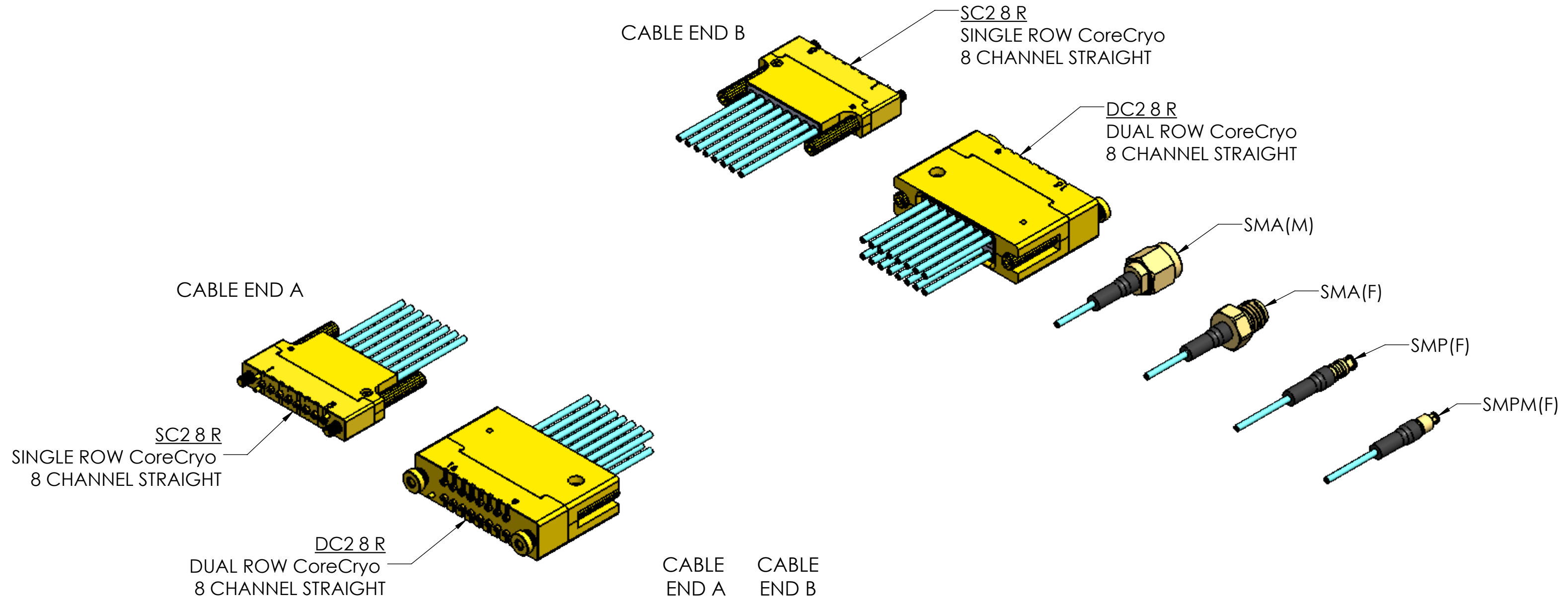


CoreCryo STD OFFERING

REVISION HISTORY					
ECO	REV.	DESCRIPTION	DRAWN BY	APPROVAL	DATE
204811	A	INITIAL RELEASE	HTRAN	KFISHER	10.20.25
205028	B	ADD -X CODE: COUNTRY OF ORIGIN-C.O.O.	HTRAN	KFISHER	11.20.25
205519	C	TEST FREQ. TO 20 GHz WAS 18 GHz	HTRAN	KFISHER	03.04.26



CABLE CODE
 4C- Cryo (NM) 0.047"

STRAIN RELIEF
 S- HEATSHRINK SHORT
 M-HEATSHRINK MEDIUM
 L-HEATSHRINK LONG
 X-NO HEATSHRINK

NO. OF ROWS
 S- SINGLE ROW
 D-DOUBLE ROW

CONNECTOR TYPE
 C2-CoreCryo CPW
 S2-CoreCryo STRIPLINE

OF CHANLES PER ROW
 2, 4, 6, 8, 10

CONNECTOR ORIENTATION
 R-RUGGED STRAIGHT

TM 4C X S C2 8 R C2 R 050 C (X)-X

ORIENTATION
 1: SAME
 2: OPPOSITE
 (APPLIES WHEN USING
 2 HC CONNECTORS)

PHASE MATCHING
 C ± 2ps (PAIR) (AS STANDARD)
 D ± 1ps (PAIR)
 E ± 0.5ps (PAIR)
 F ± 2ps (LOT)
 G ± 1ps (LOT)
 H ± 0.5ps (LOT)

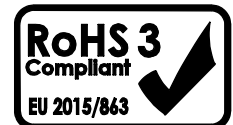
LENGTH (cm)
 050=500mm
 100=1000mm

CONNECTOR ORIENTATION
 R-RUGGED STRAIGHT (C2 AND S2 CONNECTOR)
 S-STRAIGHT

CONNECTOR TYPE
 C2-CoreCryo CPW
 S2-CoreCryo STRIPLINE
 2M -SMA MALE
 2F -SMA FEMALE
 PF -SMP FEMALE
 MF -SMPM FEMALE

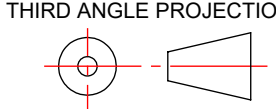
Country of Origin (C.O.O.)
 NULL: C.O.O. CN: BUILD TO FG (CN)
 -U: C.O.O. USA: BUILD FG LEVEL ONLY (USA)
 -Y: MAKE IN USA: BUILD TO FG (USA)

1. FOOTPRINTS...
- TM13-0236-XX - DUAL ROW STRIPLINE
 - TM13-0240-XX - DUAL ROW CPW
 - TM13-0239-XX - SINGLE ROW STRIPLINE
 - TM13-0238-XX - SINGLE ROW CPW
- NOTES: UNLESS OTHERWISE SPECIFIED...



THE INFORMATION CONTAINED HEREIN IS PROPRIETARY TO AMPHENOL AND SHALL IN NO WAY BE REPRODUCED OR DISCLOSED IN WHOLE OR IN PART OR USED FOR ANY DESIGN OR MANUFACTURE EXCEPT WHEN SUCH USER POSSESSES DIRECT, WRITTEN AUTHORIZATION FROM AMPHENOL.

DIMENSIONS ARE IN MILLIMETERS [INCHES] ± TOLERANCES UNLESS OTHERWISE NOTED			MATERIAL		SPECIFICATION		PROCUREMENT	
X ± 0.3mm [012"] XX ± 0.15mm [006"] .XXX ± 0.050mm [.002"] .XXXX ± 0.010mm [0004"] ANGLE ± 0.5°			APPROVAL	INITIALS	DATE	12900 Alondra Blvd. Cerritos, CA 90703		
	DRAWN BY	HT	10.13.25	TITLE		CoreCryo CABLE BUILDER ASSY		
	CHECKED BY			SCALE	SUB-DIRECTORY/		SHEET 1 OF 9	
	TEST ENG			DESIGN ENG	HT	10.13.25		
	QUALITY			MFG ENG	LC	03.05.26		
	ECO APPRV	HT	03.05.26	DRAWING NO.		OL_TM99-0141-00		
				SIZE	CAGE CODE	30990	REV.	C



