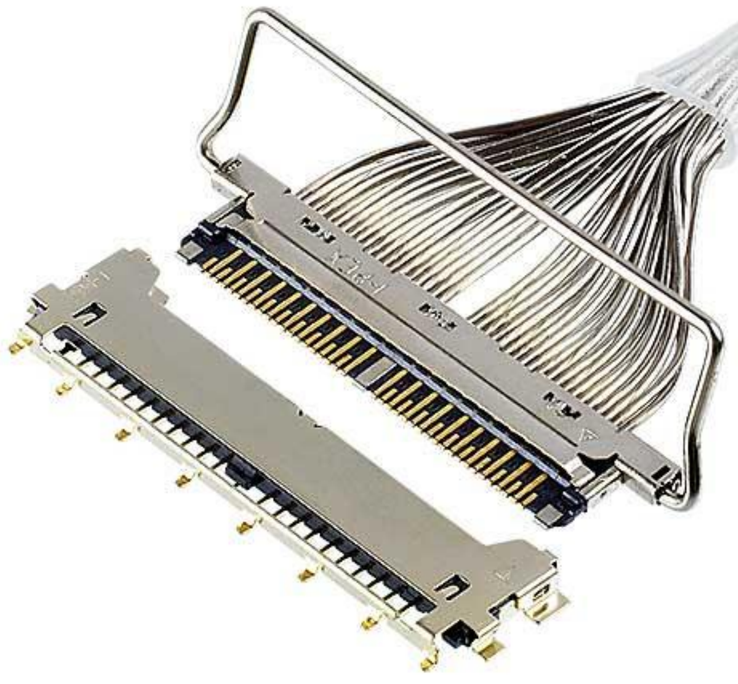
CABLINE®-CX II Without Cover

Narrow pitch (0.25 mm pitch), Low mating height (Height 0.78 mm max.), Mechanical lock with shielding and multi-point ground, Horizontal mating type micro-coaxial connector



Product Specifications:

Mating type		Horizontal
Board Pitch		0.5 mm
Wiping Length		0.54 mm
Mated Size	Height	0.78 mm max.
	Width	6.45 + (0.25 x pin count) mm
	Depth	5.21 mm
Pin Counts	Range	Up to 40
	Available	40

Applicable Cable Size:

Maximum O.D.	0.25 mm
Micro-Coaxial for Signal	45 ohm: AWG 44 or smaller
	50 ohm: AWG 46 or smaller
Twinaxial	-
Discrete	AWG 39 or smaller

Applicable Standards (Reference Only):

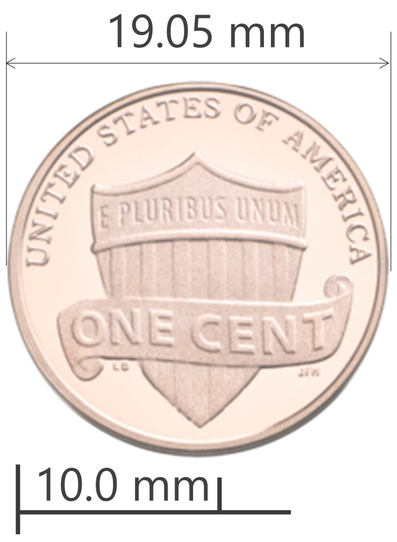
USB 3.1 Gen 1 (5 Gbps), V-By-One HS 1.4 (4 Gbps), HDMI 1.3 (3.4 Gbps) Gbps

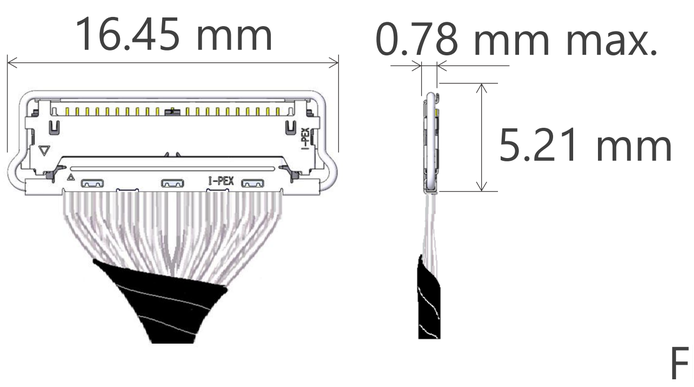
* Please inquire for pin counts not listed or outside of the pin count range.
* CABLINE®-CX II With Cover type (mating height 1.0 mm max.) is also available.

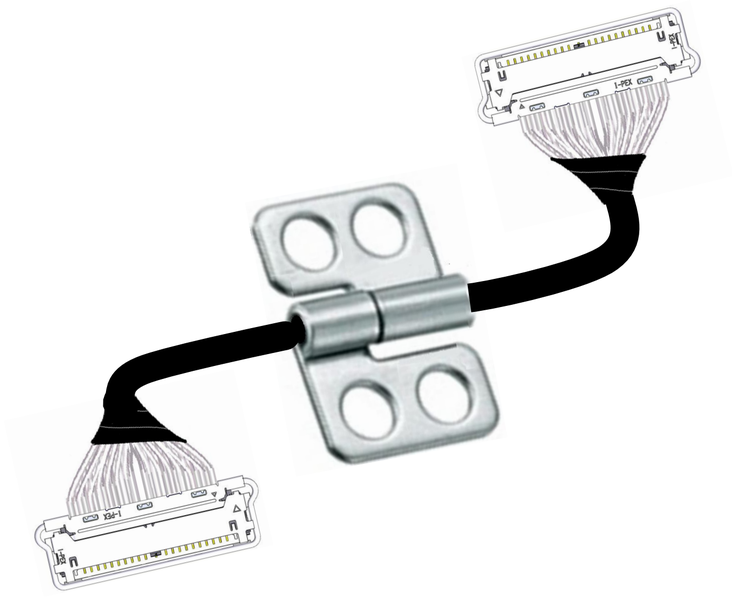
Suitable for small spaces

[Hinge Component Pass-Through with CABLINE® Harness Assemblies]

CABLINE-CX II 40 pin size is smaller than a one-cent coin.
Mating Height: 0.78 mm max.

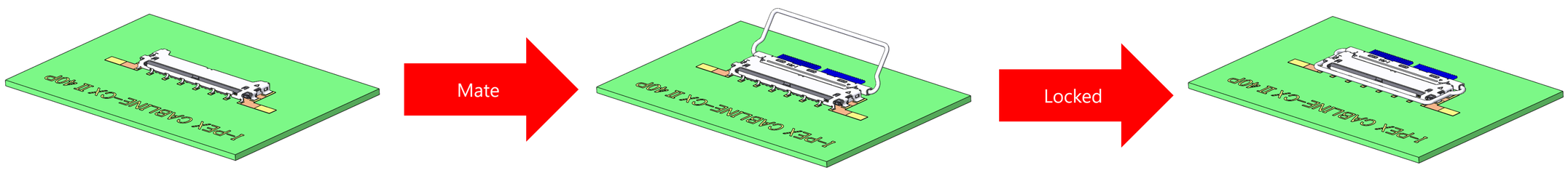






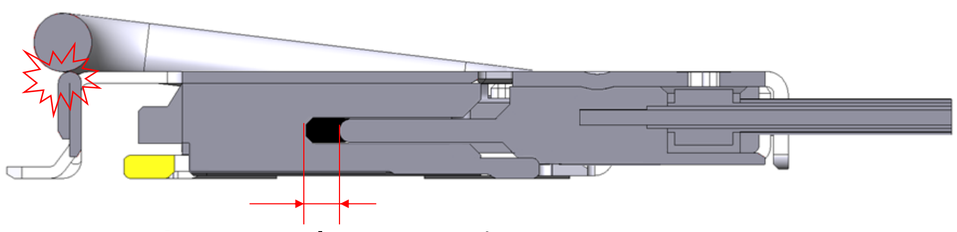
Flexible micro-coaxial cable harness is suitable for small applications with hinge design.

