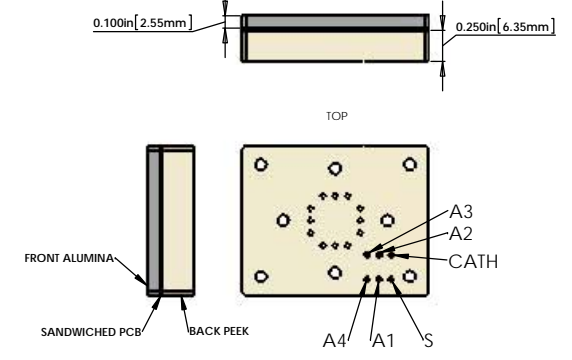
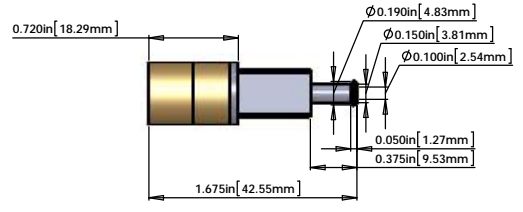
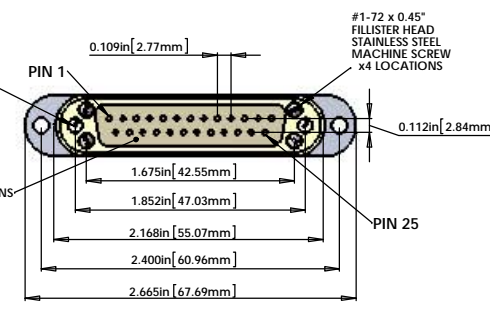
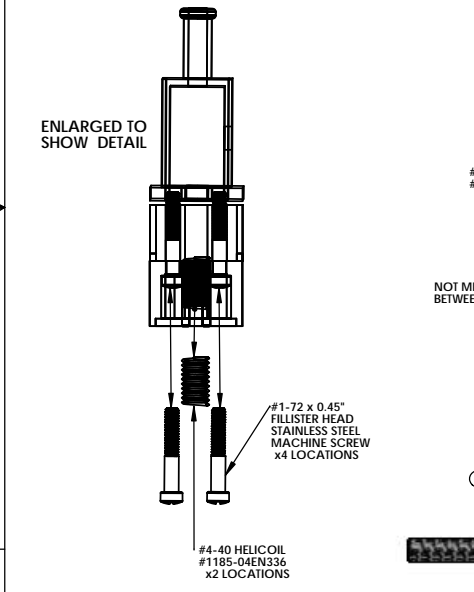
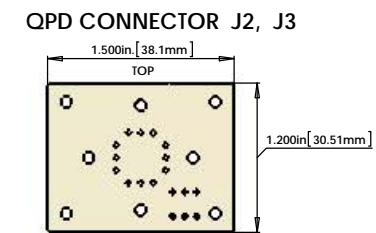
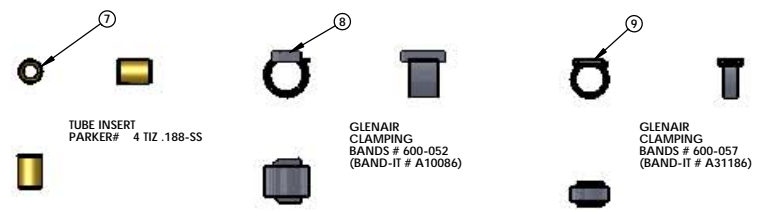
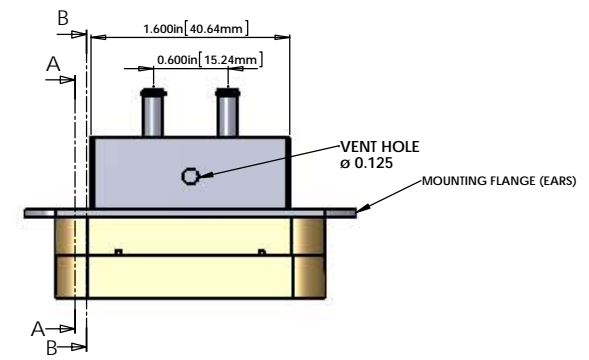
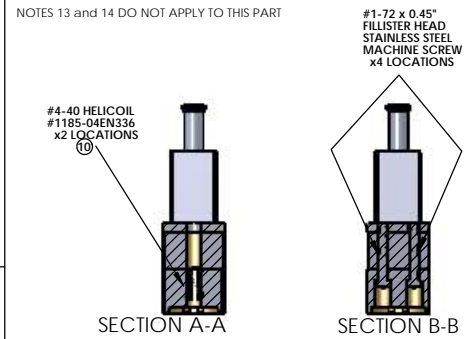
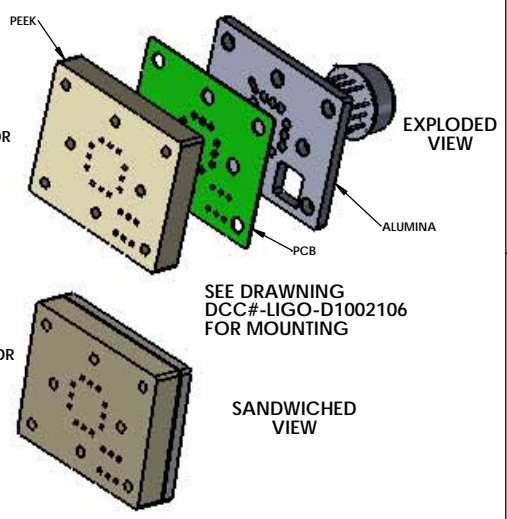
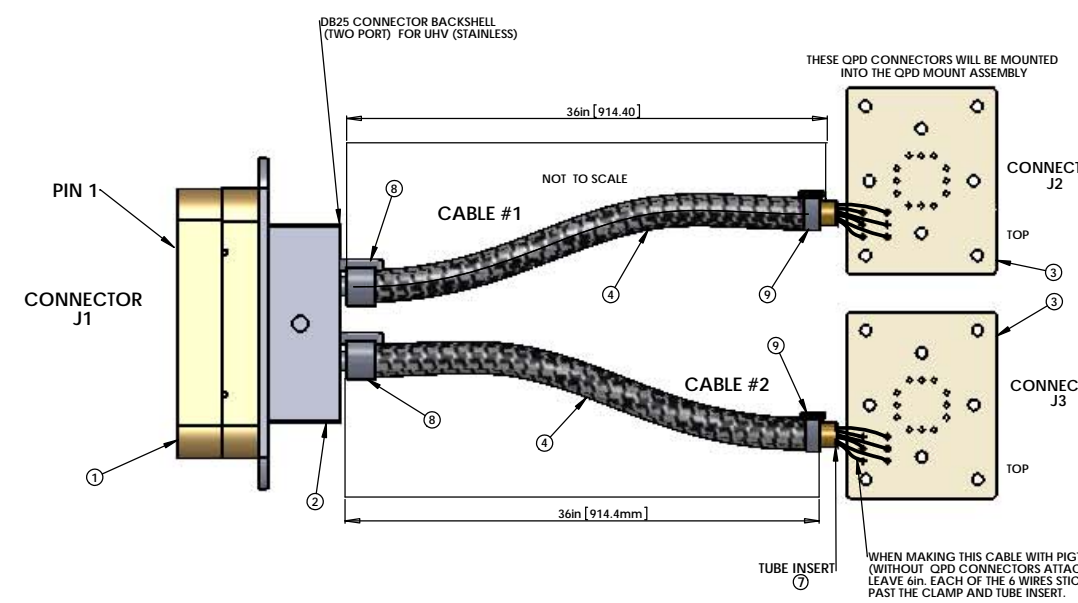
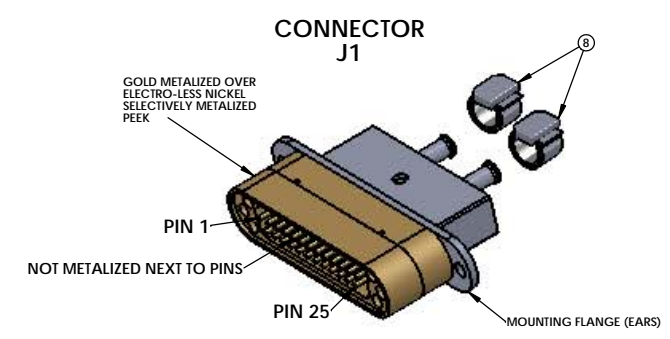