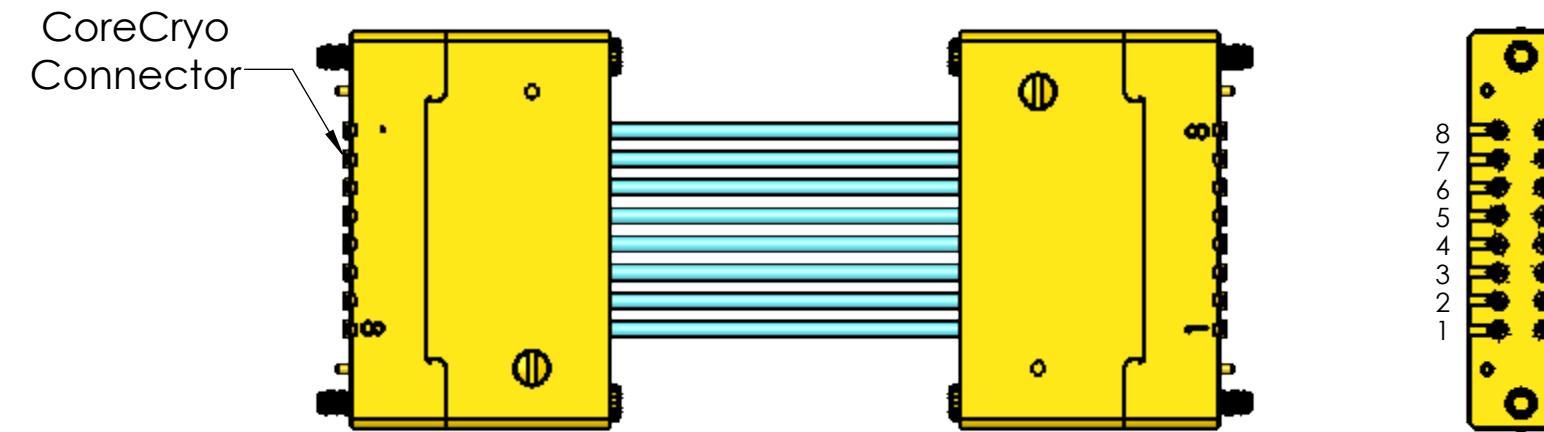
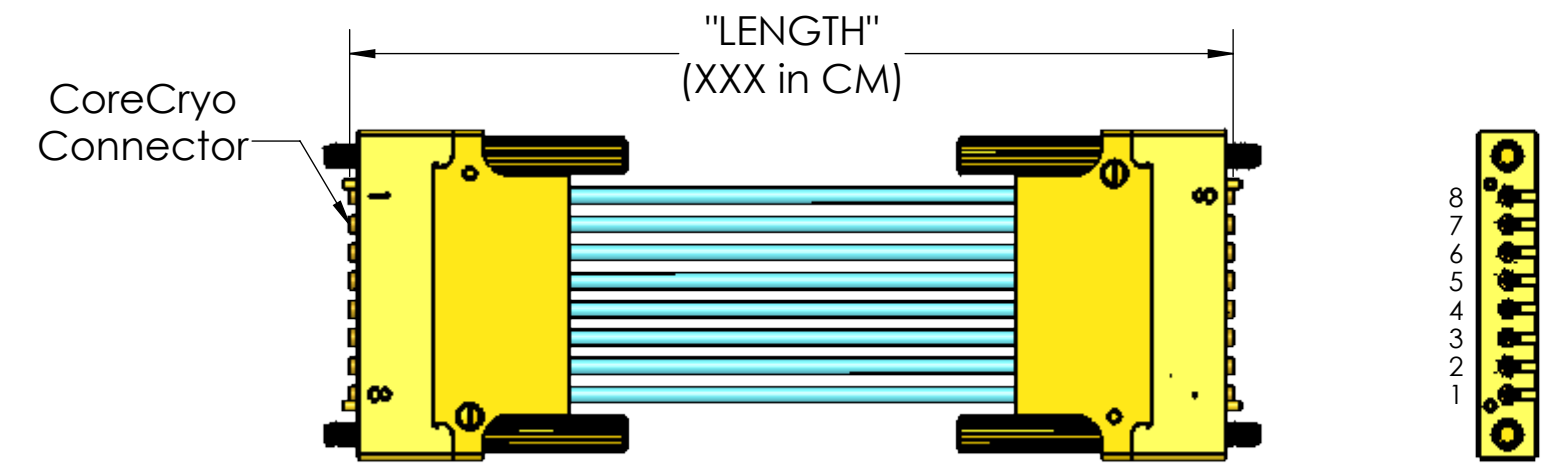
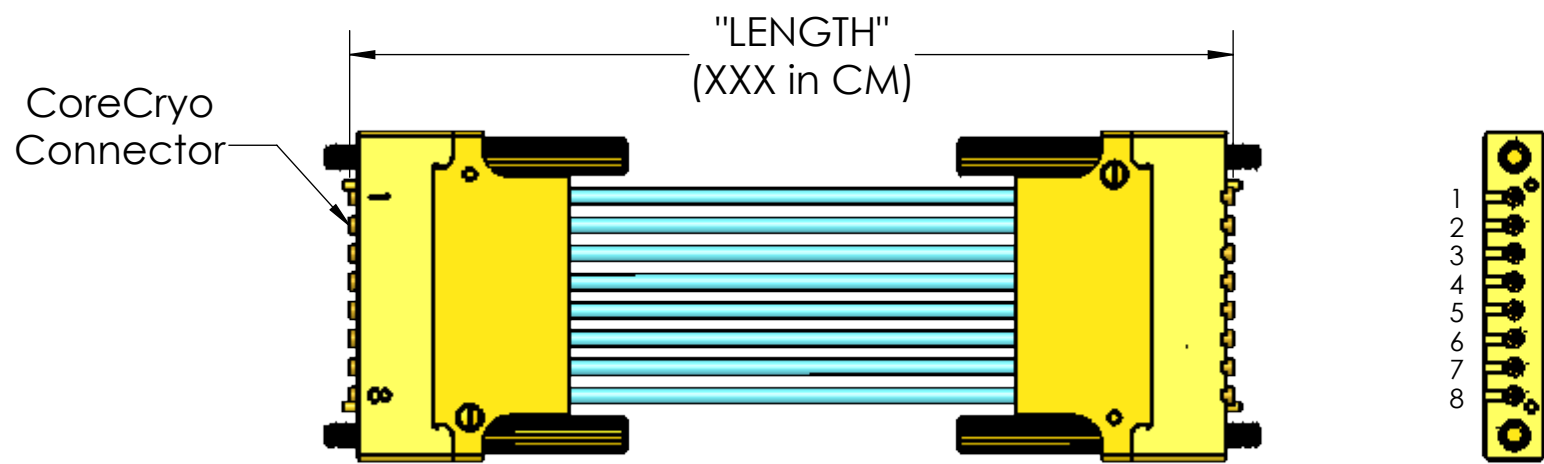
CoreCryo Assy.	
TM4CX5X2RXXRXXX1-X	
TM4CX5X4RXXRXXX1-X	
TM4CX5X6RXXRXXX1-X	
TM4CX5X8RXXRXXX1-X	
TM4CX5X10RXXRXXX1-X	
TM4CX5X2RXXRXXX2-X	
TM4CX5X4RXXRXXX2-X	
TM4CX5X6RXXRXXX2-X	
TM4CX5X8RXXRXXX2-X	
TM4CX5X10RXXRXXX2-X	
TM4CXDX2RXXRXXX2-X	
TM4CXDX4RXXRXXX2-X	
TM4CXDX6RXXRXXX2-X	
TM4CXDX8RXXRXXX2-X	
TM4CXDX10RXXRXXX2-X	

ORIENTATION STYLE 1: SAME ORIENTATION		
CABLE #	CONNECTOR 1	CONNECTOR 2
	PINOUT	PINOUT
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8

ORIENTATION STYLE 2: OPPOSITE / REVERSED		
CABLE #	CONNECTOR 1	CONNECTOR 2
	PINOUT	PINOUT
1	1	8
2	2	7
3	3	6
4	4	5
5	5	4
6	6	3
7	7	2
8	8	1

ORIENTATION STYLE 2: OPPOSITE / REVERSED		
CABLE #	CONNECTOR 1	CONNECTOR 2
	PINOUT	PINOUT
1	1	8
2	2	7
3	3	6
4	4	5
5	5	4
6	6	3
7	7	2
8	8	1
9	9	16
10	10	15
11	11	14
12	12	13
13	13	12
14	14	11
15	15	10
16	16	9

FREQUENCY	RETURN LOSS (GATED) (dB Max.)	INSERTION LOSS (dB/Ft Max.)
DC TO 14 GHz	-17	-2.2
14 TO 20 GHz	-14	-3.0



**CoreCryo To CoreCryo
(EX: 1R & 2R X 8CH. AS SHOWN)**

MATERIAL(S):

CoreHC2 connector: P/n TM14-0189-01/-02(**Non-Magnetic**)
Contact, Front Shell,Rear Shell,Ground Slider & Solder Sleeve:
BeCu Alloy, Gold over Copper Plating
Spring :
Stainless Steel SUS130M, Passivate
Front Insulator: Rexolite 1422 (unfilled)
Support Insulator 1, Support Insulator 2: PTFE
Dielectric Stop: Peek
Spring pin:
Barrel: Phosphor Bronze, Gold over Copper Plating
Plunger:BeCu Alloy, Gold over Copper Plating
Spring: NAS 604PH, Gold over Copper Plating
Tail Needle: BeCu Alloy, Gold over Copper Plating

HC2 Compliant Carrier: TM4S-XC28R (**Non-Magnetic**)
Carrier, Clamp Shell, Dowel Pin, Screw & Press Nut:
BeCu Alloy, Gold over Copper Plating
Cable Support: Silicone

Cable: P/n TM20-4S9 (**Non-Magnetic**)
Conductor: Solid Silver Plated Copper Alloy (non magnetic)
Dielectric: Solid PTFE
Shielding: Helically wrapped flat silver plated copper tape (non-magnetic)
Shielding: Silver Plated Copper Alloy (non-magnetic)
Jacket: FEP

ELECTRICAL(S): REFERENCE ONLY

Impedance: 50 Ohms Nominal
Frequency Range: DC to 20 GHz
VSWR: See Table
Insertion Loss: See Table
HC2 (Spring Pin):
Working Voltage: 325 Vrms max @ Sea Level
Insulation Resistance: 5000 MegOhms min.
Spring Pin:
Current: 1A Max.
Contact Resistance: 100mOhm Max.

MECHANICAL(S): REFERENCE ONLY

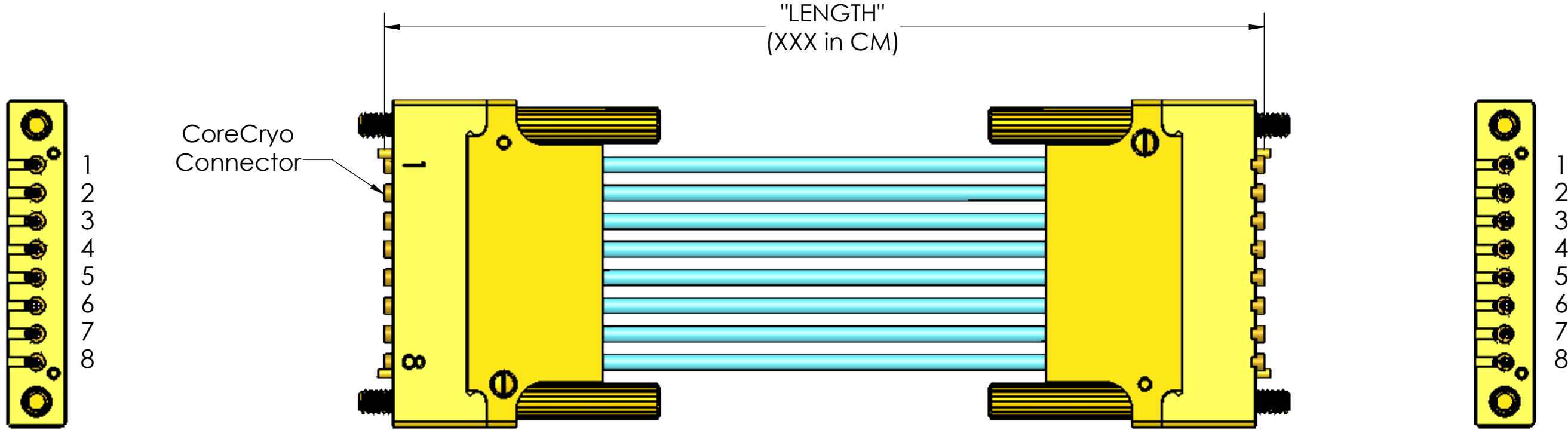
Mating Characteristics:
CoreHC2 Interface per Amphenol CDI
Force to Engage:
CoreHC2 (Individual): .85 Lbs Typ.
Force to Disengage:
CoreHC2 (Individual): .N/A
Connector Durability:
CoreHC2: 1,000 Cycles

ENVIRONMENTAL(S): REFERENCE ONLY

Temperature Range: -65°C to +125°C
Thermal Shock:
MIL-STD-202, Method 107, Test Condition B
Moisture Resistance:
MIL-STD-202, Method 106, Insulation resistance at least 200 MegaOhms within 5 minutes after removal from humidity.

