E-12R	40	20.40	15.60	20.80	14.60



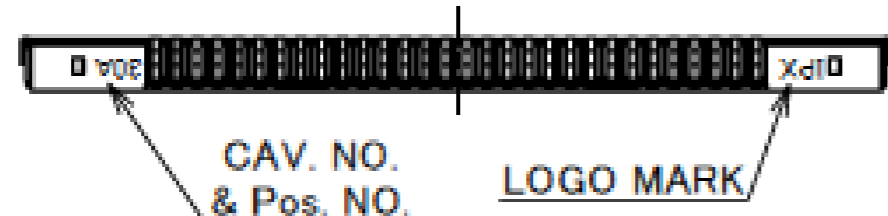
MATED CONDITION(S=5/1)



SECT. X-X  
(S=10/1)



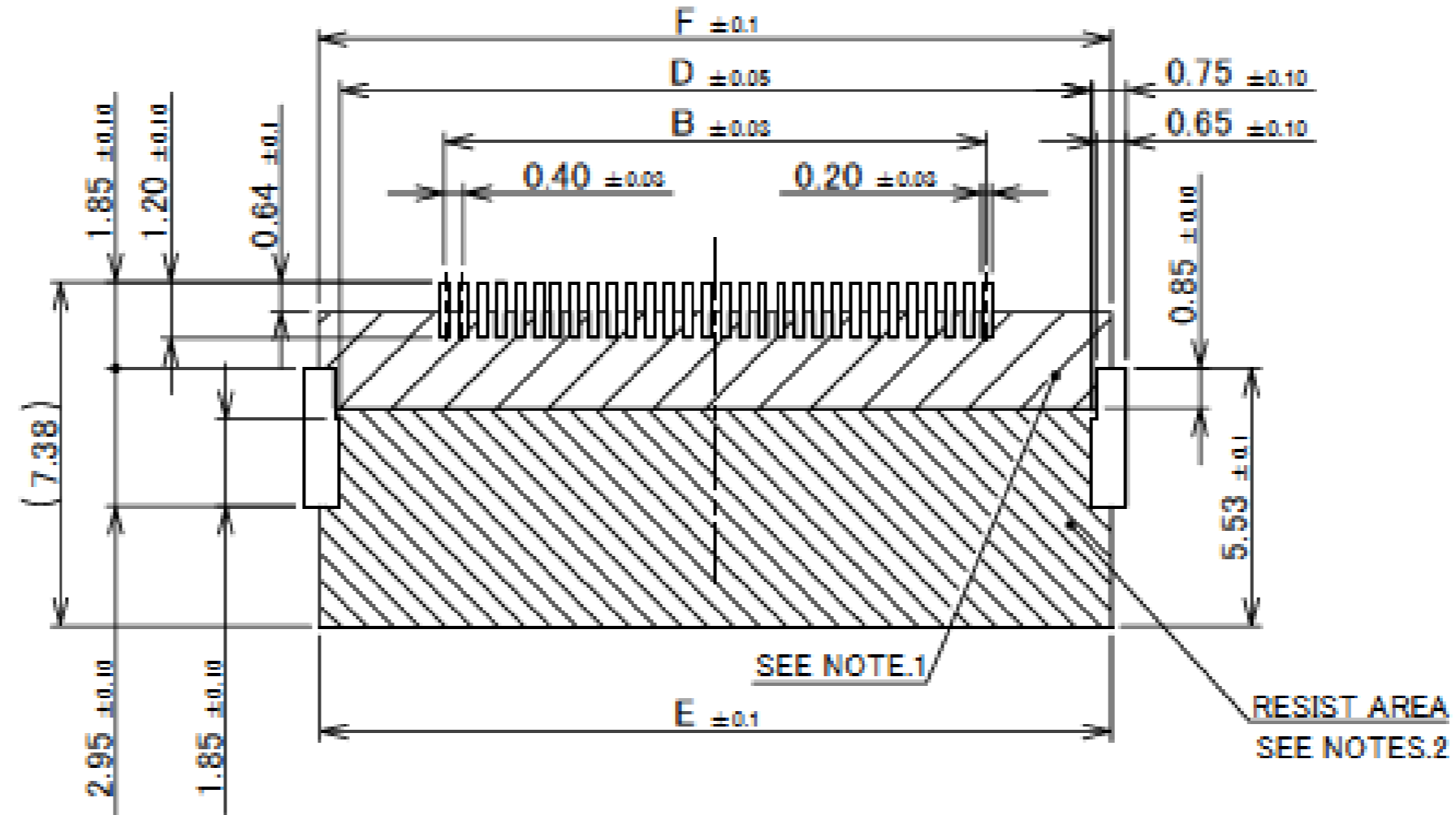
NO.	DISCRIPTION	MATERIAL	FINISH, REMARKS
3	SHELL	PHOSPHOR BRONZE	Sn 1.00 μm MIN. OVER Ni 1.00 μm MIN.
2	CONTACT	PHOSPHOR BRONZE	ALL OVER: Ni 1.00 μm MIN. UNDER PLATING CONTACT AREA: Au 0.10 μm MIN. SOLDERING AREA: Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0. BRACK



