



DO NOT SCALE FROM THIS PRINT

PATENTED, ADDITIONAL PATENTS PENDING

DESIGNED & DIMENSIONED IN MILLIMETERS [INCHES]

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

TYPE  
 -T12: x12 Tx ONLY  
 -R12: x12 Rx ONLY  
 -U12: FULL ACTIVE OPTICAL CABLE  
 -Y12: Y CONFIGURATION  
 \*-B04: x4 BIDIRECTIONAL

DATA RATE  
 -14: 14 Gbps  
 \*28: 28 Gbps

ASSEMBLY LENGTH  
 -XXX: LENGTH (cm)

HEAT SINK  
 -1: FLAT  
 -2: PIN-FIN (-14 DATA RATE ONLY)  
 -3: FLAT WITH 3-RIBBON PASS THROUGH

\*\*END OPTIONS  
 -01: MTP 12F KEY DOWN MALE  
 -02: MTP 12F KEY DOWN FEMALE  
 -03: MPO 12F KEY DOWN MALE  
 -04: MPO 12F KEY DOWN FEMALE  
 -05: MT 12F MALE  
 -06: MT 12F FEMALE  
 \*07: PRIZM MT 12F  
 -21: MTP 24F KEY DOWN MALE  
 -22: MTP 24F KEY DOWN FEMALE  
 -23: MPO 24F KEY DOWN MALE  
 -24: MPO 24F KEY DOWN FEMALE  
 -25: MT 24F MALE  
 -26: MT 24F FEMALE  
 \*27: PRIZM MT 24F

FIBER TYPE  
 -1: LOW BEND RADIUS RIBBON  
 -2: LOW BEND RADIUS LOOSE TUBE

\*IN DESIGN  
 \*\*LEAVE BLANK FOR U12 TYPE

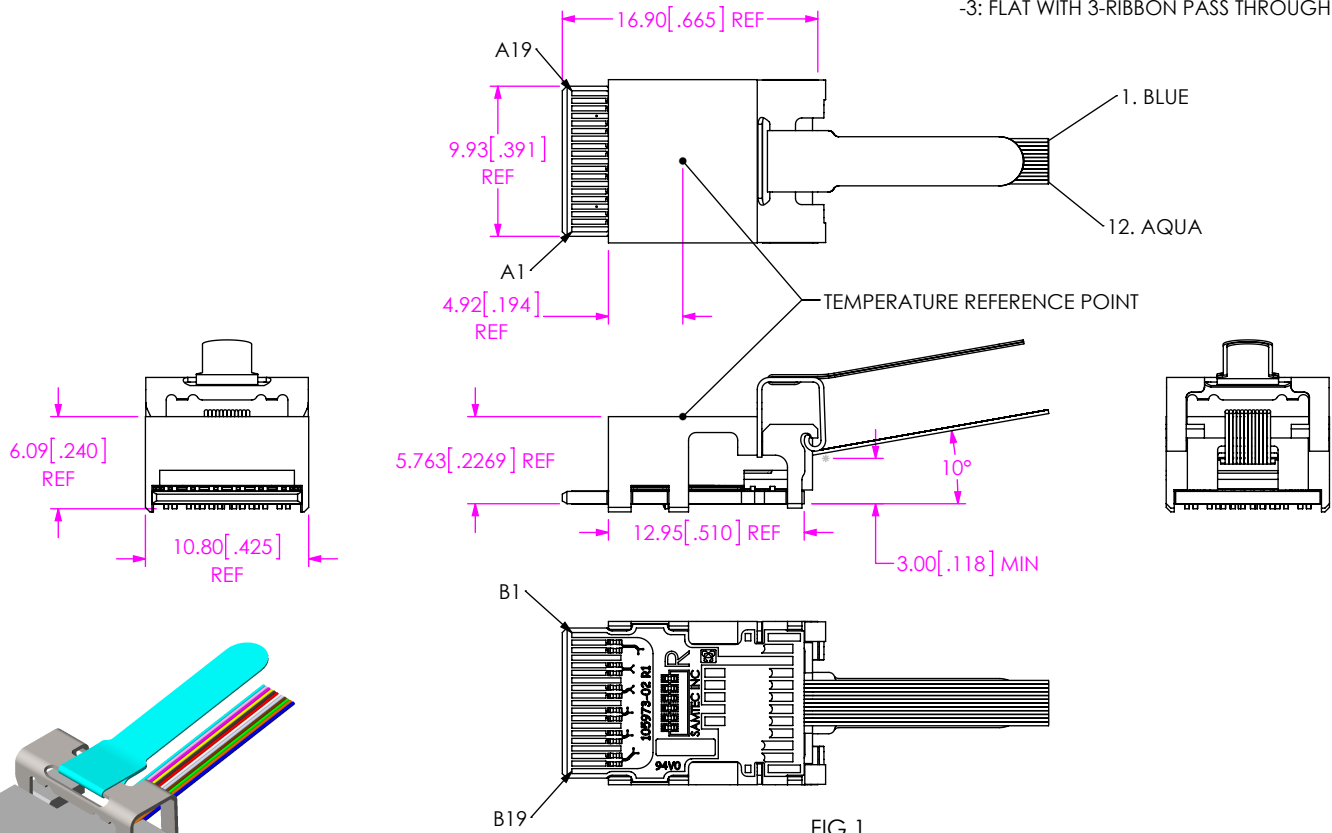
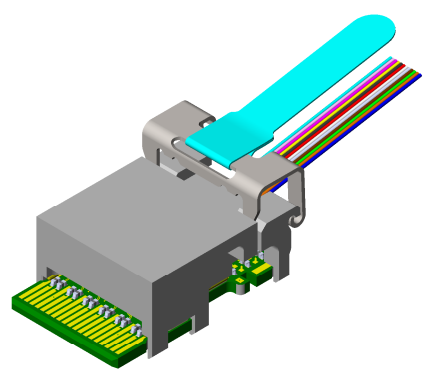