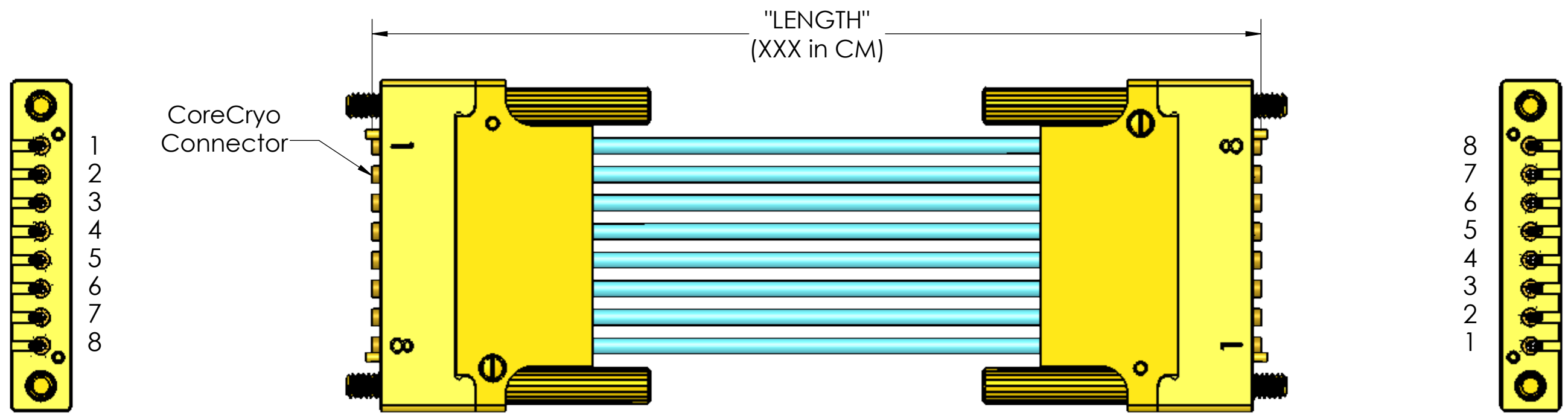
ORIENTATION STYLE 1: SAME ORIENTATION		
CABLE #	CONNECTOR 1	CONNECTOR 2
	PINOUT	PINOUT
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8

FREQUENCY	RETURN LOSS (GATED)	INSERTION LOSS
	(dB Max.)	(dB/Ft Max.)
DC TO 14 GHz	-17	-2.2
14 TO 20 GHz	-14	-3.0



**CoreCryo To CoreCryo
Single Row Configuration
Same Orientation Style
(EX: 1R X 8CH. As Shown)**

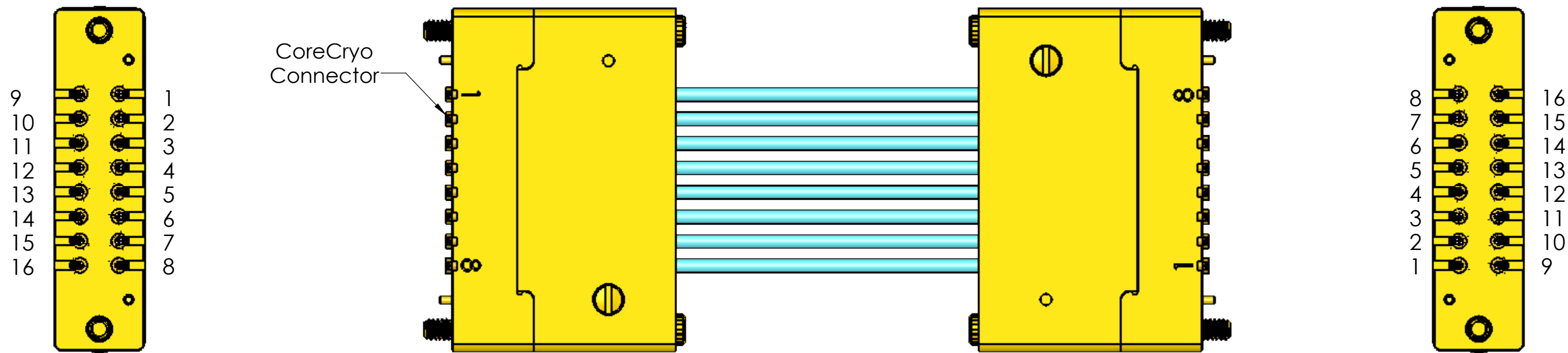
ORIENTATION STYLE 2: OPPOSITE / REVERSED		
CABLE #	CONNECTOR 1	CONNECTOR 2
	PINOUT	PINOUT
1	1	8
2	2	7
3	3	6
4	4	5
5	5	4
6	6	3
7	7	2
8	8	1



**CoreCryo To CoreCryo
Single Row Configuration
Opposite Orientation Style
(EX: 1R X 8CH. As Shown)**

ORIENTATION STYLE 2: OPPOSITE / REVERSED		
CABLE #	CONNECTOR 1	CONNECTOR 2
	PINOUT	PINOUT
1	1	8
2	2	7
3	3	6
4	4	5
5	5	4
6	6	3
7	7	2
8	8	1
9	9	16
10	10	15
11	11	14
12	12	13
13	13	12
14	14	11
15	15	10
16	16	9

FREQUENCY	RETURN LOSS (GATED) (dB Max.)	INSERTION LOSS (dB/Ft Max.)
DC TO 14 GHz	-17	-2.2
14 TO 20 GHz	-14	-3.0



**CoreCryo To CoreCryo
Dual Row Configuration
Opposite Orientation Style
(EX: 2R X 8CH. As Shown)**



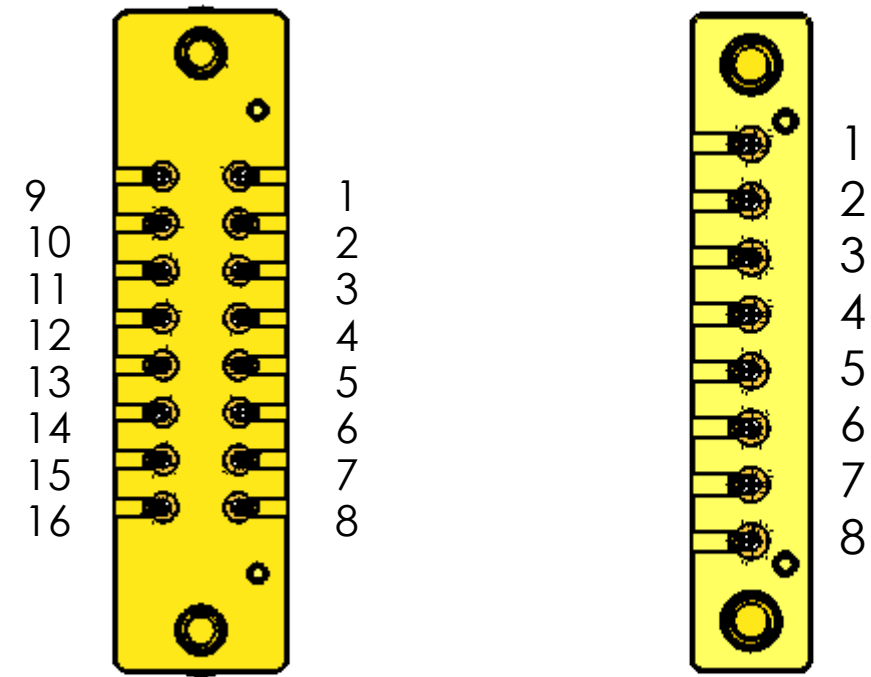
TITLE
CoreCryo CABLE BUILDER
ASSY

SIZE	CAGE CODE	DRAWING NUMBER	REV
C	30990	OL_TM99-0141-00	C

SCALE: 4:1 DO NOT SCALE DRAWING 4 OF 9

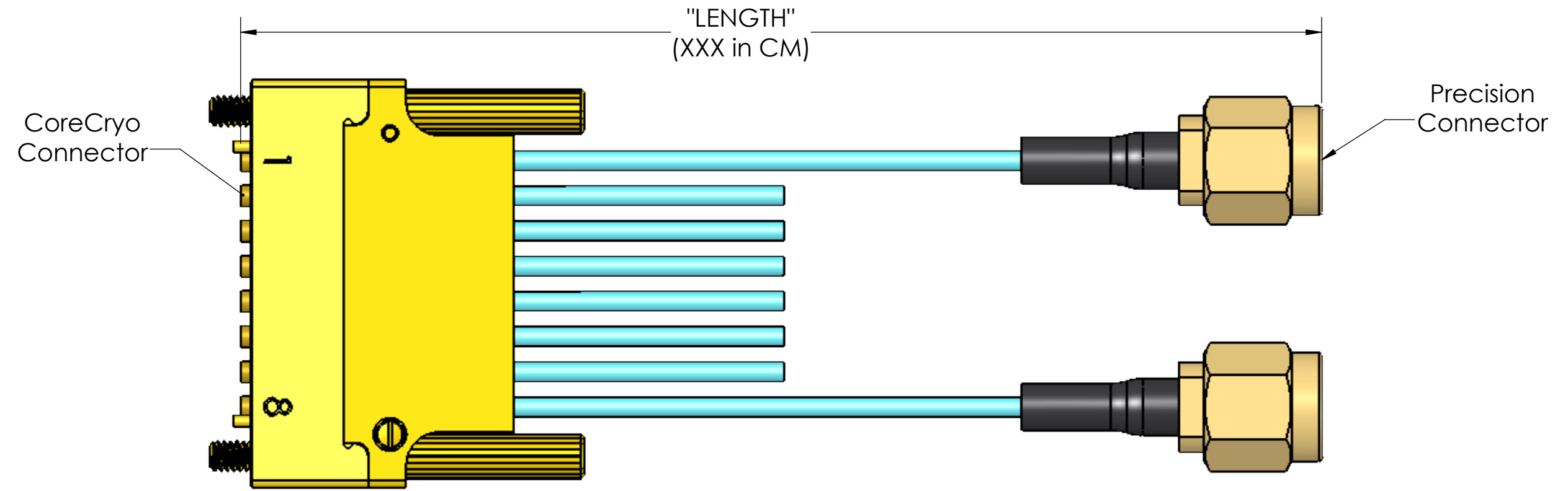
CoreCryo Assy.
TM4CXSSX2RXXXXXXXX-X
TM4CXSSX4RXXXXXXXX-X
TM4CXSSX6RXXXXXXXX-X
TM4CXSSX8RXXXXXXXX-X
TM4CXSSX10RXXXXXXXX-X
TM4CXDX2RXXXXXXXX-X
TM4CXDX4RXXXXXXXX-X
TM4CXDX6RXXXXXXXX-X
TM4CXDX8RXXXXXXXX-X
TM4CXDX10RXXXXXXXX-X