Mechanical locking bar prevents incomplete mating and back-out/un-mating

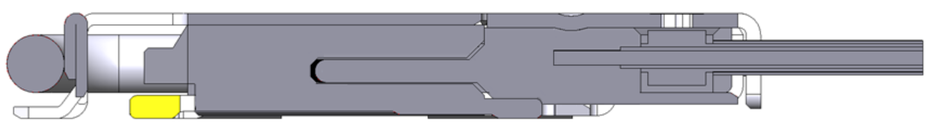


Mechanical locking bar can be locked only when plug is fully mated to receptacle.

Interference

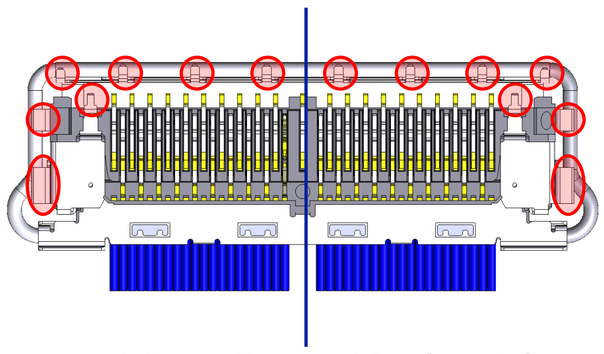


Incomplete mating



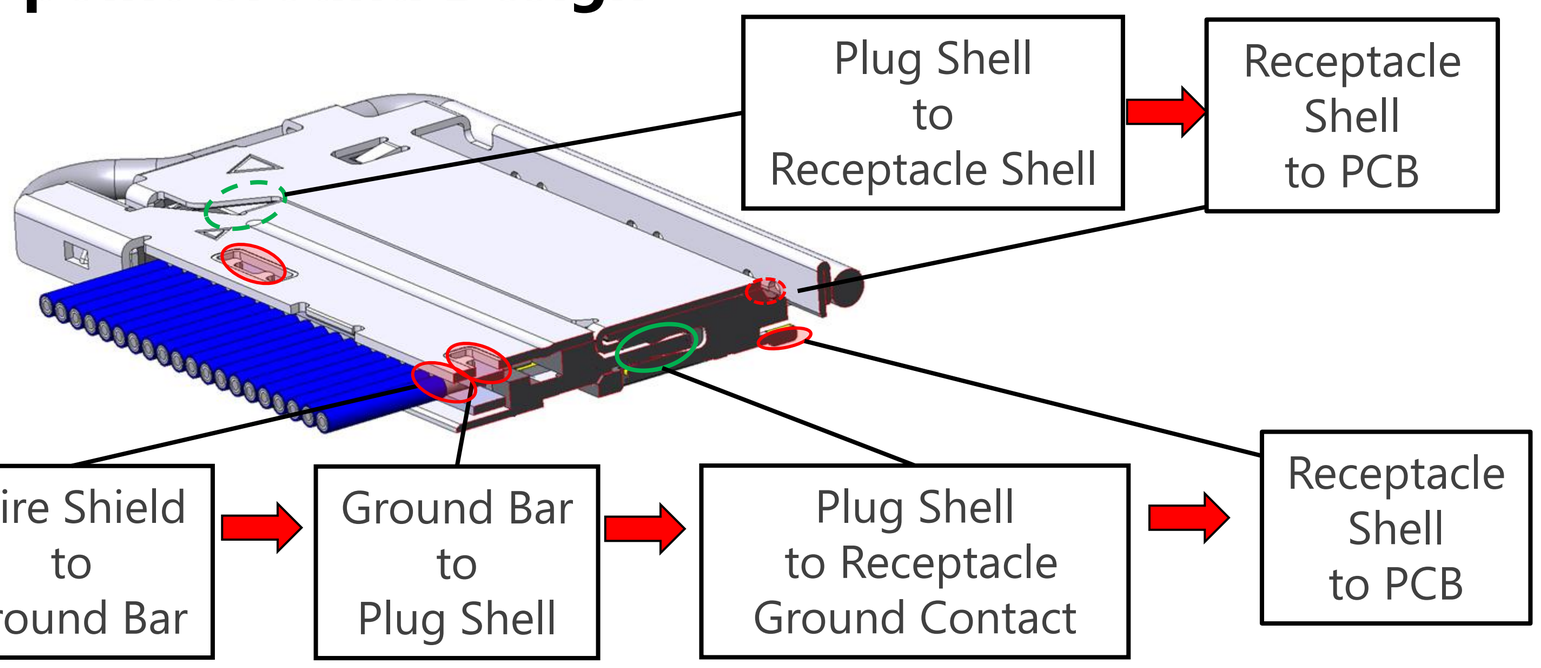
Complete mating

EMI Shielding and Multi-point Ground Design



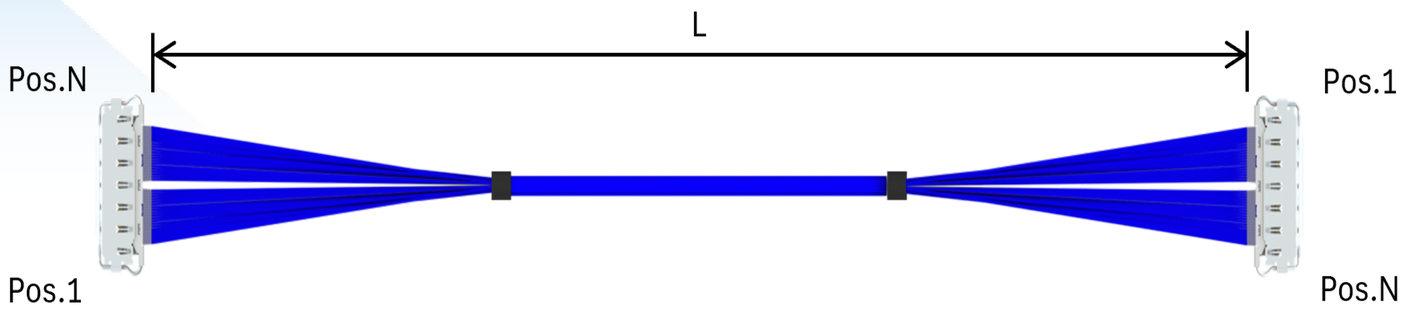
View From Underside

Soldered contacts
Mechanical contacts



CABLINE®-CX II With Cover standard harness

- Please click the part number to get its 2D drawing.
- Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- Please contact us via Inquiry form for other harness specifications.

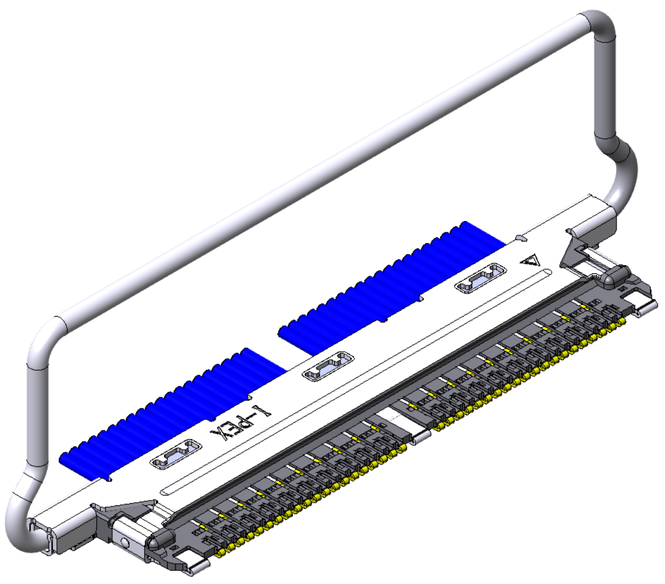


Part Number Description	Part Number (Link to Drawing)	Sample available
CABLINE-CX II 40pin micro-coaxial 46AWG L=300mm 1-N Zenshield type	82439-100B-02-D	Buy from Digikey