Rev.37

# Receptacle Assembly

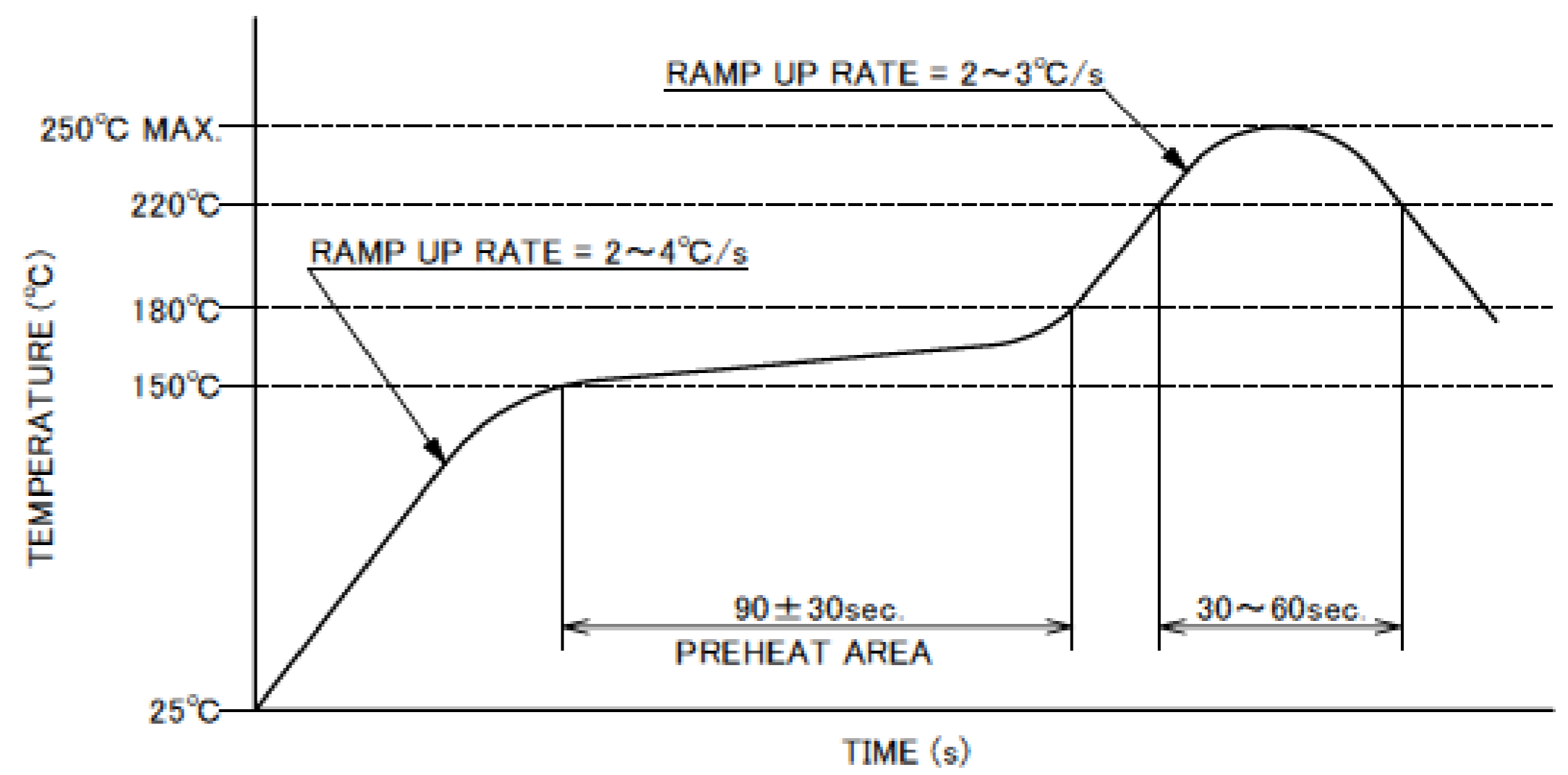
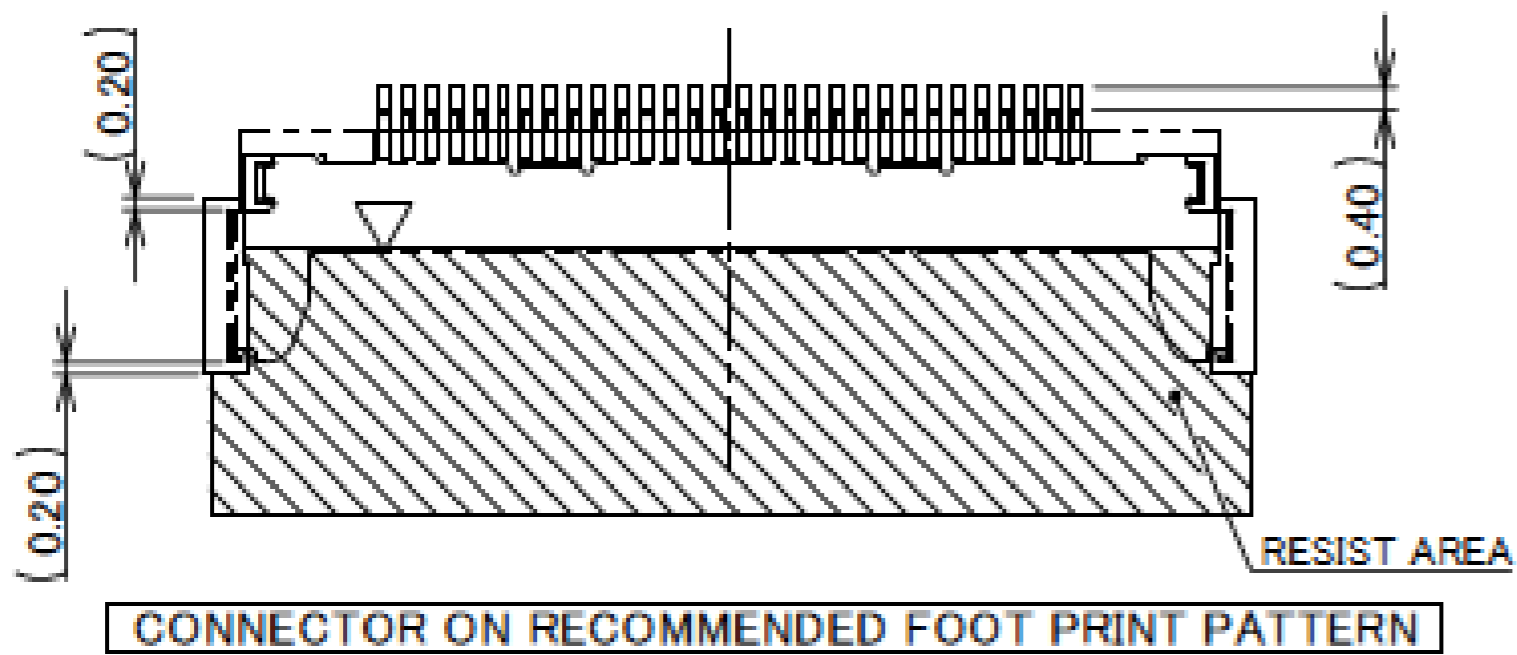
PART NO.	POS.	B	D	E	F
20347-310E-12R	10	3.60	8.10	9.94	8.97
20347-315E-12R	15	5.60	10.10	10.94	10.97
20347-320E-12R	20	7.60	12.10	12.94	12.97
20347-325E-12R	25	9.60	14.10	14.94	14.97
20347-330E-12R	30	11.60	16.10	16.94	16.97
20347-335E-12R	35	13.60	18.10	18.94	18.97
20347-340E-12R	40	15.60	20.10	20.94	20.97



**RECOMMENDED FOOT PRINT PATTERN & METALMASK LAYOUT**  
 RECOMMENDED METALMASK THICKNESS :  $t=0.12$

- NOTES.  
 1. DO NOT MOUNT ANOTHER COMPONENTS IN THIS AREA.  
 2. SOLDER RESIST MUST BE APPLIED TO THIS AREA.

