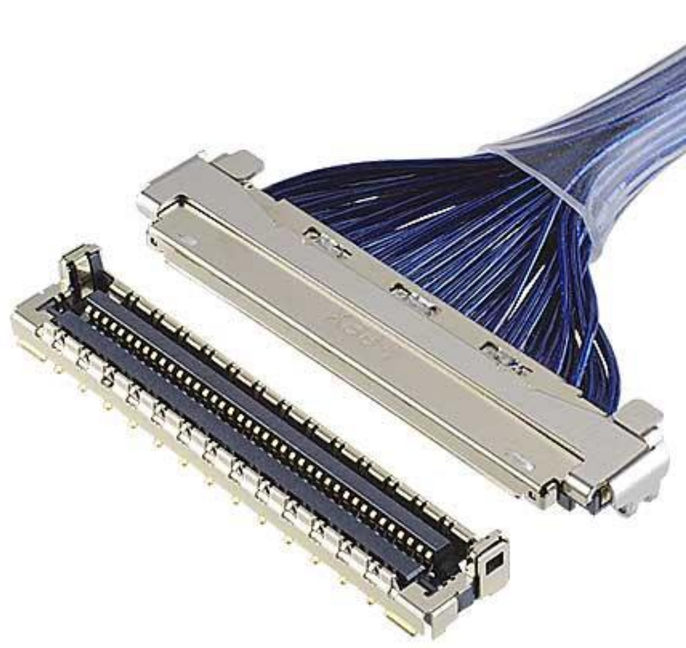
CABLINE®-UM



フルシールド、多点グランド接点、メカニカルロック付き、高速伝送対応（20Gbps/lane）、0.4mmピッチ、ライトアングル縦嵌合タイプ細線同軸コネクタ

Product Specifications:

Mating type		Right Angle Vertical
Board Pitch (mm)		0.4
Wiping Length (mm)		0.65
Mated size (mm)	Height	With Lock Cover : 2.2 +/- 0.15
		Without Lock Cover : 2.0 +/- 0.15
		With Pull Tape Holder: 2.2 +/- 0.15
	Width	Formula: 5.0 + (0.4 * ? p)
	Depth	5.0 with lock cover
Pin Counts	Range	Up to 60
	Available	30, 40, 60

Applicable Cable Size:

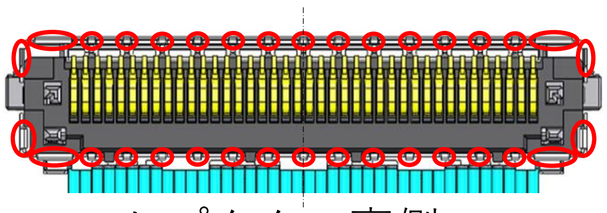
Maximum O.D. (mm)	0.4
Micro-Coaxial for Signal (AWG)	45 ohm: #38 or smaller
	50 ohm: #40 or smaller
Twinax (AWG)	#40, #42
Discrete (AWG)	#34 or smaller

Applicable Standards (Reference Only):

USB4/Thunderbolt 4 (20 Gbps/lane), PCIe Gen 4 (16GT/s), eDP HBR 3 (8.1 Gbps)

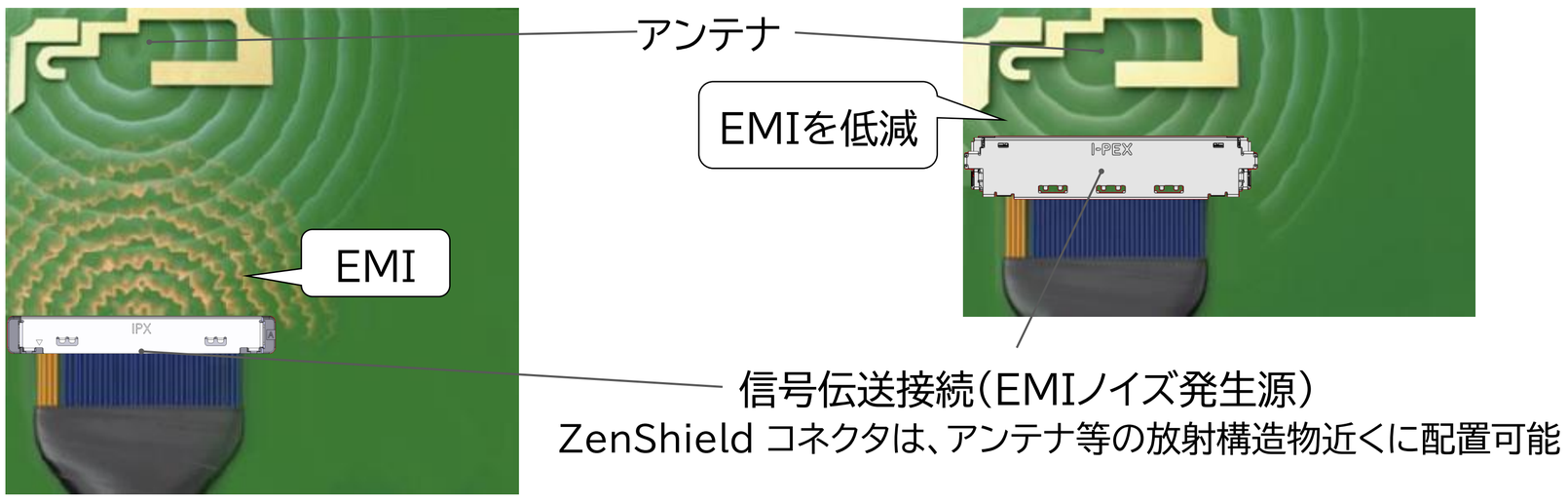
*記載のない極数の対応状況についてはお問い合わせください。

多点グランド接点による360度ZenShield®フルシールドでEMI対策



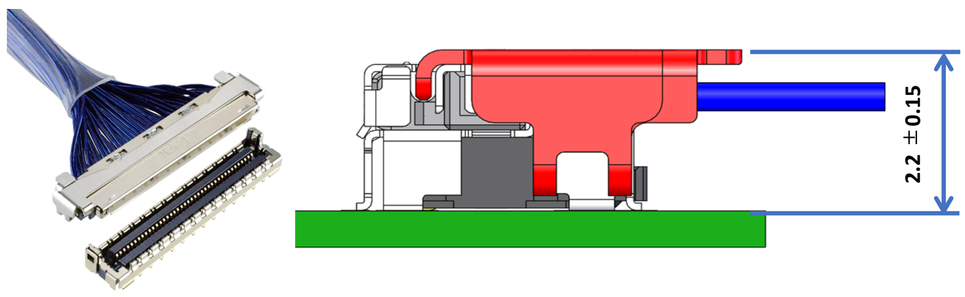
レセプタクル裏側

グランドSMT点

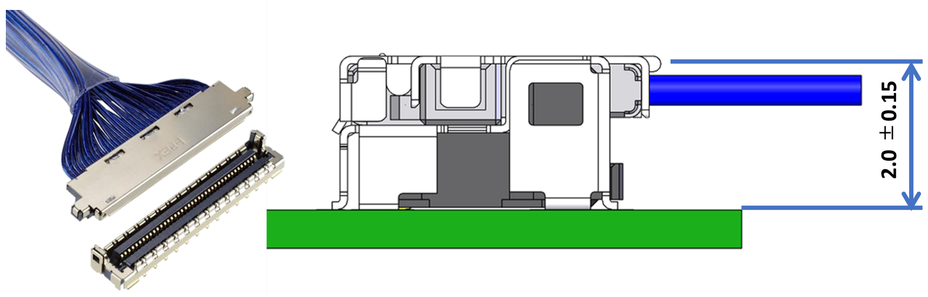


豊富なバリエーション展開

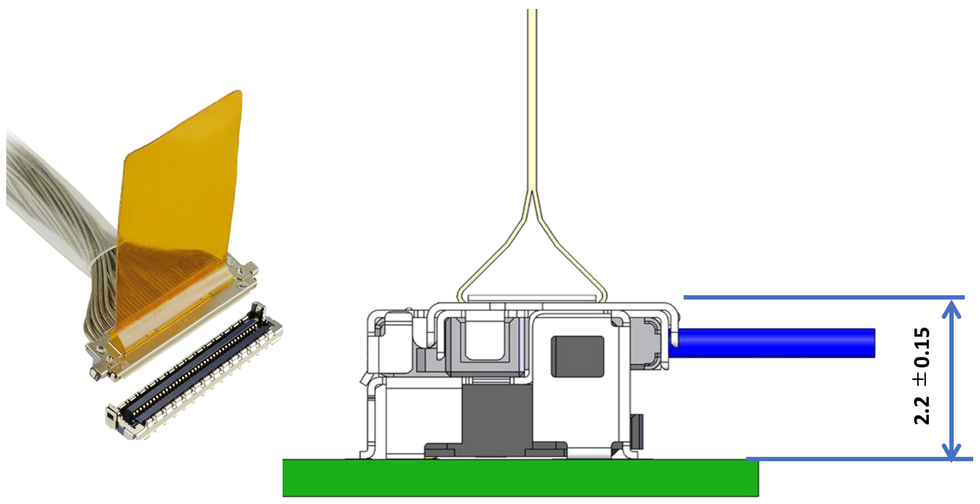
Lock Cover付---嵌合保持力増強



Lock Coverなし---低背

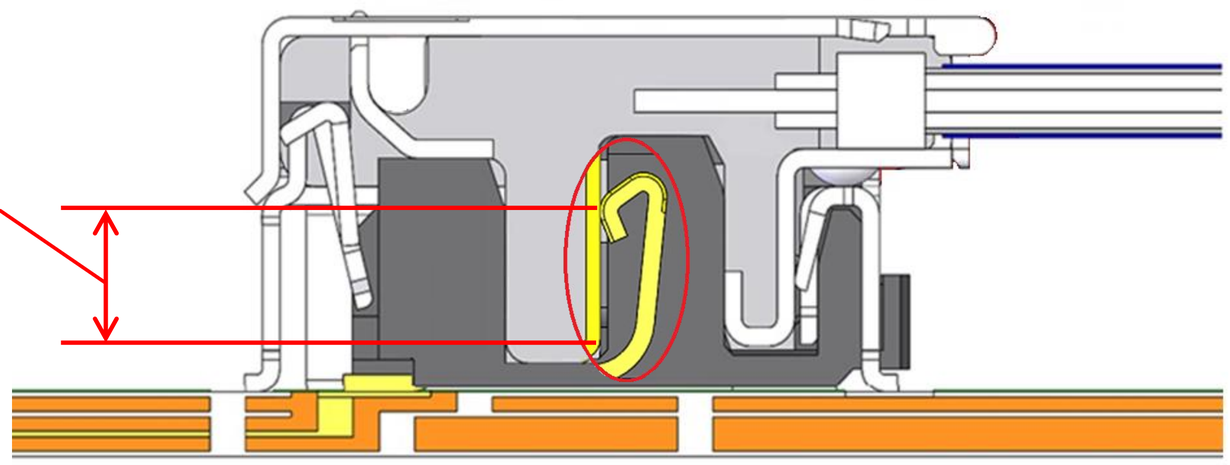


Pull tape holder付き---抜去作業効率向上



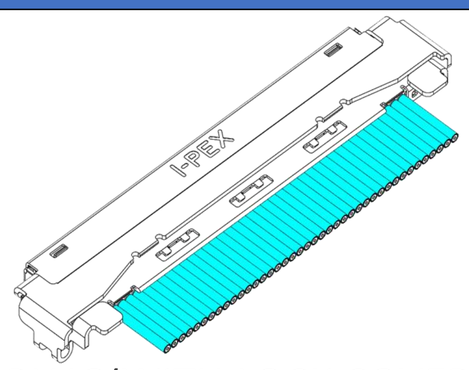
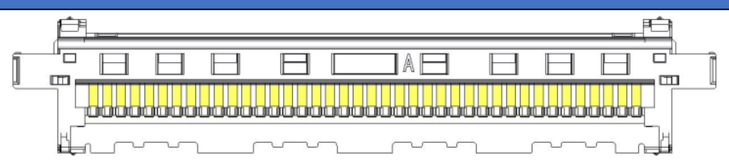
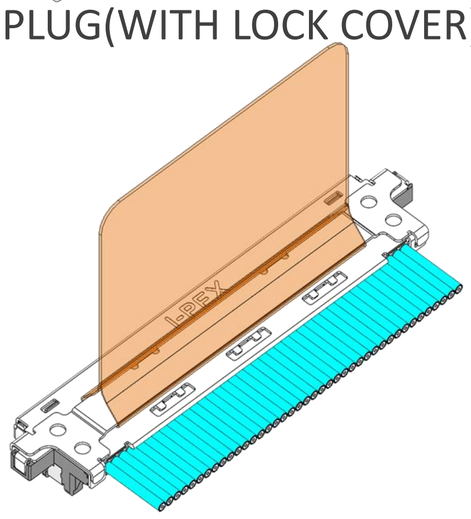
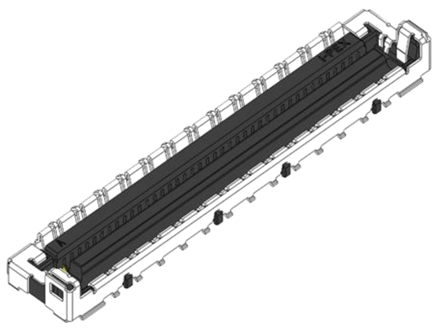
高いコンタクト接触信頼性

有効嵌合長：0.65mm Min.



