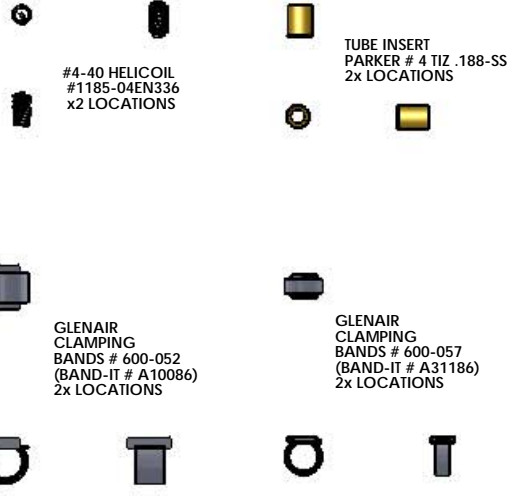
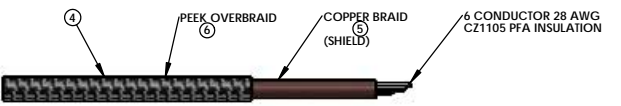
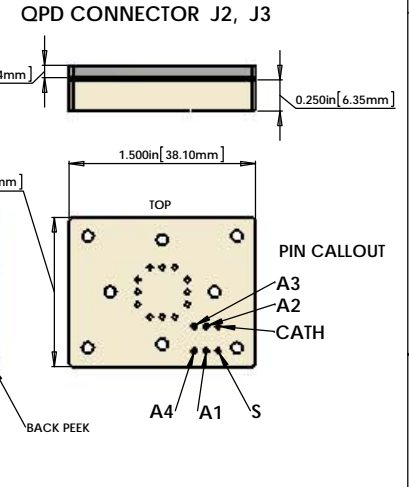
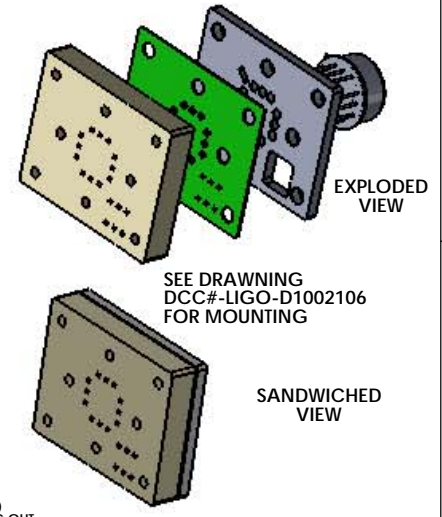
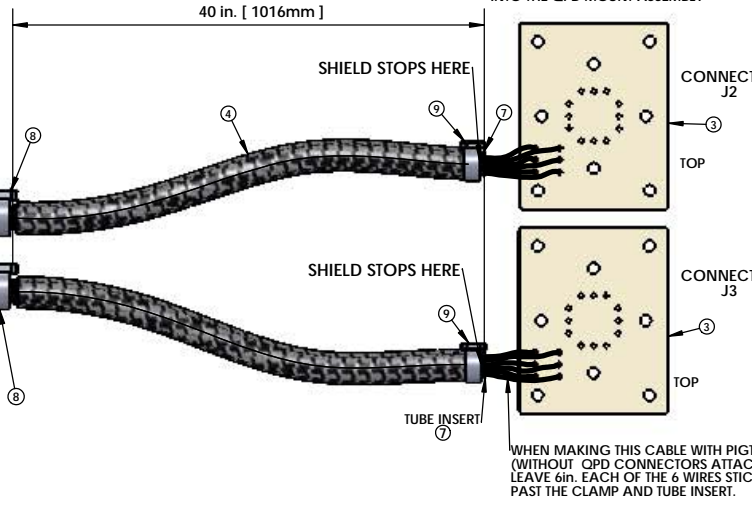
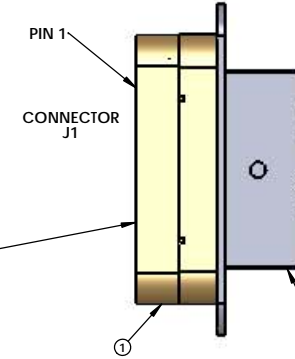
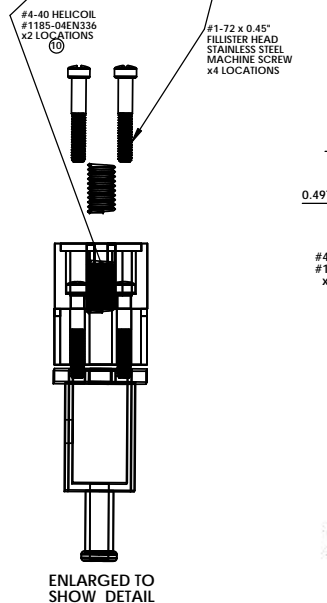
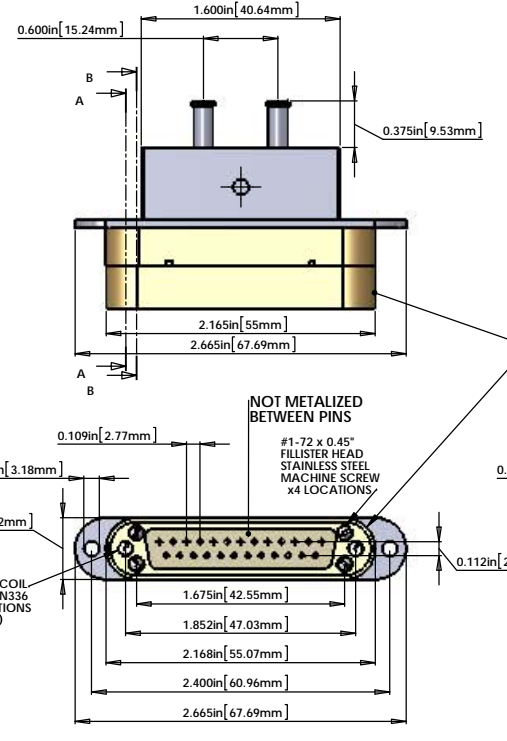
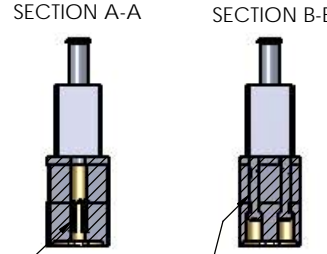
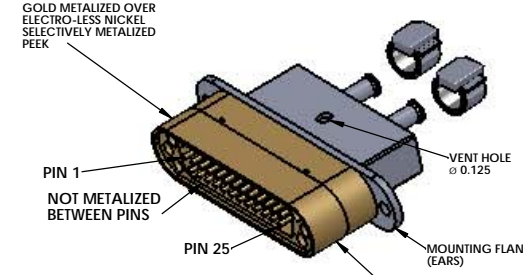


