

ESD SENSITIVE

DO NOT SCALE FROM THIS PRINT

TABLE 1: ASSEMBLY LENGTH LIMITS [cm]

FIBER TYPE	MIN						MAX				
	BLANK	-01	-02	-07	-0A	-0E	-1	-2	-3	-4	-5
-5	12	11	11	10	9	8	100	100	50	100	100
-6	12	11	11	10	9	8	100	100	50	100	100
-7	12	14	14	12	11	10	300	300	300	300	300
-8	12	12	12	10	9	8	300	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

ETUO-B04-XX-XXX-0-X-1-X-XX

DATA RATE
-10: 10 Gbps
-25: 25.7 Gbps

END OPTION
LEAVE BLANK FOR AOC
-01: MTP@ MALE
-02: MTP@ FEMALE
-07: MXC@ INTERNAL PLUG
-0A: VITA 66.1/66.4 READY (SEE NOTE 8)
-0C: MT38999 MALE (SEE NOTE 9)
-0E: MPO PLUS@ BAYONET MALE

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

HEAT SINK
-1: FLAT
-2: PIN FIN
-3: FLAT WITH GROOVE (SEE NOTE 2)
-4: PCIe@ PIN FIN (-10 DATA RATE ONLY)
-5: 1.75 cm TALL PIN FIN (-25 DATA RATE ONLY)

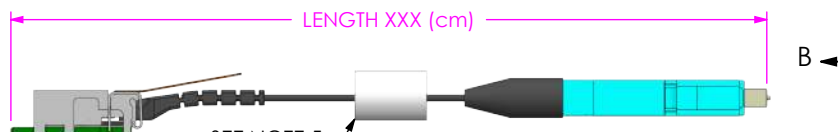
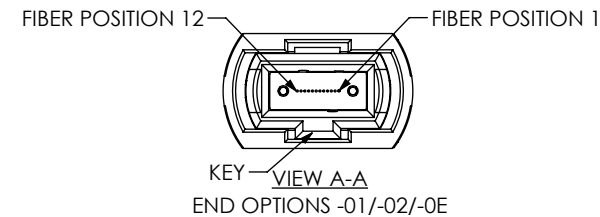
FIBER TYPE
-5: BLACK JACKETED RIBBON WITH BOOT
-6: BLACK JACKETED RIBBON
-7: BLACK LOOSE TUBE WITH BOOT
-8: BLACK LOOSE TUBE



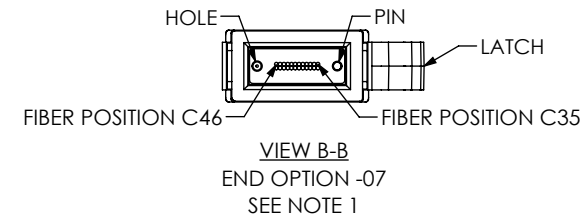
PART NUMBER ETUO-B04-XX-XXX-0-1-1-5 SHOWN



PART NUMBER ETUO-B04-XX-XXX-0-1-1-5-01 SHOWN



PART NUMBER ETUO-B04-XX-XXX-0-1-1-5-07 SHOWN



NOTES:

- QUANTITY OF LENSES PRESENT MAY VARY. FIBER POSITION DOES NOT CHANGE REGARDLESS OF THE NUMBER OF LENSES PRESENT
- GROOVE ALLOWS ONE JACKETED RIBBON (FIBER TYPE -5/-6) OF CABLE LENGTH MAX 50 CM OR TWO CABLES OF JACKETED LOOSE TUBE (FIBER TYPE -7/-8) 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 INTERMATEABLE 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.
- FOR USE WITH TE VITA 66.1 (2000974-1) AND VITA 66.4 (2226881-1) DAUGHTER CARD PART NUMBERS
- ASSEMBLIES SHIPPED WITH AMPHENOL PART NUMBER CF-59471 1-01S INSTALLED

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

PROPRIETARY NOTE
THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND ALL DESIGN, MANUFACTURING, REPRODUCTION, USE, PATENT RIGHTS AND SALES RIGHTS ARE EXPRESSLY RESERVED BY SAMTEC, INC. THIS DOCUMENT SHALL NOT BE DISCLOSED, IN WHOLE OR PART, TO ANY UNAUTHORIZED PERSON OR ENTITY NOR REPRODUCED, TRANSFERRED OR INCORPORATED IN ANY OTHER PROJECT IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SAMTEC, INC.



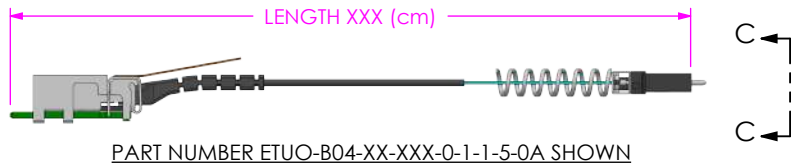
520 PARK EAST BLVD, NEW ALBANY, IN 47150
PHONE: 812-944-6733 FAX: 812-948-5047
e-Mail: info@SAMTEC.com code 53322

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

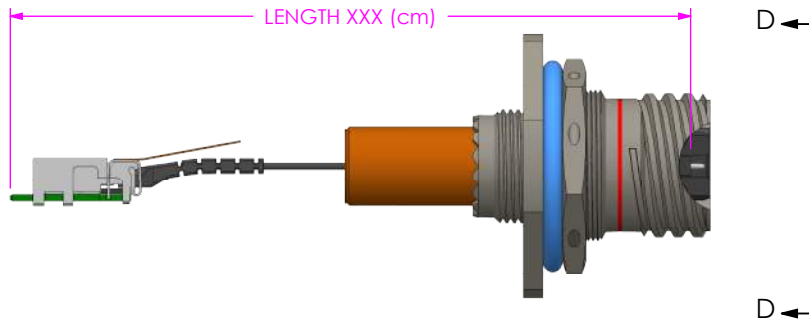
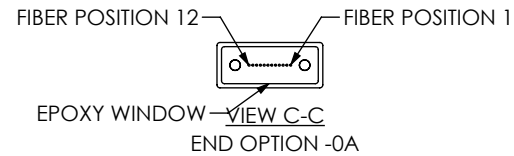
DESCRIPTION:
EXTENDED TEMPERATURE OPTICAL FIREFLY ASSEMBLY