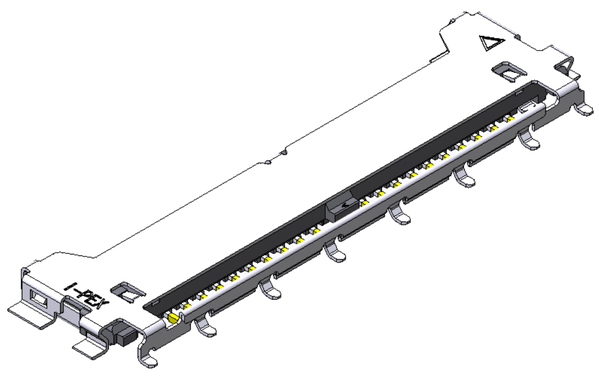
Component Parts Details

Component Parts

Connector parts

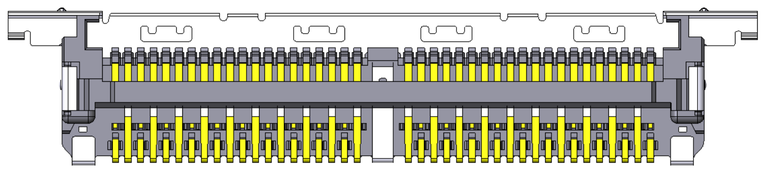


PLUG

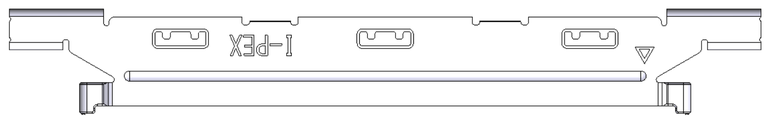


RECEPTACLE

Plug parts



PLUG HOUSING ASSEMBLY



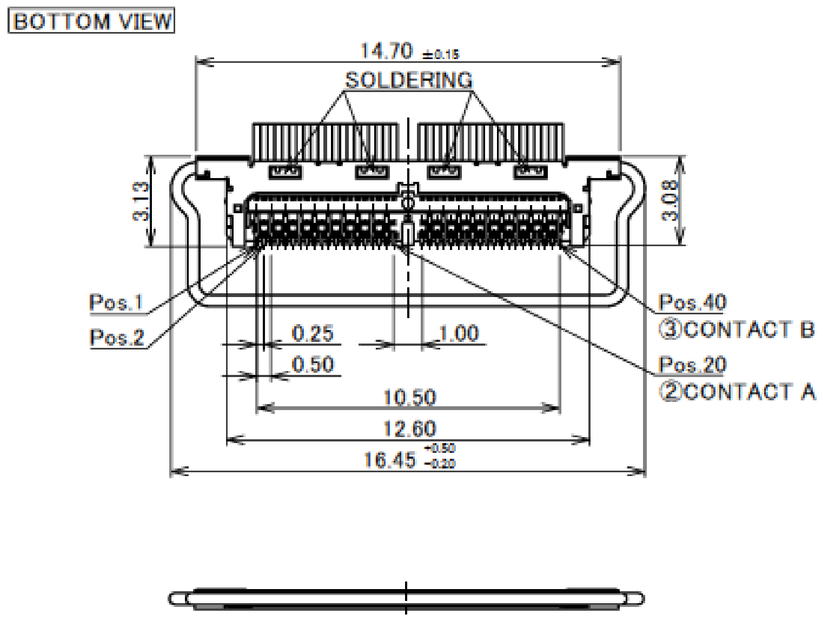
PLUG SHELL-A

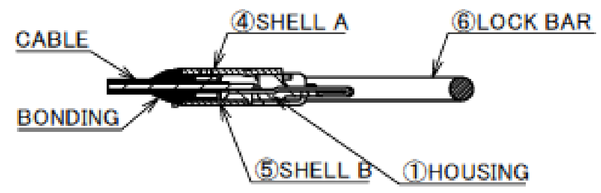
PLUG LOCK BAR

Plug for Cable Assembly

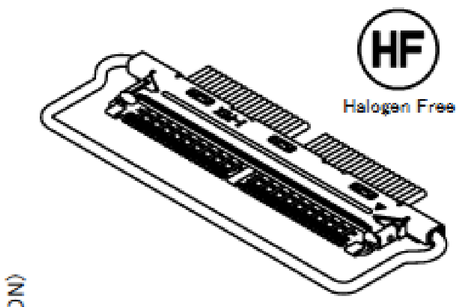
Recommended P/N	20978-040T-01

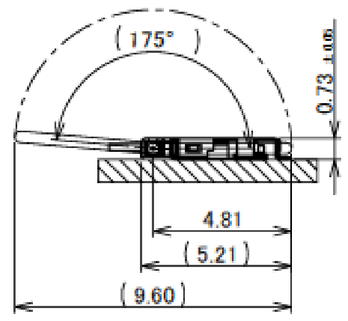
PART NO.	Pos.
20978-040T-01	40



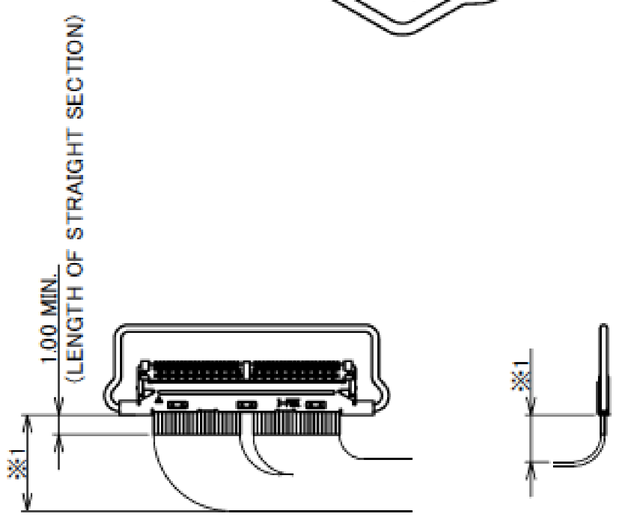


SECT. AA-AA
(S= 10 : 1)

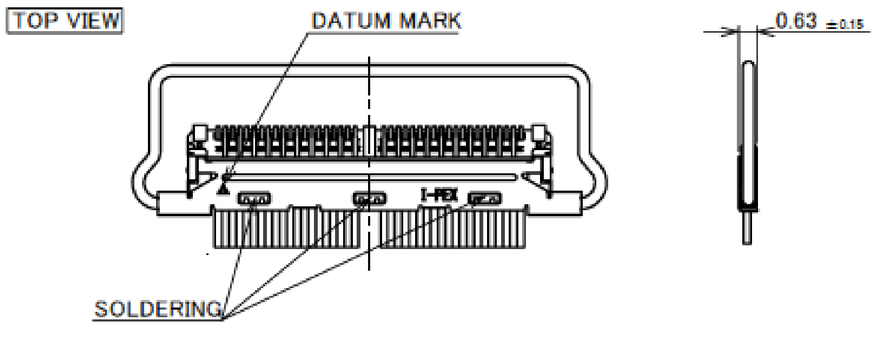


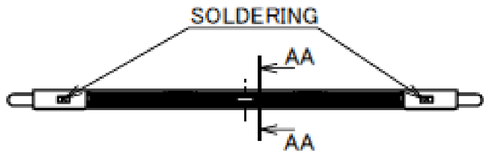


LOCK BAR MOVEMENT



REFERENCE CABLE BENDING DIMENSIONS

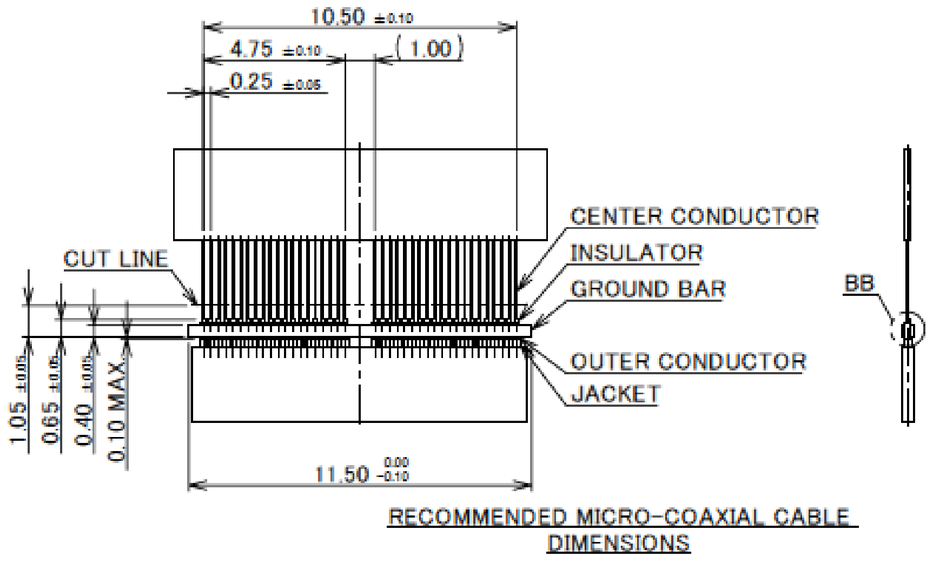




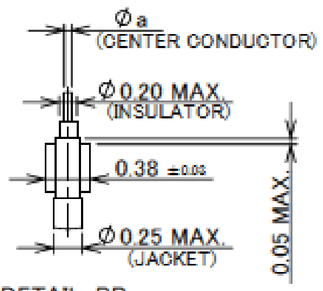
※1 : THE BEND DIMENSIONS MAY VARY BASED ON THE SIZE AND QUANTITY OF CABLES.
PLEASE CONFIRM THE MINIMUM BENDING RADIUS WITH I-PEX OR THE HARNESS MANUFACTURER.