FREQUENCY	RETURN LOSS (GATED) (dB Max.)	INSERTION LOSS (dB/Ft Max.)
DC TO 14 GHz	-17	-2.2
14 TO 20 GHz	-14	-3.0



DUAL ROW

SINGLE ROW



CoreCryo To PRECISION CONNECTOR
(EX: 1R & 2R X 8CH. AS SHOWN)

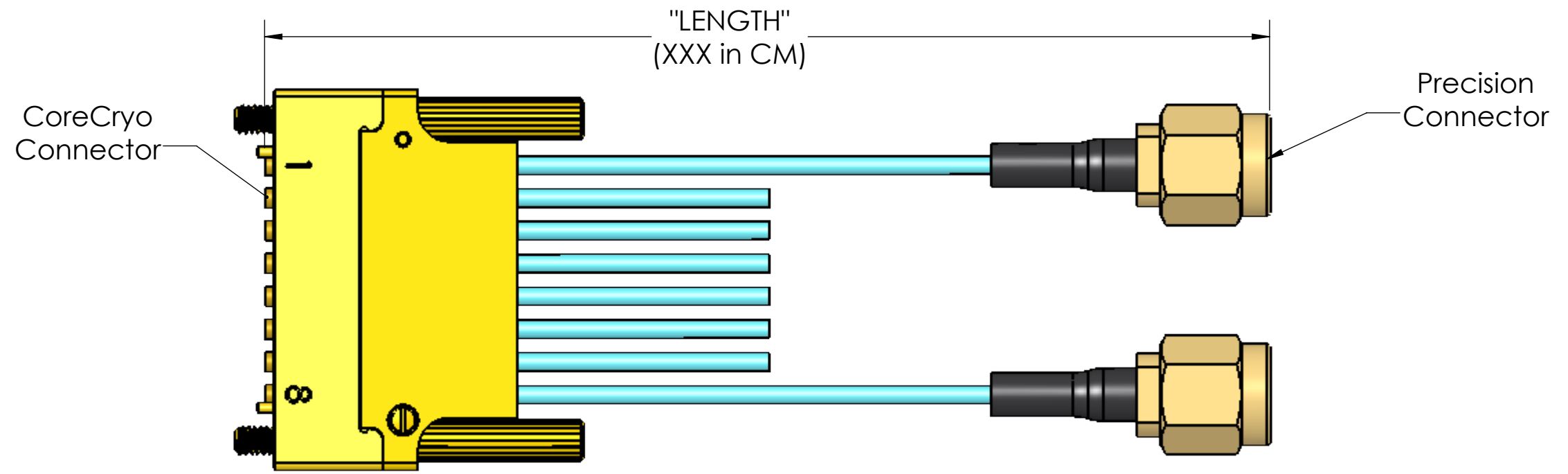
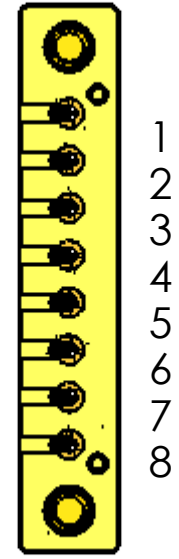
MATERIAL(S):	ELECTRICAL(S): REFERENCE ONLY	MECHANICAL(S): REFERENCE ONLY	ENVIRONMENTAL(S): REFERENCE ONLY
<p><u>CoreHC2 connector:</u> P/n TM14-0189-01/-02(Non-Magnetic) Contact, Front Shell,Rear Shell,Ground Slider & Solder Sleeve: BeCu Alloy, Gold over Copper Plating Spring : Stainless Steel SUS130M, Passivate Front Insulator: Rexolite 1422 (unfilled) Support Insulator 1, Support Insulator 2: PTFE Dielectric Stop: Peek Sping pin: Barrel: Phosphor Bronze, Gold over Copper Plating Plunger:BeCu Alloy, Gold over Copper Plating Spring: NAS 604PH, Gold over Copper Plating Tail Needle: BeCu Alloy, Gold over Copper Plating <u>Precision connector:</u> (Non-Magnetic) (See Precision Connector Matrix) <u>HC2 Compliant Carrier:</u> TM4S-XC28R (Non-Magnetic) Carrier, Clamp Shell, Dowel Pin, Screw & Press Nut: BeCu Alloy, Gold over Copper Plating Cable Support: Silicone</p> <p><u>Cable:</u> P/n TM20-4S9 (Non-Magnetic) Conductor: Solid Silver Plated Copper Alloy (non magnetic) Dielectric: Solid PTFE Shielding: Helically wrapped flat silver plated copper tape (non-magnetic) Shielding: Silver Plated Copper Alloy (non-magnetic) Jacket: FEP</p>	<p>Impedance: 50 Ohms Nominal Frequency Range: DC to 20 GHz VSWR: See Table Insertion Loss: See Table <u>HC2 (Spring Pin):</u> Working Voltage: 325 Vrms max @ Sea Level Insulation Resistance: 5000 MegOhms min. Spring Pin: Current: 1A Max. Contact Resistance: 100mOhm Max. <u>SMA:</u> Working Voltage: 250 Vrms max @ Sea Level DWV: 1000 Vrms max @ Sea Level Insulation Resistance: 5000 MegOhms min. <u>SMP & SMPM:</u> Working Voltage: 217 Vrms max @ Sea Level Insulation Resistance: 5000 MegOhms min. Contact Resistance: Center Contact: 6 m Ω Outer Contact: 2 m Ω</p>	<p>Mating Characteristics: SMPM Interface per MIL-STD 348 CoreHC2 Interface per Amphenol CDI Force to Engage: CoreHC2 (Individual): .85 Lbs Typ. SMA: 2in-lbs max SMP: Depend on Detent SMPM: Depend on Detent Force to Disengage: CoreHC2 (Individual): .N/A SMA: 2in-lbs max SMP: Depend on Detent SMPM: Depend on Detent Connector Durability: CoreHC2: 1,000 Cycles SMA: 500 Cycles SMP & SMPM: 100 Cycles (Full Detent) SMP & SMPM: 500 Cycles (SmoothBore)</p>	<p>Temperature Range: -65°C to +125°C Thermal Shock: MIL-STD-202, Method 107, Test Condition B Moisture Resistance: MIL-STD-202, Method 106, Insulation resistance at least 200 MegaOhms within 5 minutes after removal from humidity.</p>



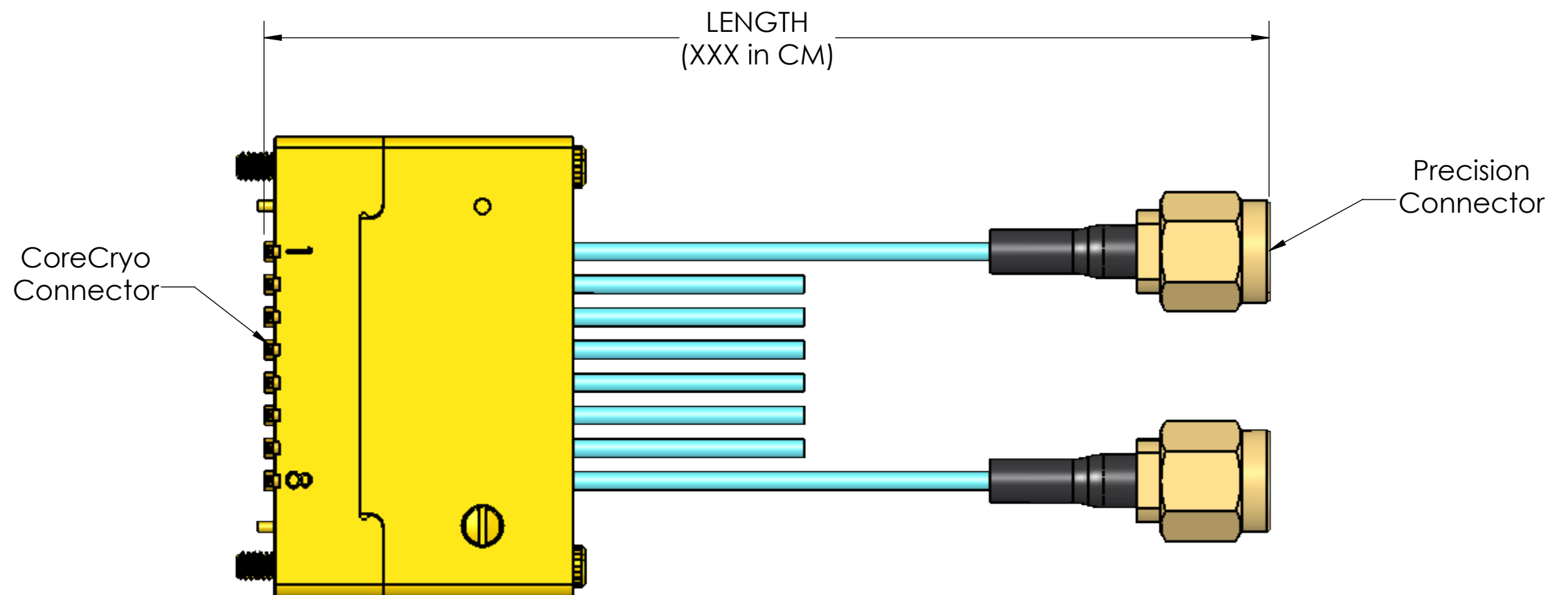
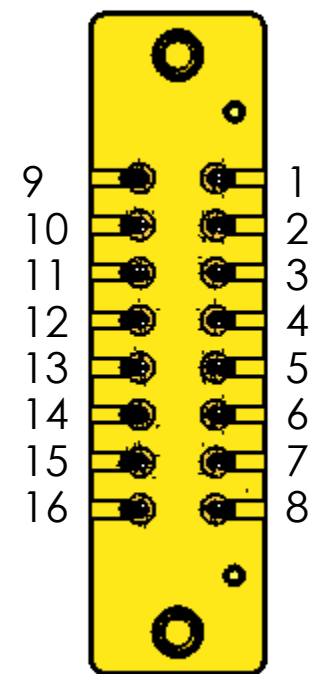
TITLE
CoreCryo CABLE BUILDER
ASSY