DWG. NO.
ETUO-B04-XX-XXX-0-X-1-X-XX

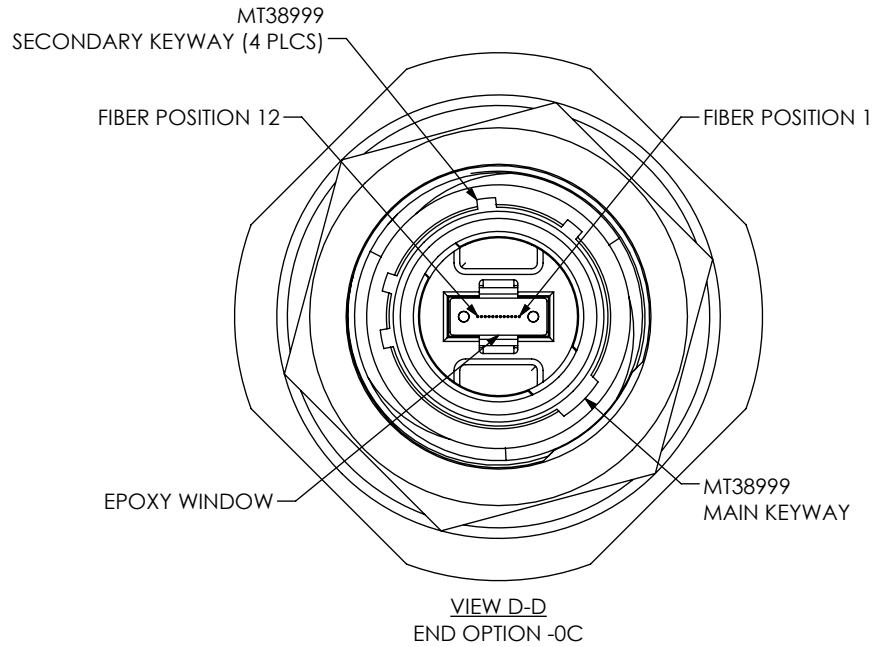
BY: AARON B. 03/05/2020 SHEET 1 OF 11




PART NUMBER ETUO-B04-XX-XXX-0-1-1-5-0A SHOWN



PART NUMBER ETUO-B04-XX-XXX-0-1-1-5-0C SHOWN



<p>PROPRIETARY NOTE</p> <p>THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND ALL DESIGN, MANUFACTURING, REPRODUCTION, USE, PATENT RIGHTS AND SALES RIGHTS ARE EXPRESSLY RESERVED BY SAMTEC, INC. THIS DOCUMENT SHALL NOT BE DISCLOSED, IN WHOLE OR PART, TO ANY UNAUTHORIZED PERSON OR ENTITY NOR REPRODUCED, TRANSFERRED OR INCORPORATED IN ANY OTHER PROJECT IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SAMTEC, INC.</p>	 <p>520 PARK EAST BLVD, NEW ALBANY, IN 47150 PHONE: 812-944-6733 FAX: 812-948-5047 e-Mail info@SAMTEC.com code 55322</p>
<p>DO NOT SCALE DRAWING SHEET SCALE: 1:1</p>	<p>DESCRIPTION: EXTENDED TEMPERATURE OPTICAL FIREFLY ASSEMBLY</p> <p>DWG. NO. ETUO-B04-XX-XXX-0-X-1-X-XX</p> <p>BY: AARON B. 03/05/2020 SHEET 2 OF 11</p>



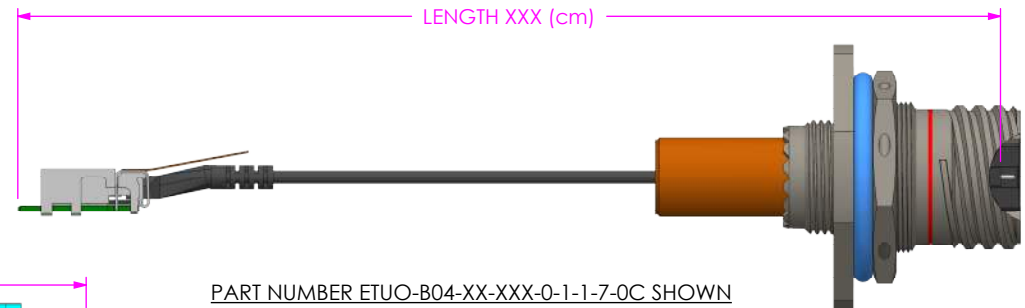
PART NUMBER ETUO-B04-XX-XXX-0-1-1-7 SHOWN



PART NUMBER ETUO-B04-XX-XXX-0-1-1-7-0A SHOWN



PART NUMBER ETUO-B04-XX-XXX-0-1-1-7-01 SHOWN




PART NUMBER ETUO-B04-XX-XXX-0-1-1-7-0C SHOWN



PART NUMBER ETUO-B04-XX-XXX-0-1-1-7-02 SHOWN



PART NUMBER ETUO-B04-XX-XXX-0-1-1-7-07 SHOWN

<p>PROPRIETARY NOTE THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND ALL DESIGN, MANUFACTURING, REPRODUCTION, USE, PATENT RIGHTS AND SALES RIGHTS ARE EXPRESSLY RESERVED BY SAMTEC, INC. THIS DOCUMENT SHALL NOT BE DISCLOSED, IN WHOLE OR PART, TO ANY UNAUTHORIZED PERSON OR ENTITY NOR REPRODUCED, TRANSFERRED OR INCORPORATED IN ANY OTHER PROJECT IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SAMTEC, INC.</p>		 520 PARK EAST BLVD, NEW ALBANY, IN 47150 PHONE: 812-944-6733 FAX: 812-948-5047 e-Mail info@SAMTEC.com code 55322	
<p>DO NOT SCALE DRAWING</p>		<p>DESCRIPTION: EXTENDED TEMPERATURE OPTICAL FIREFLY ASSEMBLY</p>	
<p>SHEET SCALE: 1:1</p>		<p>DWG. NO. ETUO-B04-XX-XXX-0-X-1-X-XX</p>	
		<p>BY: AARON B. 03/05/2020 SHEET 3 OF 11</p>	