REV.	DATE	DCN #	DRAWING TREE #

- 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 100 FOR THE FIRST ANGLE AND PROCEED CONSECUTIVELY. USE 07 HIGH CHARACTERS. EXAMPLE: A DXXXXXX.YY.SN.001 VIBRATORY TOOL MAY BE USED.
 - APPROXIMATE WEIGHT - X.XXX LB.
 - MACHINE ALL SURFACES TO REMOVE CHIPS 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 NITRONE 60 HIRSEAD 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.
 - PARTS TO BE PORCELAIN COATED PER LIGO SPECIFICATION E0900364 AFTER FABRICATION. THE PORCELAIN COATING SHALL BE MASKED PRIOR TO PORCELAIN COATING. THE MASKING SHALL BE 1/16" DIAMETER. CLEANED ON BOTH SIDES OF THE HOLE.
 - THE 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



BILL OF MATERIALS				
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	LENGTH
1	TICOR #T50149-25CG20B52-100F (OR EQUIVALENT)	DB25 MALE CONNECTOR (J1) FOR UHV (GOLD METALIZED PEEK)	1	
2	LIGO - D1002106 (ITEM 2,6 and 16 or 17)	DB25 CONNECTOR BACKSHELL (TWO PORT) FOR UHV (STAINLESS)	2	
3	C1	QPDP FEMALE CONNECTOR (J2,J3) FOR UHV (PEEK)	2	
4		6 COND. CABLE WITH (C) COPPER BRAID (SHIELD), (P) PEEK OVERBRAID AND INCLUDING 28GA. WIRES WITH C21105 PFA INSULATION	2	36in.
5	CONTINENTAL PART #24x3x40BC	COPPER BRAID - 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.