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
6	LOCK BAR	SUS	-
5	SHELL B	SUS	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
4	SHELL A	SUS	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
3	CONTACT B	CORSON ALLOY	CONTACT AREA : Au 0.25 μm MIN. OVER Ni 2.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
2	CONTACT A	CORSON ALLOY	CONTACT AREA : Au 0.25 μm MIN. OVER Ni 2.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
1	HOUSING	LCP	UL94V-0, BLACK

Rev.4



RECOMMENDED MICRO-COAXIAL CABLE
DIMENSIONS



DETAIL BB
(S= 20 : 1)

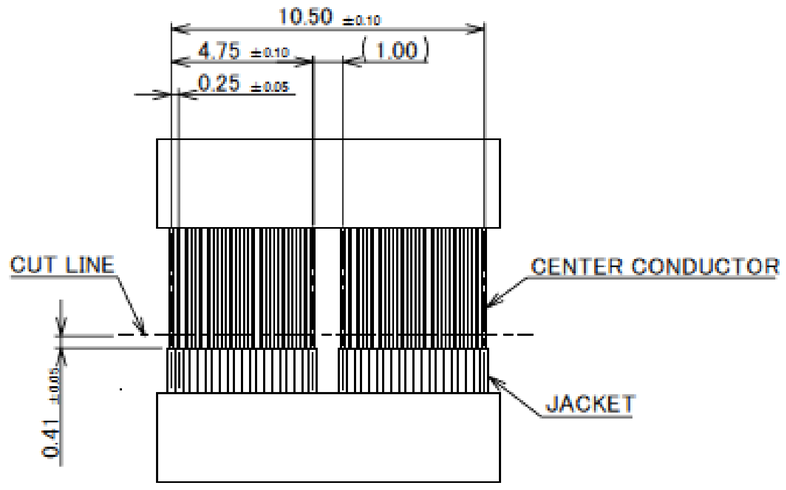
CHARACTERISTIC IMPEDANCE MATCHING MICRO-COAXIAL CABLE

	a
#44	0.063
#46	0.048

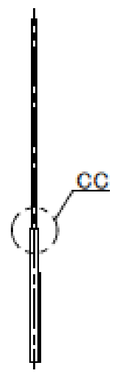
CHARACTERISTIC IMPEDANCE UN-MATCHING MICRO-COAXIAL CABLE

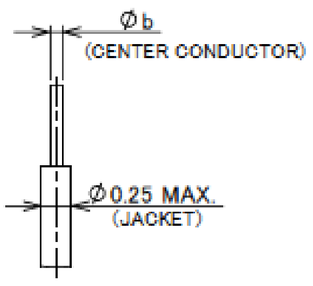
	a
#39	0.102

MICRO-COAXIAL CABLE #39 : NOT RECOMMENDED
FOR HIGH SPEED SIGNAL TRANSFER



RECOMMENDED DISCRETE WIRE DIMENSIONS





DETAIL CC
(S= 20 : 1)