FIG 1  
 ECUO-R12-XX-XXX-0-1-0-1-XX SHOWN FLAT HEAT SINK



| STANDARD MINIMUM ASSEMBLY LENGTH (SEE NOTE 3) |                    |                              |
|---|--------------------|------------------------------|
| FIBER TYPE                                    | END OPTIONS        | MINIMUM ASSEMBLY LENGTH (cm) |
| -1  | -01, -02, -03, -04 | 17                           |
|   | -05, -06           | 14                           |
|   | -21, -22, -23, -24 | 17                           |
|   | -25, -26           | 14                           |
| -2  | -01, -02, -03, -04 | 12                           |
|   | -05, -06           | 8                            |
|   | -21, -22, -23, -24 | 11                           |
|   | -25, -26           | 8                            |
| ANY   | BLANK              | 10                           |

NOTES:  
 1. INTEGRITY OF ACRYLATE COATING OF FIBER RIBBON NOT GUARANTEED UNDER 30 mm BEND RADIUS. OPTICAL PERFORMANCE AND INTEGRITY OF OPTICAL FIBERS GUARANTEED DOWN TO 7.5 mm BEND RADIUS.  
 2. CONTACT SAMTEC FOR SHORTER CUSTOM LENGTHS.

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS. TOLERANCES ARE:  
 DECIMALS ANGLES  
 X.X: ±0.3 [.01] 2°  
 X.XX: ±0.13 [.005]  
 X.XXX: ±0.051 [.0020]

PROPRIETARY NOTE  
 THIS DOCUMENT CONTAINS INFORMATION CONFIDENTIAL AND PROPRIETARY TO SAMTEC, INC. AND SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR ANY PURPOSE OTHER THAN THAT WHICH IT WAS OBTAINED WITHOUT THE EXPRESSED WRITTEN CONSENT OF SAMTEC, INC.

MATERIAL: DO NOT SCALE DRAWING SHEET SCALE: 2:1

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

DESCRIPTION: OPTICAL FIREFLY ASSEMBLY  
 DWG. NO. ECUO-XXX-XX-XXX-0-X-X-X-XX  
 BY: JEAN W. 02/28/2013 SHEET 1 OF 8

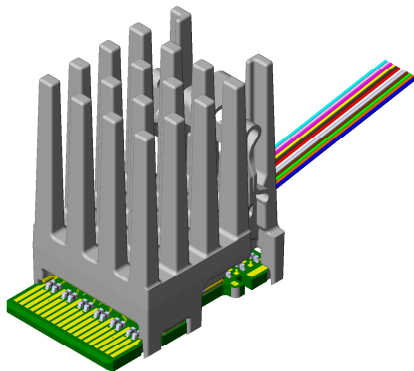
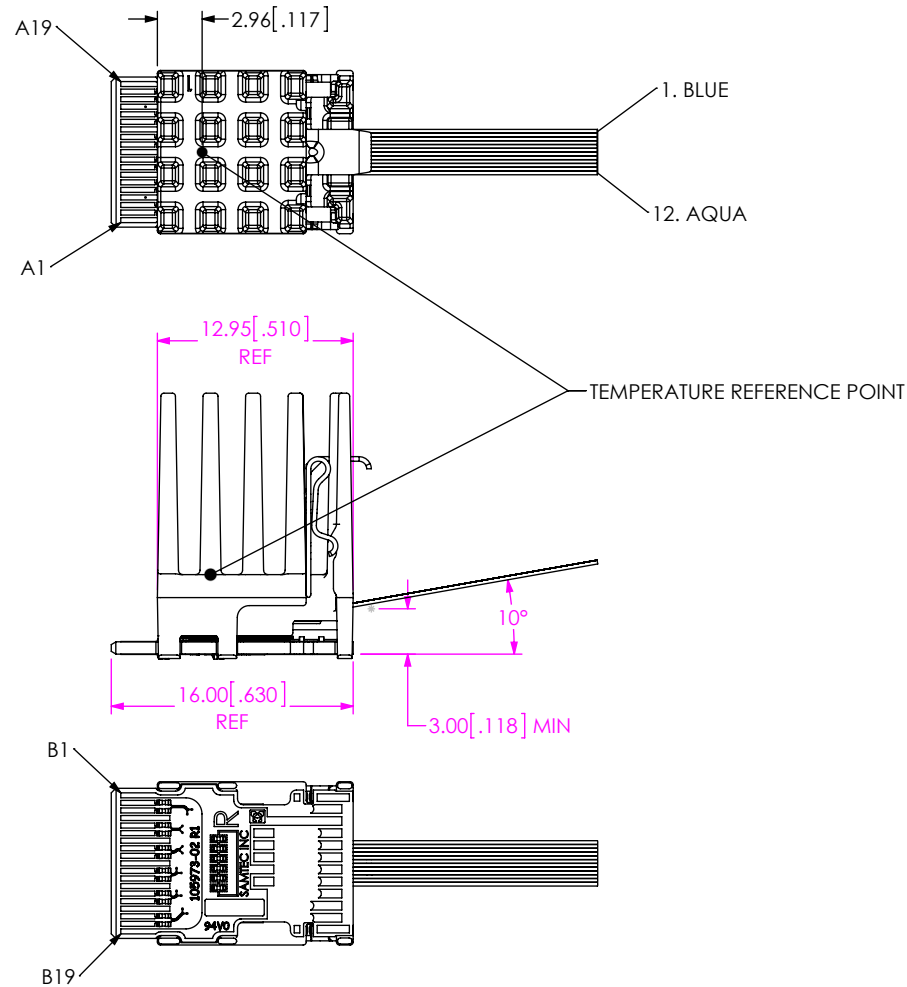