- ELECTRICAL NOTES: (UNLESS OTHERWISE SPECIFIED)**
- MATERIAL: a. J1 CONNECTOR SHELL - GOLD OVER ELECTRO-LESS NICKEL SELECTIVELY METALIZED PEEK VICTREX 450GL30. b. J2, J3 CONNECTOR SHELL - PEEK VICTREX 450GL30. c. BACKSHELL - STAINLESS STEEL WITH VENT HOLE. d. CONTACTS - BERYLLIUM COPPER ALLOY C17300 0.00050 MIN. GOLD OVER NICKEL. e. HARDWARE: STAINLESS STEEL, PASSIVATED. f. PEEK BRAID - PEEK VICTREX GRADE TD5-450CA30 CARBON LOADED - SUPPLIED BY LIGO.
 - CABLE 6 COND. 28 AWG, (40 STRD 44 AWG) WITH C21105 PFA INSULATION. 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.

V25T CABLE ASSEMBLY CIRCUIT SUMMARY V-DB25 M/S1-36,36-2_QPD										
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	SHIELD (BRAID)	SHIELD	
1, SHELL			36in.		CONNECTED ONLY TO BRAID CLAMP				N/C	
13	(CABLE 1) WIRE 13	White	-	TP-1	A4	(CABLE 1) WIRE 13	OPD 1 ANODE 4		A4	
25	(CABLE 1) WIRE 25	White	-		A3	(CABLE 1) WIRE 25	OPD 1 ANODE 3		A3	
12	(CABLE 1) WIRE 12	White	-	TP-2	A2	(CABLE 1) WIRE 12	OPD 1 ANODE 2		A2	
24	(CABLE 1) WIRE 24	White	-		A1	(CABLE 1) WIRE 24	OPD 1 ANODE 1		A1	
11	(CABLE 1) WIRE 11	White	-		S	(CABLE 1) WIRE 11	OPD 1 SENSE		S	
23	(CABLE 1) WIRE 23	White	-	TP-3	CAT	(CABLE 1) WIRE 23	OPD 1 CATHODE		CAT	
					CONNECTOR J3 - QPD FEMALE CONNECTOR (PEEK)					PCB CONNECTION
PIN	WIRE NAME	COLOR	LENGTH	TWISTED PAIR	PIN	WIRE NAME	SIGNAL	SHIELD (BRAID)	SHIELD	
1, SHELL			36in.		CONNECTED ONLY TO BRAID CLAMP				N/C	
10	(CABLE 2) WIRE 10	White	-	TP-4	A4	(CABLE 2) WIRE 10	OPD 2 ANODE 4		A4	
22	(CABLE 2) WIRE 22	White	-		A3	(CABLE 2) WIRE 22	OPD 2 ANODE 3		A3	
9	(CABLE 2) WIRE 9	White	-	TP-5	A2	(CABLE 2) WIRE 9	OPD 2 ANODE 2		A2	
21	(CABLE 2) WIRE 21	White	-		A1	(CABLE 2) WIRE 21	OPD 2 ANODE 1		A1	
8	(CABLE 2) WIRE 8	White	-	TP-6	S	(CABLE 2) WIRE 8	OPD 2 SENSE		S	
20	(CABLE 2) WIRE 20	White	-		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)										

TEST LIST	
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

V-DB25 M/S1-36,36-2_QPD STANDARD USE FOR THIS CABLE		
SUBSYSTEM	AIR/VAC	STANDARD USE
ISC	IN-VAC	OPD'S FOR TRANSMON

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

- INTERPRET DRAWING PER ASME Y14.5-1994.
- REMOVE ALL SHARP EDGES. 0.05-0.15 FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATELY R.02 FOR SHEET METAL PARTS.
- DO NOT SCALE FROM DRAWING.
- ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.

DIMENSIONS ARE IN: TOLERANCES: .XXX ± .XXX ± ANGULAR: ±

MATERIAL: Material <not specified> FINISH: μin/oz NEXT ASSY: SYSTEM: SUB-SYSTEM: ICS

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY

PART NAME: CUSTOM CABLE SPECIFICATION V25T-36

DESIGNER: R. ABBOTT DATE: 2010/02/10 REV. NO: 1
 DRAFTER: E. BROWN DATE: 2010/02/10 REV. NO: 1
 CHECKER: DATE: REV. NO: 1
 APPROVAL: SCALE: 2:1 PROJECTION: SHEET 1 OF 1