SIZE	CAGE CODE	DRAWING NUMBER	REV
C	30990	OL_TM99-0141-00	C
SCALE: 4:1		DO NOT SCALE DRAWING	5 OF 9

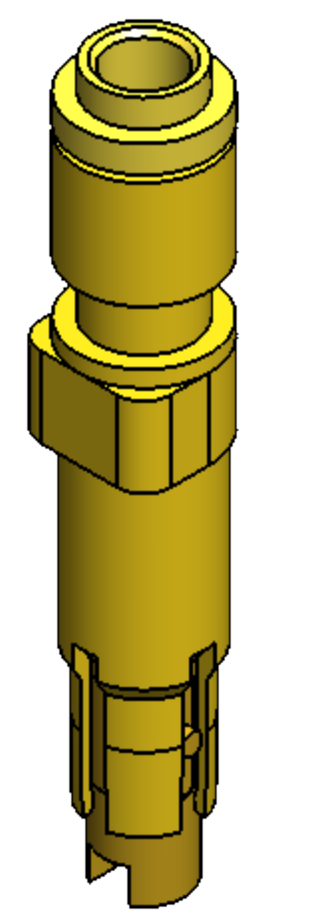
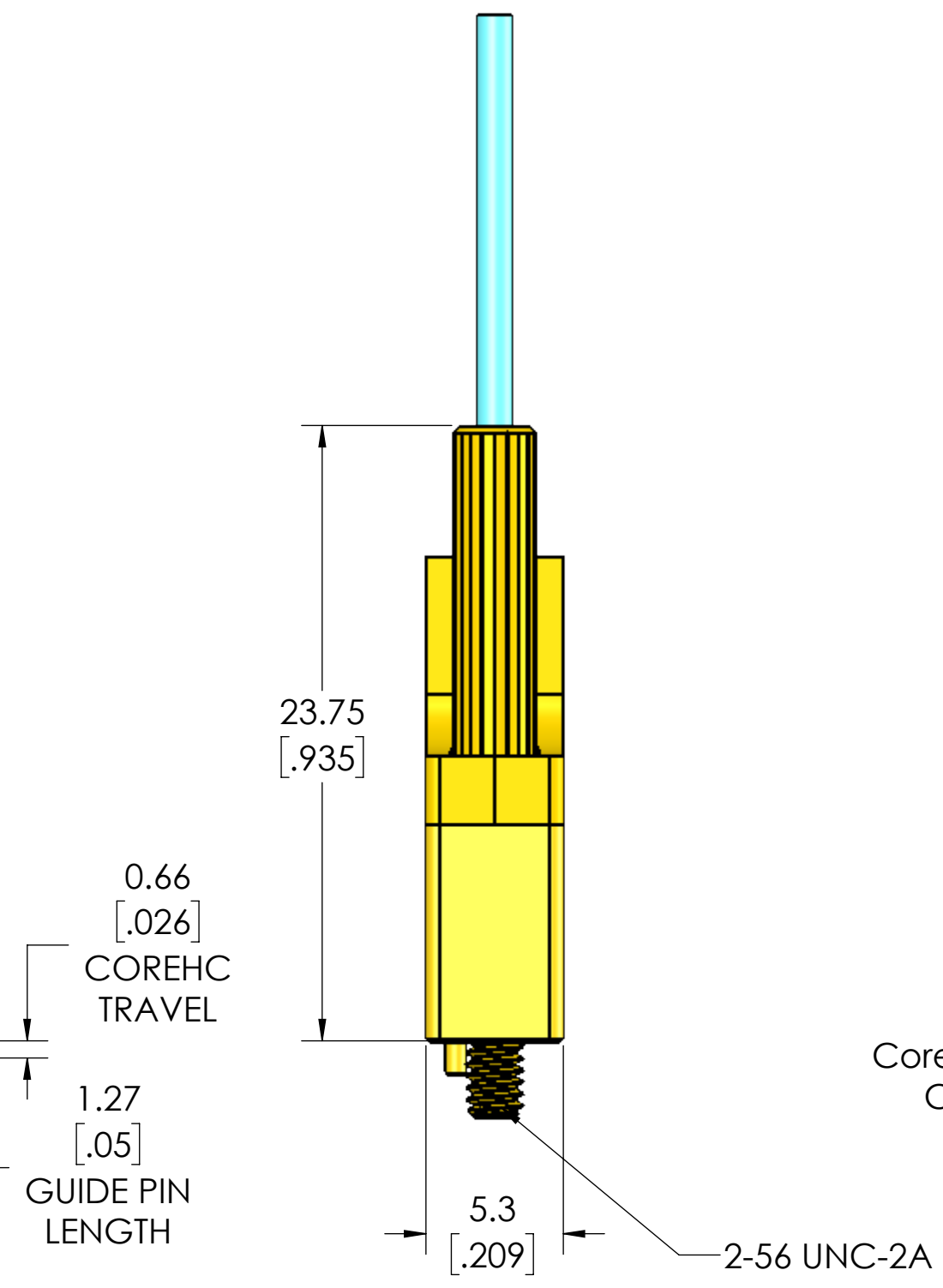
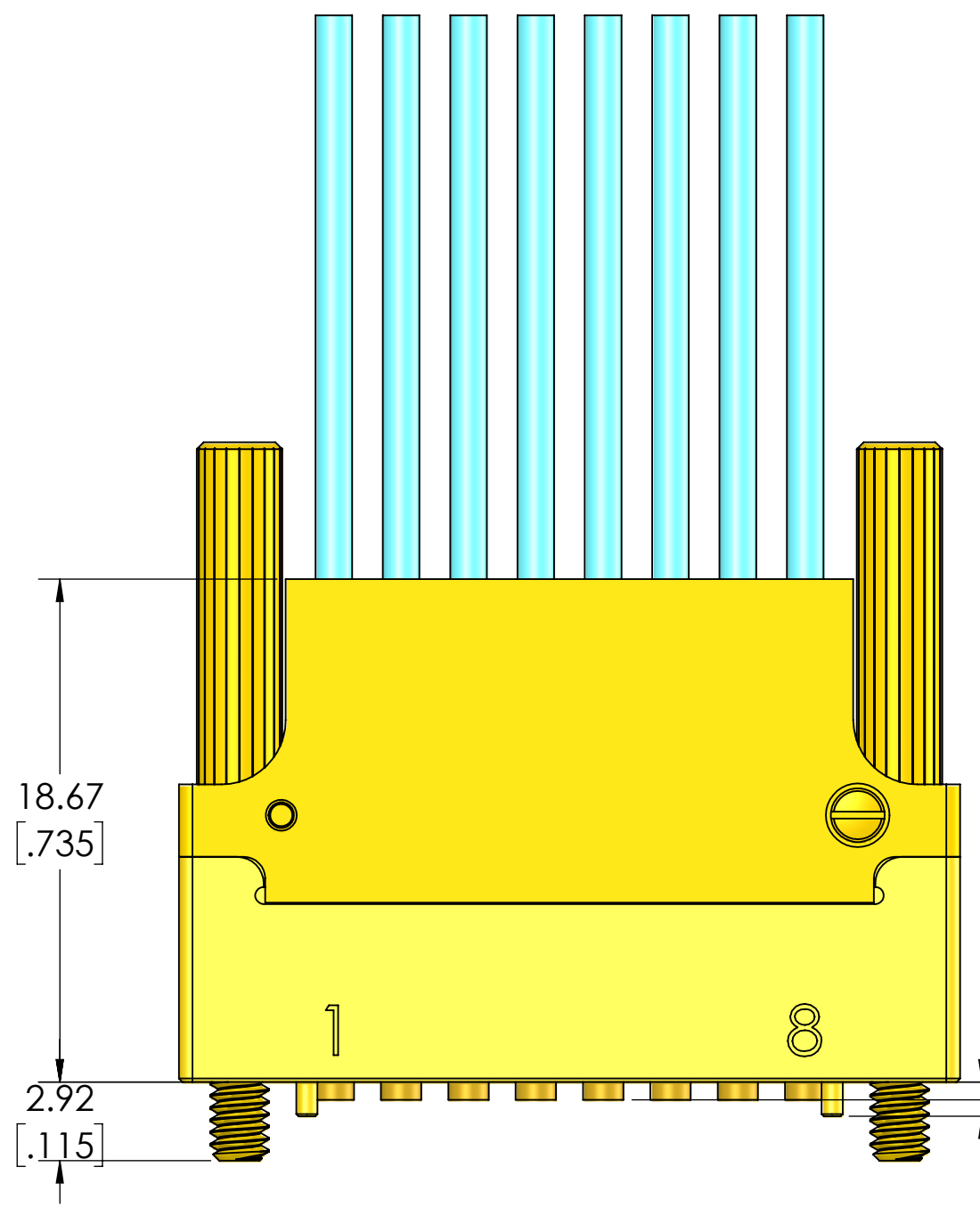
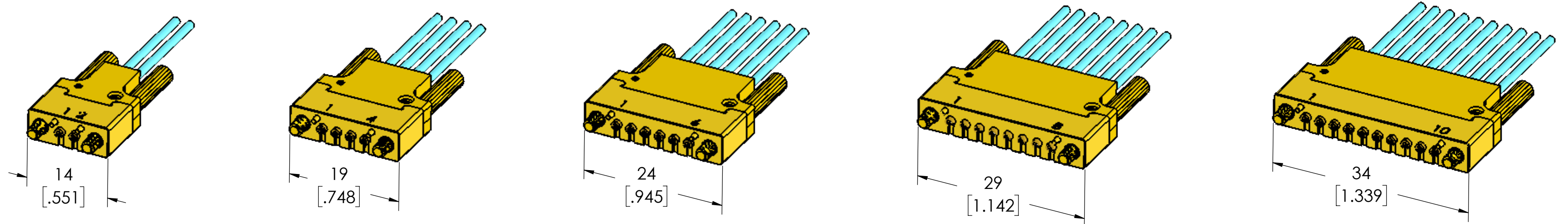
FREQUENCY	RETURN LOSS (GATED)	INSERTION LOSS
	(dB Max.)	(dB/Ft Max.)
DC TO 14 GHz	-17	-2.2
14 TO 20 GHz	-14	-3.0



