

**ESD SENSITIVE**

DO NOT SCALE FROM THIS PRINT

**TABLE 1: ASSEMBLY ENGLH LIMITS [cm]**

FIBER TYPE	MIN				MAX			
	END OPTION				HEAT SINK			
	-01	-02	-07	-0E	-1	-2	-3	-4
-4	15	15	13	8	999	999	999	999
-5	11	11	10	8	100	100	50	100
-6	11	11	10	8	100	100	50	100
-7	14	14	12	10	300	300	300	300
-8	12	12	10	8	300	300	300	300

**TABLE 2: LENGTH TOLERANCE**

ASSEMBLY LENGTH [cm]	TOLERANCE [cm]*
000-016	±0.16
017-999	±1%

\* ROUNDED UP TO 2 DECIMAL PLACES

ECUO-X12-XX-XXX-0-X-1-X-XX

**TYPE**  
 -T12: x12 TX  
 -R12: x12 RX

**DATA RATE**  
 -14: 14 Gbps  
 -16: 16.1 Gbps

**ASSEMBLY LENGTH**  
 -XXX: LENGTH (cm) SEE TABLES 1, 2

**END OPTION**  
 -01: MTP® MALE  
 -02: MTP® FEMALE  
 -07: MXC® INTERNAL PLUG  
 -0E: MPO PLUS® BAYONET MALE

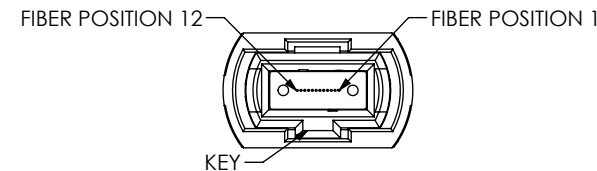
**FIBER TYPE**  
 -4: AQUA LOOSE TUBE WITH BOOT  
 -5: BLACK JACKETED RIBBON WITH BOOT  
 -6: BLACK JACKETED RIBBON  
 -7: BLACK LOOSE TUBE WITH BOOT  
 -8: BLACK LOOSE TUBE

**HEAT SINK**  
 -1: FLAT  
 -2: PIN FIN  
 -3: FLAT WITH GROOVE (SEE NOTE 2)  
 -4: PCIe® PIN FIN (-14 DATA RATE ONLY)

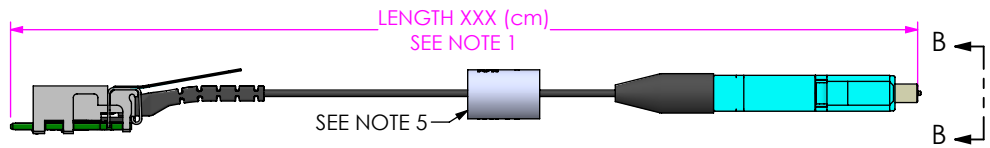
ORANGE TAB INDICATES T12  
 BLUE TAB INDICATES R12



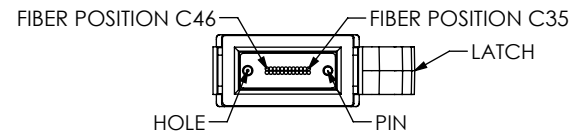
PART NUMBER ECUO-X12-XX-XXX-0-1-1-5-01 SHOWN



VIEW A-A  
 END OPTIONS -01/-02/-0E



PART NUMBER ECUO-X12-XX-XXX-0-1-1-5-07 SHOWN



VIEW B-B  
 END OPTION -07  
 SEE NOTE 1

NOTES:

- QUANTITY OF LENSES PRESENT MAY VARY. FIBER POSITION DOES NOT CHANGE REGARDLESS OF THE NUMBER OF LENSES PRESENT
- PASS THROUGH ALLOWS ONE JACKETED RIBBON (FIBER TYPE -5/-6) OF CABLE LENGTH MAX 50 cm TO PASS ABOVE HEAT SINK AND UNDER COLD PLATE
- FIREFLY MUST BE INSTALLED IN A NO-TENSION STATE FREE FROM DYNAMIC FLEXING
- ALL MTP®/MPO ARE INTERMATABLE WITH CONNECTOR ADHERING TO TIA-604-5
- ALL CABLES WITH A LENGTH GREATER THAN 50 cm ARE LABELED. LABEL TO CONTAIN PART NUMBER AND SERIAL NUMBER INFORMATION
- DUST CAPS REMOVED FROM ALL VIEWS FOR CLARITY
- YELLOW LATCH PINS NOT SHOWN FOR CLARITY. SEE FIREFLY INSTALLATION INSTRUCTIONS FOR MORE DETAILS.

