

- 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. DXXXXXXVY, 5/N 001. EXAMPLE: A VIBRATORY TOOL MAY BE USED.
  - APPROXIMATE WEIGHT = X.XXXX LB.
  - MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH. USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-ED900364
  - ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION ED900364.
  - ALL HELI-COIL HOLES TO BE PREPARED ACCORDING TO EMMART HELI-COIL PRODUCT CATALOG, HC2000, REV. 4
  - ALL HELI-COIL INSERTS TO BE INSTALLED BY LIGO PERSONNEL AFTER DELIVERY OF FINISHED PARTS. USE NITRONIC 60 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-ED900364.
  - SURFACE FINISH TO BE AS-PROCESSED FROM MILL/SUPPLIER, FREE FROM SCRATCHES OR GOUGES.
  - PART WILL BE PORCELAIN COATED PER LIGO SPECIFICATION E100083 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.

ELECTRO-LESS NICKEL SELECTIVELY METALIZED PEEK

PIN 1

CONNECTOR J1

ELECTRO-LESS NICKEL SELECTIVELY METALIZED PEEK

CONNECTOR J1 (E)

ELECTRO-LESS NICKEL SELECTIVELY METALIZED PEEK

NOT METALIZED

ELECTRO-LESS NICKEL SELECTIVELY METALIZED PEEK

PIN 1

CONNECTOR J1 (E)

PEEK

CONNECTOR J2 (A)

CONNECTOR J3 (B)

CONNECTOR J4 (C)

CONNECTOR J5 (D)

### V25N-10-5-10-5 CABLE ASSEMBLY CIRCUIT SUMMARY

#### V-DB25 M/S1-10.5,10.5-4\_u9D F/S

FROM

CONNECTOR J1 - 25 PIN MALE SUBMINI\_D CONNECTOR (METALIZED PEEK)

PIN	WIRE NAME	LENGTH	TWISTED PAIR
1, SHELL	(SHIELD)		
1, SHELL	(SHIELD)		(SHIELD)
14	(CABLE 1) WIRE 14	CABLE 1 (A) 10in.*	TP-1
2	(CABLE 1) WIRE 2		TP-2
15	(CABLE 1) WIRE 15		TP-3
3	(CABLE 1) WIRE 3		TP-4
16	(CABLE 1) WIRE 16	CABLE 2 (B) 5in.*	TP-5
4	(CABLE 1) WIRE 4		TP-6
17	(CABLE 2) WIRE 17		TP-7
5	(CABLE 2) WIRE 5		TP-8
18	(CABLE 2) WIRE 18	CABLE 3 (C) 10in.*	TP-9
6	(CABLE 2) WIRE 6		TP-10
19	(CABLE 2) WIRE 19		TP-11
7	(CABLE 2) WIRE 7		TP-12
1, SHELL	(SHIELD)		(SHIELD)
20	(CABLE 3) WIRE 20	CABLE 4 (D) 5in.*	TP-1
8	(CABLE 3) WIRE 8		TP-2
21	(CABLE 3) WIRE 21		TP-3
9	(CABLE 3) WIRE 9		TP-4
22	(CABLE 3) WIRE 22	CABLE 5 (E) 10in.*	TP-5
10	(CABLE 3) WIRE 10		TP-6
11	(CABLE 4) WIRE 23		TP-7
24	(CABLE 4) WIRE 24		TP-8
12	(CABLE 4) WIRE 12	CABLE 6 (F) 5in.*	TP-9
25	(CABLE 4) WIRE 25		TP-10
13	(CABLE 4) WIRE 13		TP-11
1, SHELL	(SHIELD)		

NOT TO SCALE  
10 in.

5 in.  
NOT TO SCALE

10 in.  
NOT TO SCALE

5 in.  
NOT TO SCALE

10 in.