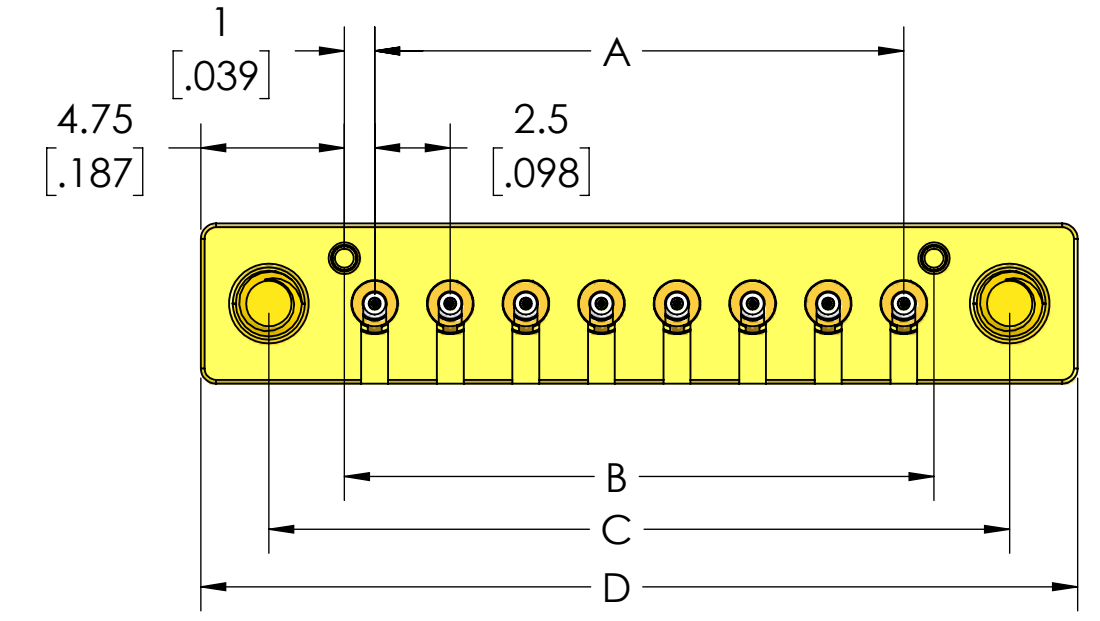
**CoreCryo To PRECISION CONNECTOR
(EX: 1R X 8CH. AS SHOWN)**



**CoreCryo To PRECISION CONNECTOR
(EX: 2R X 8CH. AS SHOWN)**

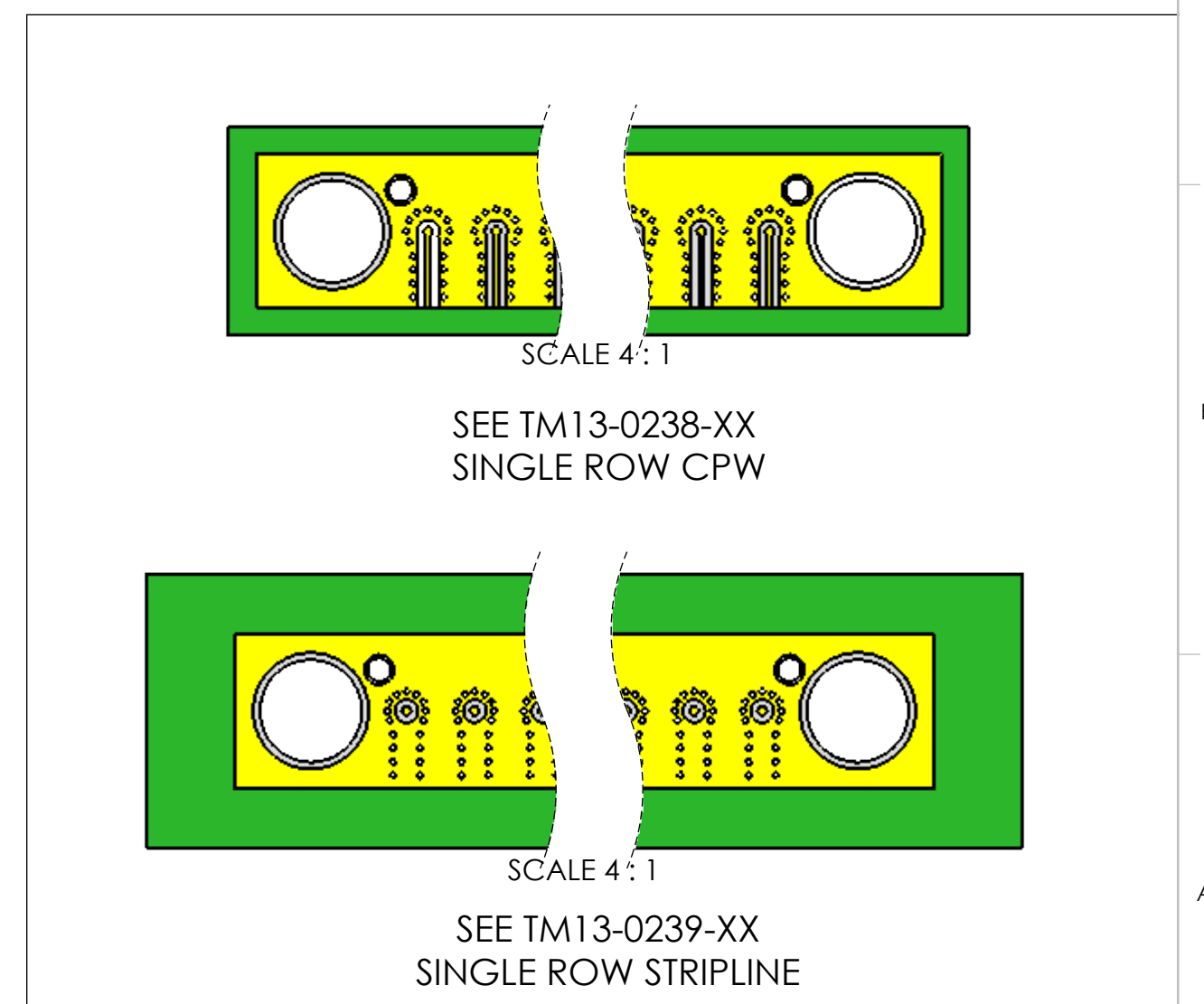


CoreCryo COAXIAL CONNECTOR



S C2 X R
SINGLE ROW CoreCryo

CABLE END "CoreCryo"	DIM. "A" mm[in]	DIM. "B" mm[in]	DIM. "C" mm[in]	DIM. "D" mm[in]
SC22R	2.5 [.0984]	4.5 [.177]	9.5 [.374]	14 [.551]
SC24R	7.5 [.295]	9.5 [.374]	14.5 [.571]	19 [.748]
SC26R	12.5 [.492]	14.5 [.571]	19.5 [.768]	24 [.945]
SC28R	17.5 [.689]	19.5 [.768]	24.5 [.965]	29 [1.142]
SC10R	22.5 [.886]	24.5 [.965]	29.5 [1.161]	34 [1.339]