PART NUMBER ETUO-B04-XX-XXX-0-1-1-8 SHOWN



PART NUMBER ETUO-B04-XX-XXX-0-1-1-8-01 SHOWN



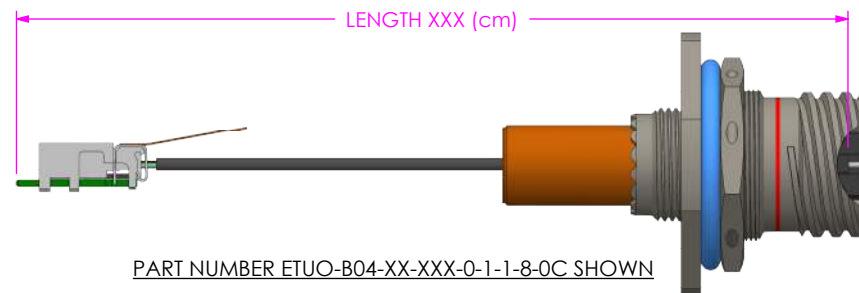
PART NUMBER ETUO-B04-XX-XXX-0-1-1-8-02 SHOWN



PART NUMBER ETUO-B04-XX-XXX-0-1-1-8-07 SHOWN



PART NUMBER ETUO-B04-XX-XXX-0-1-1-8-0A SHOWN



PART NUMBER ETUO-B04-XX-XXX-0-1-1-8-0C SHOWN



PART NUMBER ETUO-B04-XX-XXX-0-1-1-8-0E SHOWN

PROPRIETARY NOTE
 THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND ALL DESIGN, MANUFACTURING, REPRODUCTION, USE, PATENT RIGHTS AND SALES RIGHTS ARE EXPRESSLY RESERVED BY SAMTEC, INC. THIS DOCUMENT SHALL NOT BE DISCLOSED, IN WHOLE OR PART, TO ANY UNAUTHORIZED PERSON OR ENTITY NOR REPRODUCED, TRANSFERRED OR INCORPORATED IN ANY OTHER PROJECT IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SAMTEC, INC.



520 PARK EAST BLVD, NEW ALBANY, IN 47150
 PHONE: 812-944-6733 FAX: 812-948-5047
 e-Mail info@SAMTEC.com code 55322

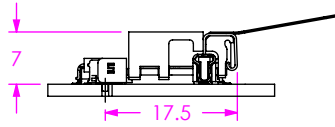
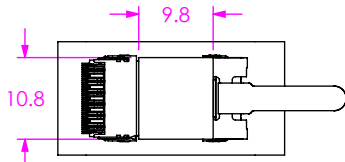
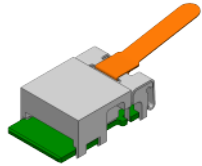
DO NOT SCALE DRAWING

SHEET SCALE: 1:1

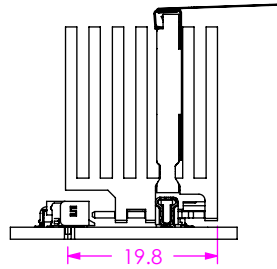
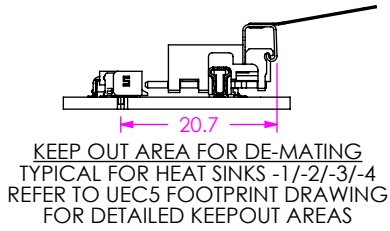
DESCRIPTION:
 EXTENDED TEMPERATURE OPTICAL FIREFLY ASSEMBLY

DWG. NO.
 ETUO-B04-XX-XXX-0-X-1-X-XX

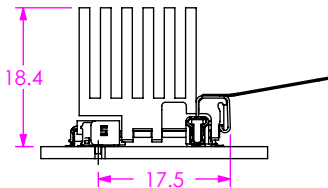
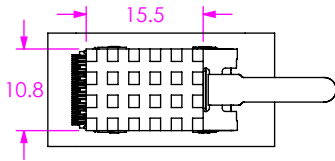
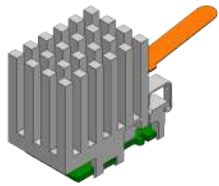
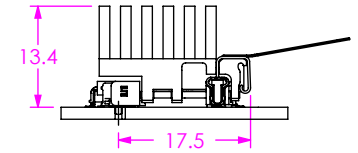
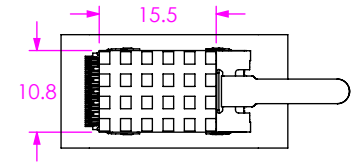
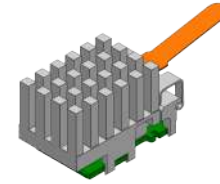
BY: AARON B. 03/05/2020 SHEET 4 OF 11



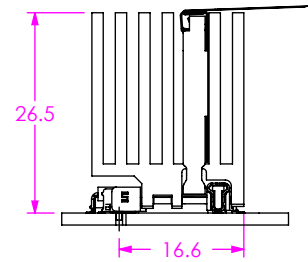
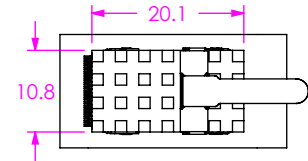
-1 FLAT HEAT SINK



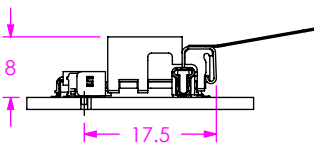
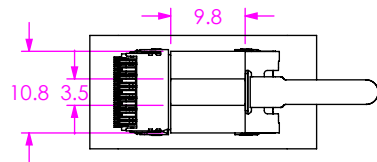
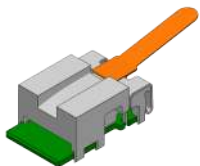
-4 LOW-PROFILE PIN-FIN HEAT SINK



-2 PIN-FIN HEAT SINK



-5 HIGH PERFORMANCE PIN-FIN



-3 FLAT HEAT SINK WITH PASS THROUGH

PROPRIETARY NOTE
THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND ALL DESIGN, MANUFACTURING, REPRODUCTION, USE, PATENT RIGHTS AND SALES RIGHTS ARE EXPRESSLY RESERVED BY SAMTEC, INC. THIS DOCUMENT SHALL NOT BE DISCLOSED, IN WHOLE OR PART, TO ANY UNAUTHORIZED PERSON OR ENTITY NOR REPRODUCED, TRANSFERRED OR INCORPORATED IN ANY OTHER PROJECT IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SAMTEC, INC.