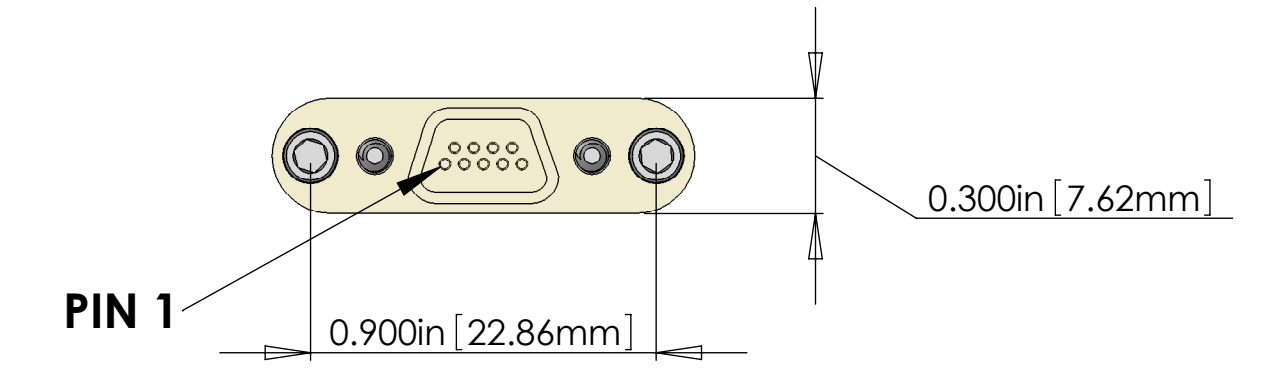
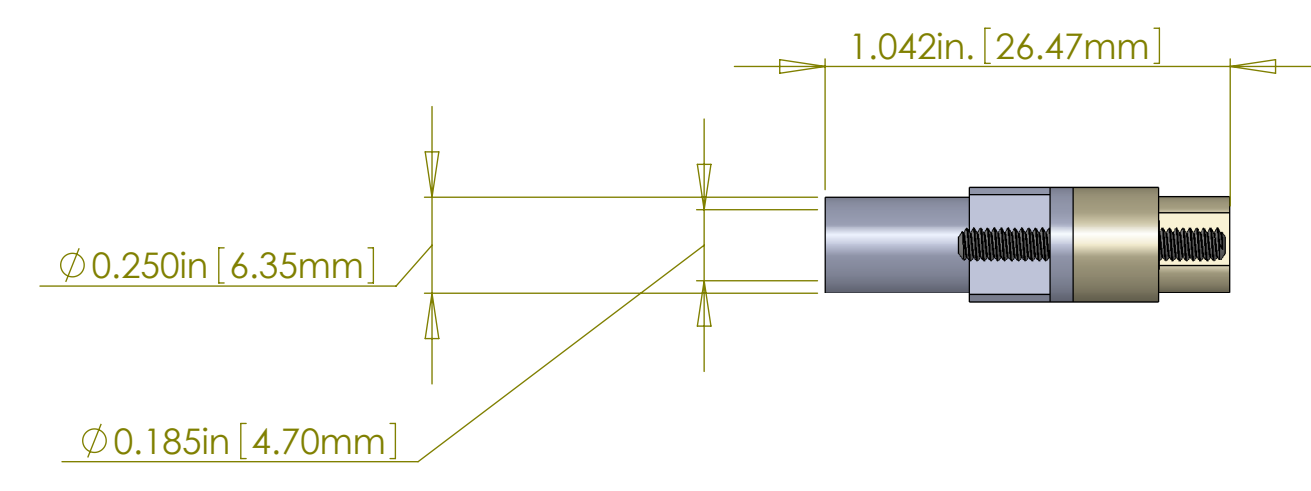
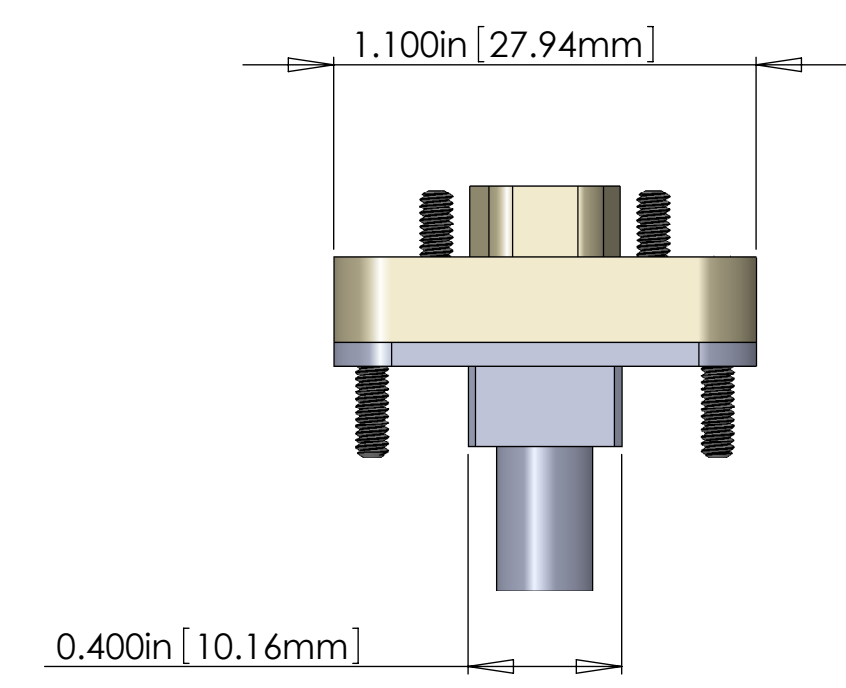
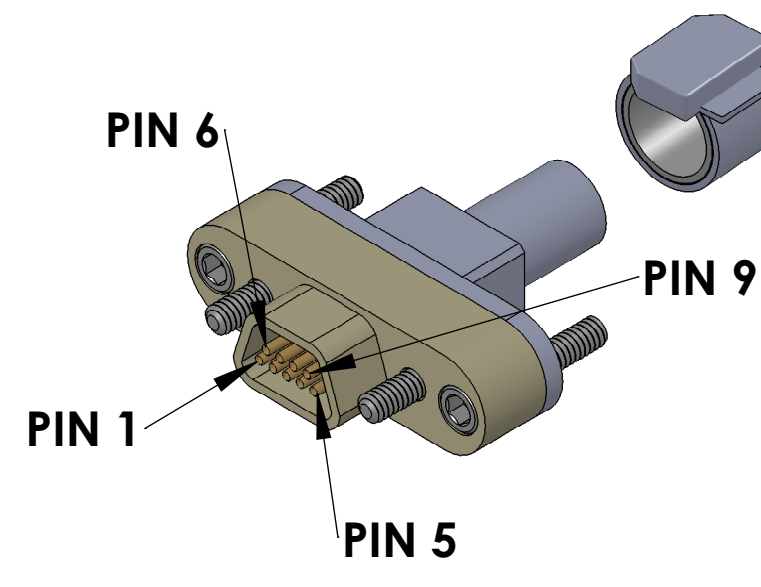
### BILL OF MATERIALS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	LENGTH
1	TICOR #TS0125-3	DB25 MALE CONNECTOR (J1) FOR UHV (PEEK)	1	
2	TICOR #TS0094	DB25 CONNECTOR BACKSHELL FOR UHV (STAINLESS)	1	
3	TICOR #TS0094	DB9 (DE9) FEMALE CONNECTOR (J2,J3,J4,J5) FOR UHV (PEEK)	4	
4	TICOR #TS0094	DB9 CONNECTOR BACKSHELL FOR UHV (STAINLESS)	4	
5	CABLE INCLUDING COONER WIRE # CZ1105 + 6 + 7	4 COND. (3 TWISTED PAIR) CABLE (AND COPPER BRAID (SHIELD) 6. AND PEEK OVERBRAID) 7.	4	CABLE 1 10in.* CABLE 2 5in.* CABLE 3 10in.* CABLE 4 5in.*
6	CONTINENTAL PART #24x3x40BC	COPPER BRAID - CONTINENTAL CORDAGE PART #24x3x40BC	4	
7	PART #6759	PEEK BRAID - PART #6759 MANUFACTURED WITH ZEUS 0.014" BLACK PEEK DRAWN MONOFILAMENT	4	
8	GLENNAIR 600-052	GLENNAIR 600-052 STANDARD BRAID CLAMP	8	