FIG 2  
ECUO-R12-XX-XXX-0-2-0-1-XX SHOWN  
PIN-FIN HEAT SINK

|   |   |
|---|---|
| <p><b>PROPRIETARY NOTE</b><br/>THIS DOCUMENT CONTAINS INFORMATION CONFIDENTIAL AND PROPRIETARY TO SAMTEC, INC. AND SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR ANY PURPOSE OTHER THAN THAT WHICH IT WAS OBTAINED WITHOUT THE EXPRESSED WRITTEN CONSENT OF SAMTEC, INC.</p> | <br>520 PARK EAST BLVD., NEW ALBANY, IN 47150<br>PHONE: 812-944-6733 FAX: 812-948-5047<br>e-Mail: info@SAMTEC.com code 55322 |
| <p>SHEET SCALE: 1:2</p>   | <p>DESCRIPTION:<br/>OPTICAL FIREFLY ASSEMBLY</p>  |
|   | <p>DWG. NO.<br/>ECUO-XXX-XX-XXX-0-X-X-X-XX<br/>BY: JEAN W. 02/28/2013 SHEET 2 OF 8</p>  |

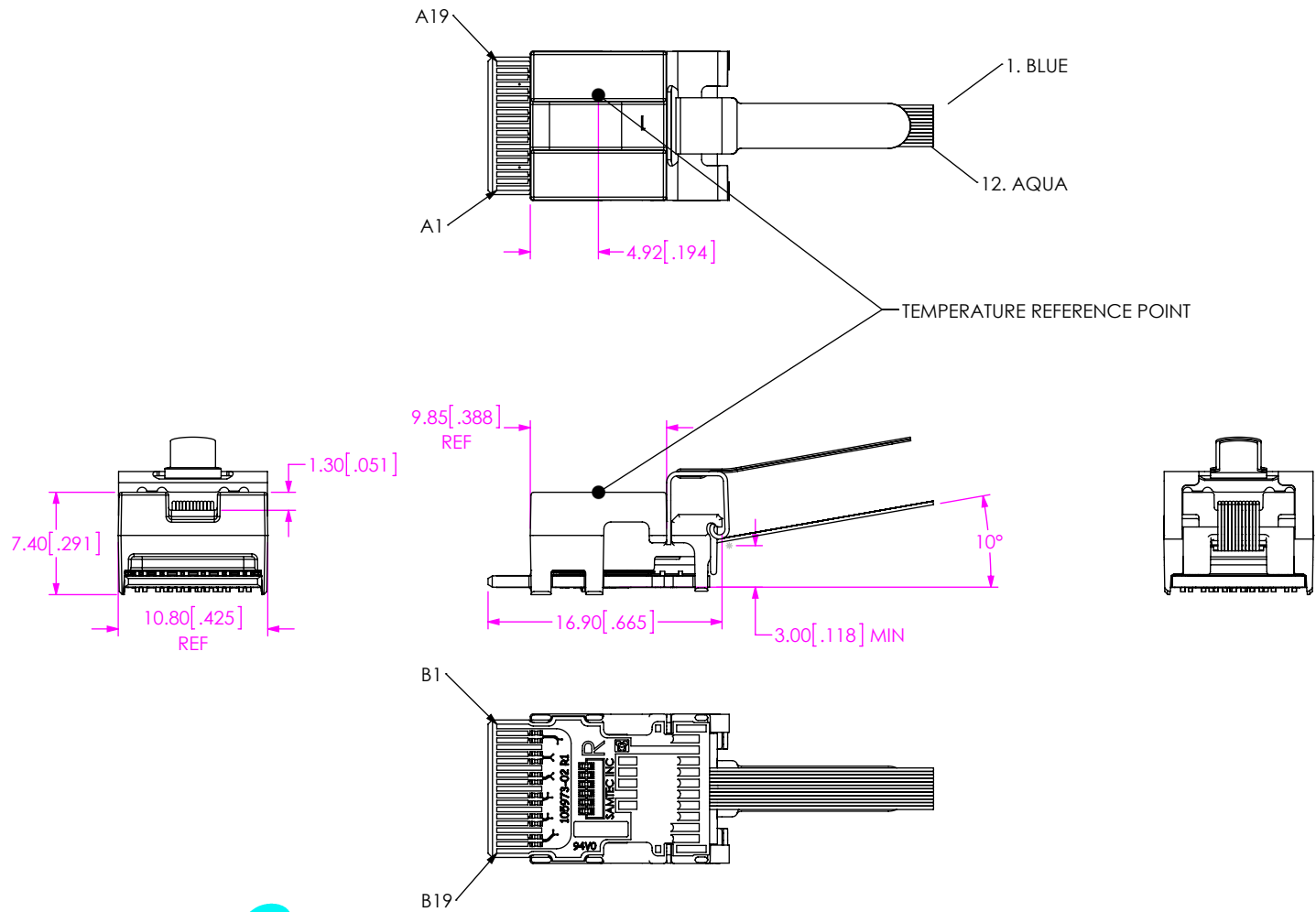
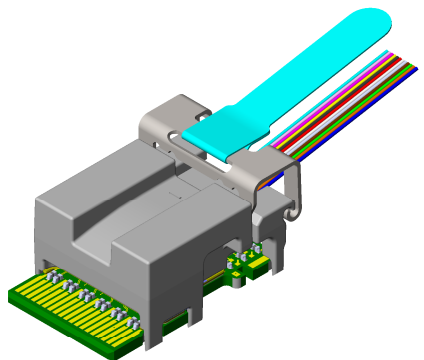