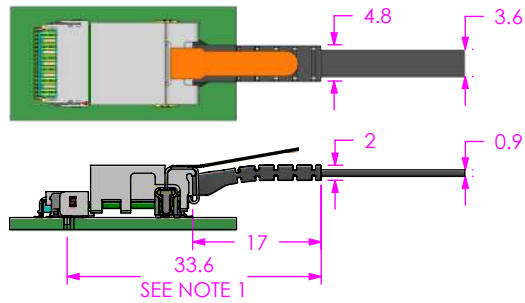
520 PARK EAST BLVD., NEW ALBANY, IN 47150
PHONE: 812-944-6733 FAX: 812-948-5047
e-Mail: info@SAMTEC.com code 55322

SHEET SCALE: 1:1

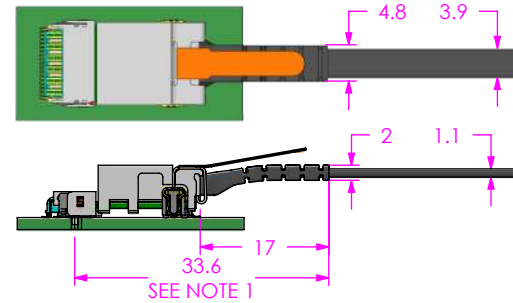
DESCRIPTION:
EXTENDED TEMPERATURE OPTICAL FIREFLY ASSEMBLY

DWG. NO.
ETUO-B04-XX-XXX-0-X-1-X-XX

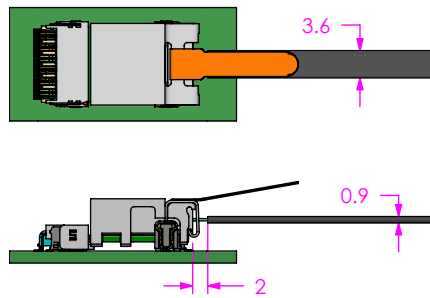
BY: AARON B. 03/05/2020 SHEET 5 OF 11



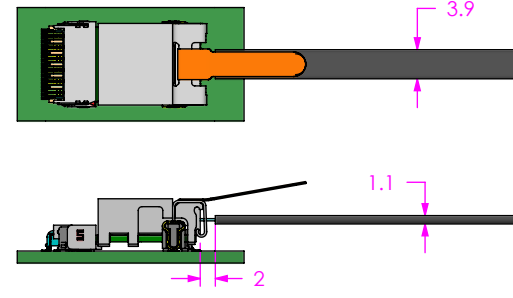
-5 FIBER TYPE, ≤ 50 cm LENGTH



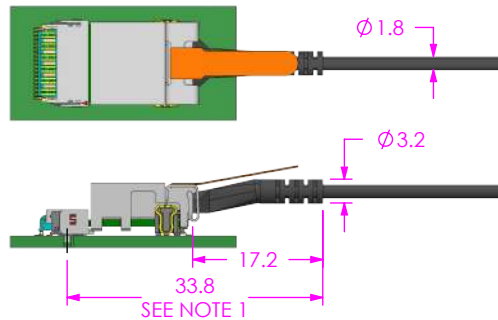
-5 FIBER TYPE, > 50 cm LENGTH



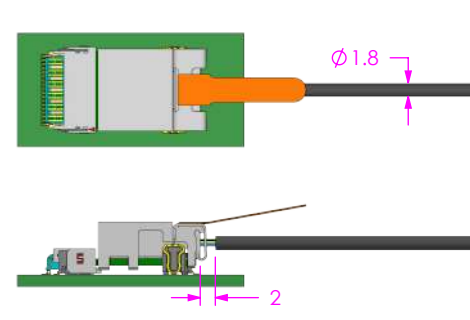
-6 FIBER TYPE, ≤ 50 cm LENGTH



-6 FIBER TYPE, > 50 cm LENGTH



-7 FIBER TYPE



-8 FIBER TYPE

NOTES:

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

PROPRIETARY NOTE

THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND ALL DESIGN, MANUFACTURING, REPRODUCTION, USE, PATENT RIGHTS AND SALES RIGHTS ARE EXPRESSLY RESERVED BY SAMTEC, INC. THIS DOCUMENT SHALL NOT BE DISCLOSED, IN WHOLE OR PART, TO ANY UNAUTHORIZED PERSON OR ENTITY NOR REPRODUCED, TRANSFERRED OR INCORPORATED IN ANY OTHER PROJECT IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SAMTEC, INC.