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS. ALL DIMENSIONS ARE FOR REFERENCE ONLY

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520 PARK EAST BLVD, NEW ALBANY, IN 47150  
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 e-Mail: info@SAMTEC.com code 53322

MATERIAL: DO NOT SCALE DRAWING SHEET SCALE: 1:1

DESCRIPTION: OPTICAL FIREFLY ASSEMBLY

DWG. NO. ECUO-X12-XX-XXX-0-X-1-X-XX

BY: AARON B. 03/10/2020 SHEET 1 OF 8



PART NUMBER ECUO-X12-XX-XXX-0-1-1-7-01 SHOWN



PART NUMBER ECUO-X12-XX-XXX-0-1-1-8-01 SHOWN



PART NUMBER ECUO-X12-XX-XXX-0-1-1-7-02 SHOWN



PART NUMBER ECUO-X12-XX-XXX-0-1-1-8-02 SHOWN



PART NUMBER ECUO-X12-XX-XXX-0-1-1-7-07 SHOWN



PART NUMBER ECUO-X12-XX-XXX-0-1-1-8-07 SHOWN



PART NUMBER ECUO-X12-XX-XXX-0-1-1-7-0E SHOWN



PART NUMBER ECUO-X12-XX-XXX-0-1-1-8-0E SHOWN

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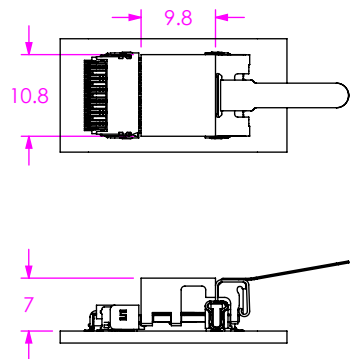
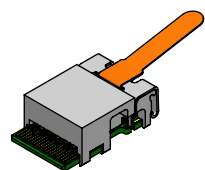
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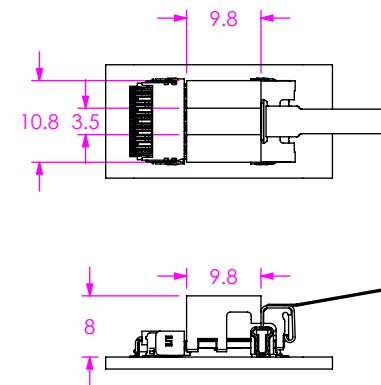
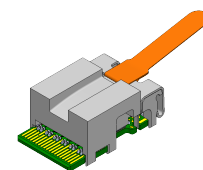
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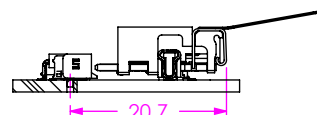
BY: AARON B. 03/10/2020 SHEET 2 OF 8



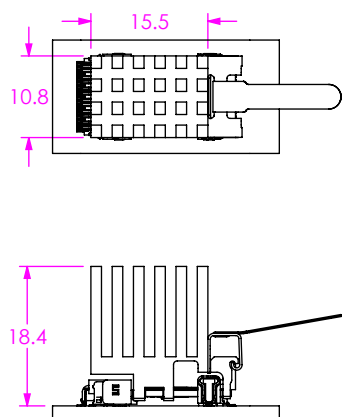
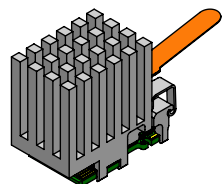
-1 FLAT HEAT SINK



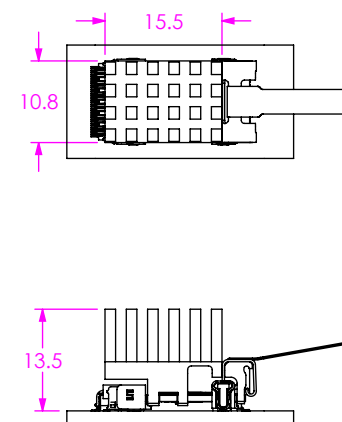
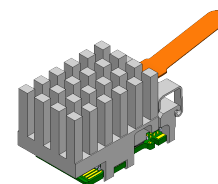
-3 FLAT HEAT SINK WITH PASS THROUGH



KEEP OUT AREA FOR DE-MATING  
TYPICAL FOR HEAT SINKS -1/-2/-3/-4  
REFER TO UEC5 FOOTPRINT DRAWING  
FOR DETAILED KEEPOUT AREAS