REV.	DATE	DCN #	DRAWING TREE #

**CONNECTOR J1  
25 PIN D MALE**

- NOTES CONTINUED:**
- SCRIBE, ENGRAVE, OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER AND REVISION ON NOTED SURFACE FOLLOWED ON THE NEXT LINE BY A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE 07 HIGH CHARACTERS. EXAMPLE: A DXXXXXX.VV.5N.001 VIBRATORY TOOL MAY BE USED.
  - APPROXIMATE WEIGHT - X.XXX LB.
  - MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH. USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364.
  - ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364.
  - ALL HELI-COIL HOLES TO BE PREPARED ACCORDING TO EMHART HELI-COIL PRODUCT CATALOG, HC2000, REV 4.
  - ALL HELI-COIL INSERTS TO BE INSTALLED BY LIGO PERSONNEL AFTER DELIVERY OF FINISHED PARTS. USE WIRENUG-40 THREADED INSERTS.
  - ALL MATERIAL IS TO BE VIRGIN MATERIAL. (i.e. NO WELD REPAIRS, PLUGS OR RECYCLED MATERIAL). NO REPAIRS SHALL BE MADE UNLESS APPROVED IN ADVANCE. AND IN WRITING, BY LIGO LABORATORY. REFER TO LIGO-E0900364.
  - SURFACE FINISH TO BE AS PROCESSED FROM MILL/SUPPLIER, FREE FROM SCRATCHES OR GOUGES.
  - PART WILL BE PORCELAIN COATED PER LIGO SPECIFICATION E100003 AFTER FABRICATION. THE INDICATED HOLES WILL BE MASKED PRIOR TO PORCELAIN COATING TO APPROXIMATELY 2.5-3X HOLE DIAMETER CENTERED ON BOTH SIDES OF THE HOLE.
  - DIMENSIONS APPLY BEFORE PORCELAIN COATING UNLESS SPECIFIED.
  - BEND RADIUS: UNLESS OTHERWISE NOTED, THE BEND RADIUS SHOULD BE THE MINIMUM REQUIRED TO FORM WITHOUT CRACKING OR REQUIRING ADDITIONAL WORK WHEN FORMING. IN PARTICULAR IF SHEET METAL IS TO BE PORCELAIN COATED, THE BEND RADIUS SHALL BE A MINIMUM OF 12" OUTSIDE RADIUS OF BEND UNLESS OTHERWISE NOTED.
  - NOTES 13 and 14 DO NOT APPLY TO THIS PART