FIG 3  
 ECUO-R12-XX-XXX-0-3-0-1-XX SHOWN  
 FLAT HEAT SINK WITH 3-RIBBON PASS THROUGH



**PROPRIETARY NOTE**  
 THIS DOCUMENT CONTAINS INFORMATION CONFIDENTIAL AND PROPRIETARY TO SAMTEC, INC. AND SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR ANY PURPOSE OTHER THAN THAT WHICH IT WAS OBTAINED WITHOUT THE EXPRESSED 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: 1:2

DESCRIPTION:  
 OPTICAL FIREFLY ASSEMBLY

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

BY: JEAN W. 02/28/2013 SHEET 3 OF 8

**ESD SENSITIVE**

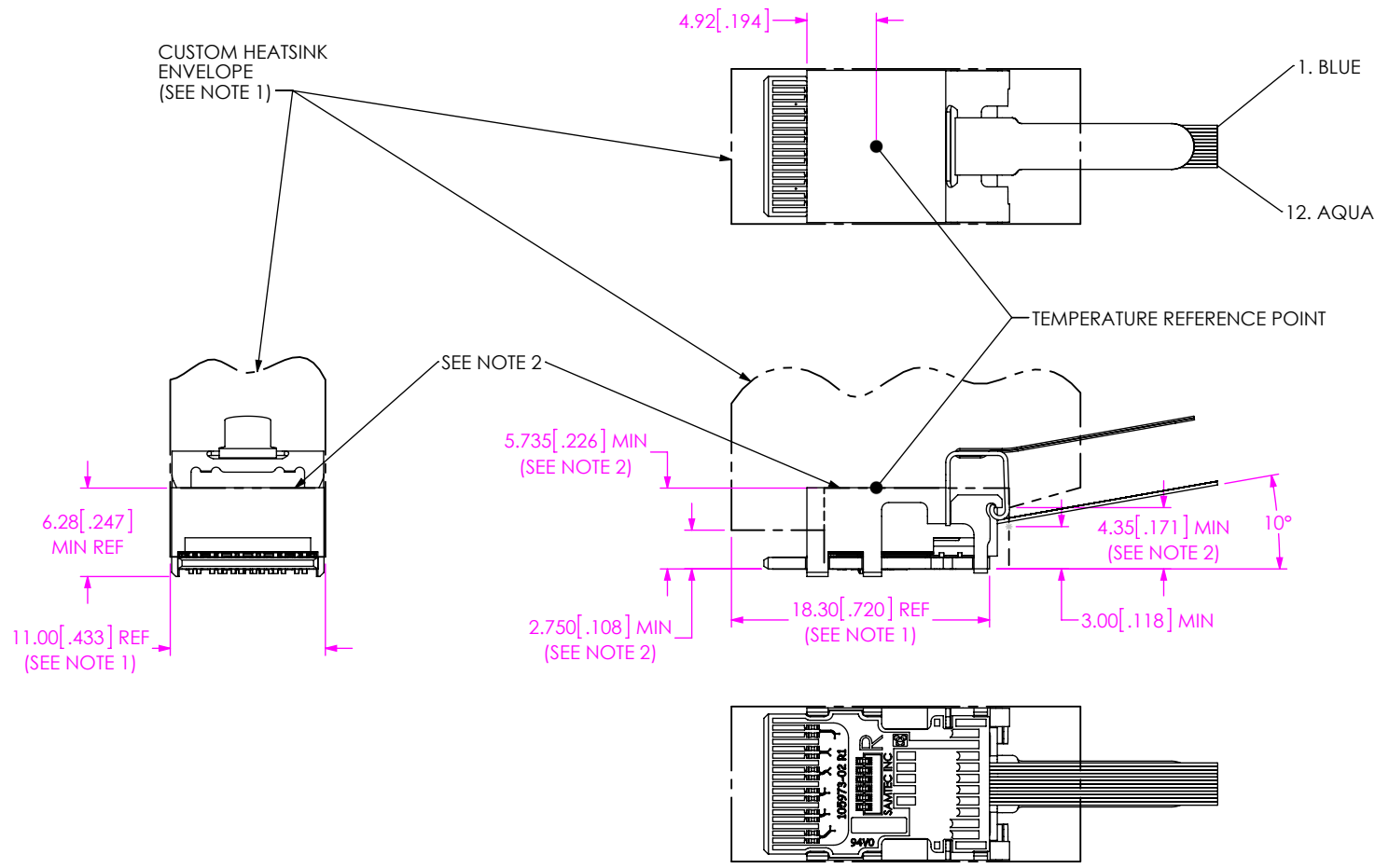


FIG4  
ECUO-R12-XX-XXX-0-X-0-1-XX SHOWN  
CUSTOM HEAT SINK

- NOTES:
1. ENVELOPE SHOWN TO FIT WITHIN CONNECTOR FOOTPRINT. LARGER CUSTOM HEATSINK POSSIBLE.
  2. ABSOLUTE MINIMUM
  3. LATCHING MECHANISM TBD

**PROPRIETARY NOTE**  
THIS DOCUMENT CONTAINS INFORMATION CONFIDENTIAL AND PROPRIETARY TO SAMTEC, INC. AND SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR ANY PURPOSE OTHER THAN THAT WHICH IT WAS OBTAINED WITHOUT THE EXPRESSED 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: 2:1