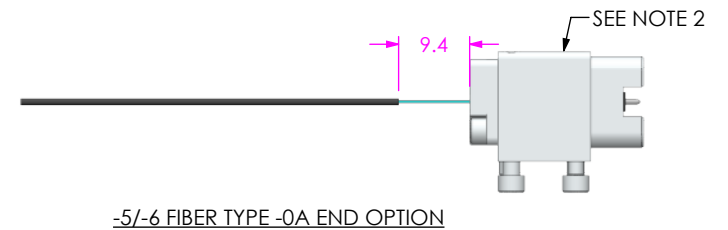
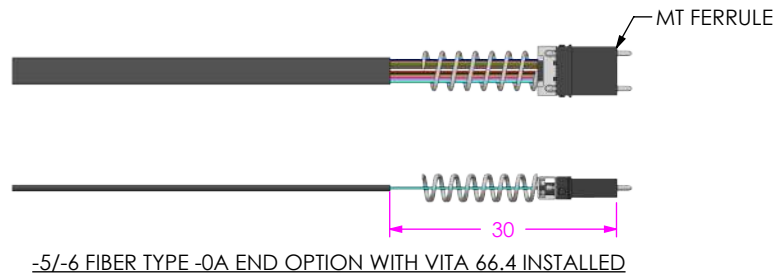
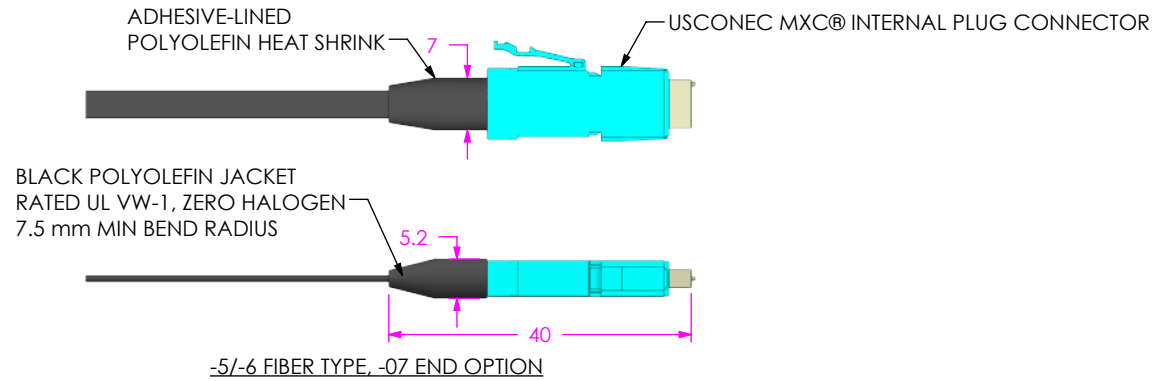
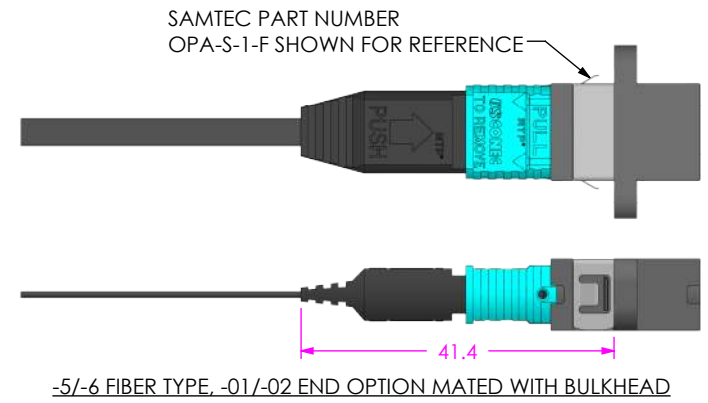
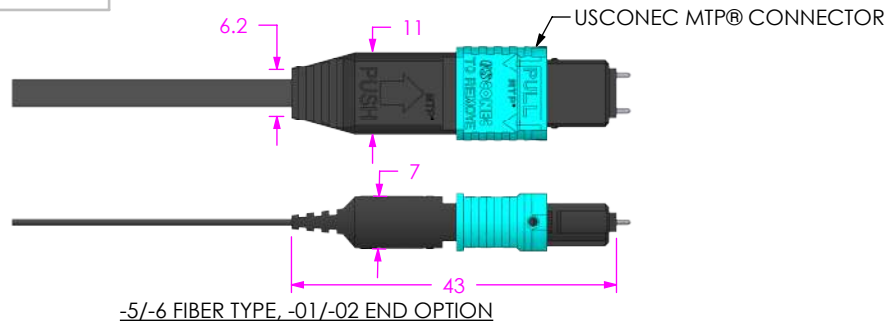
520 PARK EAST BLVD, NEW ALBANY, IN 47150
 PHONE: 812-944-6733 FAX: 812-948-5047
 e-Mail info@SAMTEC.com code 55322

DO NOT SCALE DRAWING SHEET SCALE: 1:1

DESCRIPTION:
 EXTENDED TEMPERATURE OPTICAL FIREFLY ASSEMBLY

DWG. NO.
 ETUO-B04-XX-XXX-0-X-1-X-XX

BY: AARON B. 03/05/2020 SHEET 6 OF 11



- NOTES:
1. DUST CAPS/PLUGS NOT SHOWN FOR CLARITY
 2. VITA 66.4 CONNECTOR HOUSING NOT INCLUDED WITH ASSEMBLY, SHOWN FOR REFERENCE ONLY.

PROPRIETARY NOTE
 THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND ALL DESIGN, MANUFACTURING, REPRODUCTION, USE, PATENT RIGHTS AND SALES RIGHTS ARE EXPRESSLY RESERVED BY SAMTEC, INC. THIS DOCUMENT SHALL NOT BE DISCLOSED, IN WHOLE OR PART, TO ANY UNAUTHORIZED PERSON OR ENTITY NOR REPRODUCED, TRANSFERRED OR INCORPORATED IN ANY OTHER PROJECT IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SAMTEC, INC.

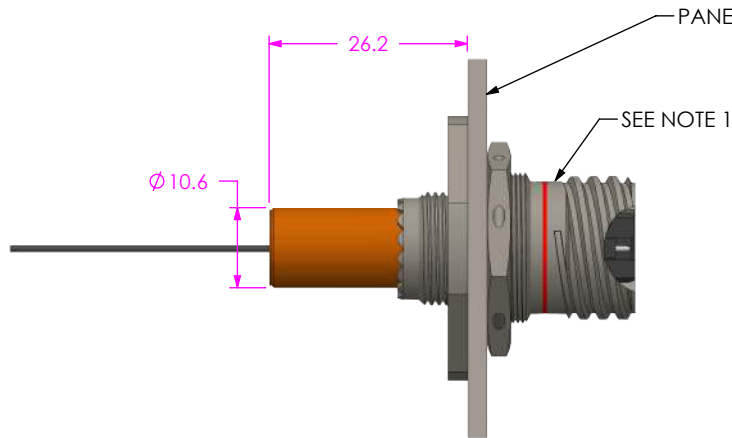
samtec
 520 PARK EAST BLVD. NEW ALBANY, IN 47150
 PHONE: 812-944-6733 FAX: 812-948-5047
 e-Mail info@SAMTEC.com code 55322