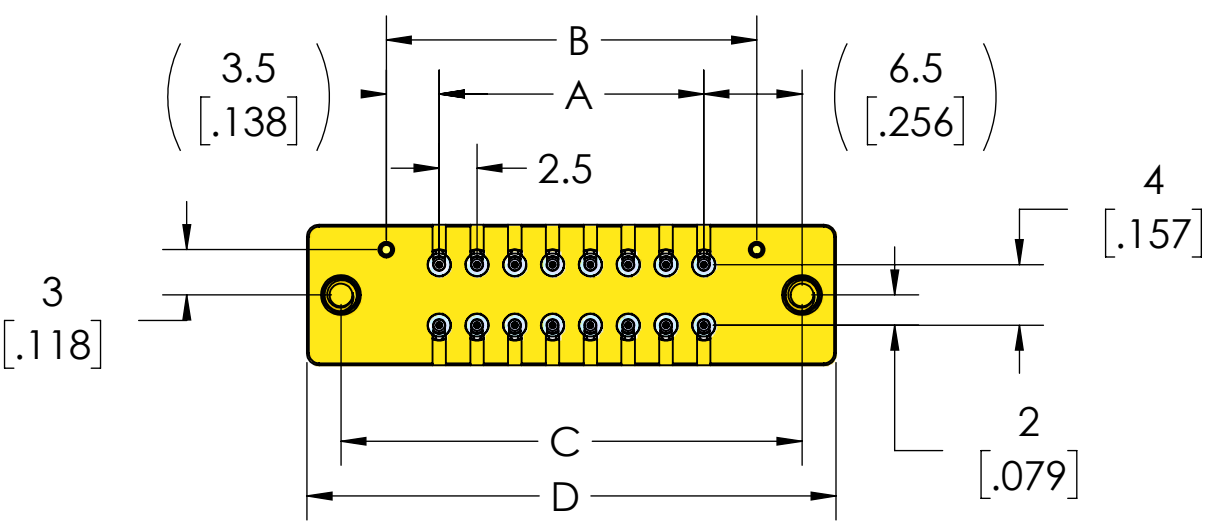
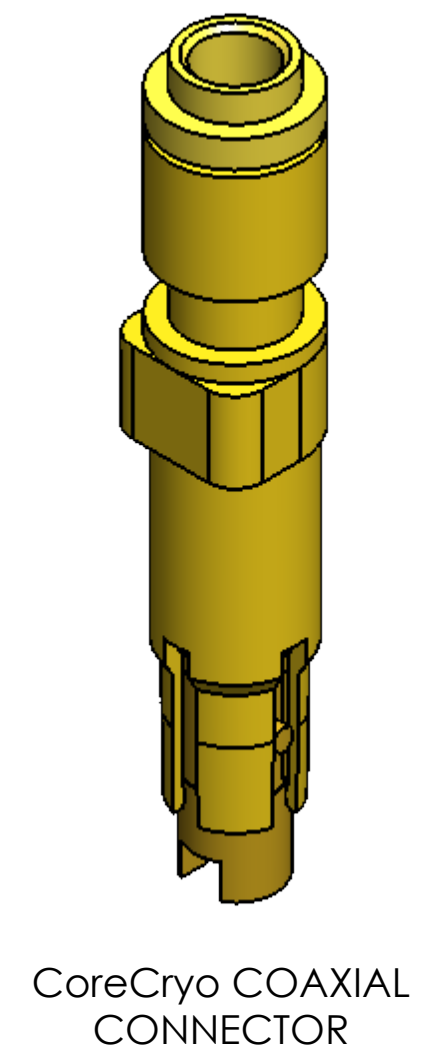
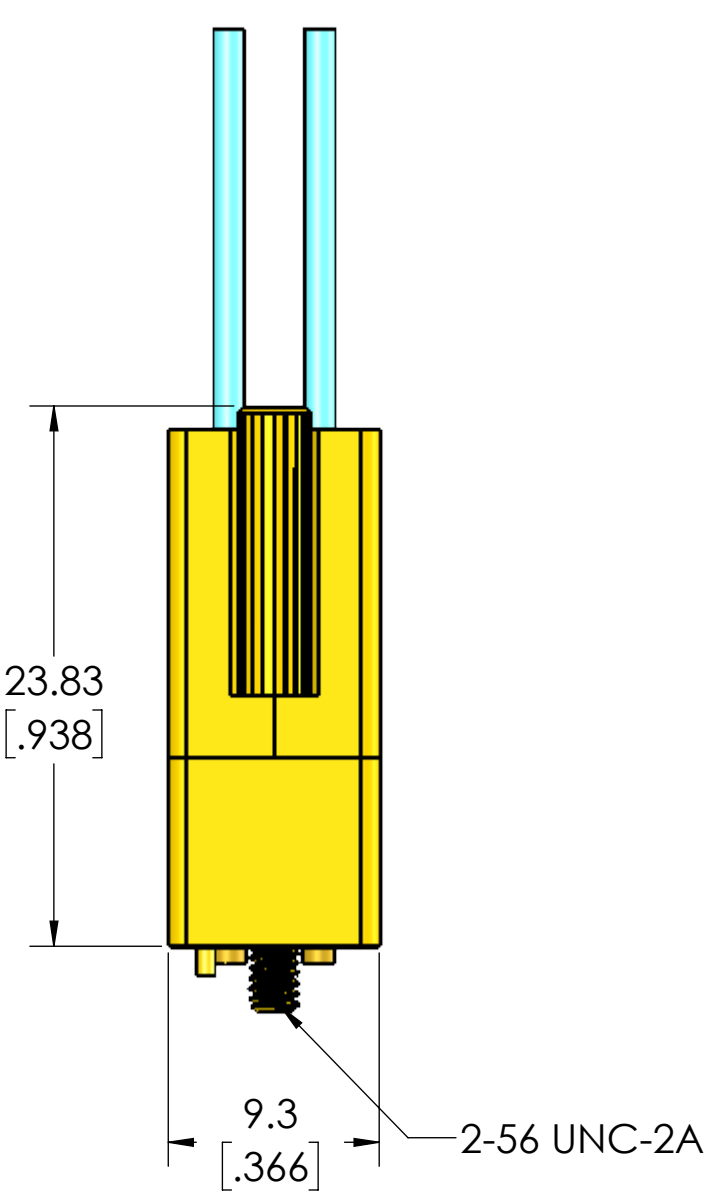
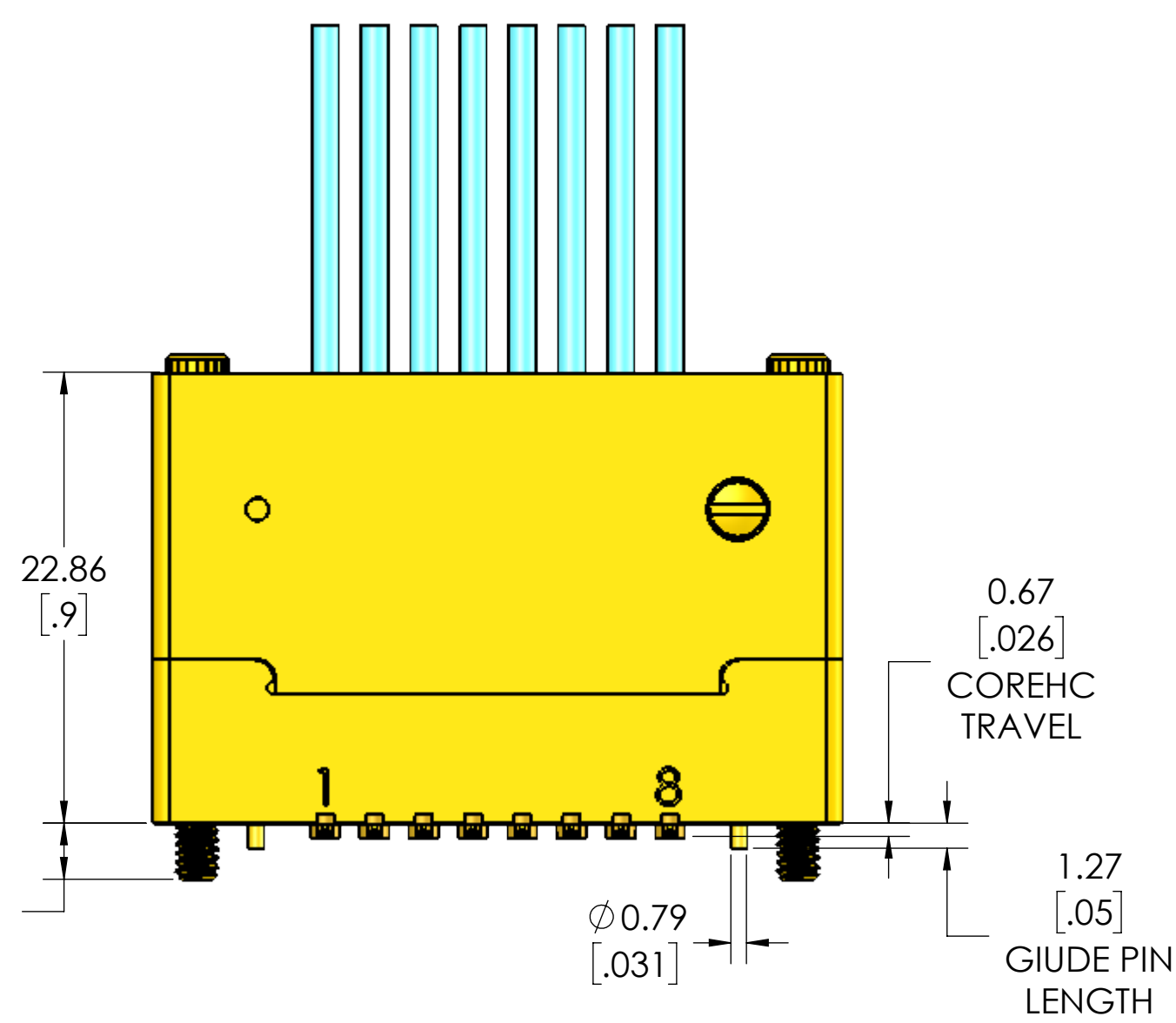
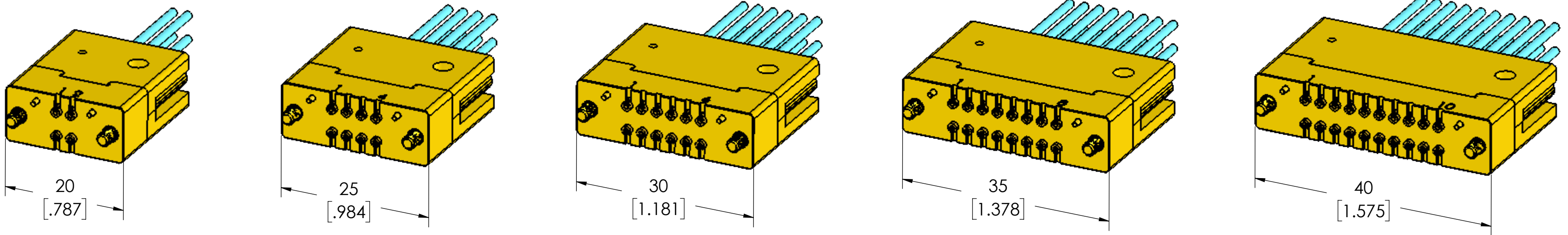
SEE TM13-0238-XX
SINGLE ROW CPW