Component Parts Details

Component Parts

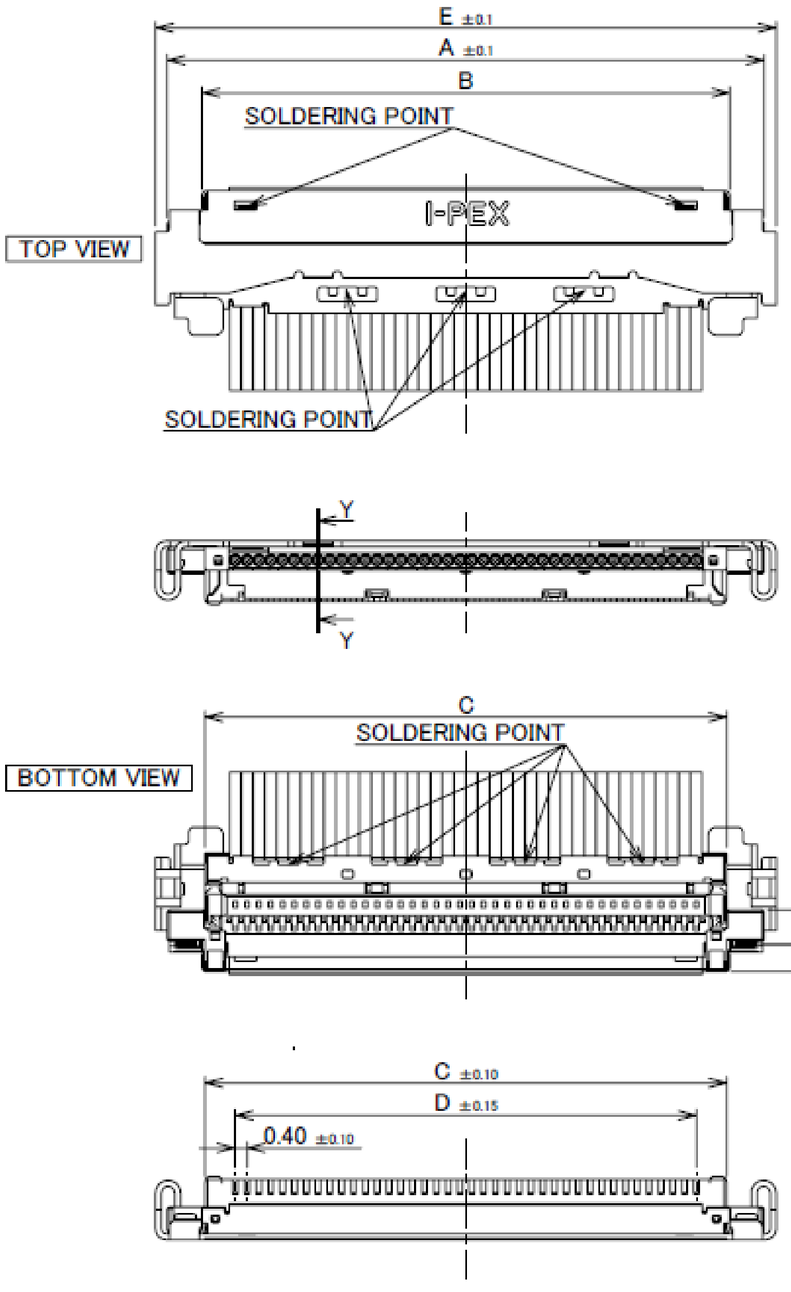
Connector parts	Plug parts
 PLUG(WITH LOCK COVER)	 PLUG HOUSING ASSEMBLY
 PLUG(WITH PULL TAPE HOLDER)	PLUG SHELL-A
 RECEPTACLE	PLUG LOCK COVER
	PLUG PULL TAPE HOLDER

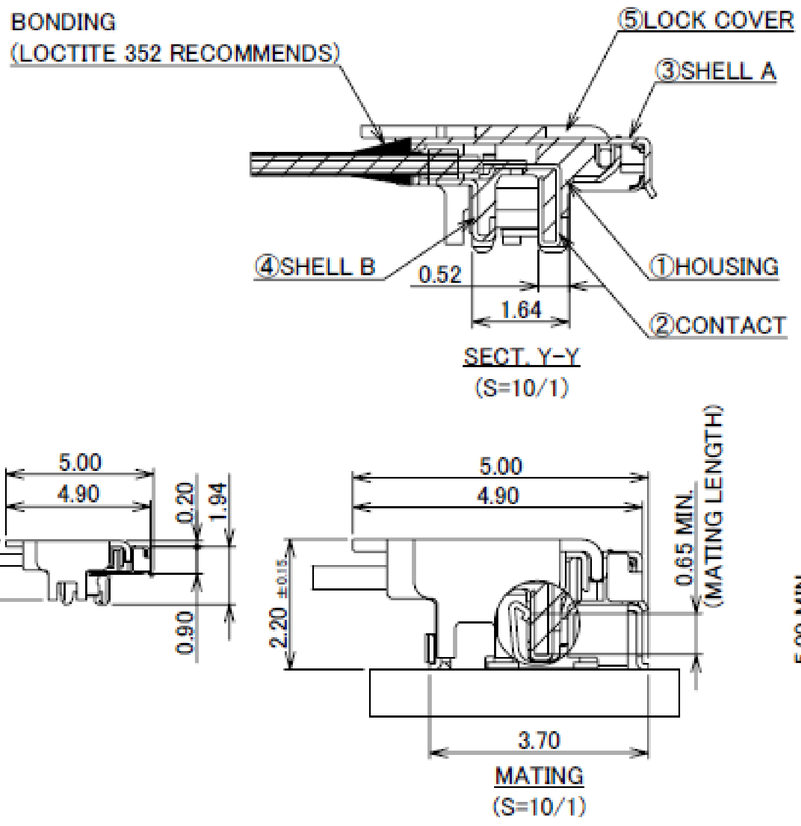
Plug for Cable Assembly

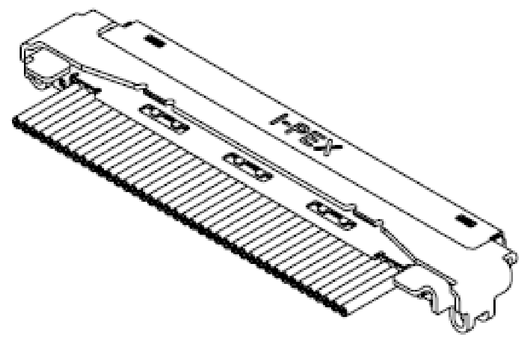
Recommended P/N	20877-0**T-01					
PART NO.	Pos.	A	B	C	D	E
20877-030T-01	30	16.20	13.85	13.65	11.60	17.00
20877-040T-01	40	20.20	17.85	17.65	15.60	21.00
20877-060T-01	60	28.20	25.85	25.65	23.60	29.00

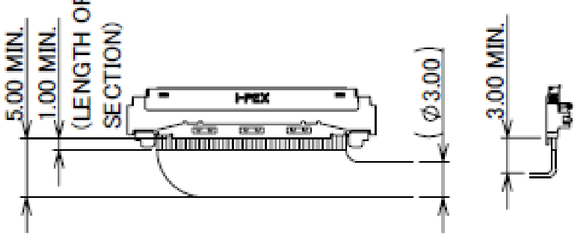
With LOCK COVER

Halogen Free RoHS Compliant









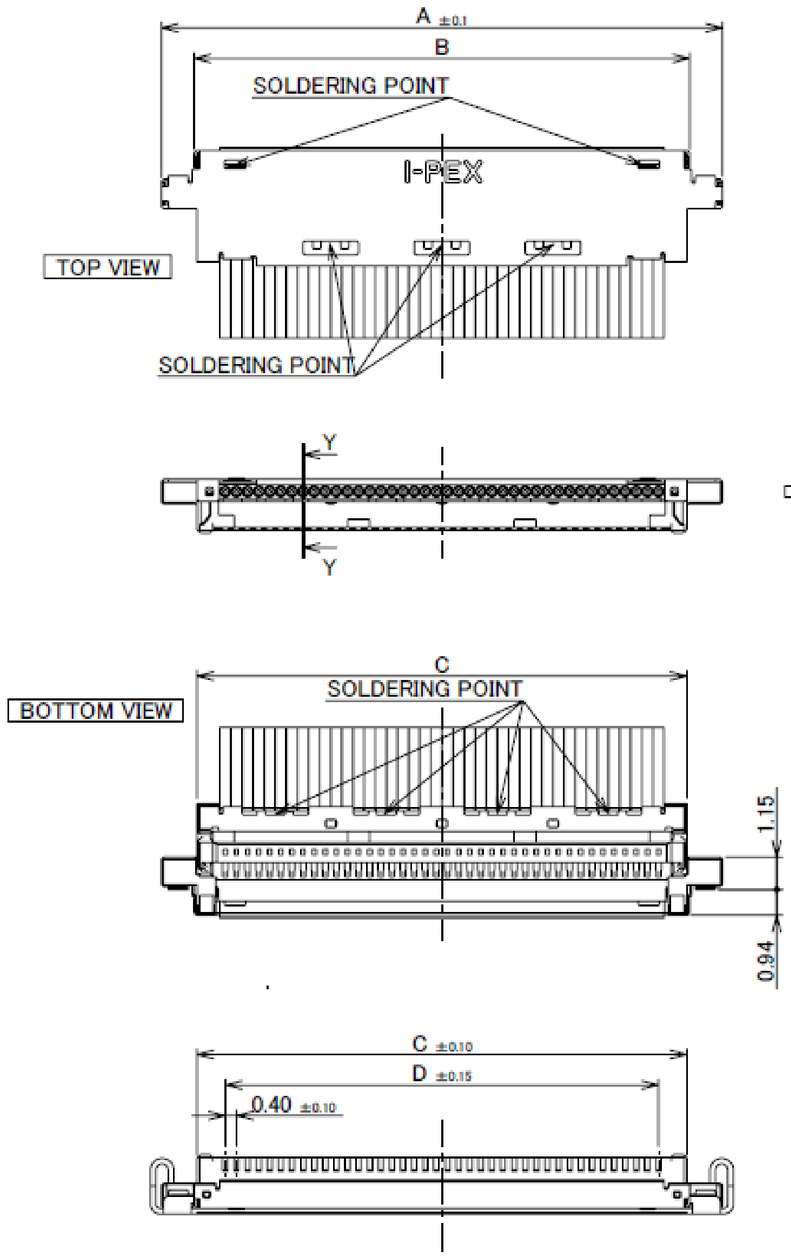
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
5	LOCK COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.0 μm MIN.
4	SHELL B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.0 μm MIN.
3	SHELL A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.0 μm MIN.
2	CONTACT	CORSON ALLOY	ALL OVER Ni 1.0 μm MIN. CONTACT & SOLDERING AREA : Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0 ,BLACK

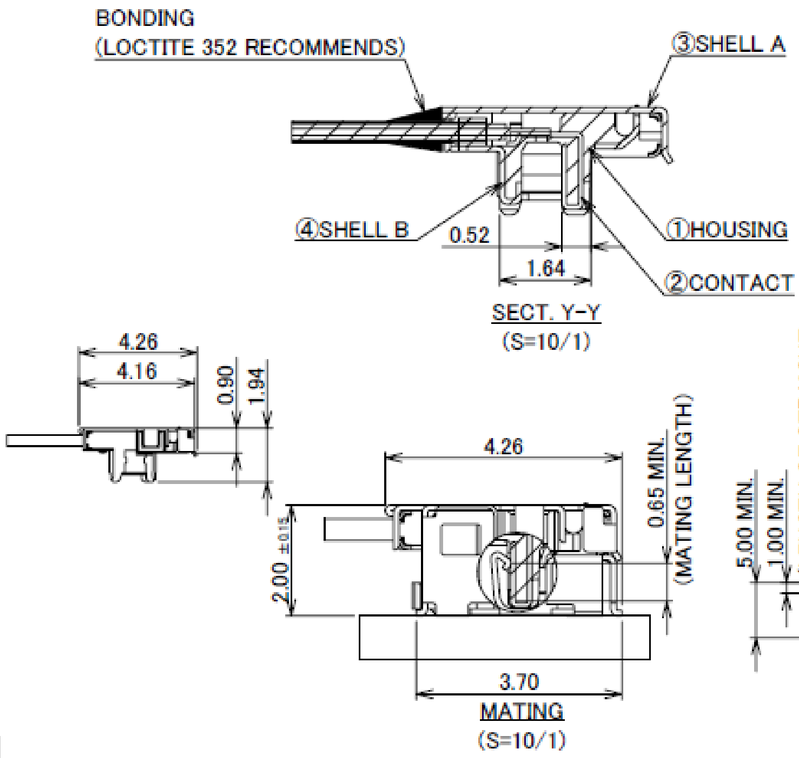
Rev.11

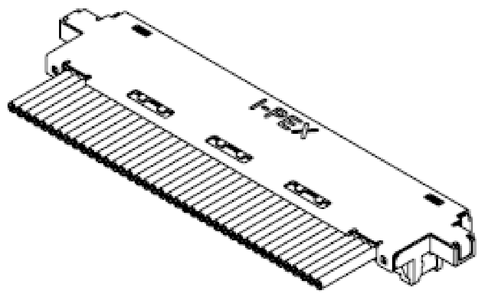
Recommended P/N	20877-0**T-01				
PART NO.	Pos.	A	B	C	D
20877-030T-02	30	16.20	13.85	13.65	11.60
20877-040T-02	40	20.20	17.85	17.65	15.60
20877-060T-02	60	28.20	25.85	25.65	23.60

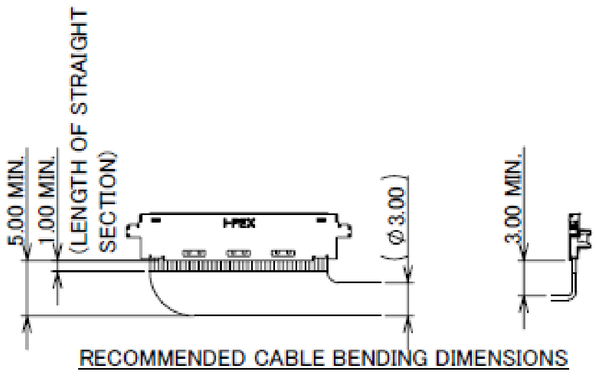
Without LOCK COVER

Halogen Free RoHS Compliant









NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
4	SHELL B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.0 μm MIN.
3	SHELL A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.0 μm MIN.
2	CONTACT	CORSON ALLOY	ALL OVER Ni 1.0 μm MIN. CONTACT & SOLDERING AREA : Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0 ,BLACK