-2 PIN-FIN HEAT SINK



-4 LOW-PROFILE PIN-FIN HEAT SINK

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SHEET SCALE: 1:1

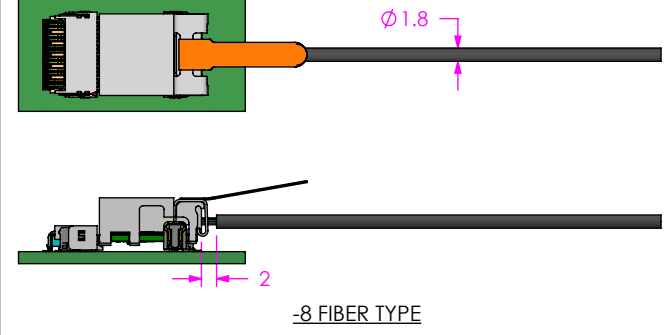
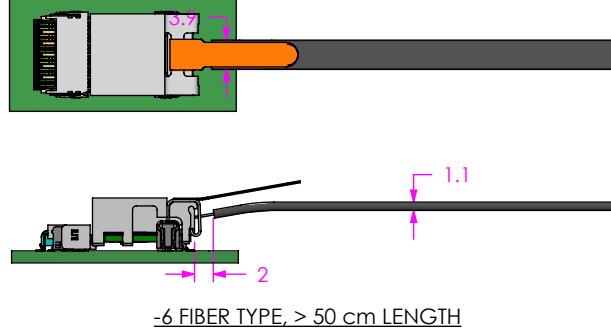
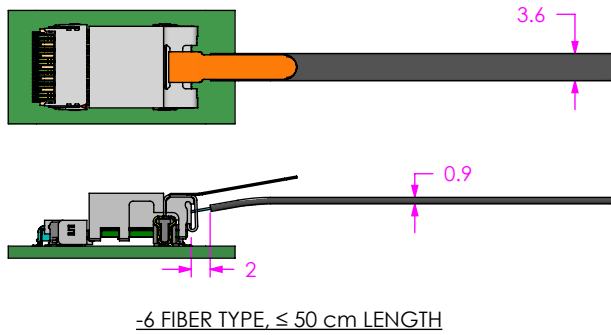
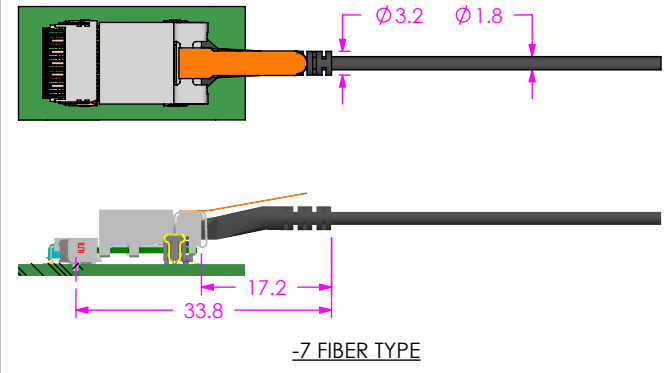
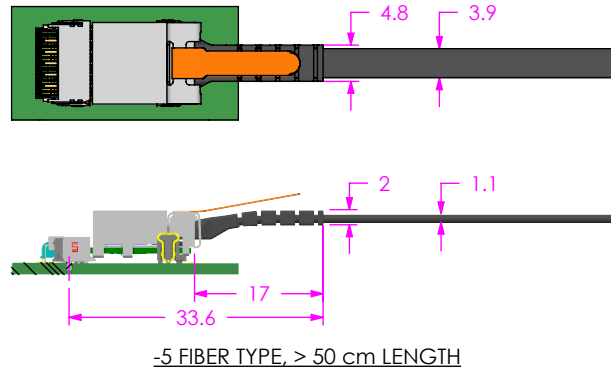
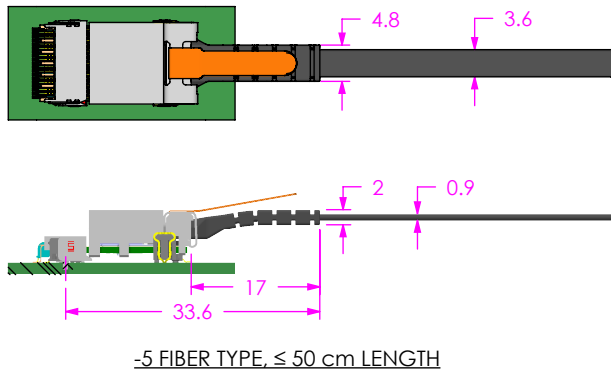
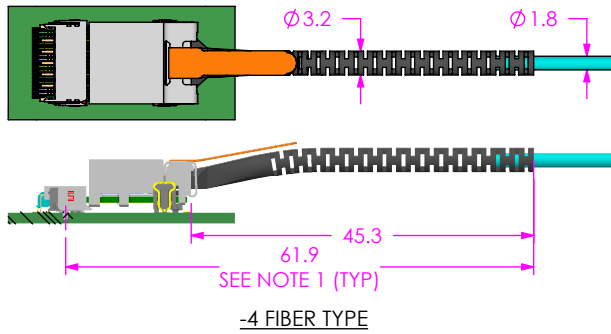