DISCRETE WIRE DIMENSION

	b
#39	0.102

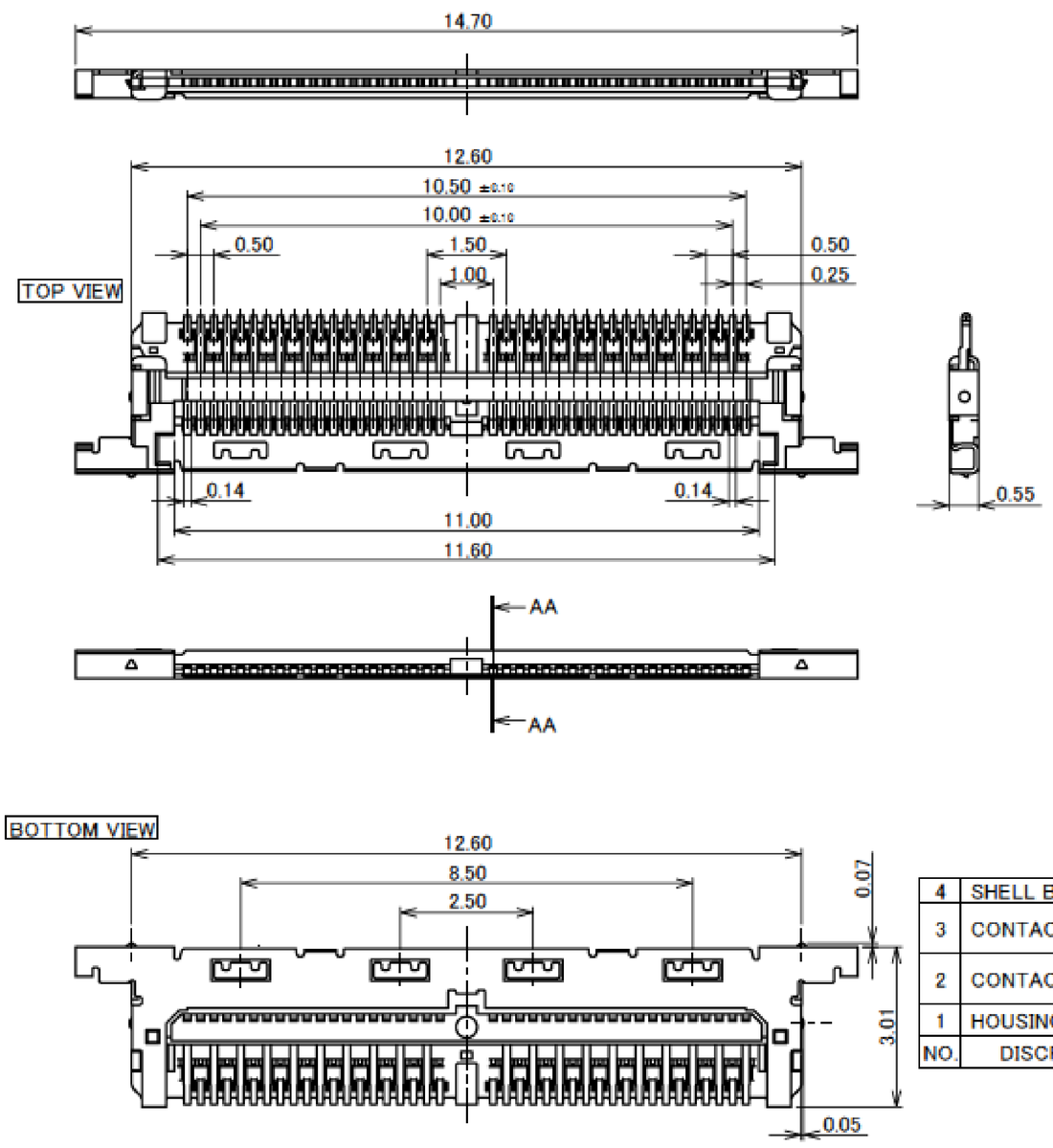
Rev.4

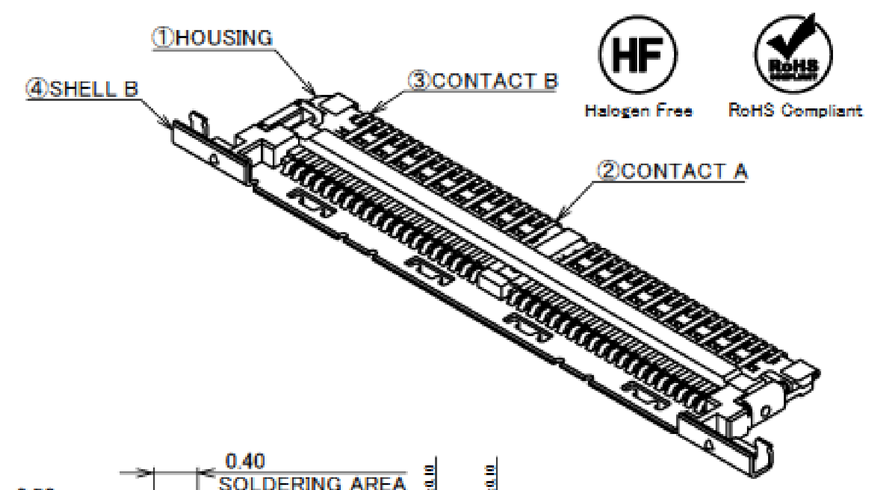
Plug for Cable Assembly

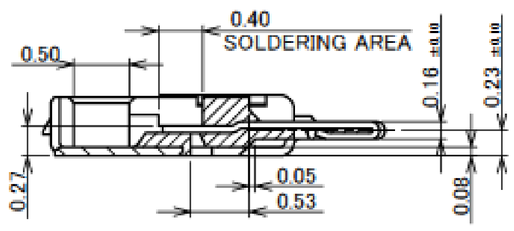
ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXAL CABLE : AWG# 46,44,39 DISCRETE WIRE : AWG# 39
RATING VOLTAGE	100V AC (PER CONTACT PIN) ※THIS IS THE RATED VOLTAGE OF THE CONNECTOR. PLEASE NOTE THAT THE RATED VOLTAGE MAY VARY IN THE HARNESS DEPENDING ON THE CABLES USED.
RATING AMPERAGE (FOR CONTACT)	0.10A AC/DC [AWG#46] PER CONTACT PIN/UP TO 40 CONTACTS 0.15A AC/DC [AWG#44] PER CONTACT PIN/UP TO 40 CONTACTS 0.50A AC/DC [AWG#39] PER CONTACT PIN/UP TO 7 CONTACTS ※TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE TEMPERTURE RISE MAY AFFECTED BY ACTUAL SITUATION
OPERATING TEMPERATURE	233～358K(-40℃～+85℃) (CONTAINING TEMPERATURE RISE BY CURRENT)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 388mohm MAX.(AWG#39) / AFTER TEST : ⊿40mohm MAX. INITIAL : 1,080mohm MAX.(AWG#44) INITIAL : 1,830mohm MAX.(AWG#46)
GROUND SHELL RESISTANCE	INITIAL : 50mohm MAX. / AFTER TEST : ⊿40mohm MAX.
INSULATION RESISTANCE	INITIAL : 1,000Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	20 CYCLES
MATING FORCE (INITIAL / 20 CYCLES)	40P : 30.0N MAX.
UNMATING FORCE (INITIAL / 20 CYCLES)	40P : 4.0N MIN.
CABLE RETENTION FORCE	40P : 19.60N MIN.
PRODUCT SPECIFICATION	PRS-2403
TEST REPORT	TR-17063
INSTRUCTION MANUAL	HIM-17040
ASSEMBLY MANUAL	ASM-17011
APPEARANCE CRITERIA No.	QLS-A***

Plug Housing Assembly

Recommended P/N	20974-040T-01
PART NO.	Pos.
20974-040T-01	40







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

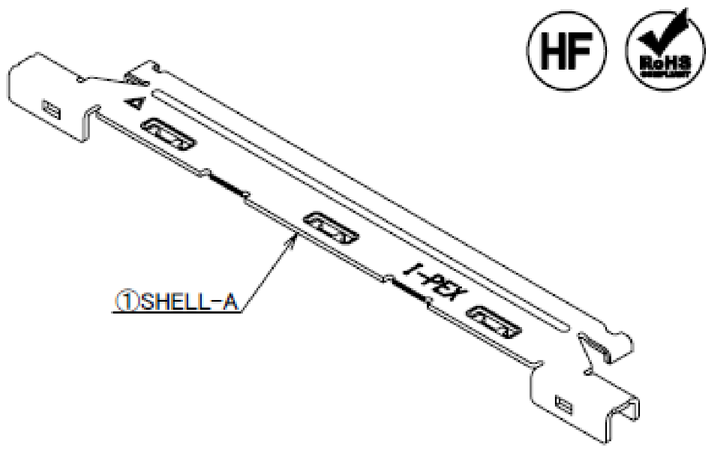
NOTES.
1. ASSEMBLY
 1-1. 20977-040T-01
  THIS PART IS ASSEMBLED WITH SHELL A (P/N 3655-0401) AND
  LOCK BAR ASS'Y (P/N 20975-040T-01) AFTER SOLDERED THE CABLE.
 1-2. 20978-040T-01
  THIS PART IS ASSEMBLED WITH SHELL A (P/N 3655-0401) AND
  LOCK BAR (P/N 3656-0402) AFTER SOLDERED THE CABLE.

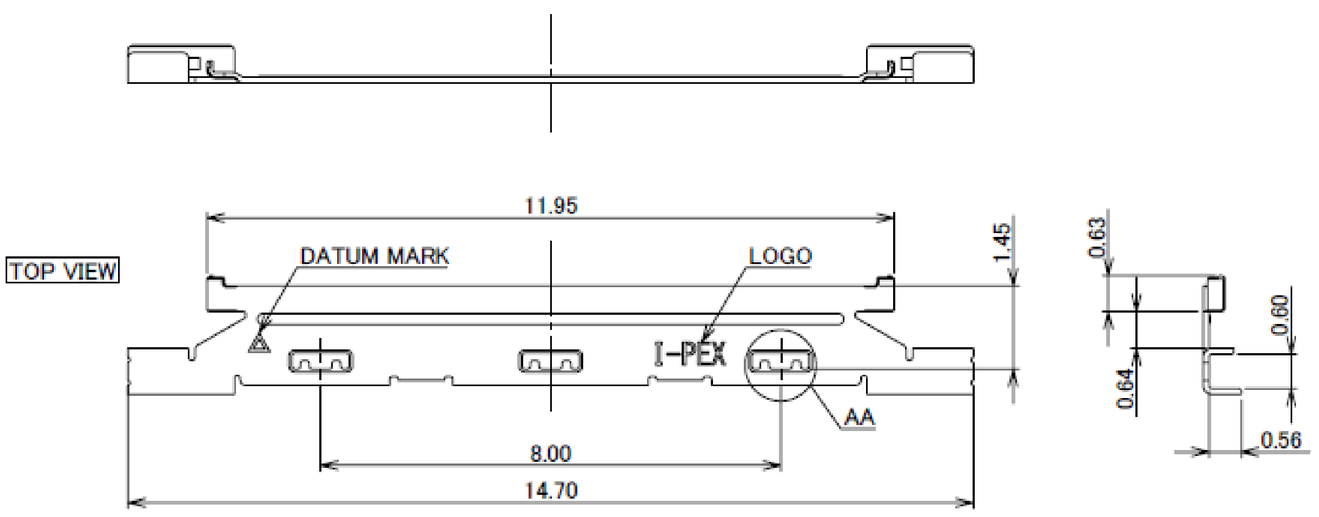
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
4	SHELL B	SUS	PARTIAL Au 0.003 μm MIN. OVER Ni 1.00 μm MIN.
3	CONTACT B	CORSON ALLOY	CONTACT AREA : Au 0.25 μm MIN. OVER Ni 2.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
2	CONTACT A	CORSON ALLOY	CONTACT AREA : Au 0.25 μm MIN. OVER Ni 2.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
1	HOUSING	LCP	UL94V-0, BLACK