Rev.11

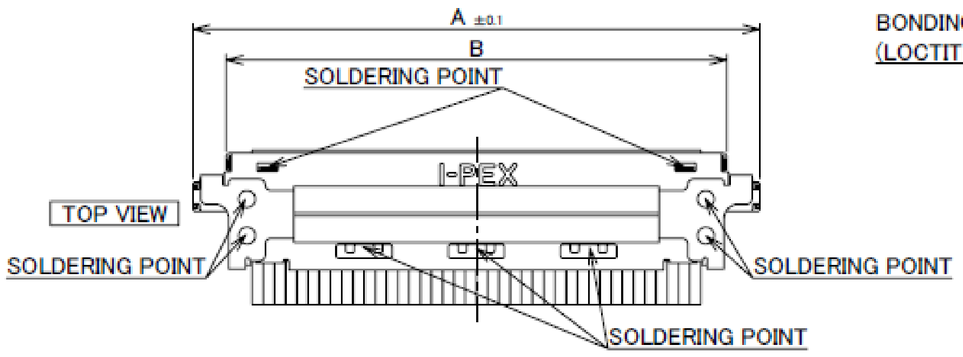
Plug for Cable Assembly

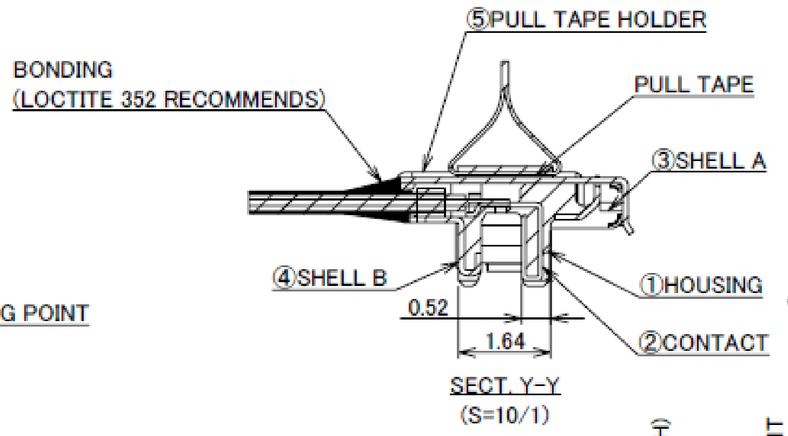
Recommended P/N	20877-0**T-01						
PART NO.	Pos.	A	B	C	D	F	G
20877-030T-03	30	16.20	13.85	13.65	11.60	9.00	10.00
20877-040T-03	40	20.20	17.85	17.65	15.60	13.00	14.00
20877-060T-03	60	28.20	25.85	25.65	23.60	21.00	22.00

With PULL TAPE HOLDER

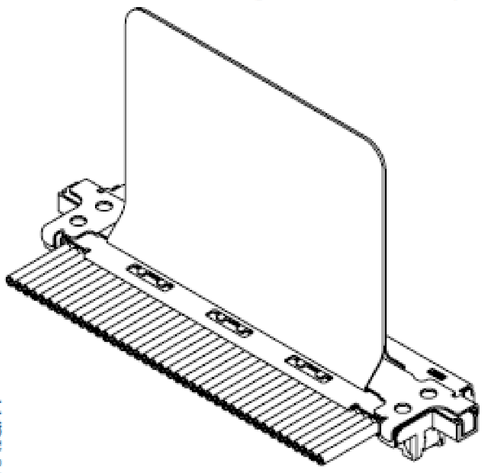
HF Halogen Free

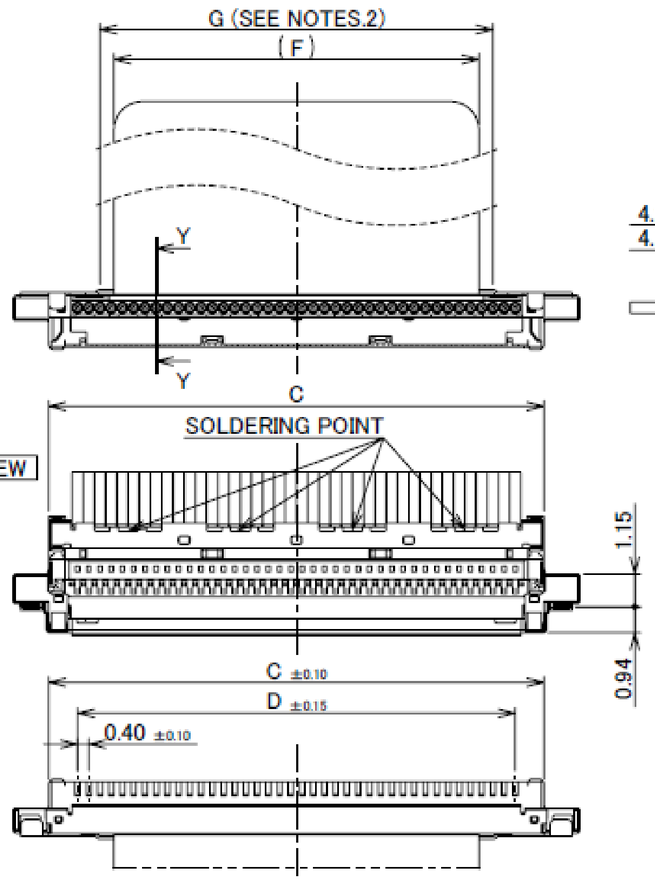
RoHS Compliant

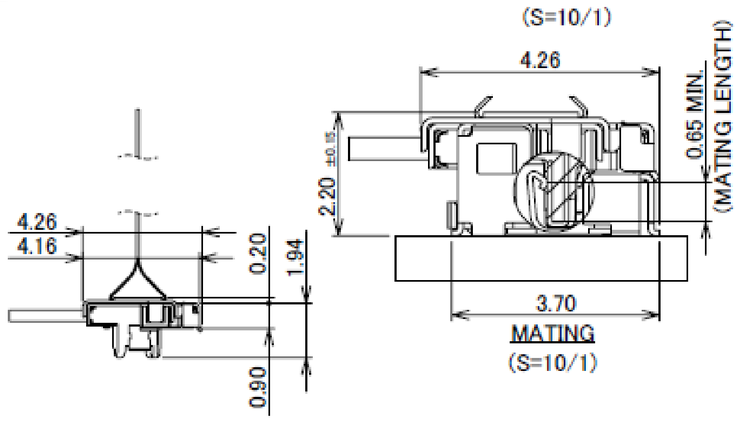


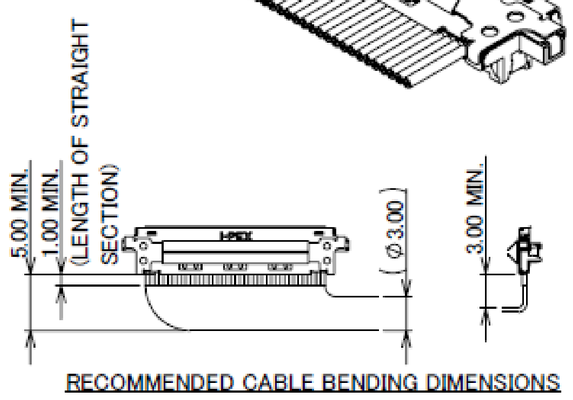


SECT. Y-Y
(S=10/1)









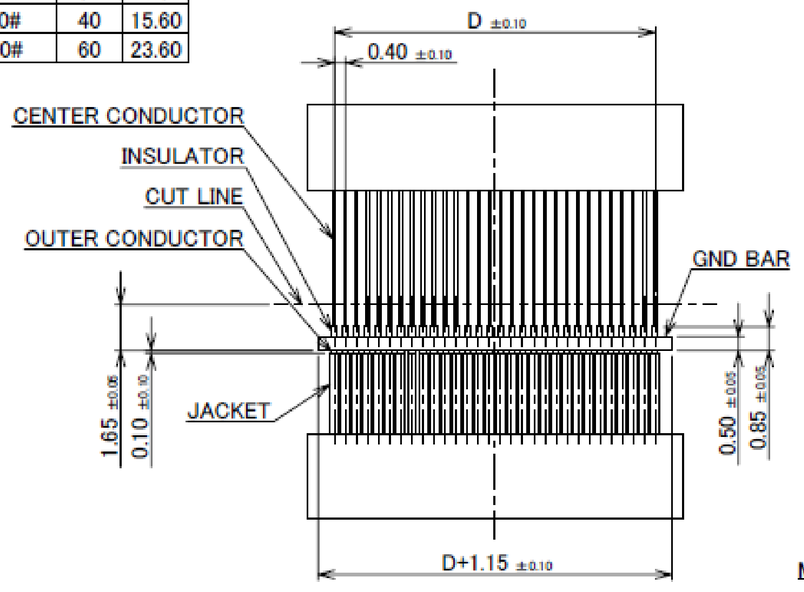
RECOMMENDED CABLE BENDING DIMENSIONS

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
5	PULL TAPE HOLDER	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.0 μm MIN.
4	SHELL B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.0 μm MIN.
3	SHELL A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.0 μm MIN.
2	CONTACT	CORSON ALLOY	ALL OVER Ni 1.0 μm MIN. CONTACT & SOLDERING AREA : Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0 ,BLACK

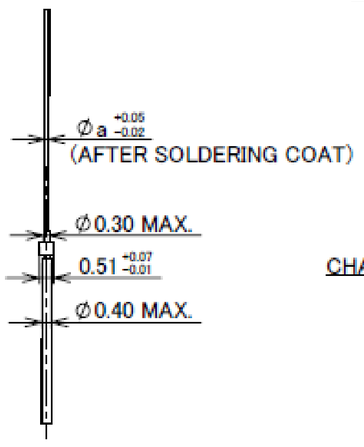
NOTES.
1.RECOMMENDED PULL-TAPE
PULL-TAPE : TERAOKA's INSULATION TAPE No.650S(#50) t=0.08
2.PULL-TAPE CAN BE PUT WITHIN THE RANGE OF "G" STRIAGHT AREA.

Rev.11

PART NO.	Pos.	D
20877-030T-0#	30	11.60
20877-040T-0#	40	15.60
20877-060T-0#	60	23.60



RECOMMENDED MICRO-COAXIAL CABLE DIM.



MICRO-COAXIAL CABLE AWG#**

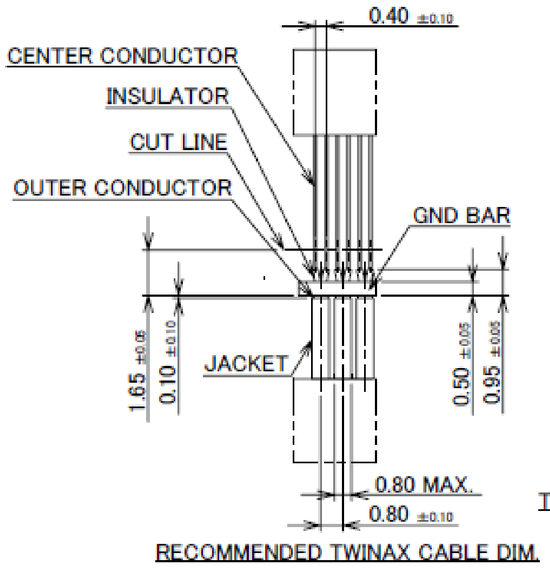
CHARACTERISTIC IMPEDANCE MATCHING MICRO-COAXIAL CABLE

	a
#38	0.12
#40	0.09
#42	0.075
#44	0.063

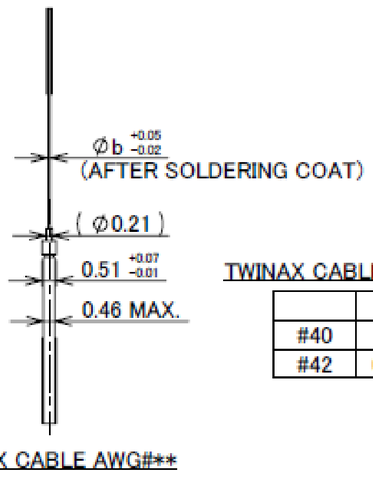
CHARACTERISTIC IMPEDANCE UN-MATCHING MICRO-COAXIAL CABLE

	a
#36	0.15

MICRO-COAXIAL CABLE #36 : NOT RECOMMENDED FOR HIGH SPEED SIGNAL TRANSFER



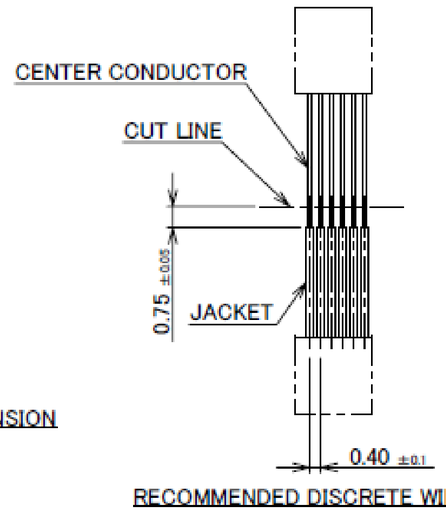
RECOMMENDED TWINAX CABLE DIM.



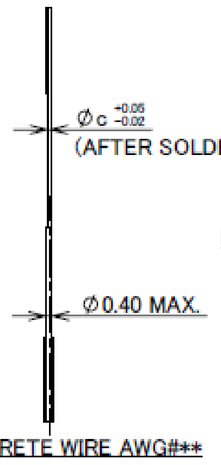
TWINAX CABLE AWG#**

TWINAX CABLE DIMENSION

	b
#40	0.09
#42	0.075



RECOMMENDED DISCRETE WIRE DIM.