SHEET SCALE: 1:1

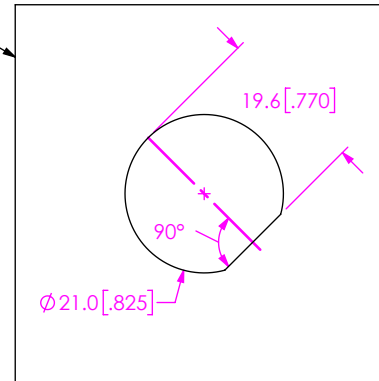
DESCRIPTION:
 EXTENDED TEMPERATURE OPTICAL FIREFLY ASSEMBLY

DWG. NO.
 ETUO-B04-XX-XXX-0-X-1-X-XX

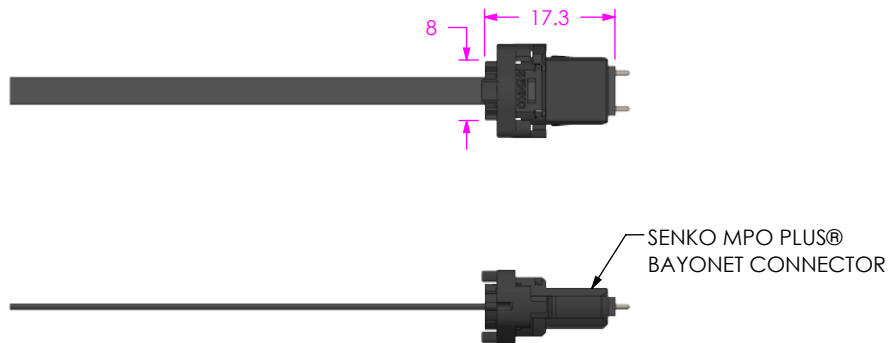
BY: AARON B. 03/05/2020 SHEET 7 OF 11



-5/-6 FIBER TYPE -0C END OPTION (SHOWN WITH PANEL)

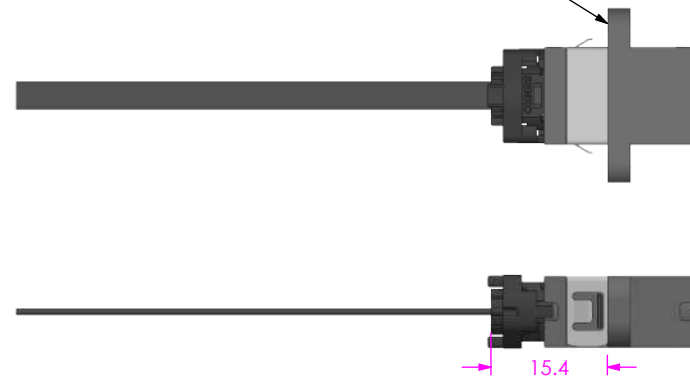


-0C END OPTION RECOMMENDED PANEL CUTOUT
mm [in]



-5/-6 FIBER TYPE -0E END OPTION

SAMTEC PART NUMBER OPA-S-1-F SHOWN FOR REFERENCE

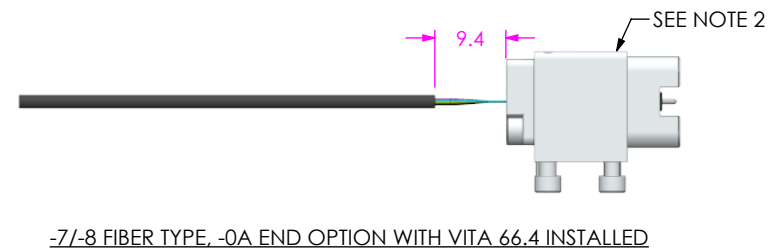
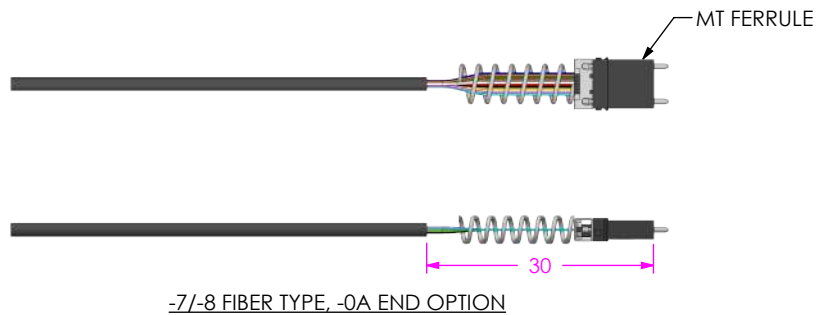
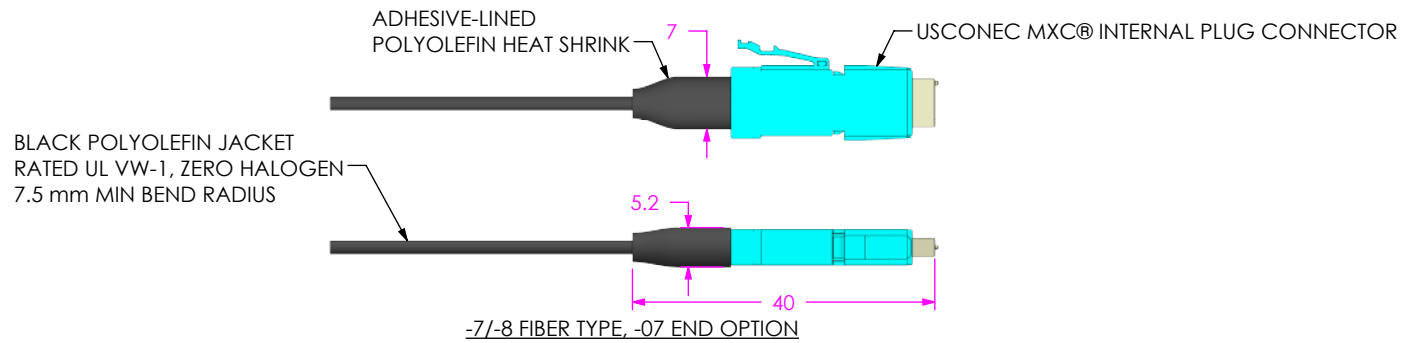
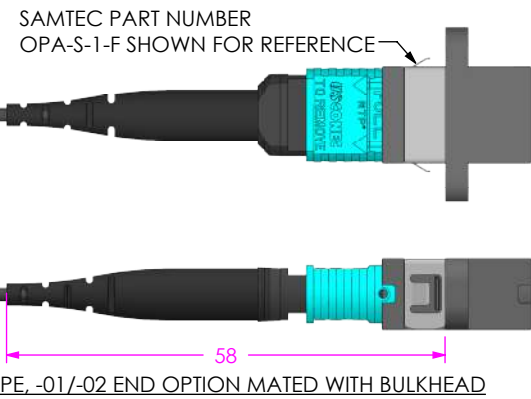
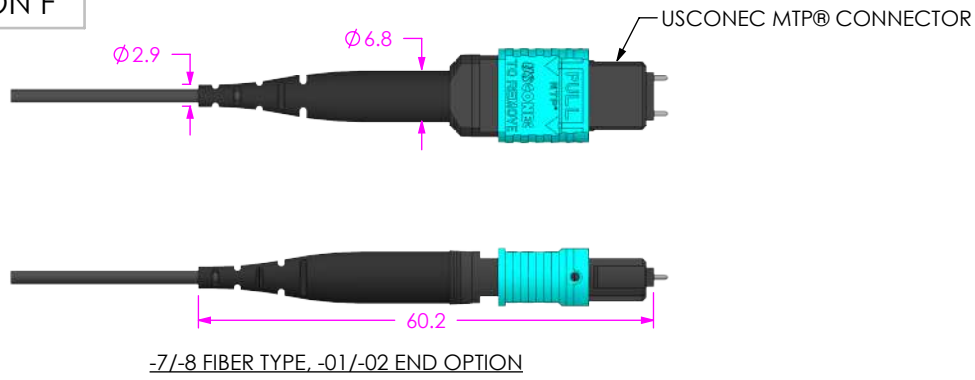