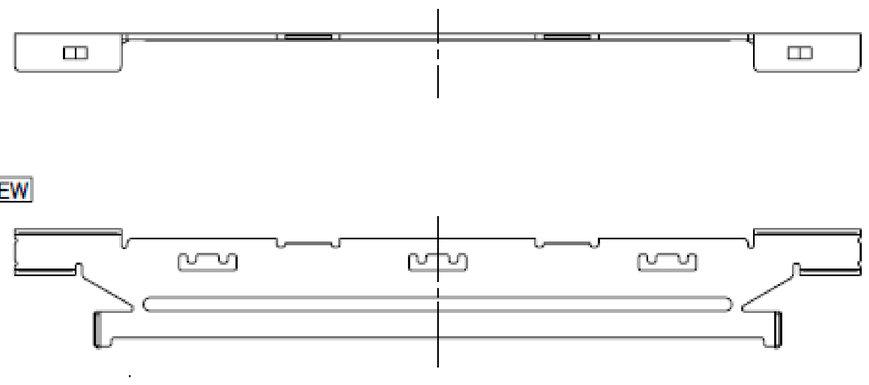
Plug Shell-A

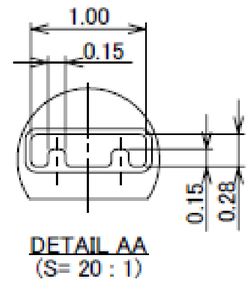
Recommended P/N	3655-0401

PART No.
3655-0401









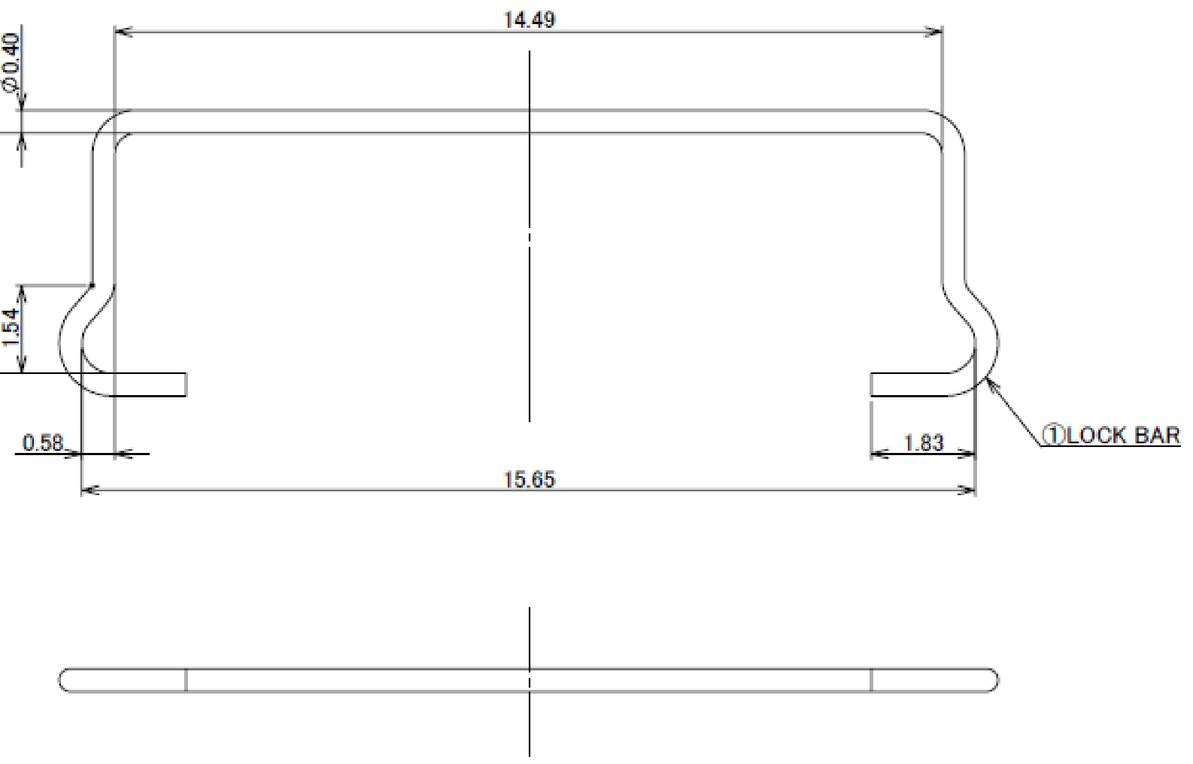
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
1	SHELL-A	SUS	PARTIAL Au 0.003 μm MIN. OVER Ni 1.0 μm MIN.

Rev.0

Plug Lock Bar

Recommended P/N	3656-0402

PART No.
3656-0402



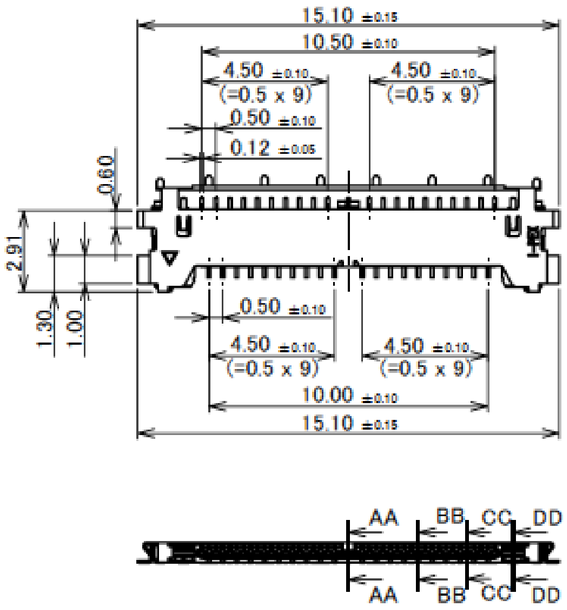
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
1	LOCK BAR	SUS ϕ0.40	–