DISCRETE WIRE AWG#**

DISCRETE WIRE DIMENSION

	c
#34	0.192
#36	0.15

Rev.11

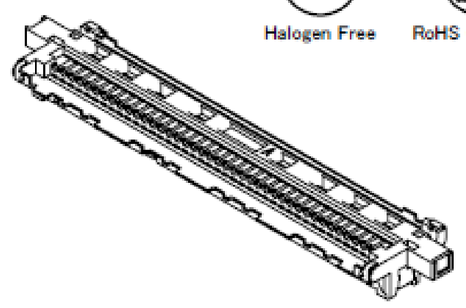
Plug Housing Assembly

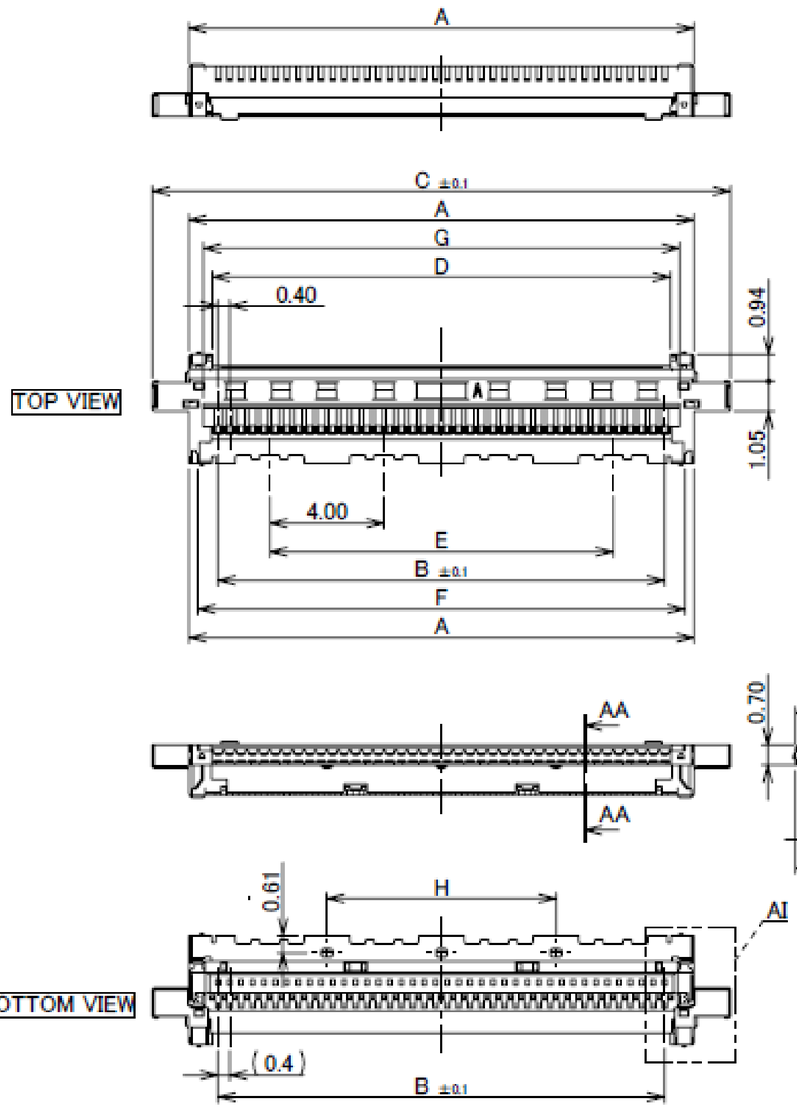
Recommended P/N	20878-0**T-01

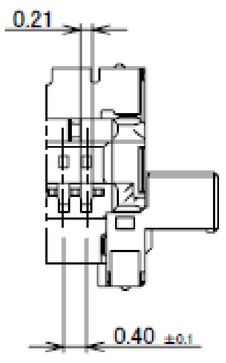
PART No.	Pos.	A	B	C	D	E	F	G	H
20878-030T-01	30	13.65	11.60	16.20	12.01	8.00	13.00	12.65	4.0
20878-040T-01	40	17.65	15.60	20.20	16.01	12.00	17.00	16.65	8.0
20878-060T-01	60	25.65	23.60	28.20	24.01	20.00	25.00	24.65	16.00

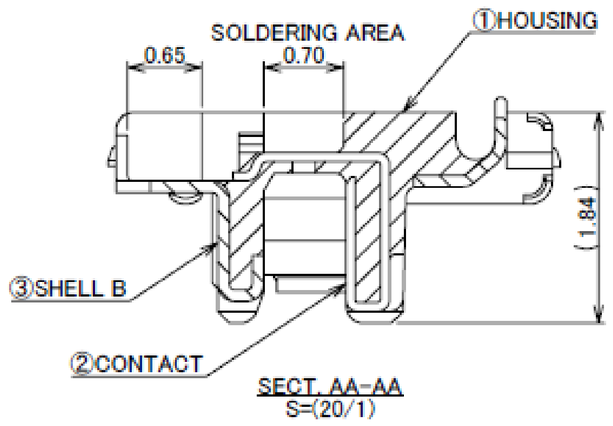
HF Halogen Free

RoHS Compliant

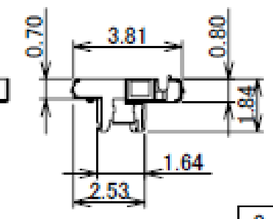








SECT. AA-AA
S=(20/1)



NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	SHELL B	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
2	CONTACT	CORSON ALLOY	ALL OVER Ni 1.00 μm MIN. CONTACT & SOLDERING AREA : Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0 ,BLACK

Rev.4

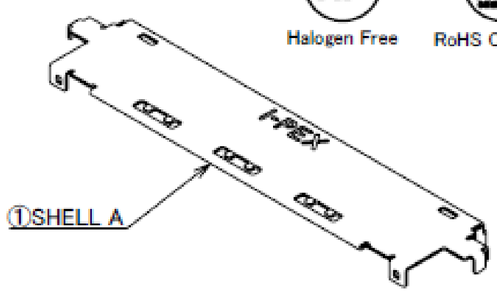
Plug Shell-A

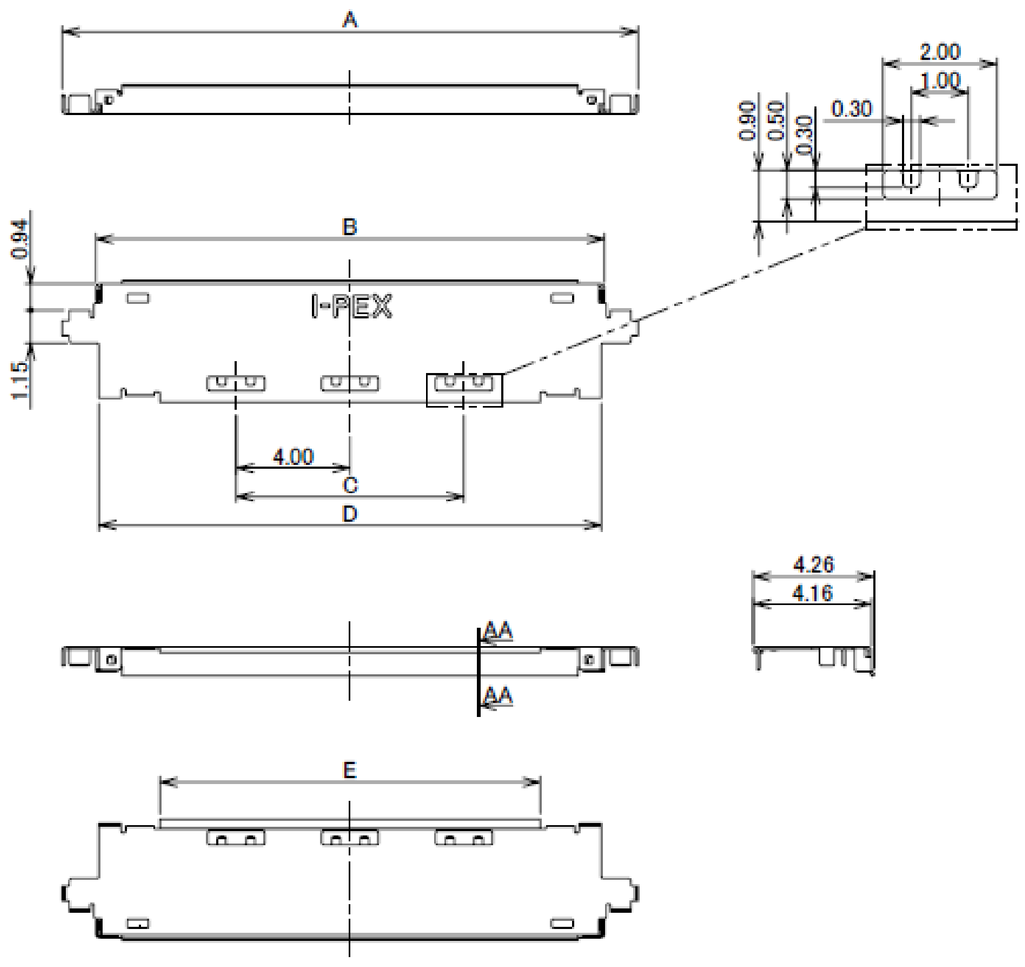
Recommended P/N	3488-0**1

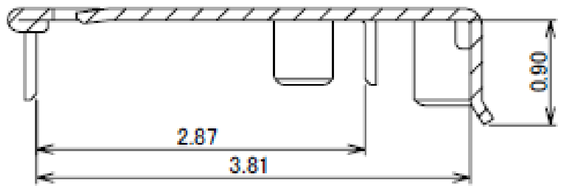
PART No.	Pos.	A	B	C	D	E
3488-0301	30	16.20	13.88	4.00	13.65	9.36
3488-0401	40	20.20	17.88	8.00	17.65	13.36
3488-0601	60	28.20	25.88	16.00	25.65	21.36

HF Halogen Free

RoHS Compliant







SECT.AA-AA
(S=20/1)

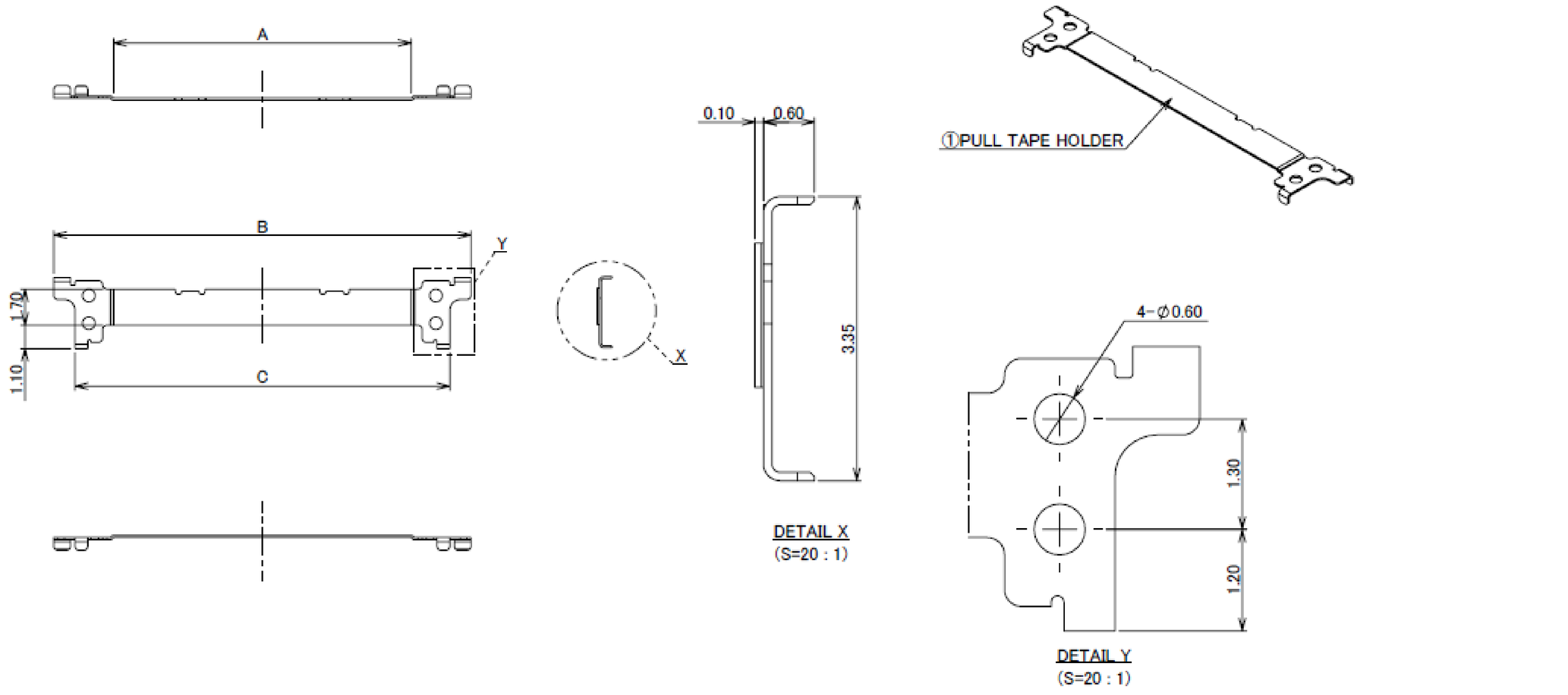
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
1	SHELL A	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.

