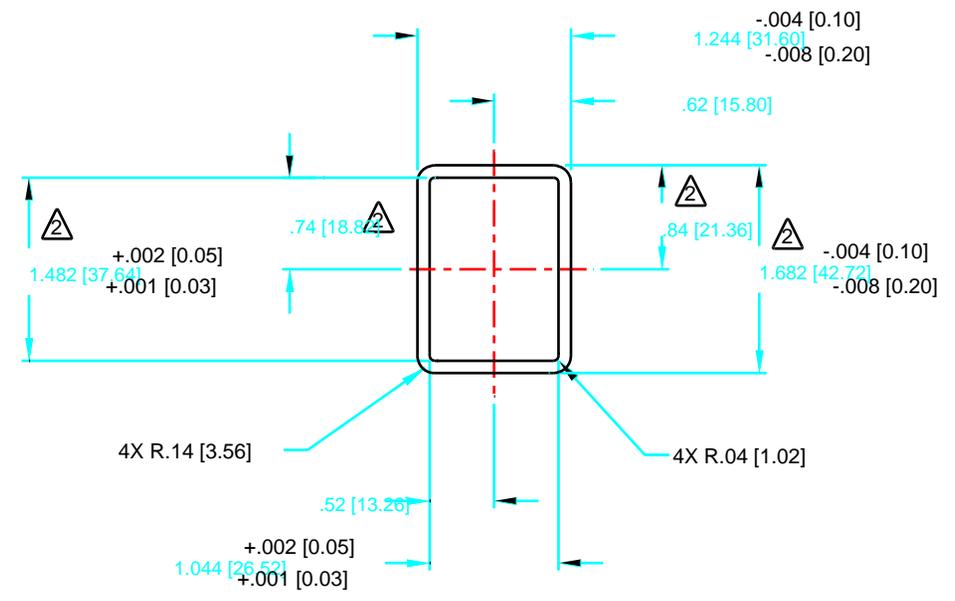
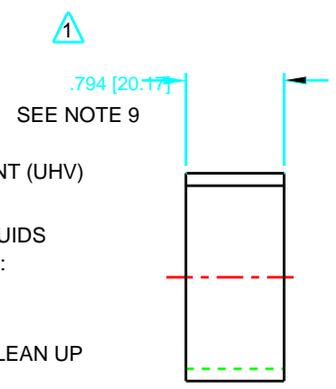


NOTES:

1. THIS IS A ULTRA- HIGH VACUUM COMPONENT (UHV)
2. WHEN MACHINING VACUUM PARTS, USE OF SILICONE AND SULPHUR-BASED CUTTING FLUIDS IS PROHIBITED. USE ONE OF THE FOLLOWING:
 - A) CIMCOOL 5 STAR 49
 - B) TRIM SOL
3. ALL SURFACES MUST BE MACHINED FOR CLEAN UP
4. FINISHING: WHEN MACHINING VACUUM PARTS USE OF ABRASIVE PAPER OR SANDING DISCS, BUFFING OR POLISHING COMPOUNDS, OR RESIN-BONDED GRINDING WHEELS IS PROHIBITED
5. CLEANING: THE COMPONENT MUST BE CLEANED SUCH THAT A UHV PRESSURE OF 1×10^{-9} TORR CAN BE ACHIEVED
6. HANDLING: THE COMPONENTS SHALL BE HANDLED WITH WHITE SILK GLOVES AND WRAPPED WITH ALUMINUM FOIL TYPE DRY ANNEAL AND UNDER CLEAN ROOM CONDITIONS
7. DO NOT BREAK SHARP EDGE
8. DIMENSIONS IN [] ARE INCHES AND FOR REF. ONLY
9. WELD SHRINKAGE SHALL BE ADDED TO THIS LENGTH.



SYM	CHANGE DESCRIPTION	BY	CHKD	DATE
2	1.482 [37.64] WAS 1.322 [33.58]			
	.74 [18.82] WAS .66 [16.76]			
	1.682 [42.72] WAS 1.522 [38.66]			2/26/99
	.84 [21.36] WAS .76 [19.33]	M.J.M.		
1	.794 [20.17] WAS .854 [21.69]	M.J.M.		1/25/99

ITEM	DWG/PART NUMBER	NOMENCLATURE OR DESCRIPTION	MATERIAL / SPEC	QTY																				
PARTS LIST																								
UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES		LOG NUMBER P2310002-02	THIS DRAWING IS THE PROPERTY OF ARGONNE NATIONAL LABORATORY																					
TOLERANCES		<table border="1"> <tr> <td>DRAWN BY MUSCIA</td> <td>DATE 11/30/98</td> <td>CHIEF DESIGN ENGINEER D. SHU</td> <td>DATE 12/12/98</td> <td>TITLE ADVANCED PHOTON SOURCE</td> </tr> <tr> <td>CHECKED BY SHU/CHANG</td> <td>DATE 12/11/98</td> <td>GP LEADER S.M. KUZAY</td> <td>DATE 12/15/98</td> <td>P2-30 APS UNDULATOR</td> </tr> <tr> <td>DESIGNER SHU/MUSCIA</td> <td>DATE 11/30/98</td> <td>PROJECT MGR.</td> <td>DATE</td> <td>FRONT END</td> </tr> <tr> <td>RESPONSIBLE ENGINEER D. SHU</td> <td>DATE 12/12/98</td> <td>APPROVED/RELEASED</td> <td>DATE</td> <td>PHOTON SHUTTER ASSEMBLY</td> </tr> </table>			DRAWN BY MUSCIA	DATE 11/30/98	CHIEF DESIGN ENGINEER D. SHU	DATE 12/12/98	TITLE ADVANCED PHOTON SOURCE	CHECKED BY SHU/CHANG	DATE 12/11/98	GP LEADER S.M. KUZAY	DATE 12/15/98	P2-30 APS UNDULATOR	DESIGNER SHU/MUSCIA	DATE 11/30/98	PROJECT MGR.	DATE	FRONT END	RESPONSIBLE ENGINEER D. SHU	DATE 12/12/98	APPROVED/RELEASED	DATE	PHOTON SHUTTER ASSEMBLY
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RESPONSIBLE ENGINEER D. SHU	DATE 12/12/98	APPROVED/RELEASED	DATE	PHOTON SHUTTER ASSEMBLY																				
DECIMALS .X - .1 [2.5] .XX - .01 [0.25] .XXX - .005 [0.13]		SURFACE TEXTURE TO BE IN ACCORDANCE WITH LATEST ANSI B46.1																						
ANGULAR - 0°30'		DIMENSIONING & TOLERANCING IN ACCORDANCE WITH LATEST ANSI Y14.5																						
SURFACE ROUGHNESS 125 ✓		MATERIAL 304 STAINLESS STEEL																						
REMOVE ALL BURRS AND BREAK SHARP EDGES .03 MAX.		SCALE 1:1	SIZE B	DRAWING NUMBER P2-310002-02																				
DO NOT SCALE DRAWING		SHEET 14																						