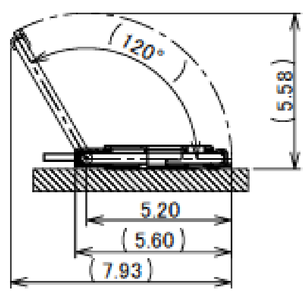
Rev.0

Receptacle Assembly

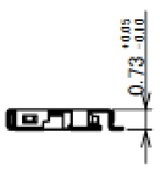
Recommended P/N	20976-040E-01

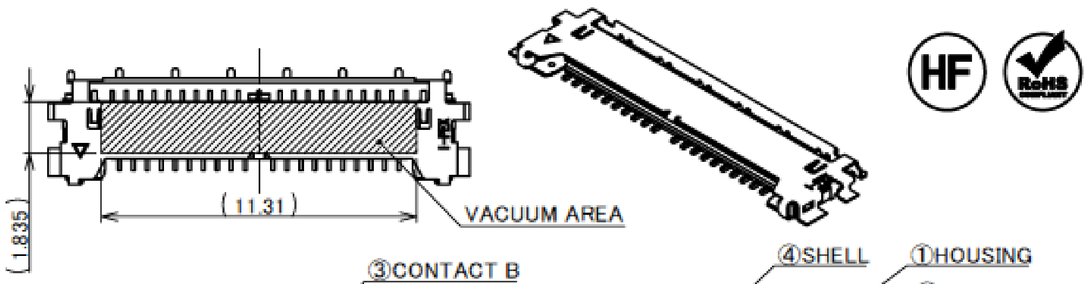
PART NO.	Pos.
20976-040E-01	40

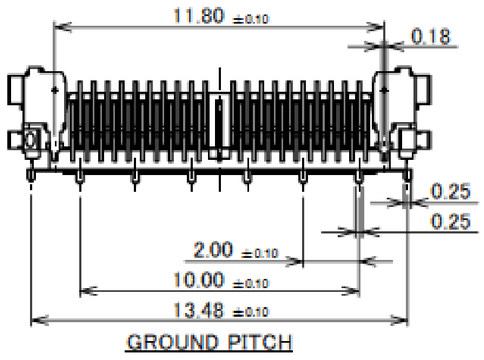




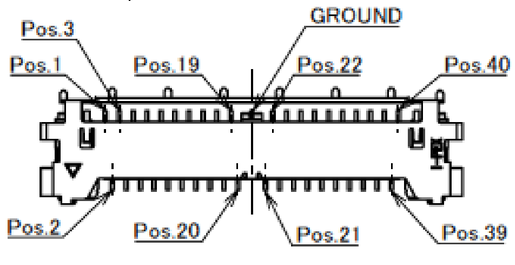
LOCK BAR MOVEMENT



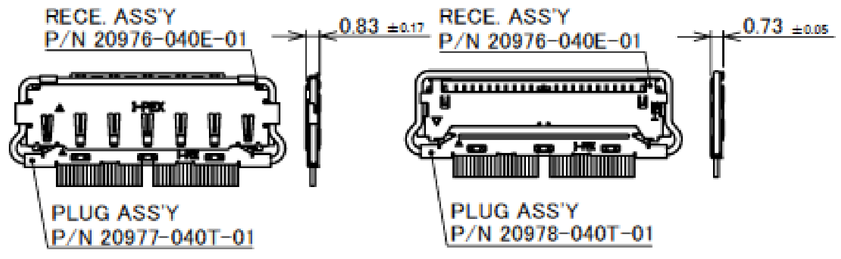


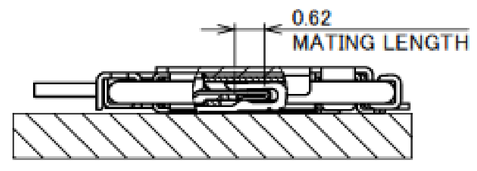


GROUND PITCH



CONTACT ARRANGEMENT

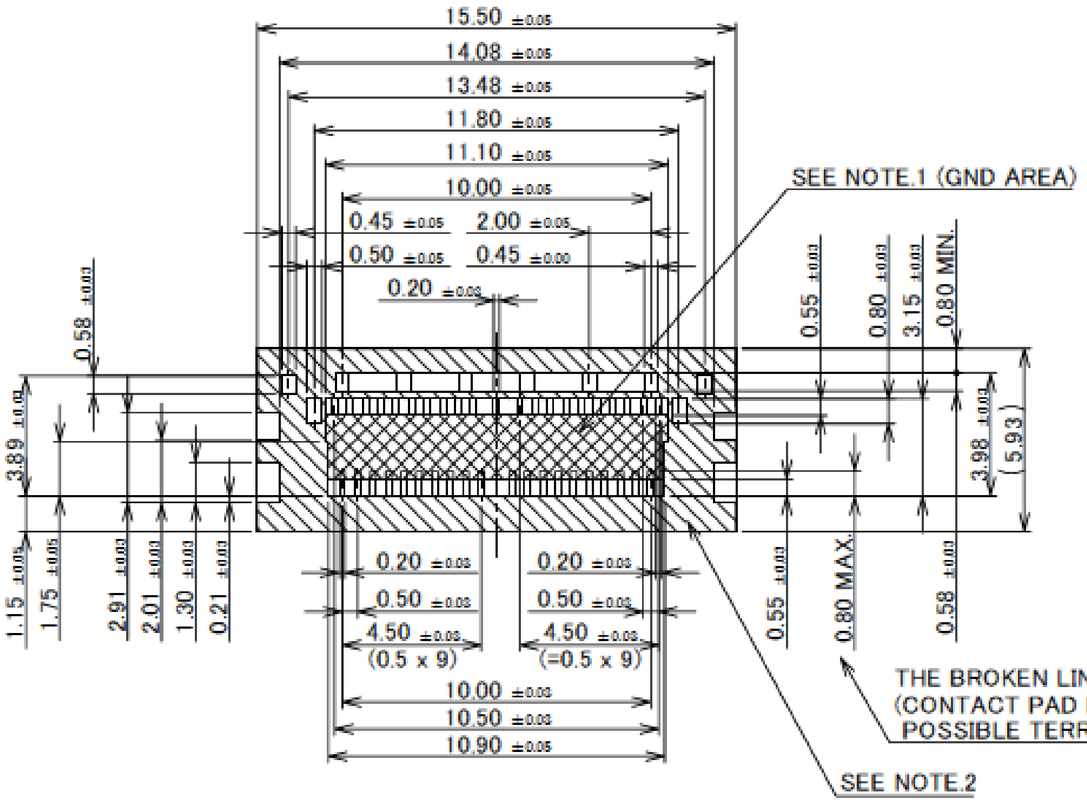




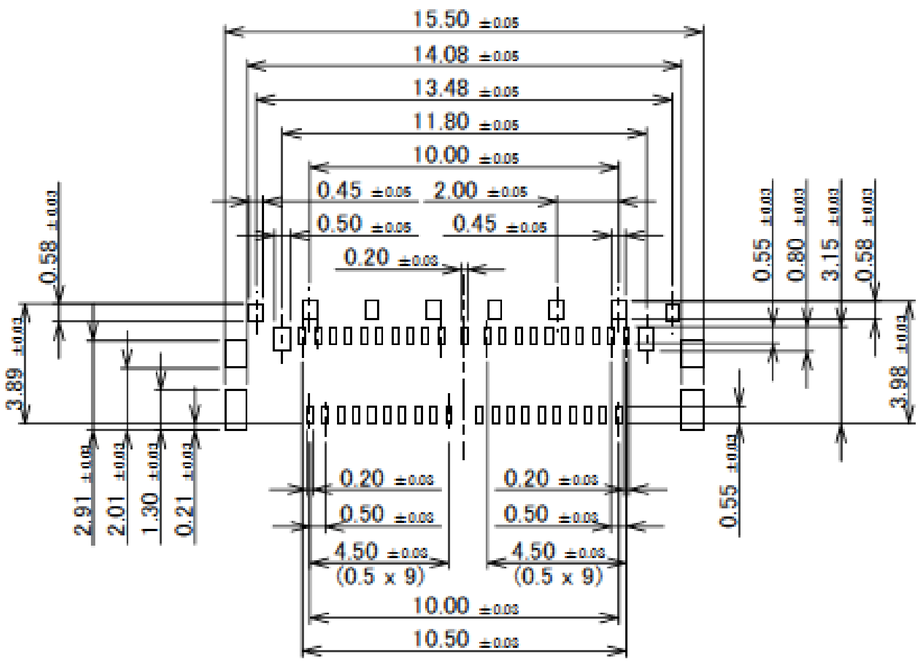
MATING CONDITION

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
4	SHELL	PHOSHOR BRONZE	PARTIAL Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
3	CONTACT B	CORSON ALLOY	CONTACT AREA : Au 0.10 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
2	CONTACT A	CORSON ALLOY	CONTACT AREA : Au 0.10 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
1	HOUSING	LCP	UL94V-0, BLACK