SEE TM13-0239-XX
SINGLE ROW STRIPLINE



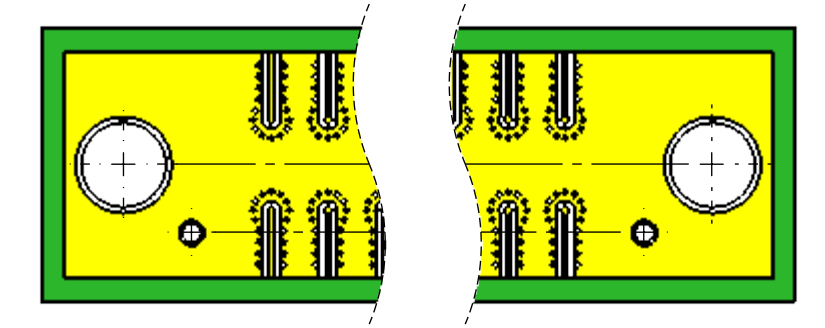
TITLE
CoreCryo CABLE BUILDER
ASSY

SIZE C	CAGE CODE 30990	DRAWING NUMBER OL_TM99-0141-00	REV C
SCALE: 2:1		DO NOT SCALE DRAWING	7 OF 9

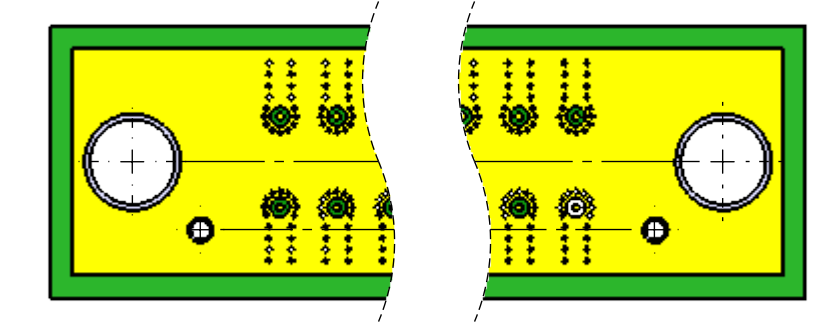


D C2 X R
DUAL ROW CoreCryo

CABLE END "CoreCryo"	DIM. "A" mm[in]	DIM. "B" mm[in]	DIM. "C" mm[in]	DIM. "D" mm[in]
DC22R	2.5 [.0984]	9.5 [.374]	15.5 [.610]	20 [.787]
DC24R	7.5 [.295]	14.5 [.571]	20.5 [.807]	25 [.984]
DC26R	12.5 [.492]	19.5 [.768]	25.5 [1.004]	30 [1.181]
DC28R	17.5 [.689]	24.5 [.965]	30.5 [1.201]	35 [1.378]
DC10R	22.5 [.886]	29.5 [1.161]	35.5 [1.398]	40 [1.575]



SEE TM13-0240-XX
DUAL ROW CPW



SEE TM13-0236-XX
DUAL ROW STRIPLINE



1. Specification

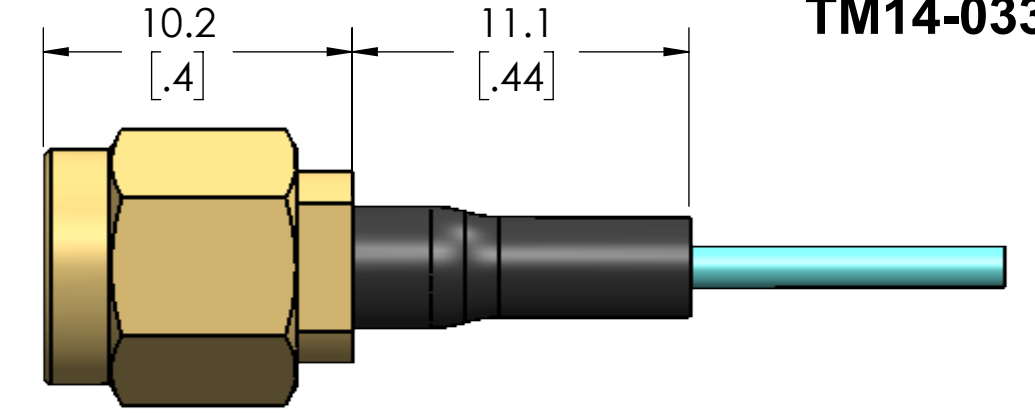
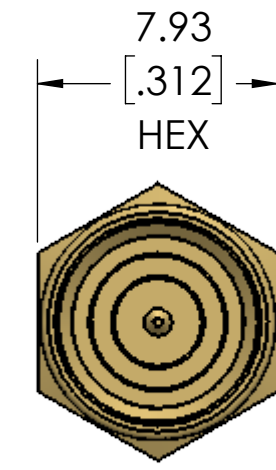
- 1.1 Frequency range: DC - 20GHz
- 1.2 Impedance: 50 Ohm Nom.
- 1.3 VSWR: 1.30 Max.

2. Material

- 2.1 Body & Center contact & Coupling nut: Beryllium copper C17300
- 2.2 Insulator: PTFE
- 2.3 Lock ring: Beryllium copper C17300
- 2.4 Gasket: Silicone rubber

3. Finish

- 3.1 Body & Center contact & Coupling nut:
Gold per ASTM B488(Nickel Free) over Copper



SMA(M)
TM14-0338-00

1. Specification

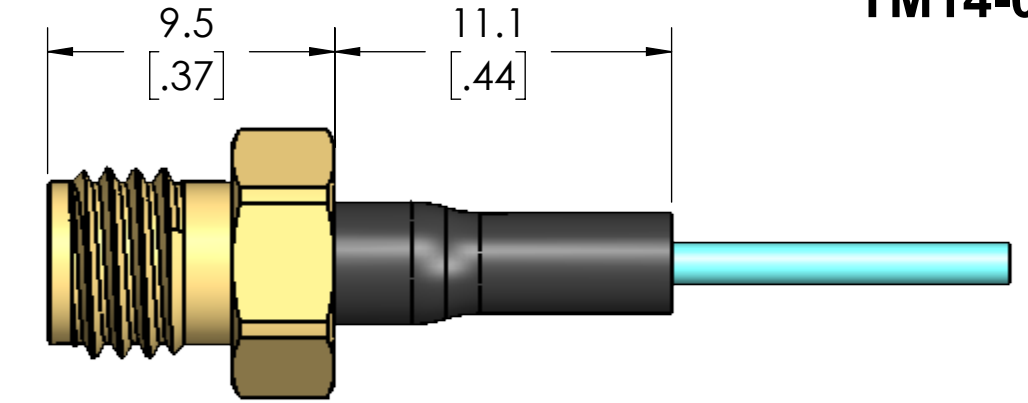
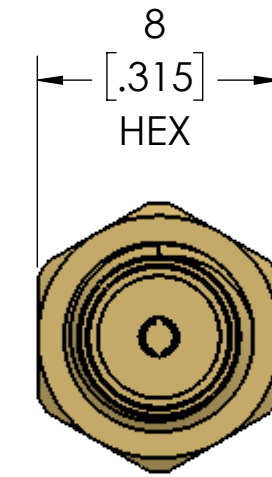
- 1.1 Frequency range: DC - 20GHz
- 1.2 Impedance: 50 Ohm Nom.
- 1.3 VSWR: 1.30 Max.

2. Material

- 2.1 Body & Center contact : Beryllium copper C17300
- 2.2 Insulator: PTFE

3. Finish

- 3.1 Body & Center contact:
Gold per ASTM B488 (Nickel Free) over Copper



SMA(F)
TM14-0339-00

1. Specification

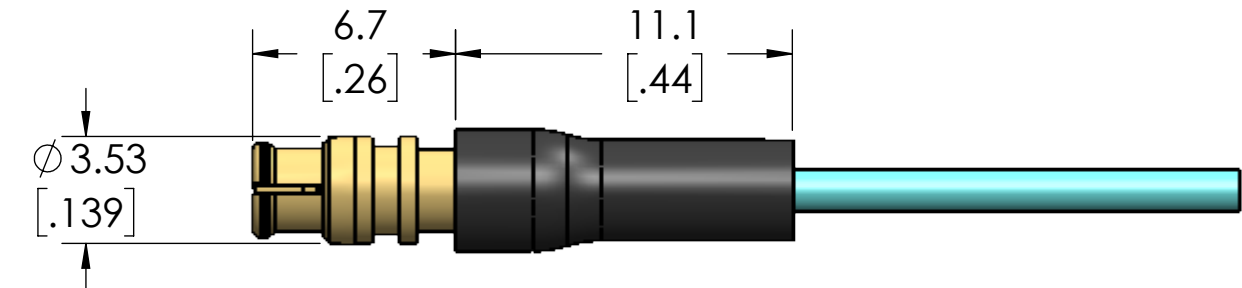
- 1.1 Frequency range: DC - 20 GHz
- 1.2 Impedance: 50 Ohm Nom.
- 1.3 VSWR: 1.30 Max.
- 1.3 Insertion Loss: 0.8 x Sqrt(F (GHz))

2. Material

- 2.1 Body, Center contact & Anti-rock ring: Beryllium copper C17300
- 2.2 Insulator: PTFE

3. Finish

- 3.1 Body, Center contact & Anti-rock ring:
Gold per ASTM B488 (Nickel Free) over Copper



SMP(F)
TM14-0340-00

1. Specification

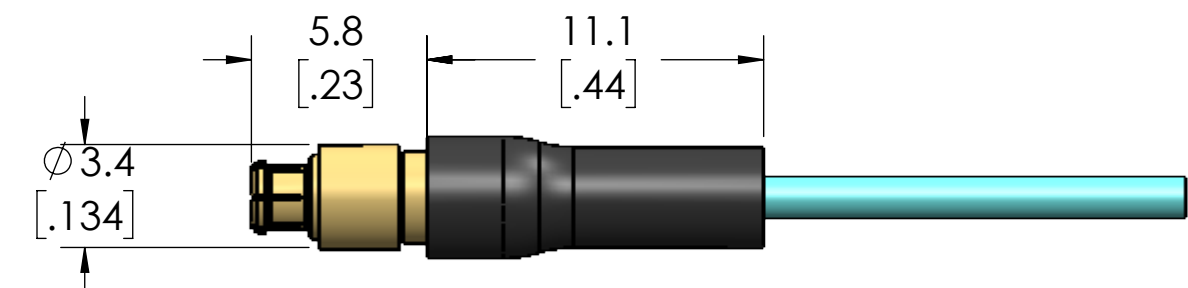
- 1.1 Frequency range: DC - 26 GHz
- 1.2 Impedance: 50 Ohm Nom.
- 1.3 VSWR: 1.30 Max.

2. Material

- 2.1 Body, Center contact & Ferrule: Beryllium copper C17300
- 2.2 Insulator: PTFE

3. Finish

- 3.1 Body, Center contact & Ferrule:
Gold per ASTM B488(Nickel Free) over Copper



SMPM(F)
TM14-0341-00

PRECISION CONNECTORS



TITLE
CoreCryo CABLE BUILDER
ASSY

SIZE	CAGE CODE	DRAWING NUMBER	REV
C	30990	OL_TM99-0141-00	C
SCALE: 2:1		DO NOT SCALE DRAWING	9 OF 9