520 PARK EAST BLVD, NEW ALBANY, IN 47150  
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DESCRIPTION:  
OPTICAL FIREFLY ASSEMBLY

DWG. NO.  
ECUO-X12-XX-XXX-0-X-1-X-XX

BY: AARON B. 03/10/2020 SHEET 3 OF 8



NOTES:  
1. DIMENSIONED FROM THE CENTER OF THE ALIGNMENT PIN HOLE AS SHOWN ON THE UEC5/UCC8 CONNECTOR FOOTPRINT

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SHEET SCALE: 1:1

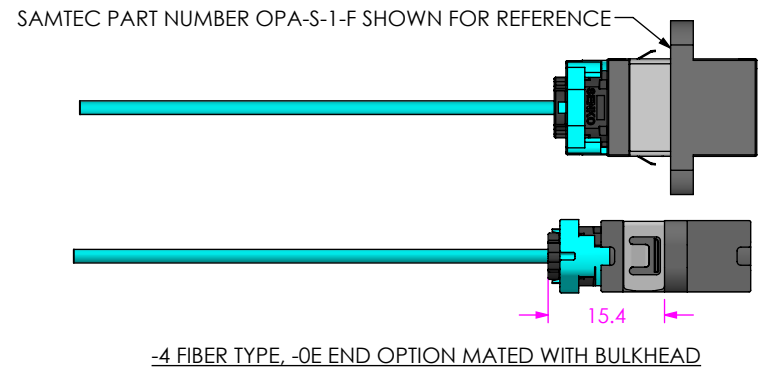
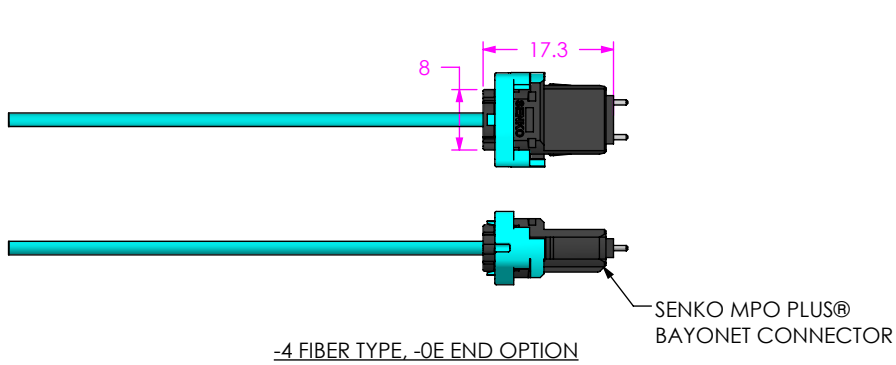
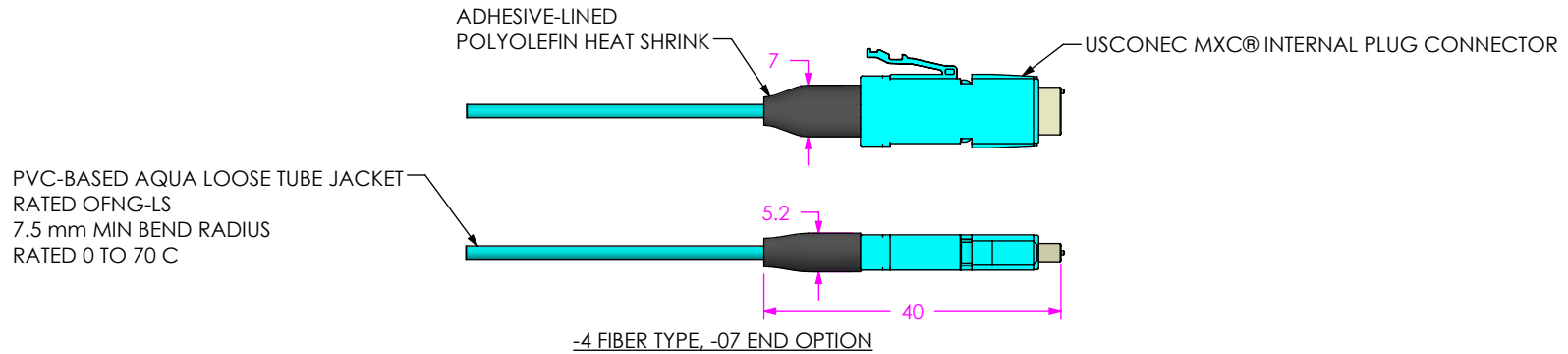
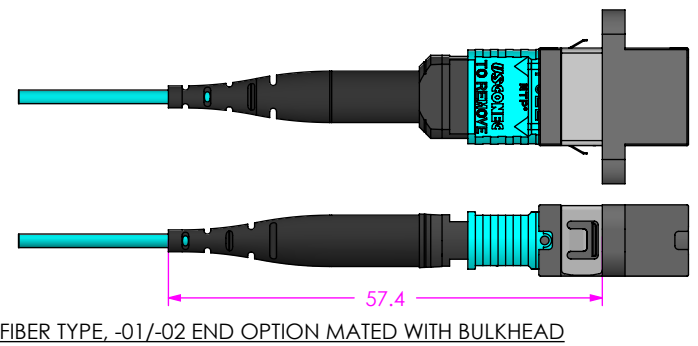
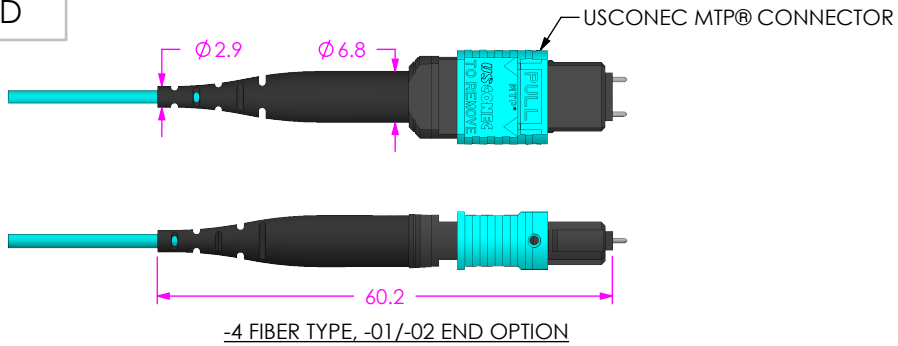
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DESCRIPTION:  
OPTICAL FIREFLY ASSEMBLY