Rev.2

Plug Pull Tape Holder

Recommended P/N		3588-0**1		
PART NO.	Pos.	A	B	C
3588-0301	30	10.00	15.65	13.65
3588-0401	40	14.00	19.65	17.65
3588-0601	60	22.00	27.65	25.65

Halogen Free RoHS Compliant



DETAIL X
(S=20 : 1)

DETAIL Y
(S=20 : 1)

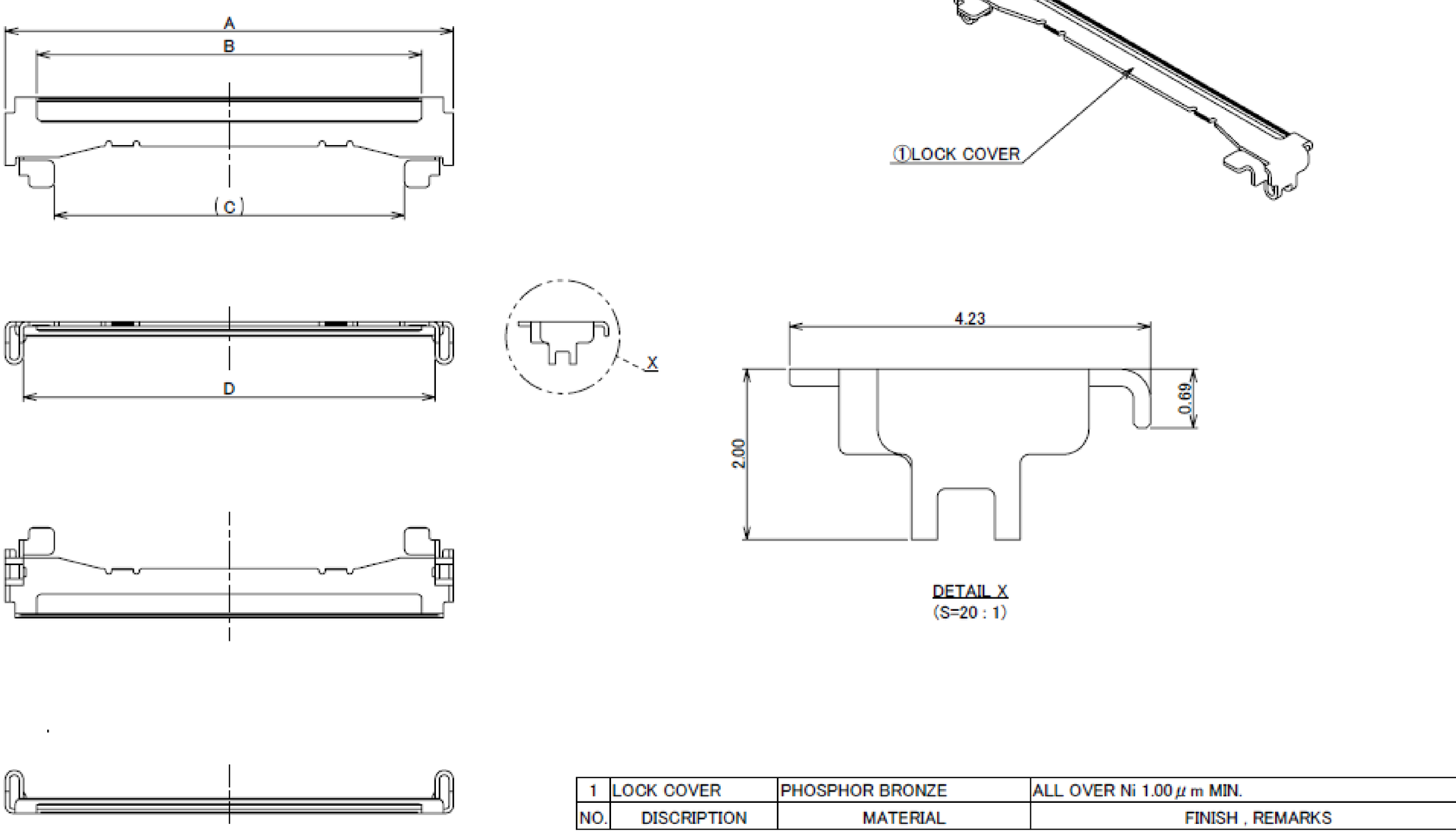
1	PULL TAPE HOLDER	PHOSPHOR BRONZE	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.3

Lock Cover

Recommended P/N		3493-0**1			
PART NO.	Pos.	A	B	C	D
3493-0301	30	17.00	14.05	12.40	15.30
3493-0401	40	21.00	18.05	16.40	19.30
3493-0601	60	29.00	26.05	24.40	27.30

Halogen Free RoHS Compliant



DETAIL X
(S=20 : 1)

1	LOCK COVER	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN.
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.3

Receptacle Assembly

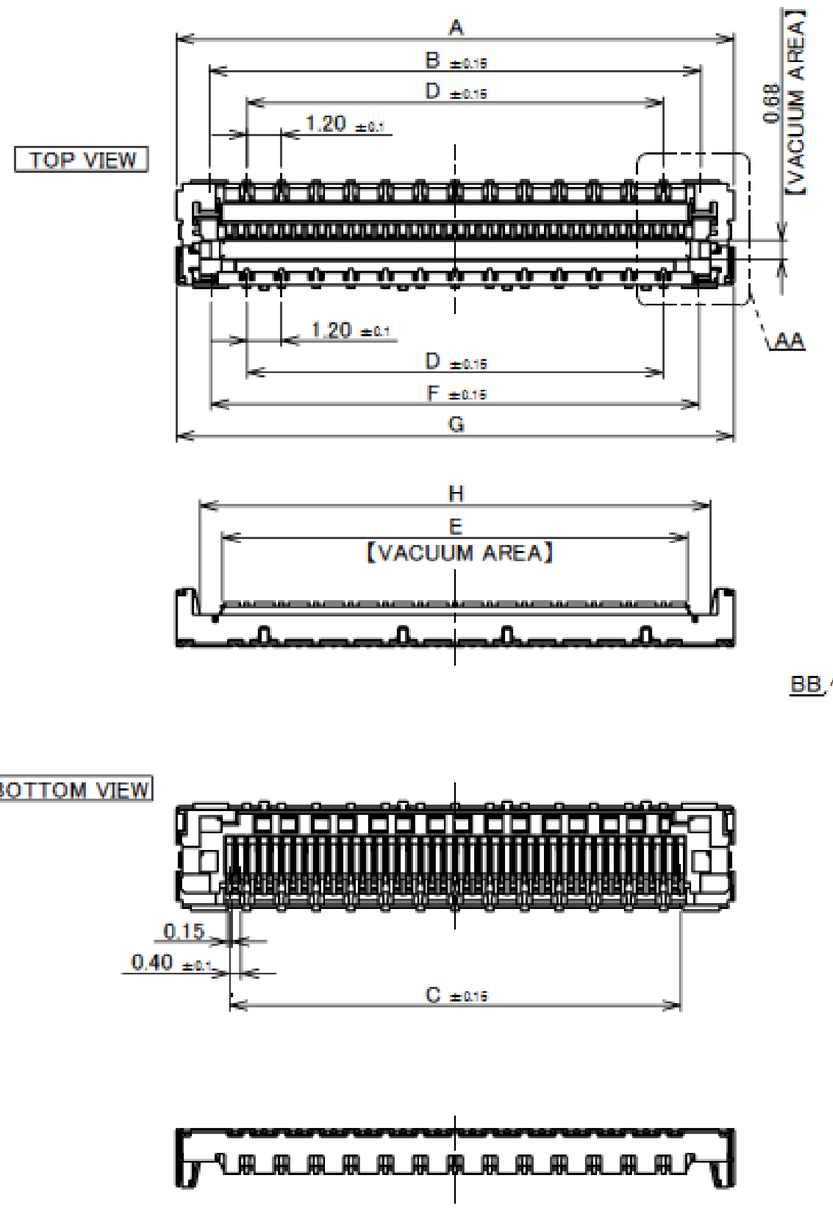
Recommended P/N	20879-0**E-01								
PART NO.	Pos.	A	B	C	D	E	F	G	H
20879-030E-#1	30	15.27	13.01	11.60	9.60	12.07	12.88	15.27	13.65
20879-040E-#1	40	19.27	17.01	15.60	14.40	16.07	16.88	19.27	17.65
20879-060E-#1	60	27.27	25.01	23.60	21.60	24.07	24.88	27.27	25.65

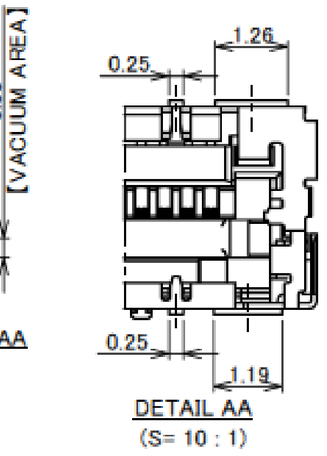
P/N : 20879-0**E-##
- Pos.
- SEE TABLE.1
- 1 : NARROW GROUND PIN TYPE
- 2 : WIDER GROUND PIN TYPE

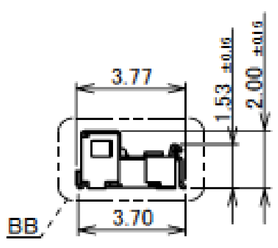
#1 TYPE

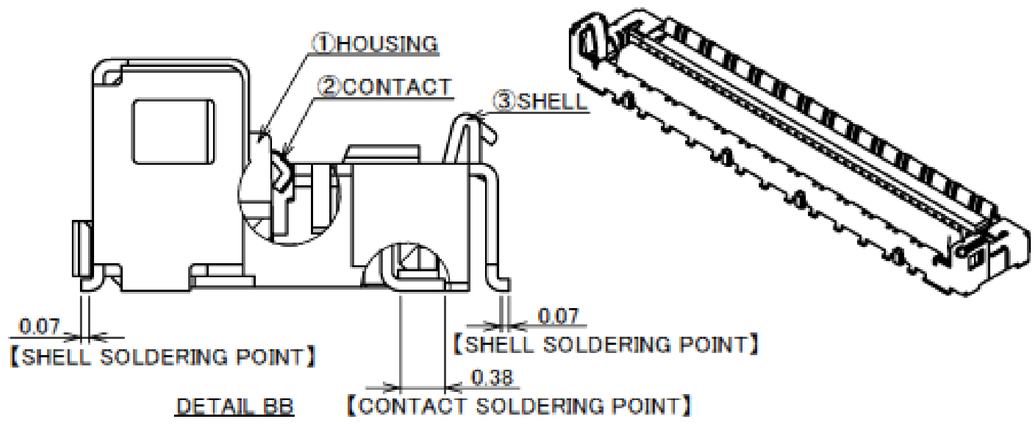
Halogen Free

RoHS Compliant









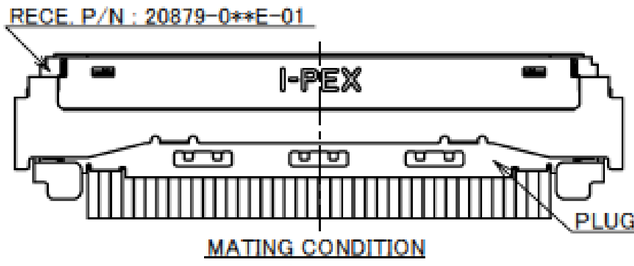


TABLE.1

PART NO.	CONTACT FINISH
20879-0**E-01	ALL OVER Ni 1.00 μm MIN. CONTACT & SOLDERING AREA : Au 0.03 μm MIN.
20879-0**E-11	ALL OVER Ni 1.27 μm MIN. CONTACT AREA : Au 0.254 μm MIN. SOLDERING AREA : Au 0.03 μm MIN.

3	SHELL	PHOSPHOR BRONZE	ALL OVER : Ni 1.00 μm MIN. SOLDERING AREA : Au 0.02 μm MIN.
2	CONTACT	CORSON ALLOY	SEE TABLE.1
1	HOUSING	LCP	UL94V-0, BLACK

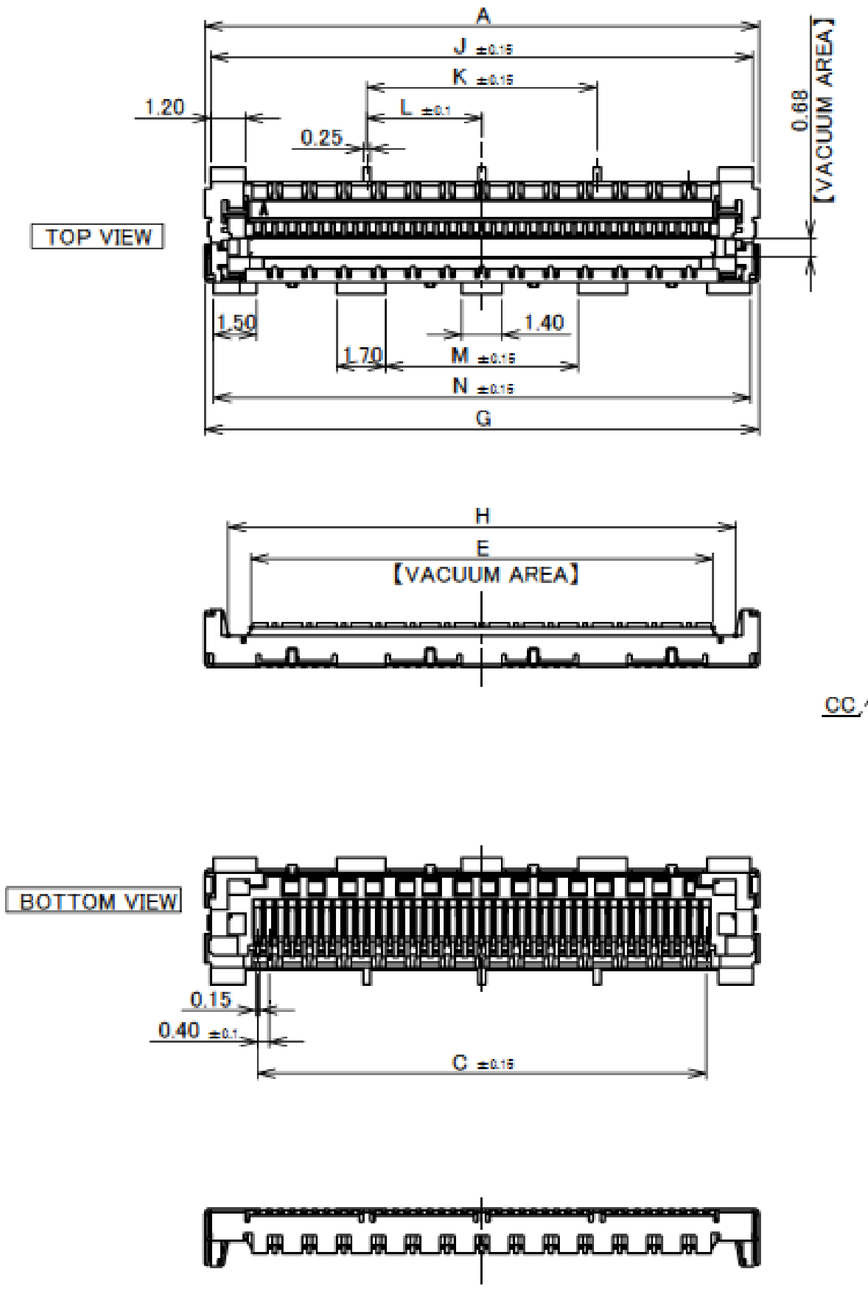
Rev.12

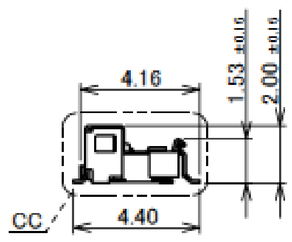
Recommended P/N	20879-0**E-01										
PART NO.	Pos.	A	C	E	G	H	J	K	L	M	N
20879-030E-02	30	15.27	11.60	12.07	15.27	13.65	14.87	4.00	–	7.09	14.69
20879-040E-02	40	19.27	15.60	16.07	19.27	17.65	18.87	8.00	4.00	6.70	18.69
20879-060E-02	60	27.27	23.60	24.07	27.27	25.65	26.87	17.60	11.20	10.70	26.69