\* NOTE: THE OVERALL LENGTH IS MEASURED FROM BAND CLAMP ("CABLE SIDE" EDGE) (25 PIN) TO BAND CLAMP ("CABLE SIDE" EDGE) (9 PIN) OF THE CABLE. USE WHATEVER LENGTH IS NECESSARY FOR THE INTERNAL WIRING OF THE CONNECTORS AND STRIP LENGTH TO ACHIEVE THE CORRECT OVERALL LENGTH.

NOTES: ( UNLESS OTHERWISE SPECIFIED )

- MATERIAL: a. CONNECTOR SHELL - PEEK VITREX GRADE TDS-450G.
  - BACKSHELL - STAINLESS STEEL WITH 4 PORTS AND VENT HOLE.
  - CONTACTS - BERYLLIUM COPPER ALLOY C17300
  - HARDWARE: CORROSION RESISTANCE STEEL, PASSIVATED
  - PEEK BRAID - PEEK VITREX GRADE TDS-450CA30 CARBON LOADED
- CABLE 4 COND. 28 AWG ( 45 STRD 46 AWG ) WITH WITH PFA INSULATION 3 TWISTED PAIRS ( 4 TO 5 TWISTS PER INCH ) OVERALL 40AWG COPPER BRAID 90% COVERAGE OVERALL PEEK BRAID MIN. 50% COVERAGE OVERALL CABLE O.D. WILL BE APPROX. 0.240 IN.