DESCRIPTION: OPTICAL FIREFLY ASSEMBLY

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

BY: JEAN W. 02/28/2013 SHEET 4 OF 8

**ESD SENSITIVE**

END OPTIONS  
ECUO - MTP (KEY DOWN) SHOWN

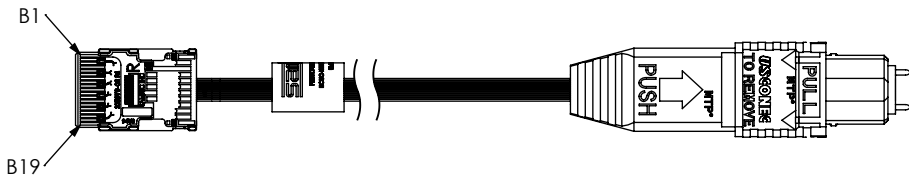
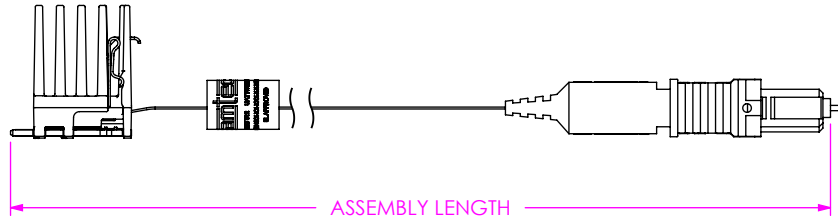
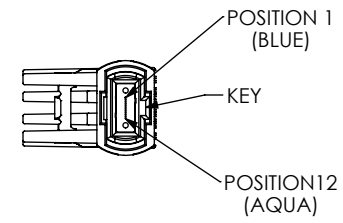
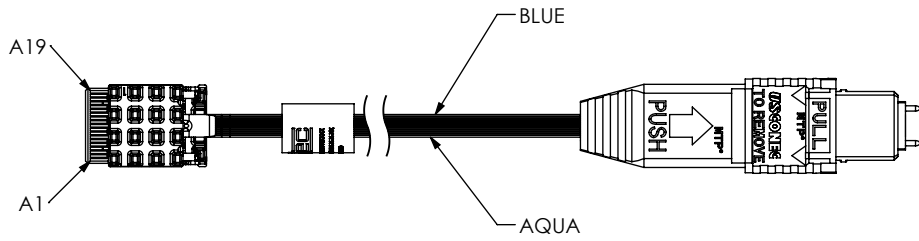
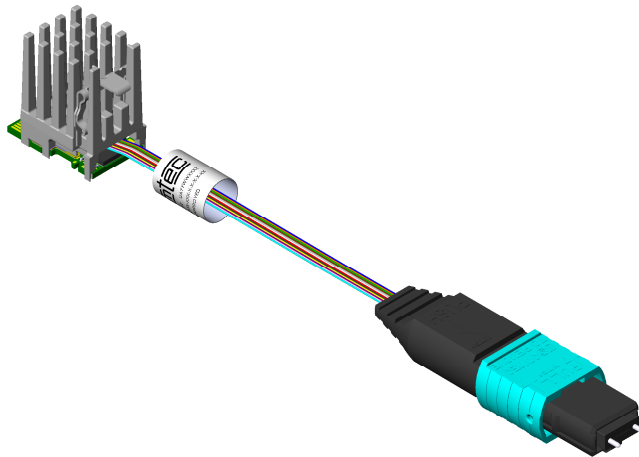


FIG 5  
ECUO-R12-XX-XXX-0-2-0-1-01 SHOWN



|   |
|---|
| <p>MTP FEMALE</p> <p>FIG 6<br/>ECUO-T12-XX-XXX-0-2-0-1-02 SHOWN</p> |
| <p>MT MALE</p> <p>FIG 7<br/>ECUO-T12-XX-XXX-0-2-0-1-05 SHOWN</p>    |
| <p>MT FEMALE</p> <p>FIG 8<br/>ECUO-T12-XX-XXX-0-2-0-1-06 SHOWN</p>  |

**PROPRIETARY NOTE**  
THIS DOCUMENT CONTAINS INFORMATION CONFIDENTIAL AND PROPRIETARY TO SAMTEC, INC. AND SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR ANY PURPOSE OTHER THAN THAT WHICH IT WAS OBTAINED WITHOUT THE EXPRESSED 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