DWG. NO.  
ECUO-X12-XX-XXX-0-X-1-X-XX

BY: AARON B. 03/10/2020 SHEET 4 OF 8



NOTES:  
1. DUST CAPS/PLUGS NOT SHOWN FOR CLARITY

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SHEET SCALE: 1:1

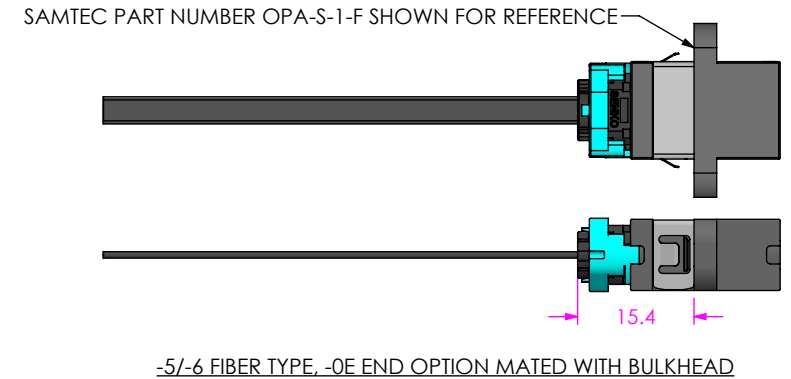
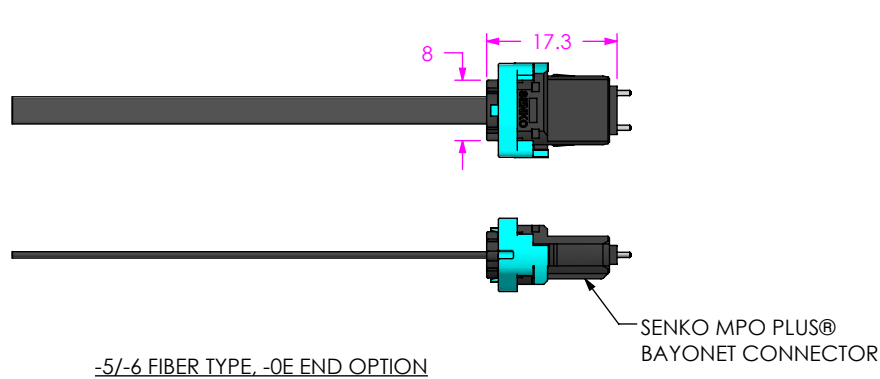
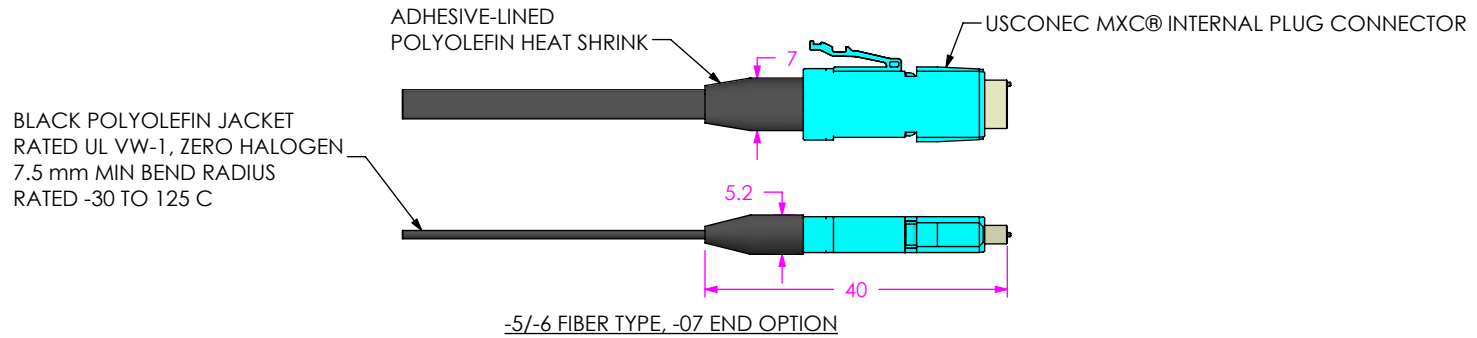
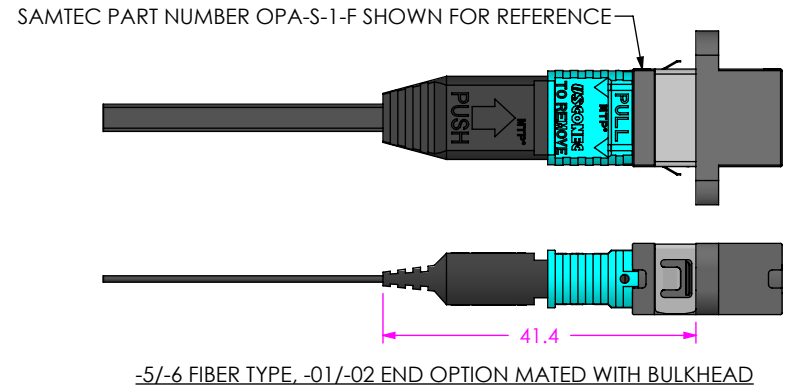
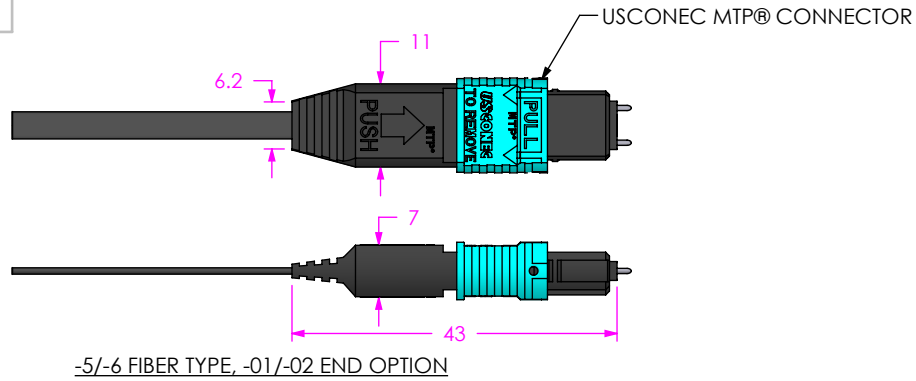