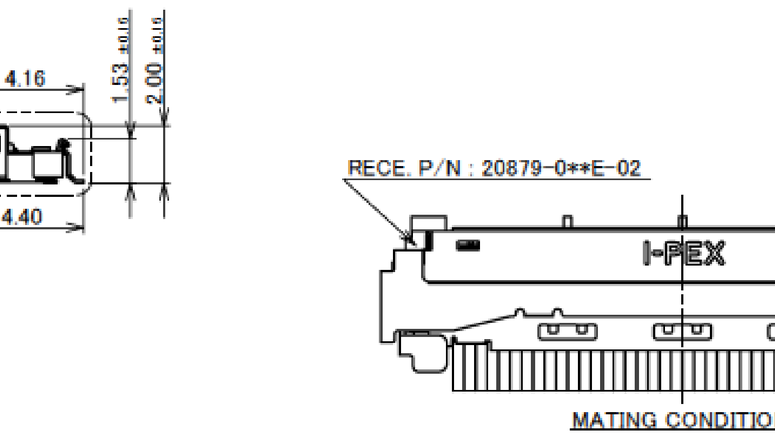
02 TYPE

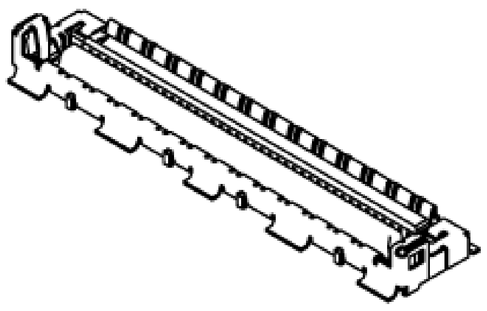
Halogen Free

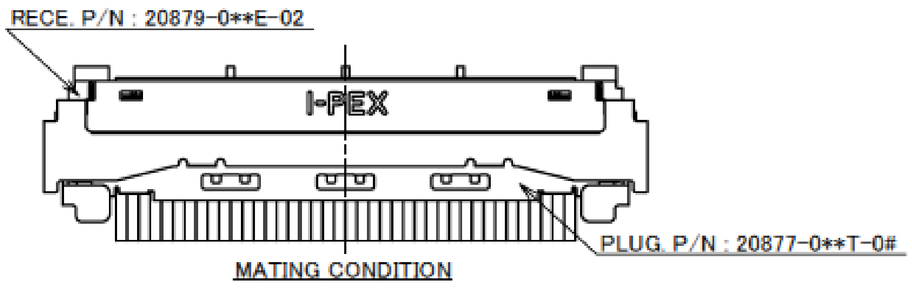
RoHS Compliant











Rev.12

Receptacle Assembly

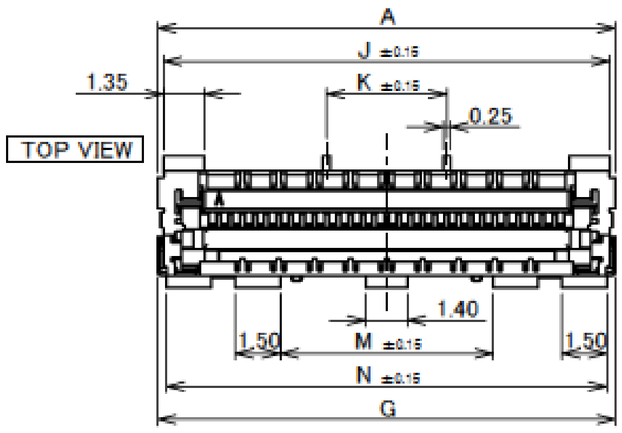
Recommended P/N	20879-0**E-01

PART NO.	Pos.	A	C	E	G	H	J	K	L	M	N	AD
20879-030E-02	30	15.27	11.60	12.07	15.27	13.65	14.87	4.00	–	7.09	14.69	–
20879-040E-02	40	19.27	15.60	16.07	19.27	17.65	18.87	8.00	4.00	6.70	18.69	–
20879-060E-02	60	27.27	23.60	24.07	27.27	25.65	26.87	17.60	11.20	10.70	26.69	3.20

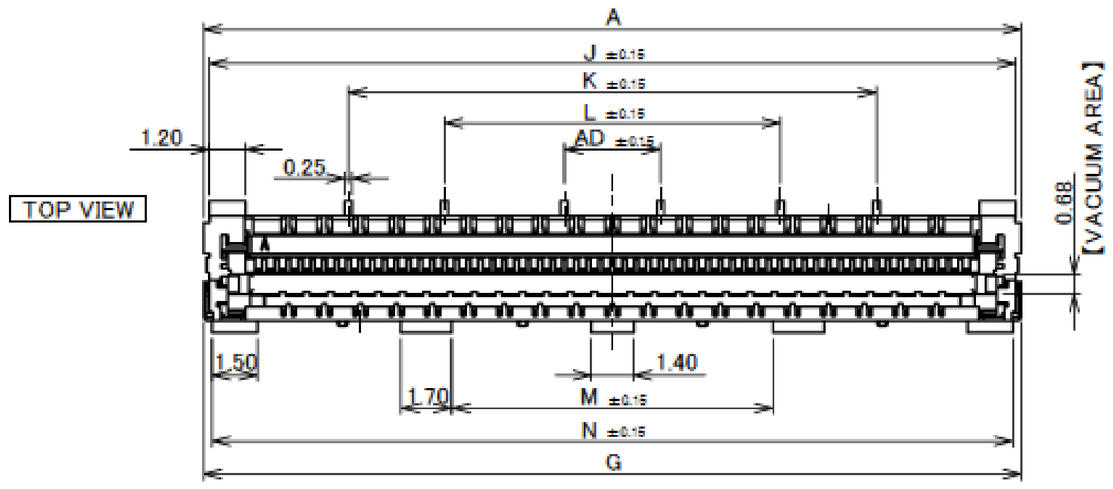
02 TYPE

Halogen Free

RoHS Compliant



30P SHAPE
(S = 5 : 1)

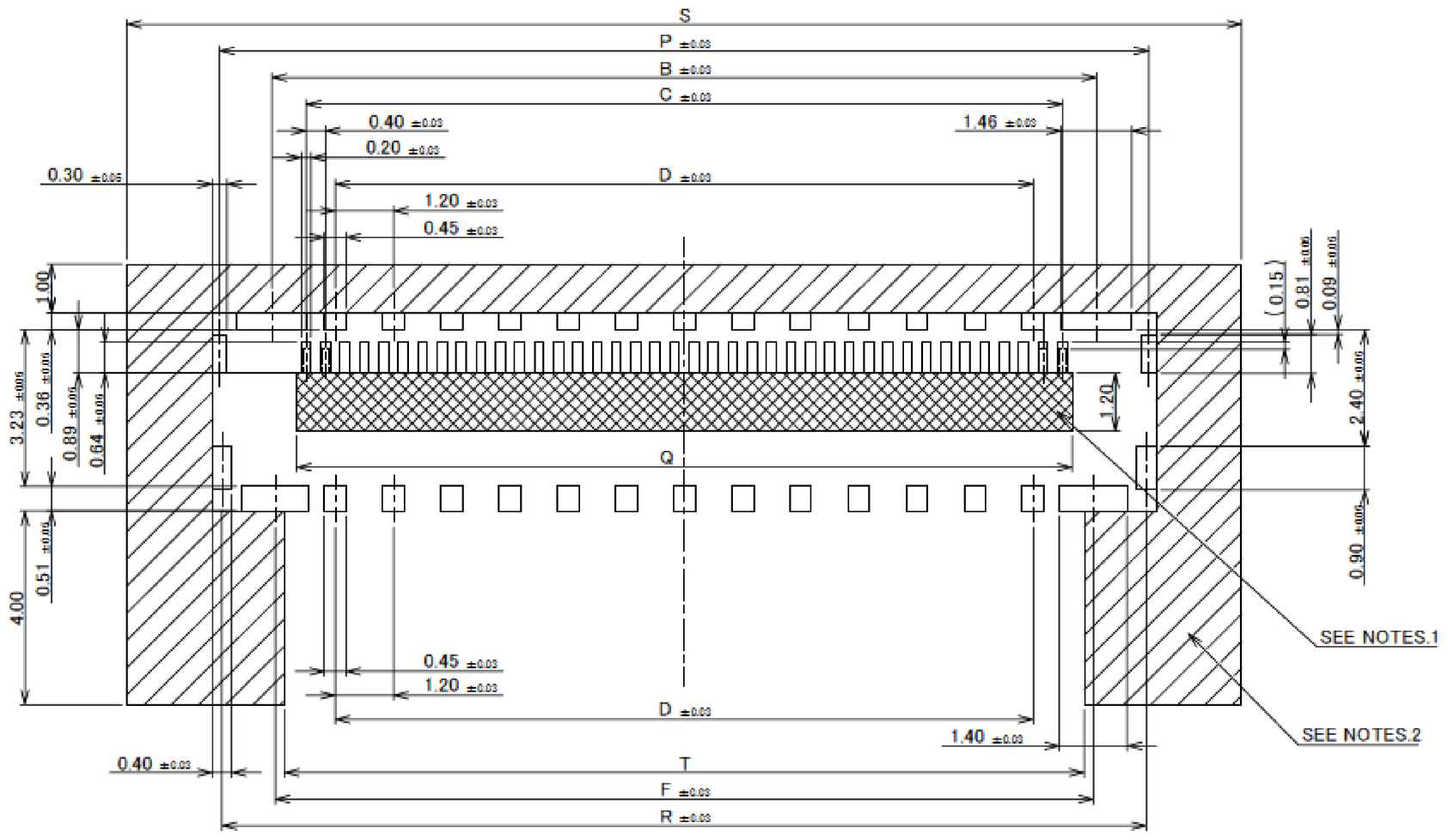


60P SHAPE
(S = 5 : 1)

Rev.12

PART No.	Pos.	B	C	D	F	P	Q	R	S	T
20879-030E-#1	30	13.01	11.60	9.60	12.88	15.17	12.00	15.07	19.00	12.50
20879-040E-#1	40	17.01	15.60	14.40	16.88	19.17	16.00	19.07	23.00	16.50
20879-060E-#1	60	25.01	23.60	21.60	24.88	27.17	24.00	27.07	31.00	24.50

#1 TYPE



01 TYPE RECOMMENDED PCB LAYOUT
(S = 10 : 1)

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

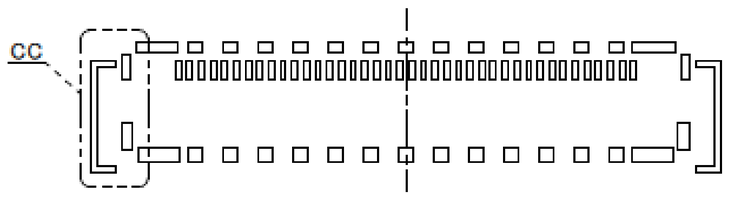
Rev.12

Receptacle Assembly

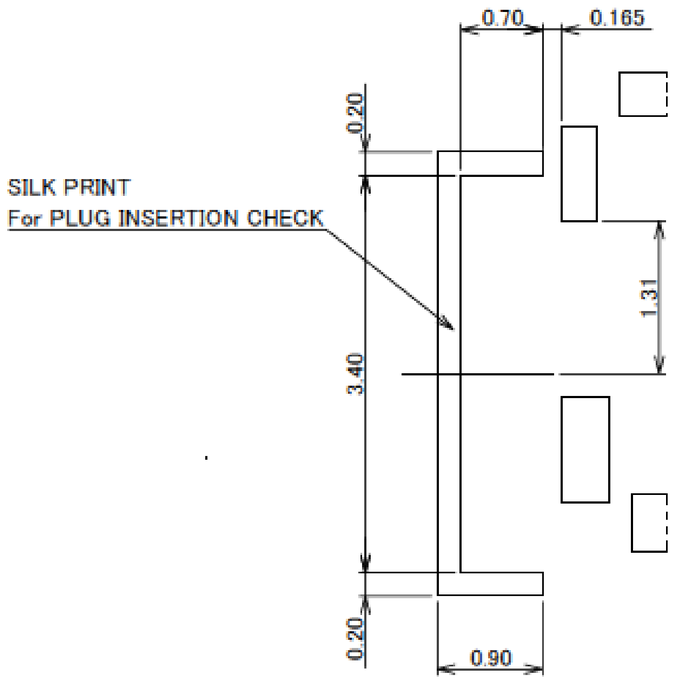
PART No.	Pos.
20879-030E-#1	30
20879-040E-#1	40
20879-060E-#1	60

#1 TYPE

With LOCK COVER

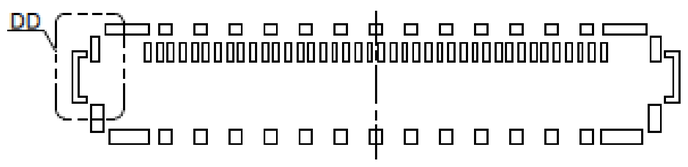


RECOMMENDED SILK PRINT For With LOCK COVER
(S = 5 : 1)

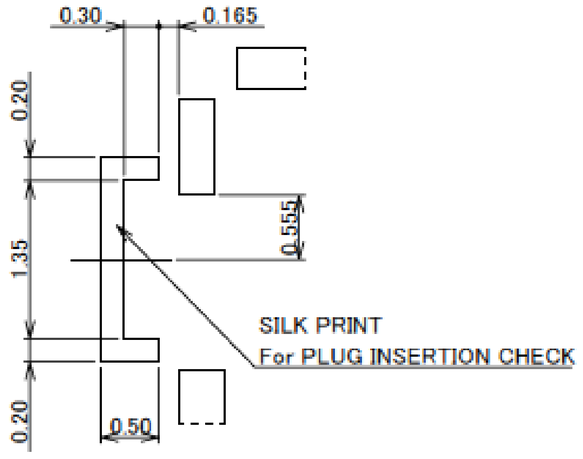


DETAIL CC
(S = 20 : 1)

Without LOCK COVER &
With PULL TAPE HOLDER



RECOMMENDED SILK PRINT For Without LOCK COVER
(S = 5 : 1)