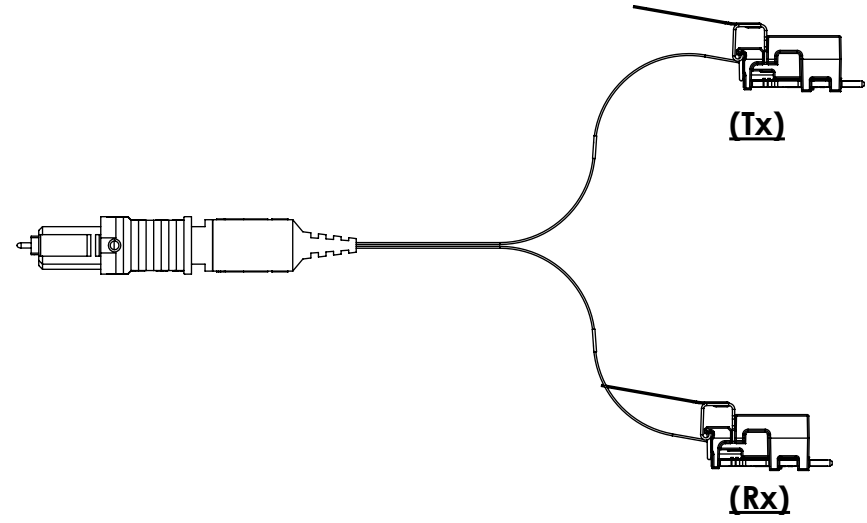
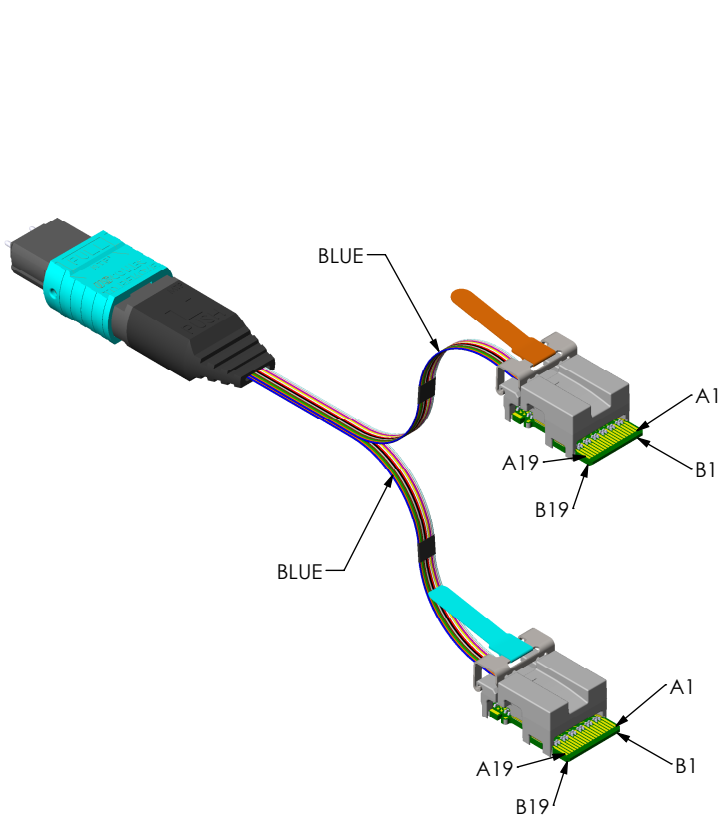
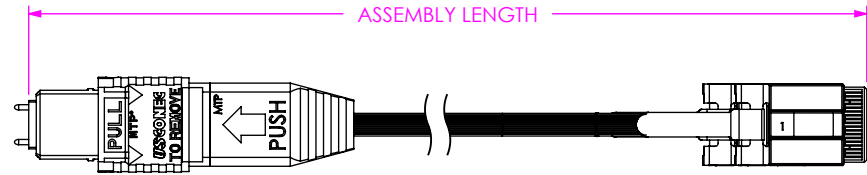
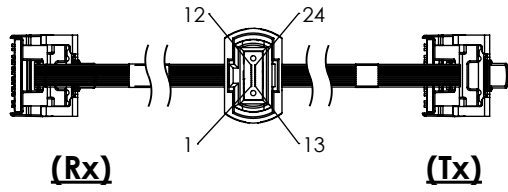
DESCRIPTION: OPTICAL FIREFLY ASSEMBLY

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

BY: JEAN W. 02/28/2013 SHEET 5 OF 8

NOTES:  
1. LABELS PRESENT ONLY ON PARTS WITH ASSEMBLY LENGTH GREATER THAN 50cm

**ESD SENSITIVE**



**FIG 9**  
ECUO-Y12-XX-XXX-0-3-0-1-21 SHOWN

|   |   |
|---|---|
| <p><b>PROPRIETARY NOTE</b><br/>THIS DOCUMENT CONTAINS INFORMATION CONFIDENTIAL AND PROPRIETARY TO SAMTEC, INC. AND SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR ANY PURPOSE OTHER THAN THAT WHICH IT WAS OBTAINED WITHOUT THE EXPRESSED WRITTEN CONSENT OF SAMTEC, INC.</p> | <p><b>samtec</b><br/>520 PARK EAST BLVD, NEW ALBANY, IN 47150<br/>PHONE: 812-944-6733 FAX: 812-948-5047<br/>e-Mail info@SAMTEC.com code 55322</p> |
| <p>SHEET SCALE: 2:1</p>   | <p>DESCRIPTION: OPTICAL FIREFLY ASSEMBLY</p>  |
|   | <p>DWG. NO. ECUO-XXX-XX-XXX-0-X-X-X-XX<br/>BY: JEAN W. 02/28/2013 SHEET 6 OF 8</p>  |