-5/-6 FIBER TYPE -0E END OPTION MATED WITH BULKHEAD

- NOTES:
1. AMPHENOL PART NUMBER CF-594711-01S. DIMENSIONS GIVEN FOR REFERENCE ONLY

<p>PROPRIETARY NOTE</p> <p>THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND ALL DESIGN, MANUFACTURING, REPRODUCTION, USE, PATENT RIGHTS AND SALES RIGHTS ARE EXPRESSLY RESERVED BY SAMTEC, INC. THIS DOCUMENT SHALL NOT BE DISCLOSED, IN WHOLE OR PART, TO ANY UNAUTHORIZED PERSON OR ENTITY NOR REPRODUCED, TRANSFERRED OR INCORPORATED IN ANY OTHER PROJECT IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SAMTEC, INC.</p>	<p>samtec</p> <p>520 PARK EAST BLVD, NEW ALBANY, IN 47150 PHONE: 812-944-6733 FAX: 812-948-5047 e-Mail info@SAMTEC.com code 55322</p>	
	<p>DO NOT SCALE DRAWING SHEET SCALE: 1:1</p>	<p>DESCRIPTION: EXTENDED TEMPERATURE OPTICAL FIREFLY ASSEMBLY</p> <p>DWG. NO. ETUO-B04-XX-XXX-0-X-1-X-XX</p> <p>BY: AARON B. 03/05/2020 SHEET 8 OF 11</p>

REVISION F



- NOTES:
1. DUST CAPS/PLUGS NOT SHOWN FOR CLARITY
 2. VITA 66.4 CONNECTOR HOUSING NOT INCLUDED WITH ASSEMBLY, SHOWN FOR REFERENCE ONLY.

PROPRIETARY NOTE

THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND ALL DESIGN, MANUFACTURING, REPRODUCTION, USE, PATENT RIGHTS AND SALES RIGHTS ARE EXPRESSLY RESERVED BY SAMTEC, INC. THIS DOCUMENT SHALL NOT BE DISCLOSED, IN WHOLE OR PART, TO ANY UNAUTHORIZED PERSON OR ENTITY NOR REPRODUCED, TRANSFERRED OR INCORPORATED IN ANY OTHER PROJECT IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SAMTEC, INC.