Rev.37



**REFLOW TEMPERATURE PROFILE**  
 SENJU METAL INDUSTRY CO., LTD. : M705-SHF(Sn96.5 Ag3.0 Cu0.5)

Rev.37

# Receptacle Assembly

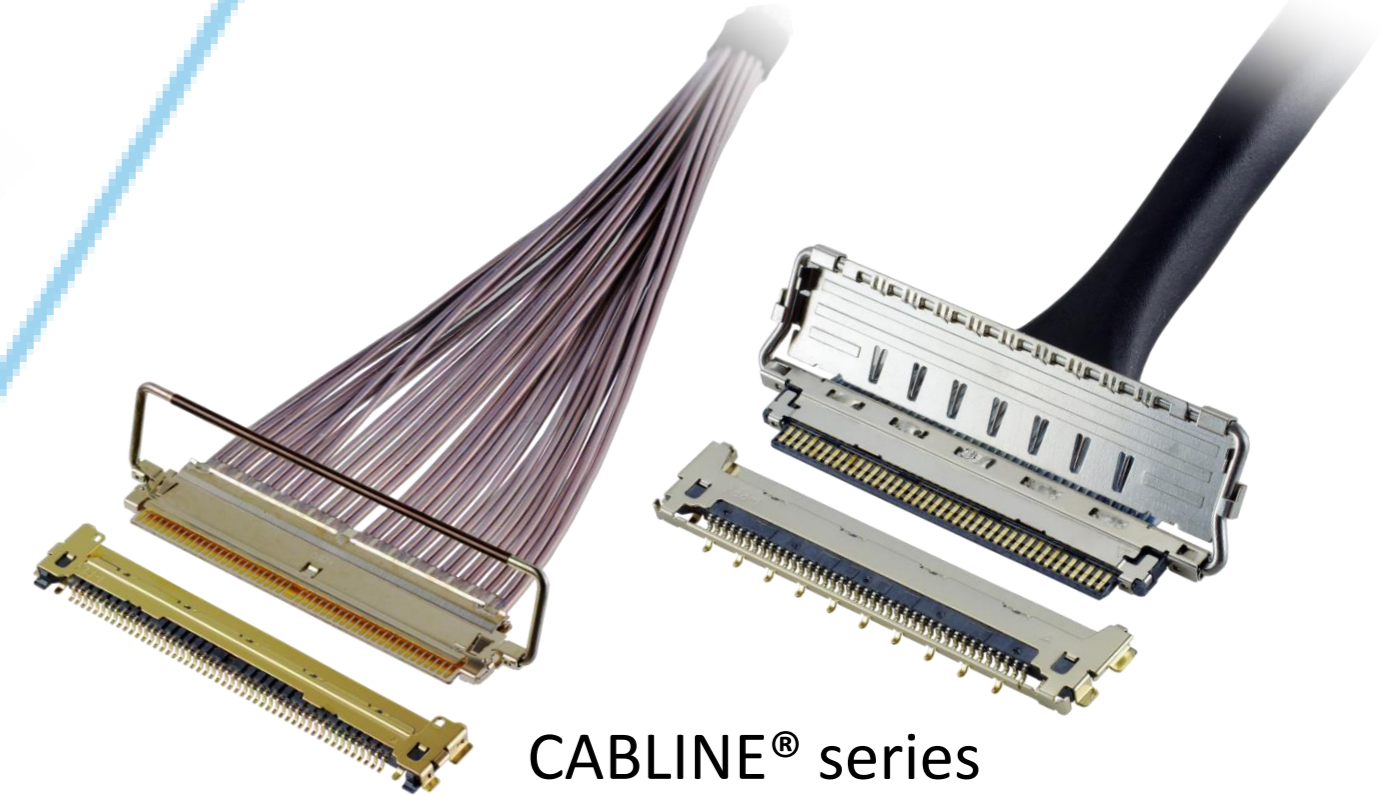
ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL CABLE : AWG# 44,42,40 DISCRETE WIRE : AWG# 36 TWINAX : AWG# 40
RATING VOLTAGE	100V AC (PER CONTACT PIN)
RATING AMPERAGE (FOR CONTACT)	0.1A AC/DC [AWG#44] PER CONTACT PIN / UP TO 40 CONTACTS 0.24A AC/DC [AWG#42] PER CONTACT PIN / UP TO 40 CONTACTS 0.3A AC/DC [AWG#40] PER CONTACT PIN / UP TO 40 CONTACTS 0.8A AC/DC [AWG#36] PER CONTACT PIN / UP TO 12 CONTACTS ※TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION.
OPERATING TEMPERATURE	233~358K(-40°C~+85°C)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 235mohm MAX.(AWG#36) / AFTER TEST : $\triangle$ 140mohm MAX. 560mohm MAX.(AWG#40) 650mohm MAX.(AWG#42) 1040mohm MAX.(AWG#44)
GROUND SHELL RESISTANCE	INITIAL : 50mohm MAX. / AFTER TEST : $\triangle$ 140mohm MAX.
INSULATION RESISTANCE	INITIAL : 1000Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER TEST)	10P : 20.0N MAX. 15P : 22.5N MAX. 20P : 25.0N MAX. 25P : 27.5N MAX. 30P : 30.0N MAX. 35P : 32.5N MAX. 40P : 35.0N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	10P : 4.0N MIN. 15P : 5.0N MIN. 20P : 5.5N MIN. 25P : 6.0N MIN. 30P : 7.0N MIN. 35P : 8.0N MIN. 40P : 8.5N MIN.
CABLE RETENTION FORCE	10P : 4.90N MIN. 15P : 7.35N MIN. 20P : 9.80N MIN. 25P : 12.25N MIN. 30P : 14.70N MIN. 35P : 17.15N MIN. 40P : 19.60N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	P/N 20347-3**E-12R : PRS-1461
TEST REPORT	P/N 20347-3**E-12R : TR-08068
PACKING STANDARD	300-308
INSTRUCTION MANUAL	HIM-03005
ASSEMBLY MANUAL	ASM-03002
APPEARANCE CRITERIA NO.	QLS-A***