 **ESD SENSITIVE**

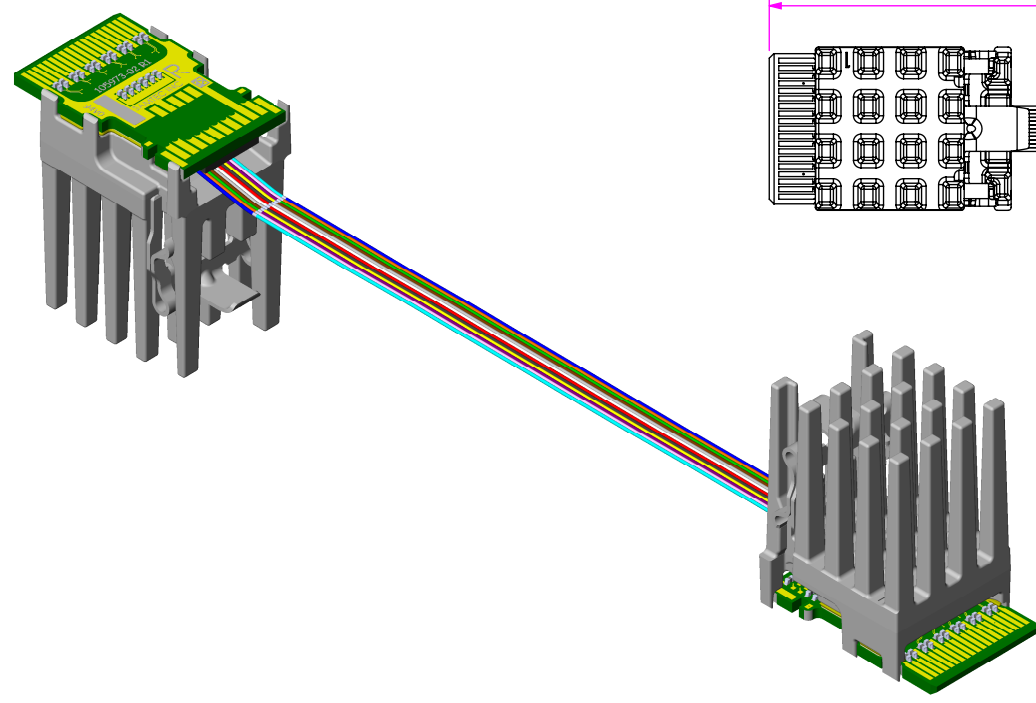
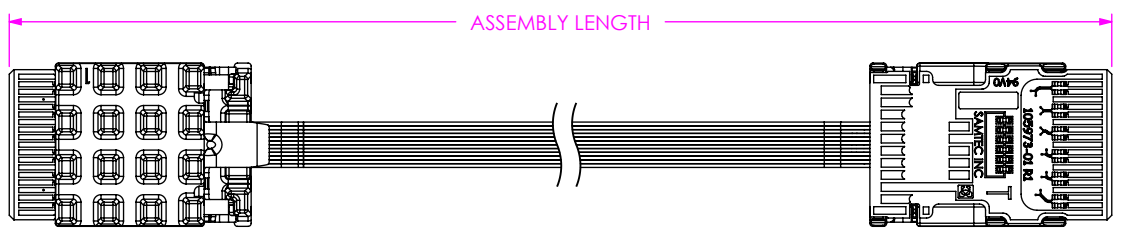
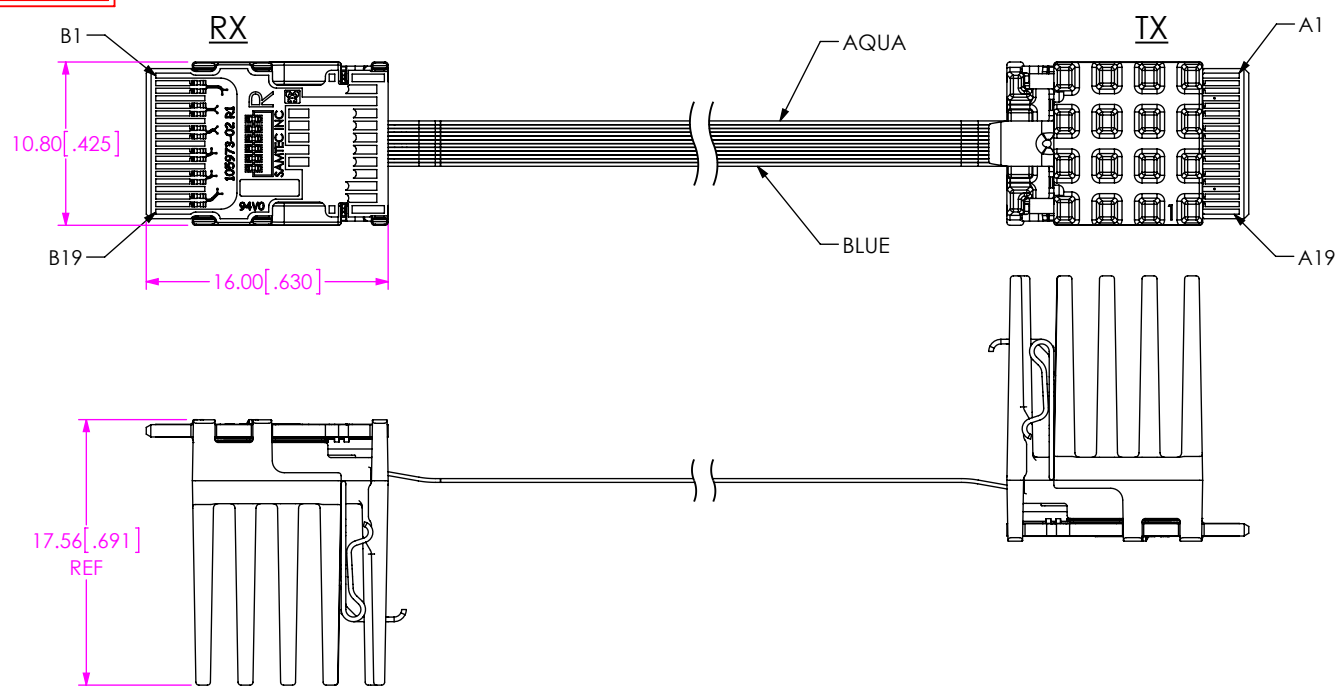