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	LENGTH
1	TICOR # (TS0149-25CG20BS2-100F) OR EQUIVALENT **	CUSTOM DB25 MALE CONNECTOR (J1) FOR UHV (GOLD METALIZED PEEK)	1	
2		CUSTOM DB25 CONNECTOR BACKSHELL FOR UHV (STAINLESS) WITH DUAL Ø0.100" I.D. PORTS	1	
3	ITEM 2.6 (16 or 17) FROM DCC#-LIGO-D1002106	QPD FEMALE CONNECTOR (J2,J3) FOR UHV (PEEK)	2	
4	C1	6 COND. CABLE WITH 5 COPPER BRAID (SHIELD) AND 6 PEEK OVERBRAID INCLUDING 6 28GA. WIRES WITH PFA INSULATION (C21105)	2	40in. * 40in. *
5	COPPER BRAID CONTINENTAL PART #24x3x40BC	CONTINENTAL CORDAGE PART # 24x3x40BC	2	
6	PEEK BRAID PART #6759	PART #6759 MANUFACTURED WITH ZEUS 0.016" BLACK PEEK DRAWN MONOFILAMENT	2	
7	PARKER# 4 TIZ-188-SS	1/4" TUBE INSERT 1/4" LENGTH 0.188" O.D.	2	
8	GLENAIR # 600-052 or BAND-IT # A10086	GLENAIR # 600-052 STANDARD BRAID CLAMP or BAND-IT PART # A10086 (0.240" WIDE) (*BAG OF 100" # A10089)	2	
9	GLENAIR # 600-057 or BAND-IT # A31186	GLENAIR # 600-057 STANDARD BRAID CLAMP or BAND-IT PART # A31186 (0.120" WIDE) (*BAG OF 100" # A31189)	2	
10	HELICOIL #1185-04EN336	#4-40 Nitronic 60® HELICOIL 0.336" LENGTH	2	

\* NOTE: USE WHATEVER LENGTH IS NECESSARY FOR THE INTERNAL WIRING OF THE CONNECTORS AND STRIP LENGTH TO ACHIEVE THE CORRECT OVERALL LENGTHS.

\*\* NOTE: SEE THE "TICOR CONNECTOR PART NUMBER BUILDER" DCC#D1000219 FOR DETAILS ON THIS PART NUMBER.

- NOTES: (UNLESS OTHERWISE SPECIFIED)**
- MATERIAL:**
    - J1 CONNECTOR SHELL - GOLD OVER ELECTRO-LESS NICKEL SELECTIVELY METALIZED PEEK VICTREX 450GL30.
    - BACKSHELL - STAINLESS STEEL WITH VENT HOLE.
    - CONTACTS - BERYLLIUM COPPER ALLOY C17300, 0.000050 MIN. GOLD OVER NICKEL.
    - HARDWARE: STAINLESS STEEL, PASSIVATED.
    - PEEK BRAID - PEEK VICTREX GRADE TDS-450CA30 CARBON LOADED - SUPPLIED BY LIGO.
  - CABLE 6 COND. 28 AWG. (65 STRD 46 AWG.) WITH PFA INSULATION COONER WIRE # C21105.** OVERALL 40AWG COPPER BRAID 90% COVERAGE - SUPPLIED BY LIGO. OVERALL PEEK BRAID MIN. 50% COVERAGE - SUPPLIED BY LIGO. OVERALL CABLE O.D. WILL BE APPROX. 0.240 IN.
  - CONNECTORS WILL BE SUPPLIED WITH HARDWARE. SCREWS SHOULD BE THE PROPER LENGTH FOR MATING.**