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DESCRIPTION:  
OPTICAL FIREFLY ASSEMBLY

DWG. NO.  
ECUO-X12-XX-XXX-0-X-1-X-XX

BY: AARON B. 03/10/2020 SHEET 5 OF 8



NOTES:  
1. DUST CAPS/PLUGS NOT SHOWN FOR CLARITY

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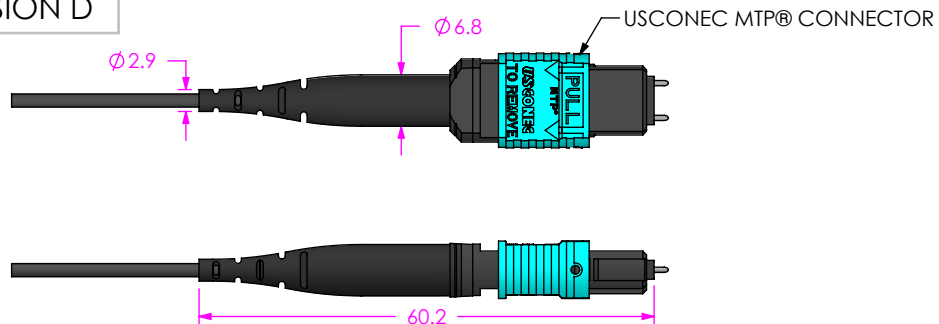
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SHEET SCALE: 1:1