FIG10  
ECUO-U12-XX-XXX-0-2-0-1 SHOWN

|   |   |
|---|---|
| <p><b>PROPRIETARY NOTE</b><br/>THIS DOCUMENT CONTAINS INFORMATION CONFIDENTIAL AND PROPRIETARY TO SAMTEC, INC. AND SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR ANY PURPOSE OTHER THAN THAT WHICH IT WAS OBTAINED WITHOUT THE EXPRESSED WRITTEN CONSENT OF SAMTEC, INC.</p> | <p><b>samtec</b><br/>520 PARK EAST BLVD., NEW ALBANY, IN 47150<br/>PHONE: 812-944-6733 FAX: 812-948-5047<br/>e-Mail: info@SAMTEC.com code 55322</p> |
| <p>SHEET SCALE: 2:1</p>   | <p>DESCRIPTION:<br/>OPTICAL FIREFLY ASSEMBLY</p>  |
|   | <p>DWG. NO.<br/><b>ECUO-XXX-XX-XXX-0-X-X-X-XX</b><br/>BY: JEAN W. 02/28/2013 SHEET 7 OF 8</p>   |

 **ESD SENSITIVE**

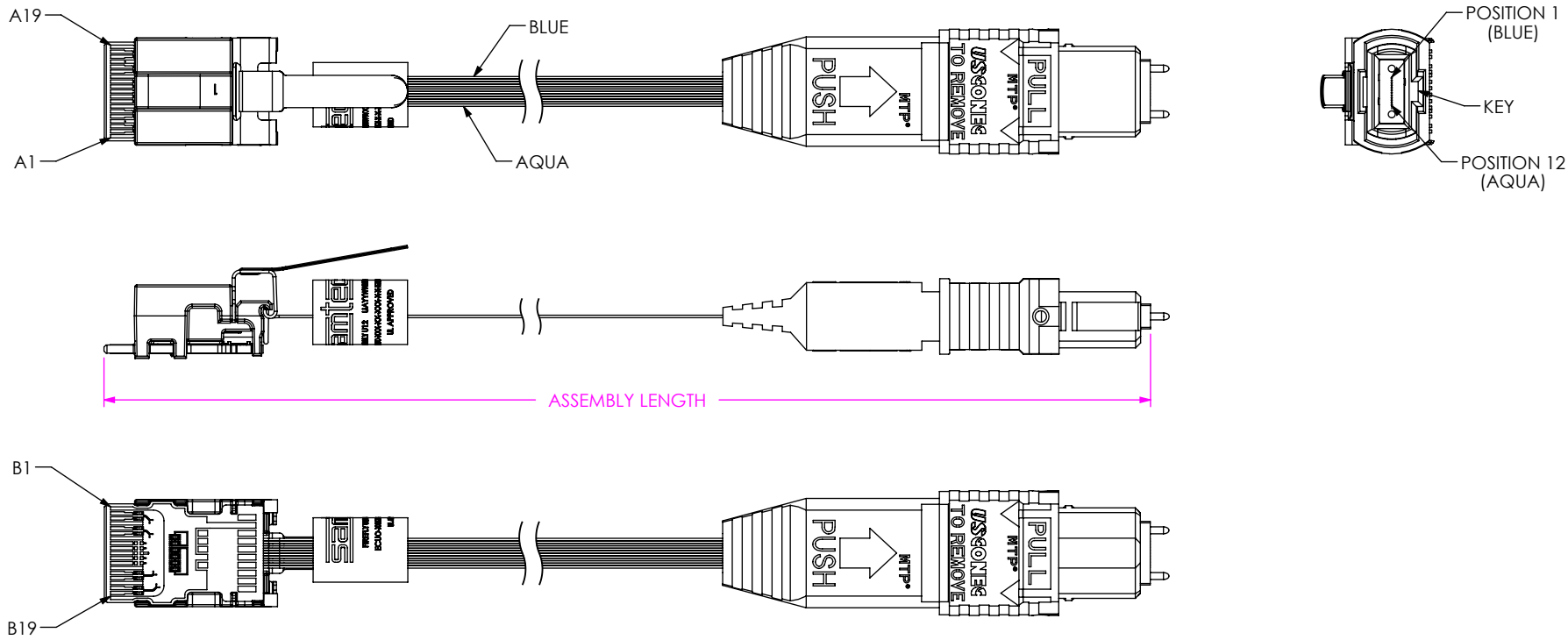
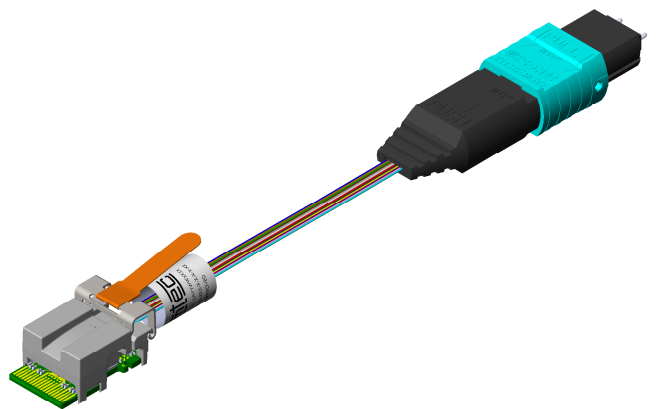


FIG11  
ECUO-B04-XX-XXX-0-3-0-1 SHOWN



**PROPRIETARY NOTE**  
THIS DOCUMENT CONTAINS INFORMATION CONFIDENTIAL AND PROPRIETARY TO SAMTEC, INC. AND SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR ANY PURPOSE OTHER THAN THAT WHICH IT WAS OBTAINED WITHOUT THE EXPRESSED 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: 1:2

DESCRIPTION: OPTICAL FIREFLY ASSEMBLY

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

BY: JEAN W. 02/28/2013 SHEET 8 OF 8