### V25N-10-5-10-5 CABLE ASSEMBLY CIRCUIT SUMMARY

#### TO

CONNECTOR J2 - 9 PIN FEMALE MICRO\_D CONNECTOR (PEEK)

PIN	WIRE NAME	SIGNAL
SHELL	SHIELD	SHIELD
1	(CABLE 1) WIRE 14	PHOTO DIODE CATHODE - (PD-K)
6	(CABLE 1) WIRE 2	PHOTO DIODE ANODE + (PD-A)
2	(CABLE 1) WIRE 15	LED ANODE + (LED-A)
7	(CABLE 1) WIRE 3	LED CATHODE - (LED-K)
4	(CABLE 1) WIRE 16	FN
9	(CABLE 1) WIRE 4	ST

### V25N-10-5-10-5 CABLE ASSEMBLY CIRCUIT SUMMARY

#### TO

CONNECTOR J3 - 9 PIN FEMALE MICRO\_D CONNECTOR (PEEK)

PIN	WIRE NAME	SIGNAL
SHELL	SHIELD	SHIELD
1	(CABLE 2) WIRE 17	PHOTO DIODE CATHODE - (PD-K)
6	(CABLE 2) WIRE 5	PHOTO DIODE ANODE + (PD-A)
2	(CABLE 2) WIRE 18	LED ANODE + (LED-A)
7	(CABLE 2) WIRE 6	LED CATHODE - (LED-K)
4	(CABLE 2) WIRE 19	FN
9	(CABLE 2) WIRE 7	ST

### V25N-10-5-10-5 CABLE ASSEMBLY CIRCUIT SUMMARY

#### TO

CONNECTOR J4 - 9 PIN FEMALE MICRO\_D CONNECTOR (PEEK)

PIN	WIRE NAME	SIGNAL
SHELL	SHIELD	SHIELD
1	(CABLE 3) WIRE 20	PHOTO DIODE CATHODE - (PD-K)
6	(CABLE 3) WIRE 8	PHOTO DIODE ANODE + (PD-A)
2	(CABLE 3) WIRE 21	LED ANODE + (LED-A)
7	(CABLE 3) WIRE 9	LED CATHODE - (LED-K)
4	(CABLE 3) WIRE 22	FN
9	(CABLE 3) WIRE 10	ST

### V25N-10-5-10-5 CABLE ASSEMBLY CIRCUIT SUMMARY

#### TO

CONNECTOR J5 - 9 PIN FEMALE MICRO\_D CONNECTOR (PEEK)

PIN	WIRE NAME	SIGNAL
SHELL	SHIELD	SHIELD
1	(CABLE 4) WIRE 23	PHOTO DIODE CATHODE - (PD-K)
6	(CABLE 4) WIRE 11	PHOTO DIODE ANODE + (PD-A)
2	(CABLE 4) WIRE 24	LED ANODE + (LED-A)
7	(CABLE 4) WIRE 12	LED CATHODE - (LED-K)
4	(CABLE 4) WIRE 25	FN
9	(CABLE 4) WIRE 13	ST

### ISC TIP TILT CABLE SEISMIC TABLE TO TIP TILT OSEMS

#### V-DB25 M/S1-10.5,10.5-4\_u9D F/S

STANDARD USE FOR THIS CABLE

SUBSYSTEM	AIR/VAC	STANDARD USE
ISC	IN-VAC	TT TIP TILT OSEMS

DIMENSIONS ARE IN		NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)		CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		PART NAME	
.XX ±		1. INTERPRET DRAWING PER ASME Y14.5-1994		LIGO		CUSTOM CABLE SPECIFICATION	
.XXX ±		2. REMOVE ALL SHARP EDGES. .005-.015. FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATELY R.02 FOR SHEET METAL PARTS.		SYSTEM		V25N-10-5-10-5	
ANGULAR ± °		3. DO NOT SCALE FROM DRAWING		SUB-SYSTEM		SIZE DWG. NO.	
		4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.		NEXT ASSY		E D1000228	
		MATERIAL		FINISH		SCALE: 2:1	
		Material <not specified>		μinch		PROJECTION:	
						SHEET 1 OF 1	