Rev.37

# Custom Connectors Available

 RF Connectors

MHF® series



CABLINE® series



Micro-Coaxial/Twinax Connectors

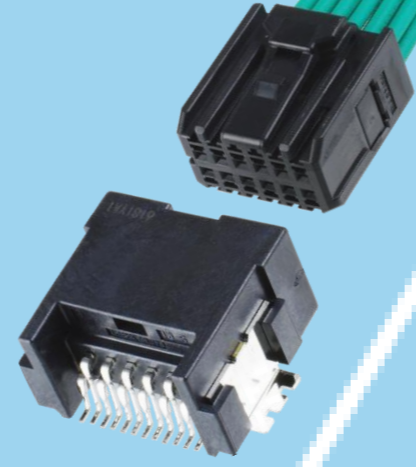


Wire-to-Board Connectors/Terminals

AP series



ISH® series



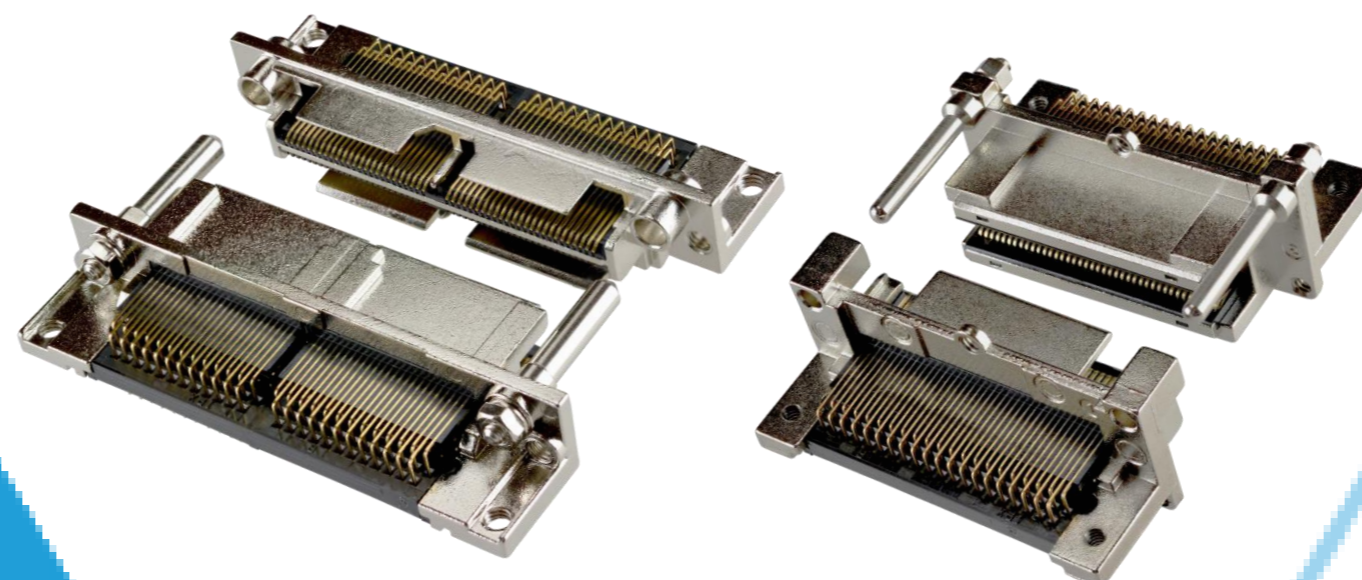
NOVASTACK® series



Board-to-Board Connectors