Rev.3



RECOMMENDED FOOTPRINT PATTERN LAYOUT

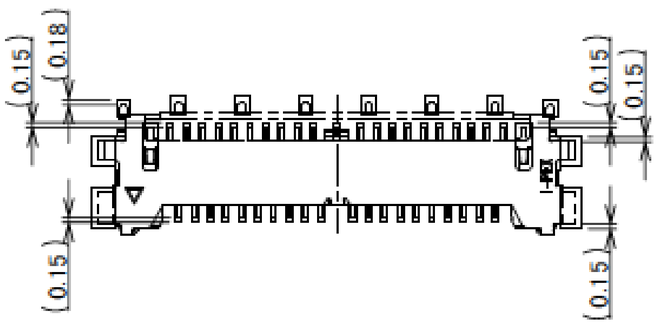


RECOMMENDED METAL MASK LAYOUT
METAL MASK THICKNESS : t=0.12 mm

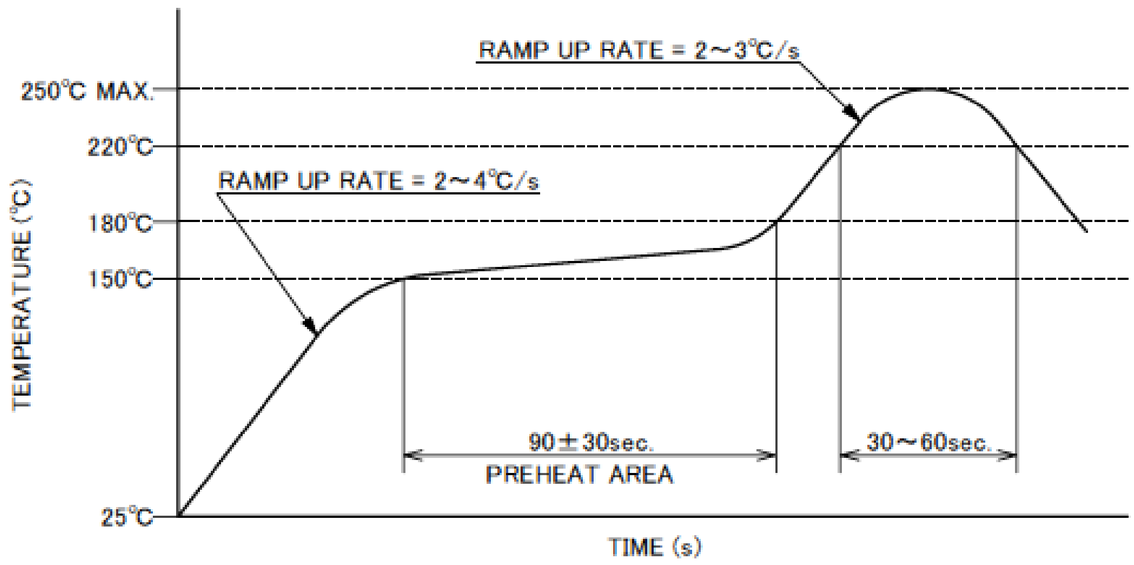
NOTES.
1. SOLDER RESIST MUST BE APPLIED TO THIS AREA
2. DO NOT MOUNT ANOTHER COMPONENTS IN THIS AREA.

Rev.3

Receptacle Assembly



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

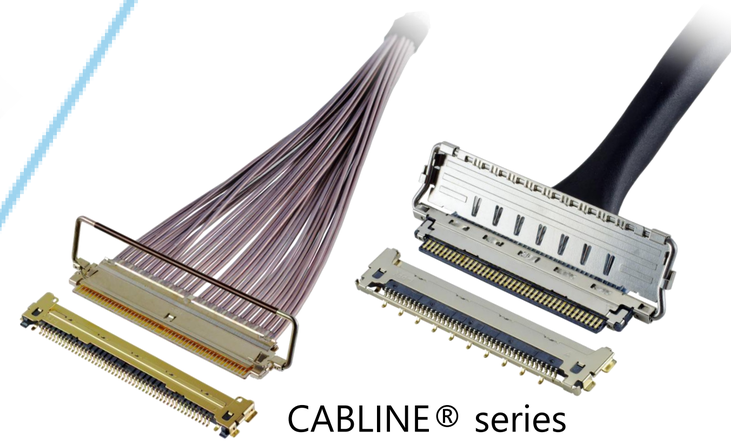
ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL CABLE : AWG# 46,44 DISCRETE WIRE : AWG# 39
RATING VOLTAGE	100V AC (PER CONTACT PIN)
RATING AMPERAGE (FOR CONTACT)	0.10A AC/DC [AWG#46] PER CONTACT PIN/UP TO 40 CONTACTS 0.15A AC/DC [AWG#44] PER CONTACT PIN/UP TO 40 CONTACTS 0.50A AC/DC [AWG#39] PLUG WITH COVER CABLE ASS'Y (P/N : 20977-040T-01) PER CONTACT PIN/UP TO 8 CONTACTS PLUG WITHOUT COVER CABLE ASS'Y (P/N : 20978-040T-01) PER CONTACT PIN/UP TO 7 CONTACTS ※TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE TEMPERTURE RISE MAY AFFECTED BY ACTUAL SITUATION
OPERATING TEMPERATURE	233～358K(-40℃～+85℃) (CONTAINING TEMPERATURE RISE BY CURRENT)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 388mohm MAX.(AWG#39) / AFTER TEST : ⊿40mohm MAX. INITIAL : 1,080mohm MAX.(AWG#44) INITIAL : 1,830mohm MAX.(AWG#46)
GROUND SHELL RESISTANCE	INITIAL : 50mohm MAX. / AFTER TEST : ⊿40mohm MAX.
INSULATION RESISTANCE	INITIAL : 1,000Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	20 CYCLES
MATING FORCE (INITIAL / 20 CYCLES)	40P : 30.0N MAX.
UNMATING FORCE (INITIAL / 20 CYCLES)	40P : 4.0N MIN.
CABLE RETENTION FORCE	40P : 19.60N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-2403
TEST REPORT	TR-17063
PACKING STANDARD	PST-17126
INSTRUCTION MANUAL	HIM-17035 (WHEN PLUG WITH COVER CABLE ASS'Y IS USED) HIM-17040 (WHEN PLUG WITHOUT COVER CABLE ASS'Y IS USED)
APPEARANCE CRITERIA No.	QLS-A***

Custom Connectors Available

RF Connectors

MHF® series

Micro-Coaxial/Twinaxial Connectors



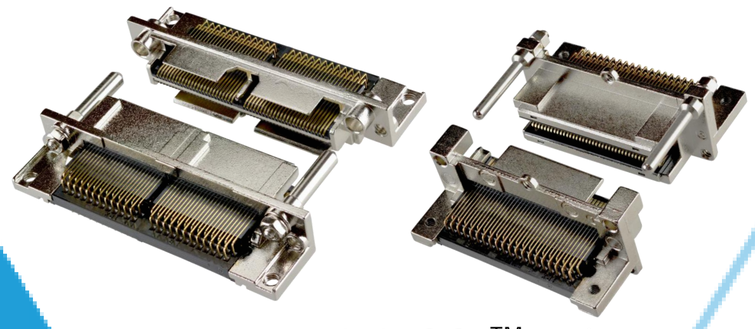
CABLINE® series

Wire-to-Board Connectors/ Terminals

AP series

ISH® series

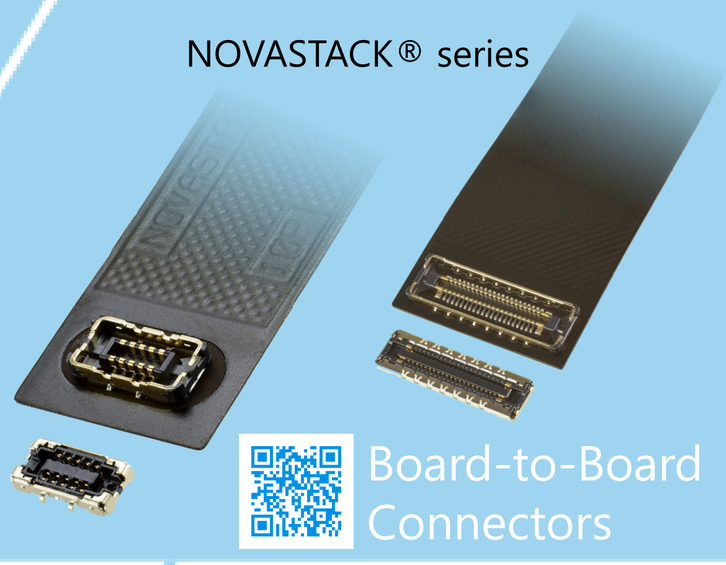
I/O Connectors



MINIDOCK™ series

Board-to-Board Connectors

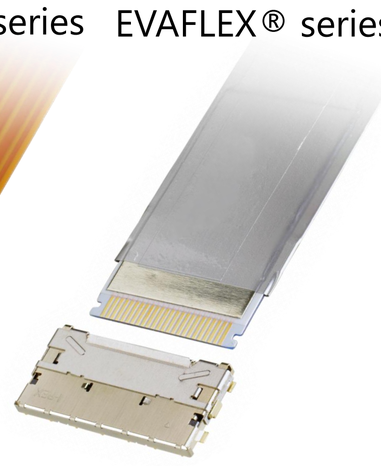
NOVASTACK® series



FPC/FFC Connectors

MINIFLEX® series

EVAFLEX® series



Inquiry

Contact your sales representative or more detailed information.

www.i-pex.com

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