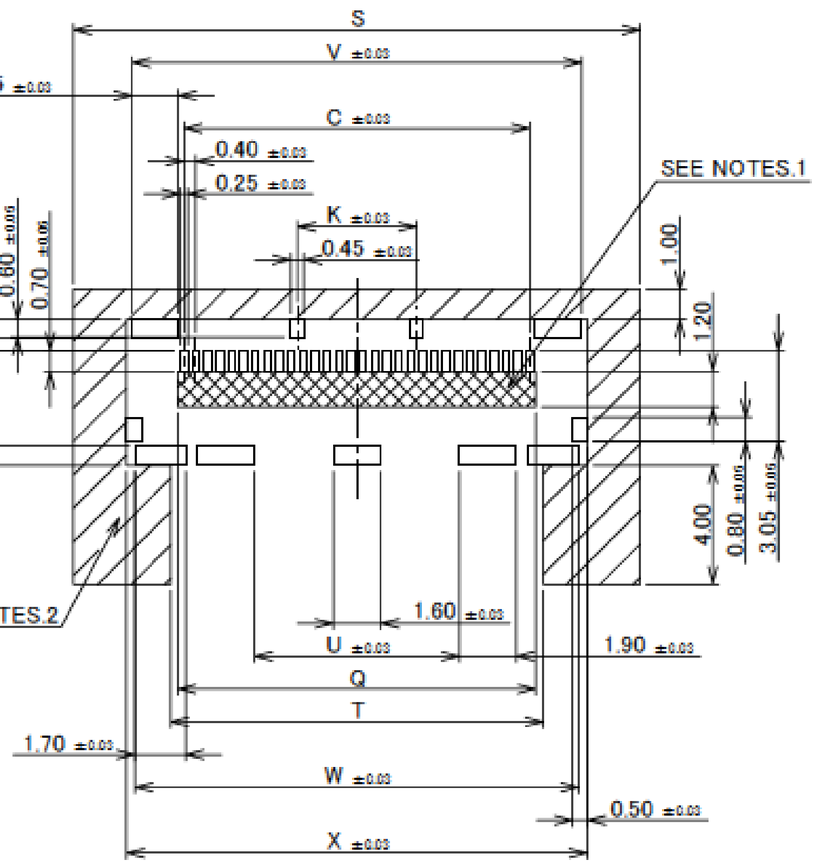
DETAILDD

Rev.12

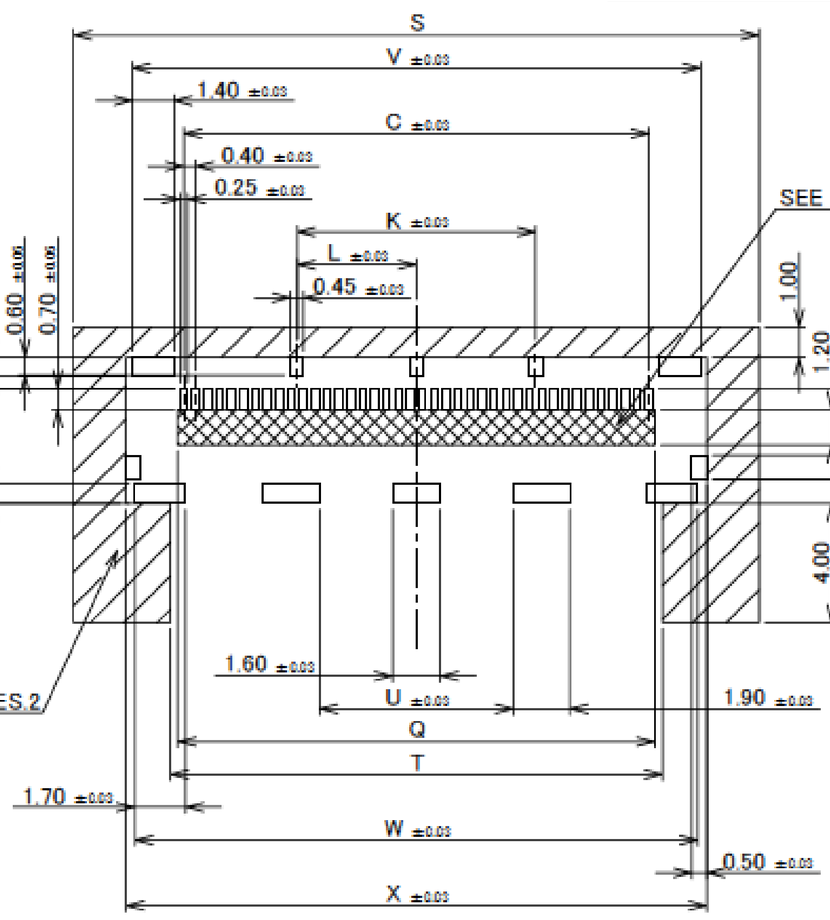
PART No.	Pos.	C	K	L	Q	S	T	U	V	W	X
20879-030E-02	30	11.60	4.00	–	12.00	19.00	12.50	6.89	15.07	14.89	15.47
20879-040E-02	40	15.60	8.00	4.00	16.00	23.00	16.50	6.50	19.07	18.89	19.47
20879-060E-02	60	23.60	17.60	11.20	24.00	31.00	24.50	10.50	27.07	26.89	27.47

PATENT PENDING

02 TYPE



02 TYPE 30P RECOMMENDED PCB LAYOUT
(S = 5 : 1)



02 TYPE 40P RECOMMENDED PCB LAYOUT
(S = 5 : 1)

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

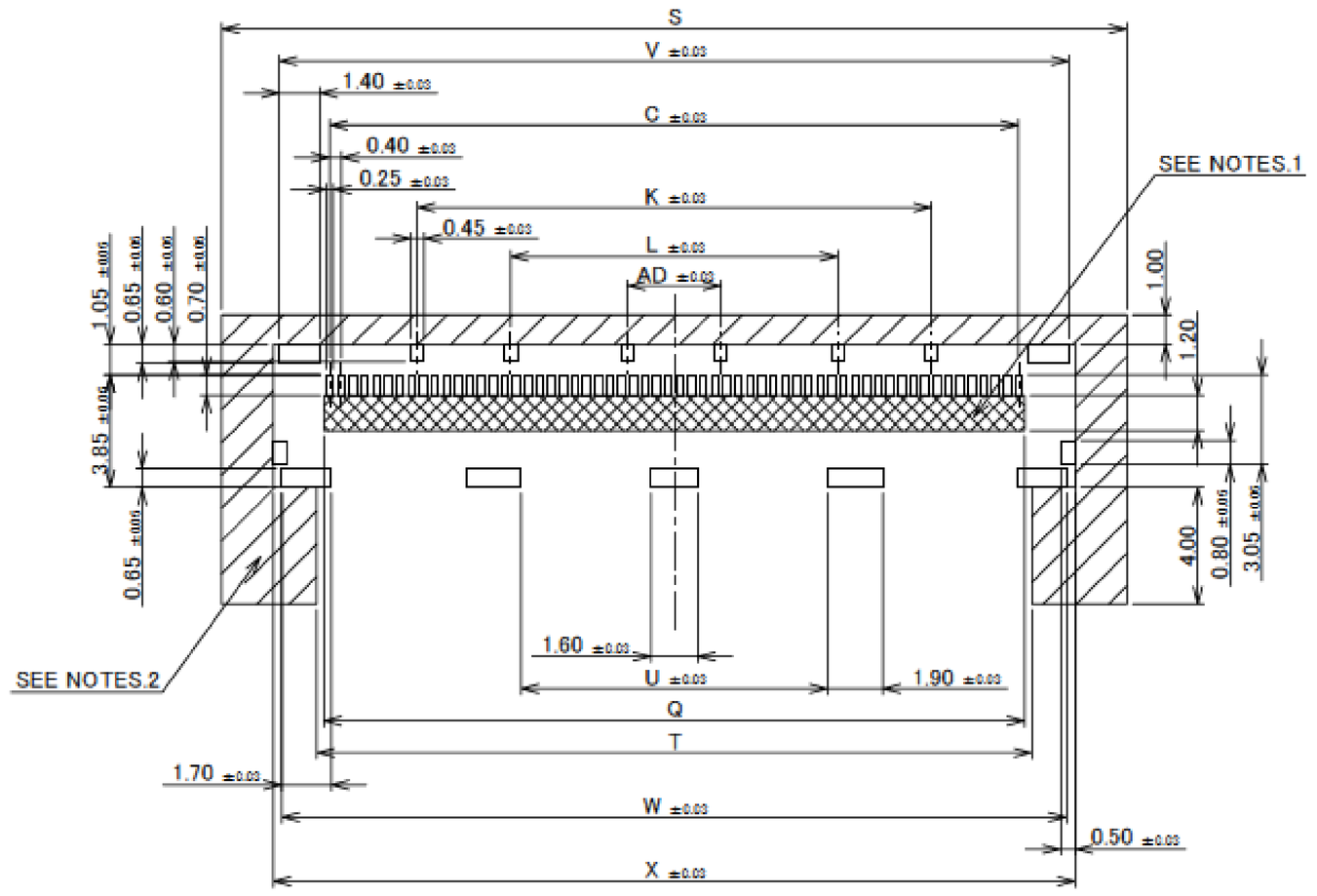
Rev.12

Receptacle Assembly

PART No.	Pos.	C	K	L	Q	S	T	U	V	W	X	AD
20879-030E-02	30	11.60	4.00	–	12.00	19.00	12.50	6.89	15.07	14.89	15.47	–
20879-040E-02	40	15.60	8.00	4.00	16.00	23.00	16.50	6.50	19.07	18.89	19.47	–
20879-060E-02	60	23.60	17.60	11.20	24.00	31.00	24.50	10.50	27.07	26.89	27.47	3.20

PATENT PENDING

02 TYPE



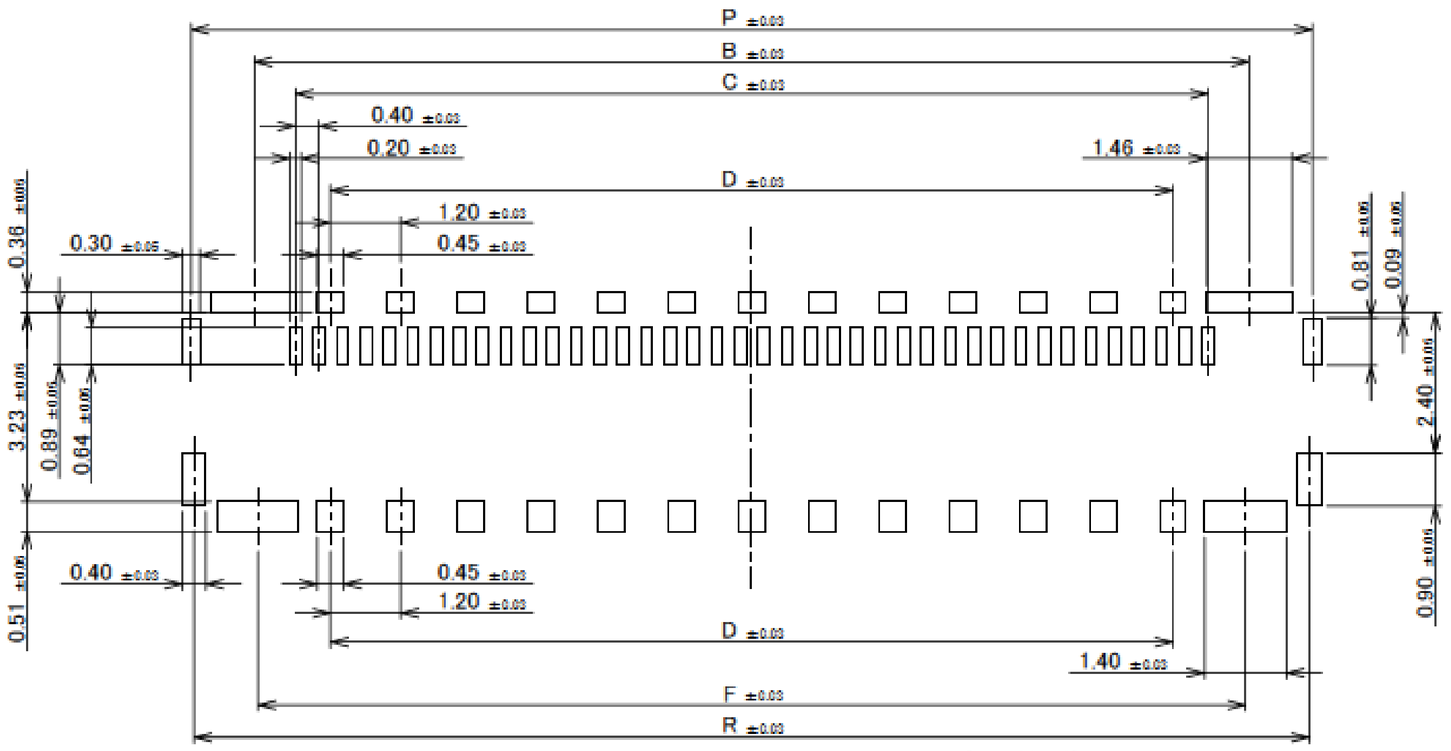
02 TYPE 60P RECOMMENDED PCB LAYOUT
(S = 5 : 1)

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

Rev.12

PART No.	Pos.	B	C	D	F	P	R
20879-030E-#1	30	13.01	11.60	9.60	12.88	15.17	15.07
20879-040E-#1	40	17.01	15.60	14.40	16.88	19.17	19.07
20879-060E-#1	60	25.01	23.60	21.60	24.88	27.17	27.07