FROM					TO			
CONNECTOR J1 - 25 PIN SUBMINI D MALE CONNECTOR SELECTIVELY METALIZED (PEEK)					CONNECTOR J2 - QPD FEMALE CONNECTOR (PEEK)			PCB CONNECTION
PIN	WIRE NAME	COLOR	LENGTH	TWISTED PAIR	PIN	WIRE NAME	SIGNAL	
1,SHELL	SHIELD (BRAID)		40 in.*		CONNECTED ONLY TO BRAID CLAMP	SHIELD (BRAID)	SHIELD	N/C
13	(CABLE 1) WIRE 13	White	40 in.*	TP-1	A4	(CABLE 1) WIRE 13	OPD 1 ANODE 4	A4
25	(CABLE 1) WIRE 25	White	40 in.*		A3	(CABLE 1) WIRE 25	OPD 1 ANODE 3	A3
12	(CABLE 1) WIRE 12	White	40 in.*		A2	(CABLE 1) WIRE 12	OPD 1 ANODE 2	A2
24	(CABLE 1) WIRE 24	White	40 in.*	TP-2	A1	(CABLE 1) WIRE 24	OPD 1 ANODE 1	A1
11	(CABLE 1) WIRE 11	White	40 in.*		S	(CABLE 1) WIRE 11	OPD 1 SENSE	S
23	(CABLE 1) WIRE 23	White	40 in.*	TP-3	CAT	(CABLE 1) WIRE 23	OPD 1 CATHODE	CAT
					CONNECTOR J3 - QPD FEMALE CONNECTOR (PEEK)			PCB CONNECTION
					PIN	WIRE NAME	SIGNAL	
1,SHELL	SHIELD (BRAID)		40 in.*		CONNECTED ONLY TO BRAID CLAMP	SHIELD (BRAID)	SHIELD	N/C
10	(CABLE 2) WIRE 10	White	40 in.*		A4	(CABLE 2) WIRE 10	OPD 2 ANODE 4	A4
22	(CABLE 2) WIRE 22	White	40 in.*	TP-4	A3	(CABLE 2) WIRE 22	OPD 2 ANODE 3	A3
9	(CABLE 2) WIRE 9	White	40 in.*		A2	(CABLE 2) WIRE 9	OPD 2 ANODE 2	A2
21	(CABLE 2) WIRE 21	White	40 in.*	TP-5	A1	(CABLE 2) WIRE 21	OPD 2 ANODE 1	A1
8	(CABLE 2) WIRE 8	White	40 in.*		S	(CABLE 2) WIRE 8	OPD 2 SENSE	S
20	(CABLE 2) WIRE 20	White	40 in.*	TP-6	CAT	(CABLE 2) WIRE 20	OPD 2 CATHODE	CAT
PIN 14,2,15,3,16,4,17,5,18,6,19,7 N/C (NOT CONNECTED)								
* USE WHATEVER LENGTH IS NECESSARY FOR THE INTERNAL WIRING OF THE CONNECTORS AND STRIP LENGTH TO ACHIEVE THE CORRECT OVERALL LENGTHS. INCLUDE NOM. LENGTH + STRIP LENGTH + INTERNAL SERVICE LOOPS + 6in. FOR PIGTAILS.								

FROM	TO
J1	J2
PIN	PIN
J1 - 1,SHELL	NOT CONNECTED
J1 - 13	J2 - A4
J1 - 25	J2 - A3
J1 - 12	J2 - A2
J1 - 24	J2 - A1
J1 - 11	J2 - S
J1 - 23	J2 - CAT
J1	J3
PIN	PIN
J1 - 1,SHELL	NOT CONNECTED
J1 - 10	J3 - A4
J1 - 22	J3 - A3
J1 - 9	J3 - A2
J1 - 21	J3 - A1
J1 - 8	J3 - S
J1 - 20	J3 - CAT

SUBSYSTEM	AIR/VAC	STANDARD USE
ISC	IN-VAC	QPD'S FOR TRANSMON

NOTES AND TOLERANCES: UNLESS OTHERWISE SPECIFIED

1. INTERPRET DRAWING PER ASME Y14.5-1994

2. REMOVE ALL SHARP EDGES. 0.05-0.15 FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATELY R.02 FOR SHEET METAL PARTS.

3. DO NOT SCALE FROM DRAWING

4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.

DIMENSIONS ARE IN INCHES

TOLERANCES:  
XXX ±  
XXXX ±  
ANGULAR ±

MATERIAL: Material <not specified>

FINISH: μinch

CALEXIA INSTITUTE OF TECHNOLOGY  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

PART NAME: CUSTOM CABLE SPECIFICATION V25T-40

DESIGNER: R. ABBOTT  
DRAFTER: E. BROWN  
CHECKER:  
APPROVAL:

DATE: 2012/02/12  
DATE: 2012/02/12

SCALE: 2:1  
PROJECTION:

REV. NO: D1101654  
REV. v5

SHEET 1 OF 1