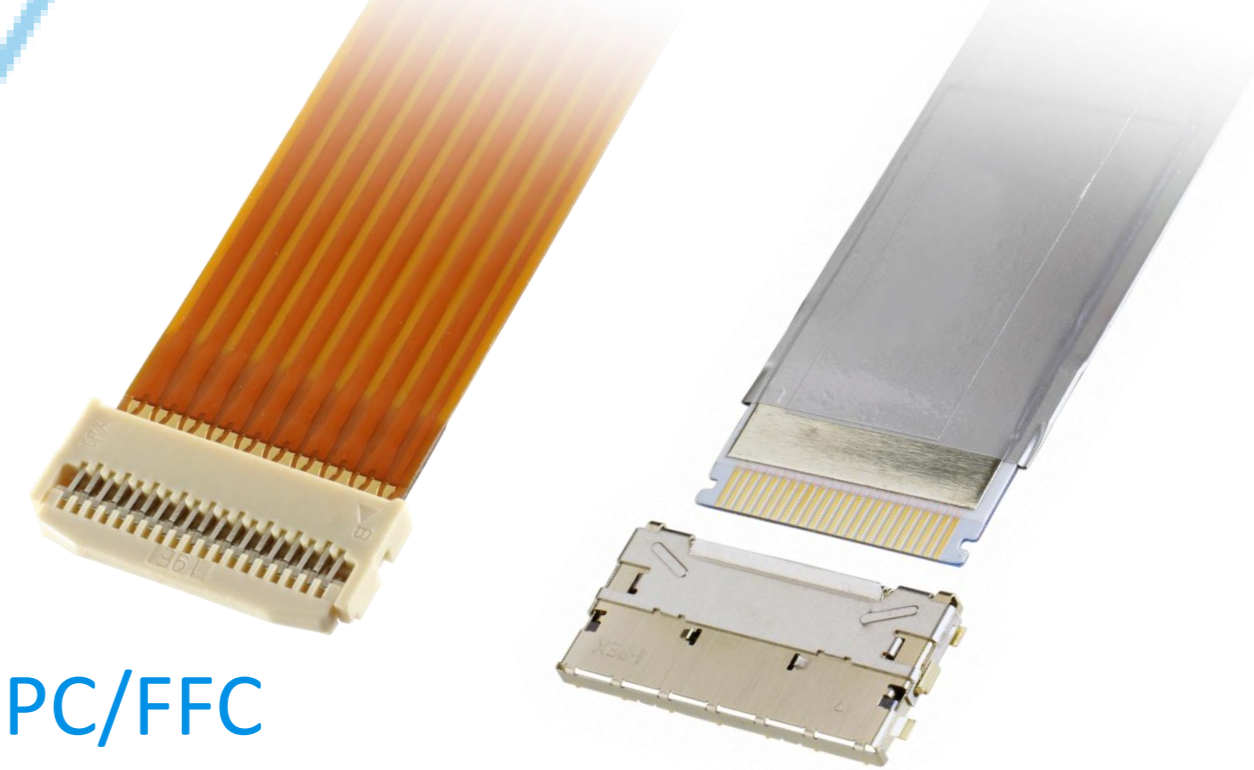
I/O Connectors



MINIDOCK™ series

MINIFLEX® series

EVAFLEX® series



FPC/FFC Connectors



Inquiry



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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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