#1 TYPE



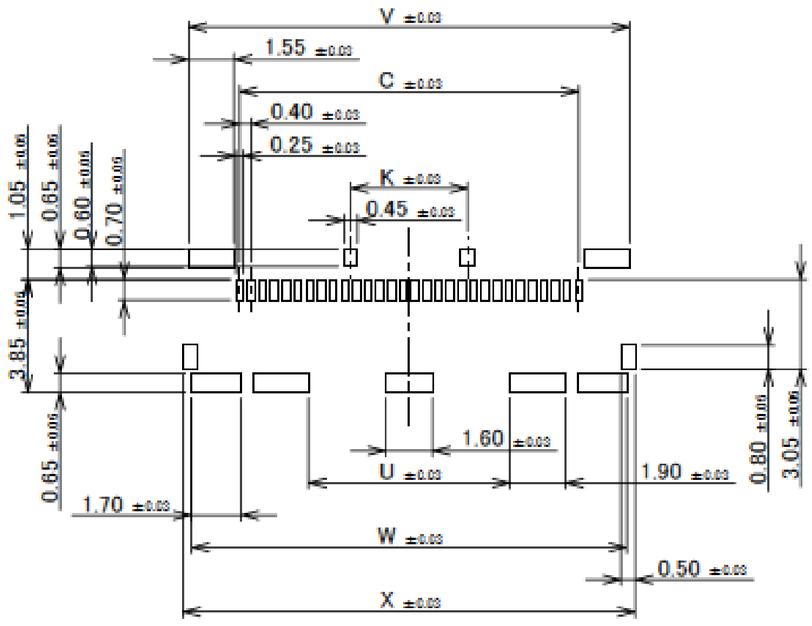
01 TYPE RECOMMENDED METAL MASK LAYOUT (S = 10 : 1)
※ METAL MASK THICKNESS : t = 0.10

Rev.12

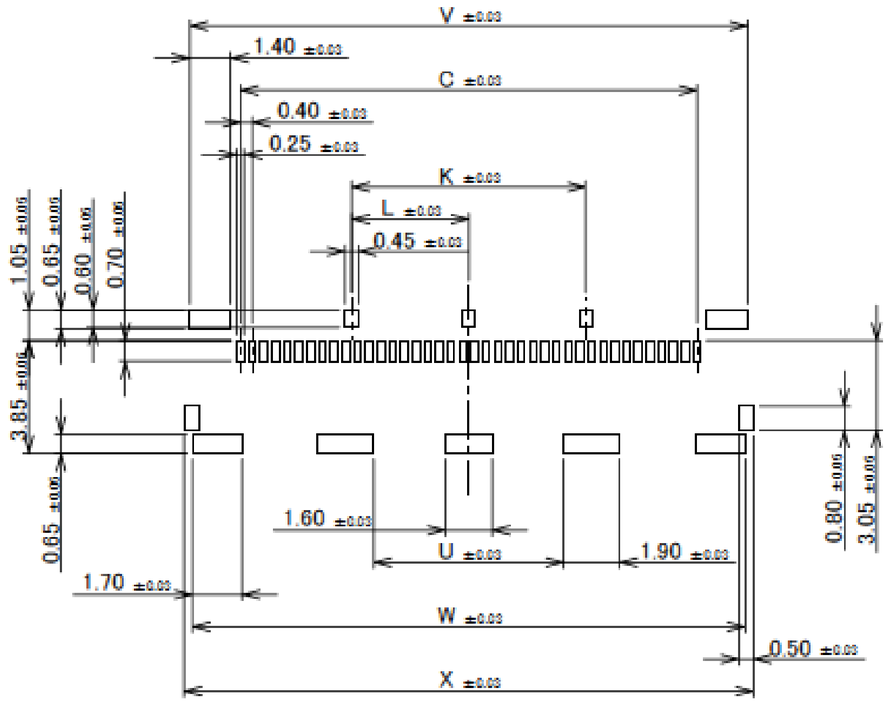
Receptacle Assembly

PART No.	Pos.	C	K	L	U	V	W	X
20879-030E-02	30	11.60	4.00	–	6.89	15.07	14.89	15.47
20879-040E-02	40	15.60	8.00	4.00	6.50	19.07	18.89	19.47
20879-060E-02	60	23.60	17.60	11.20	10.50	27.07	26.89	27.47

02 TYPE



02 TYPE 30P RECOMMENDED METAL MASK LAYOUT (S = 5 : 1)
※ METAL MASK THICKNESS : t = 0.12

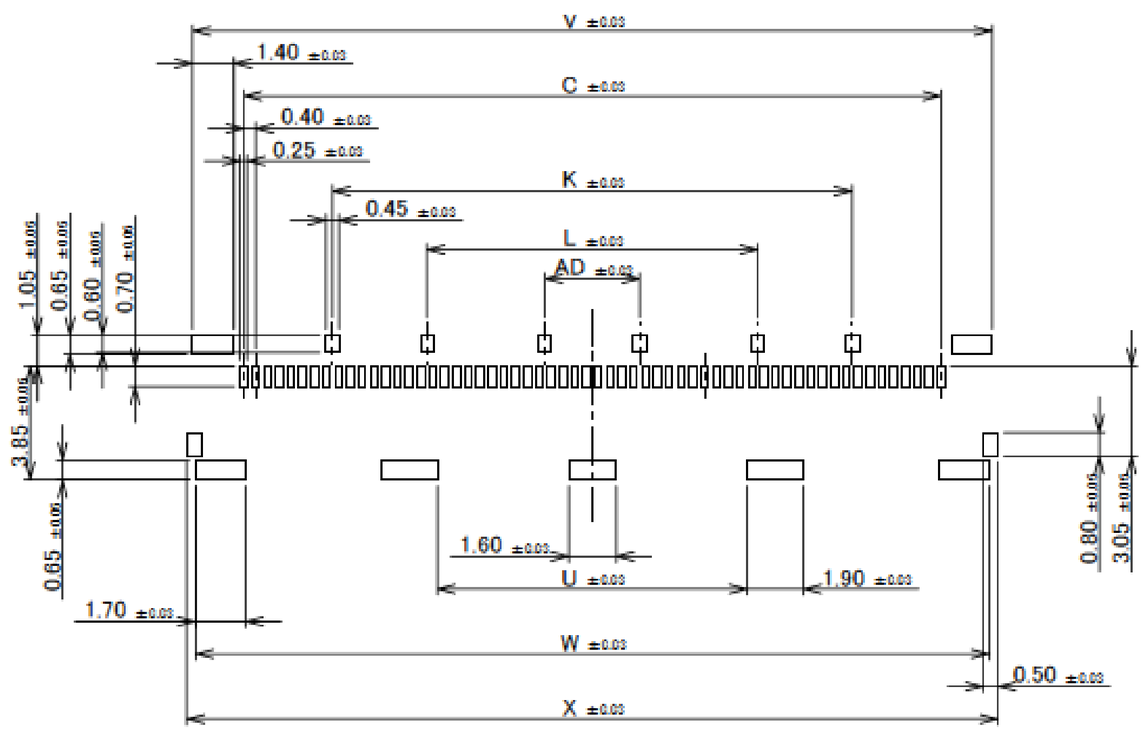


02 TYPE 40P RECOMMENDED METAL MASK LAYOUT (S = 5 : 1)
※ METAL MASK THICKNESS : t = 0.12

Rev.12

PART No.	Pos.	C	K	L	U	V	W	X	AD
20879-030E-02	30	11.60	4.00	–	6.89	15.07	14.89	15.47	–
20879-040E-02	40	15.60	8.00	4.00	6.50	19.07	18.89	19.47	–
20879-060E-02	60	23.60	17.60	11.20	10.50	27.07	26.89	27.47	3.20

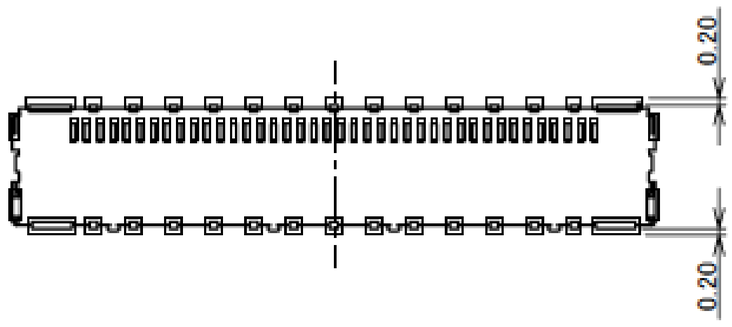
02 TYPE



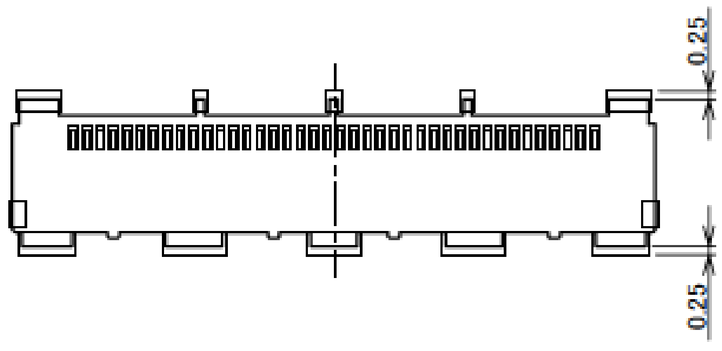
02 TYPE 60P RECOMMENDED METAL MASK LAYOUT (S = 5 : 1)
※ METAL MASK THICKNESS : t = 0.12

Rev.12

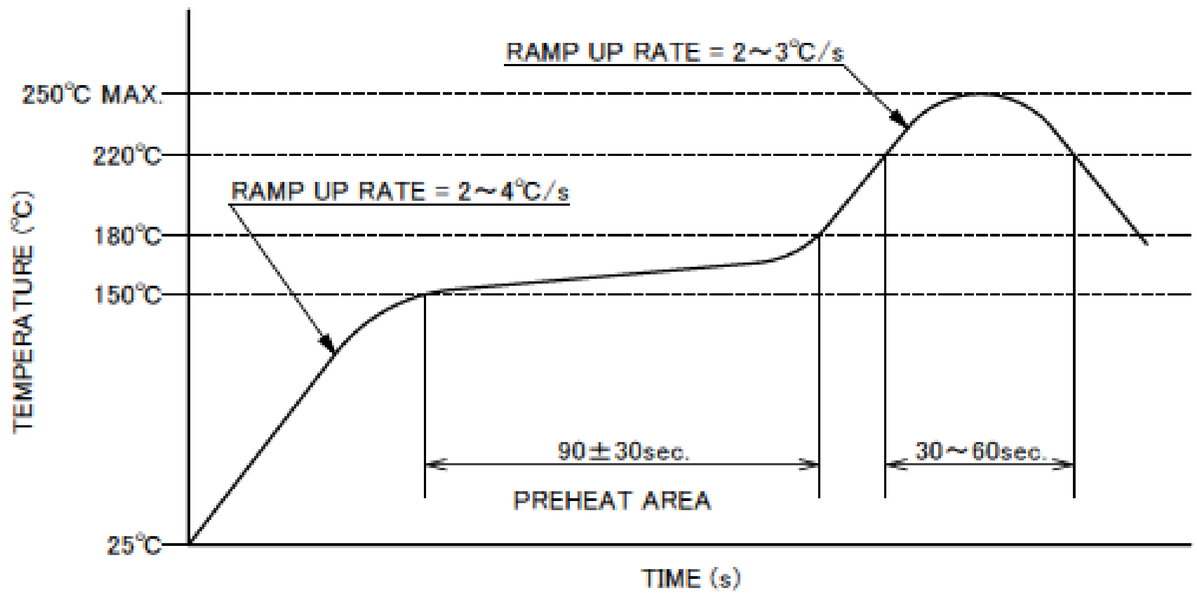
Receptacle Assembly



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN
※01 TYPE



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN
※02 TYPE



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

ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL CABLE : AWG# 44 , 42 , 40 , 38 , 36 DISCRETE WIRE : AWG# 36 , 34 TWINAX CABLE : AWG# 40 , 42
RATING VOLTAGE	100V AC (PER CONTACT PIN)
RATING AMPERAGE (FOR CONTACT)	0.15A AC/DC [AWG#44] PER CONTACT PIN/UP TO 60 CONTACTS 0.24A AC/DC [AWG#42] PER CONTACT PIN/UP TO 49 CONTACTS 0.3A AC/DC [AWG#40] PER CONTACT PIN/UP TO 38 CONTACTS 0.5A AC/DC [AWG#38] PER CONTACT PIN/UP TO 19 CONTACTS 0.8A AC/DC [AWG#36] PER CONTACT PIN/UP TO 12 CONTACTS 1.0A AC/DC [AWG#34] PER CONTACT PIN/UP TO 10 CONTACTS ※TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION.
OPERATING TEMPERATURE	233～378K(-40℃～+105℃)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 180mohm MAX.(AWG#34) / AFTER TEST : ⊿40mohm MAX. 275mohm MAX.(AWG#36) 360mohm MAX.(AWG#38) 600mohm MAX.(AWG#40) 700mohm MAX.(AWG#42) 1080mohm MAX.(AWG#44)
GROUND SHELL RESISTANCE	INITIAL : 50mohm MAX. / AFTER TEST : ⊿40mohm MAX.
INSULATION RESISTANCE	INITIAL : 1000Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER TEST)	30P : 34.00N MAX. 60P : 52.00N MAX. 40P : 40.00N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	30P : 3.0N MIN. 60P : 6.0N MAX. 40P : 4.0N MIN.
CABLE RETENTION FORCE	30P : 14.70N MIN. 60P : 29.40N MAX. 40P : 19.60N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-2514
TEST REPORT	TR-18067 (PLUG:20877-0**T-0#, RECEPTACLE:20879-0**E-01) TR-18088 (PLUG:20877-0**T-0#, RECEPTACLE:20879-0**E-02) TR-24001 (PLUG:20877-0**T-0#, RECEPTACLE:20879-0**E-11) TR-24002 (PLUG:20877-0**T-1#, RECEPTACLE:20879-0**E-01) TR-24003 (PLUG:20877-0**T-1#, RECEPTACLE:20879-0**E-02) TR-24004 (PLUG:20877-0**T-1#, RECEPTACLE:20879-0**E-11)
PACKING STANDARD	PST-18043
INSTRUCTION MANUAL	HIM-18033
APPEARANCE CRITERIA No.	QLS-A***

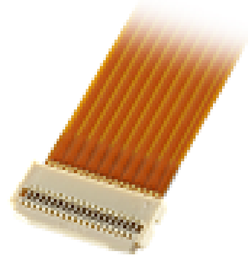
Board to Board

High-Density

Autolocking FPC/FFC

High-Density

FPC/FFC



Micro-Coaxial / Discrete Cable

High-Speed

RF

High-Frequency

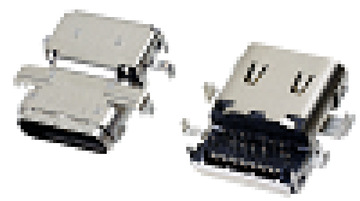
Optical Module

High-Speed

Power

High-Power

I/O (Input/Output)



Quick charge

Effector

Custom Connectors Available

Inquiry

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