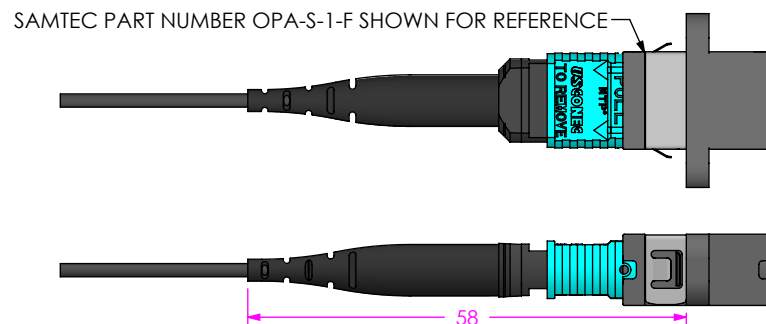
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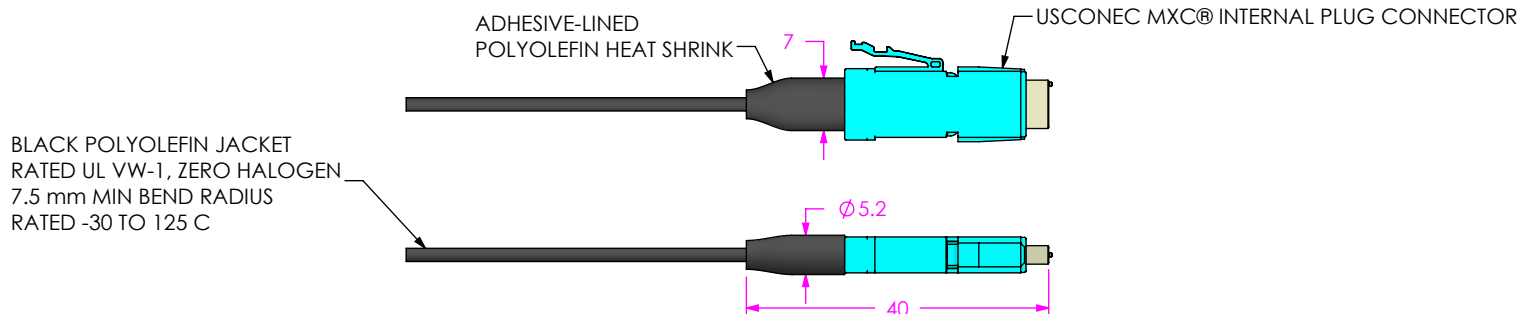
BY: AARON B. 03/10/2020 SHEET 6 OF 8



-7/-8 FIBER TYPE, -01/-02 END OPTION

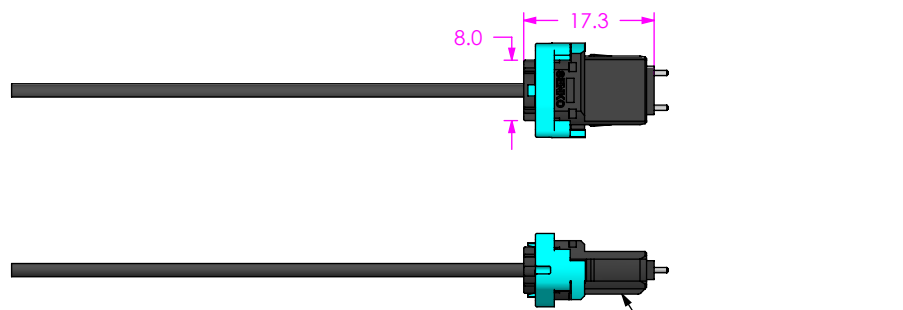


-7/-8 FIBER TYPE, -01/-02 END OPTION MATED WITH BULKHEAD



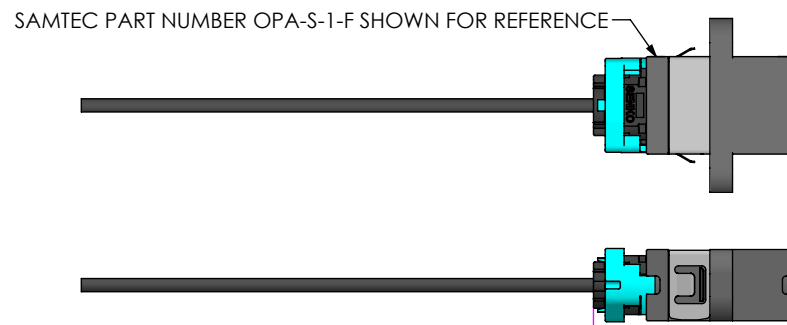
BLACK POLYOLEFIN JACKET  
RATED UL VW-1, ZERO HALOGEN  
7.5 mm MIN BEND RADIUS  
RATED -30 TO 125 C