samtec

520 PARK EAST BLVD, NEW ALBANY, IN 47150
 PHONE: 812-944-6733 FAX: 812-948-5047
 e-Mail info@SAMTEC.com code 55322

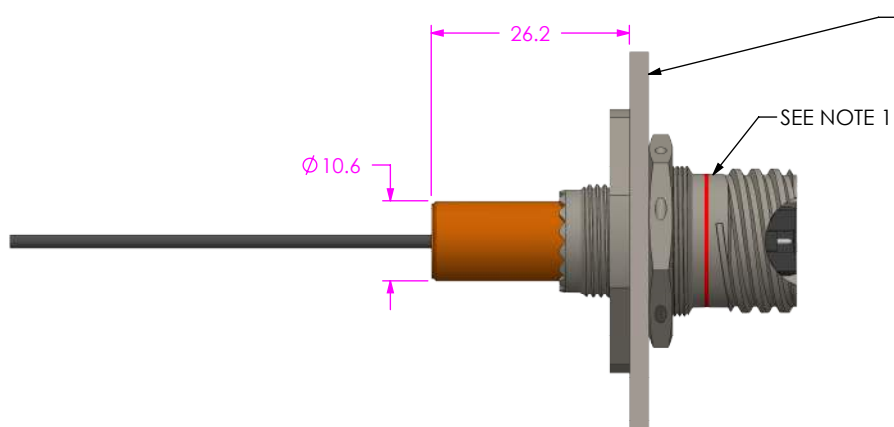
DO NOT SCALE DRAWING

DESCRIPTION:
 EXTENDED TEMPERATURE OPTICAL FIREFLY ASSEMBLY

SHEET SCALE: 1:1

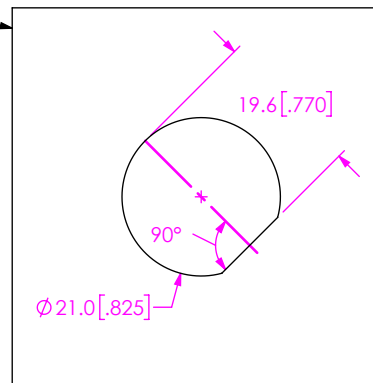
DWG. NO.
 ETUO-B04-XX-XXX-0-X-1-X-XX

BY: AARON B. 03/05/2020 SHEET 9 OF 11

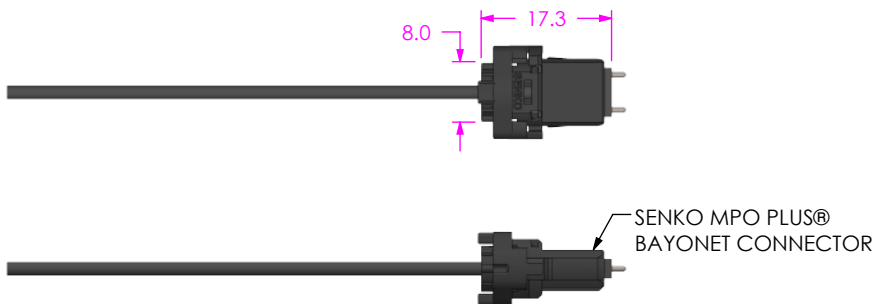


-7/-8 FIBER TYPE, -0C END OPTION

PANEL WALL



-0C END OPTION RECOMMENDED PANEL CUTOUT
mm [in]



SENKO MPO PLUS®
BAYONET CONNECTOR

SAMTEC PART NUMBER OPA-S-1-F SHOWN FOR REFERENCE



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

NOTES:
1. AMPHENOL PART NUMBER CF-594711-01S. DIMENSIONS GIVEN FOR REFERENCE ONLY

PROPRIETARY NOTE
THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND ALL DESIGN, MANUFACTURING, REPRODUCTION, USE, PATENT RIGHTS AND SALES RIGHTS ARE EXPRESSLY RESERVED BY SAMTEC, INC. THIS DOCUMENT SHALL NOT BE DISCLOSED, IN WHOLE OR PART, TO ANY UNAUTHORIZED PERSON OR ENTITY NOR REPRODUCED, TRANSFERRED OR INCORPORATED IN ANY OTHER PROJECT IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SAMTEC, INC.



520 PARK EAST BLVD, NEW ALBANY, IN 47150
PHONE: 812-944-6733 FAX: 812-948-5047
e-Mail info@SAMTEC.com code 55322

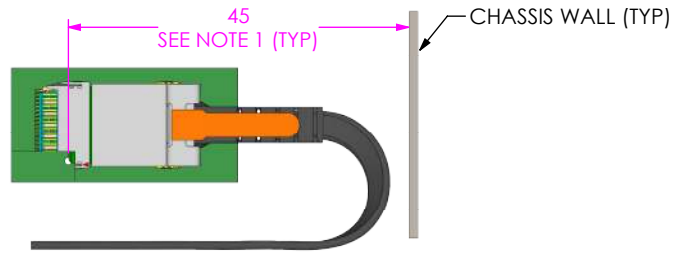
DO NOT SCALE DRAWING

SHEET SCALE: 1:1

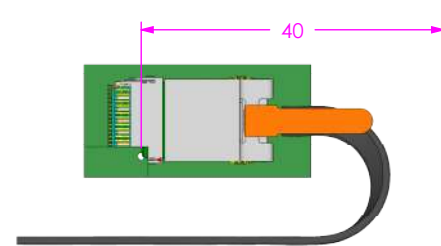
DESCRIPTION:
EXTENDED TEMPERATURE OPTICAL FIREFLY ASSEMBLY

DWG. NO.
ETUO-B04-XX-XXX-0-X-1-X-XX

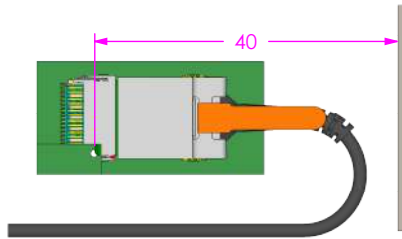
BY: AARON B. 03/05/2020 SHEET 10 OF 11



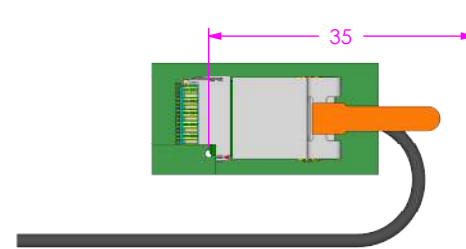
-5 FIBER TYPE RECOMMENDED CABLE ESCAPE CLEARANCE



-6 FIBER TYPE RECOMMENDED CABLE ESCAPE CLEARANCE




-7 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.

<p>PROPRIETARY NOTE</p> <p>THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND ALL DESIGN, MANUFACTURING, REPRODUCTION, USE, PATENT RIGHTS AND SALES RIGHTS ARE EXPRESSLY RESERVED BY SAMTEC, INC. THIS DOCUMENT SHALL NOT BE DISCLOSED, IN WHOLE OR PART, TO ANY UNAUTHORIZED PERSON OR ENTITY NOR REPRODUCED, TRANSFERRED OR INCORPORATED IN ANY OTHER PROJECT IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SAMTEC, INC.</p>	 <p>520 PARK EAST BLVD, NEW ALBANY, IN 47150 PHONE: 812-944-6733 FAX: 812-948-5047 e-Mail info@SAMTEC.com code 55322</p>
<p>DO NOT SCALE DRAWING SHEET SCALE: 1:1</p>	<p>DESCRIPTION: EXTENDED TEMPERATURE OPTICAL FIREFLY ASSEMBLY DWG. NO. ETUO-B04-XX-XXX-0-X-1-X-XX BY: AARON B. 03/05/2020 SHEET 11 OF 11</p>