-7/-8 FIBER TYPE, -07 END OPTION



-7/-8 FIBER TYPE, -0E END OPTION

SENKO MPO PLUS®  
BAYONET CONNECTOR



-7/-8 FIBER TYPE, -0E END OPTION MATED WITH BULKHEAD

- NOTES:  
1. DUST CAPS/PLUGS NOT SHOWN FOR CLARITY

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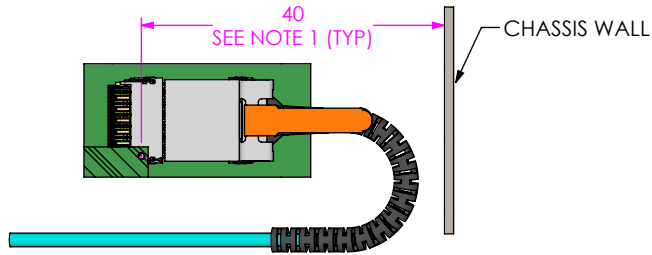
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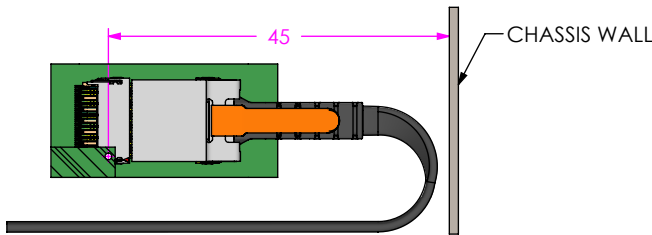
SHEET SCALE: 1:1

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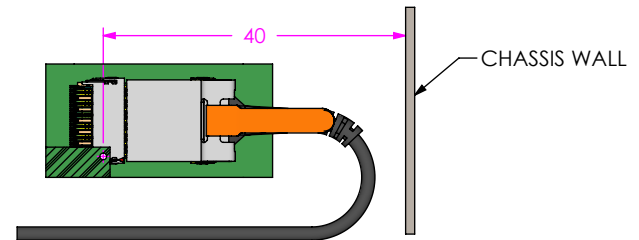
BY: AARON B. 03/10/2020 SHEET 7 OF 8



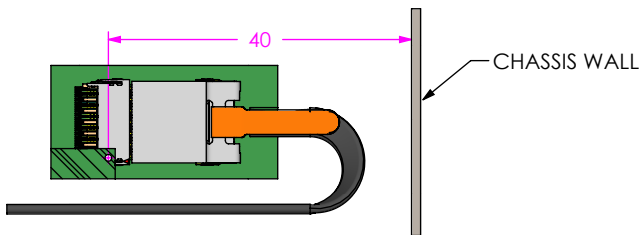
-4 FIBER TYPE RECOMMENDED CABLE ESCAPE CLEARANCE



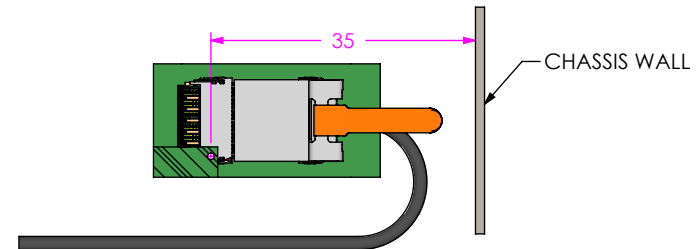
-5 FIBER TYPE RECOMMENDED CABLE ESCAPE CLEARANCE



-7 FIBER TYPE RECOMMENDED CABLE ESCAPE CLEARANCE




-6 FIBER TYPE RECOMMENDED CABLE ESCAPE CLEARANCE



-8 FIBER TYPE RECOMMENDED CABLE ESCAPE CLEARANCE

NOTES:

1. DIMENSIONED FROM THE CENTER OF THE ALIGNMENT PIN HOLE AS SHOWN ON THE UEC5/UCC8 CONNECTOR FOOTPRINT
2. DUE TO THE COMPLIANT NATURE OF FIBER CABLE AND THE MOLDED FIBER BOOT COMPONENTS, THE DIMENSIONS SHOWN ON THIS SHEET ARE FOR GUIDANCE ONLY. EACH APPLICATION IS UNIQUE AND MAY RESULT IN UNIQUE CLEARANCE DIMENSIONS FOR THE CABLE ESCAPE.

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<p>DO NOT SCALE DRAWING SHEET SCALE: 1:1          INSULATOR:          CONTACT OR TERMINAL:          SHIELD: PHOS BRONZE          PLATING:          CONTACT AREA: .00010 REF GOLD          REMAINDER: .000200 REF TIN</p>	<p>DESCRIPTION: OPTICAL FIREFLY ASSEMBLY</p> <p>DWG. NO. ECUO-X12-XX-XXX-0-X-1-X-XX</p> <p>BY: AARON B. 03/10/2020 SHEET 8 OF 8</p>