

INCH-POUND

MIL-PRF-1/1298D
23 July 1999
SUPERSEDING
MIL-E-1/1298C
20 July 1976

PERFORMANCE SPECIFICATION SHEET

ELECTRON TUBE, PHOTOTUBE
TYPE CE-75V

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the electron tube described herein shall consist of this document and the latest issue of MIL-PRF-1.

DESCRIPTION: Red-infrared sensitive, with a spectral response of S1.

DIMENSIONS AND PIN CONNECTIONS: See figure 1.

ABSOLUTE MAXIMUM RATINGS:

Parameter:	Ebb	Light	Ib	Rp	T	Light source
Unit:	V dc	lm	μA dc	Meg	°C	---
Maximum:	250	---	15	---	100	---
Test conditions:	250	0.1	---	1.0	---	LS-1 1/

See footnotes at end of table I.

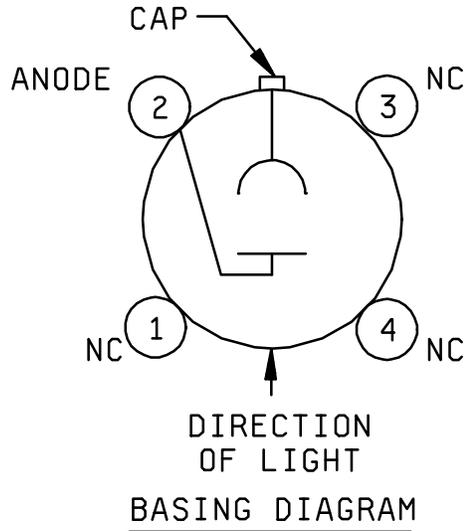
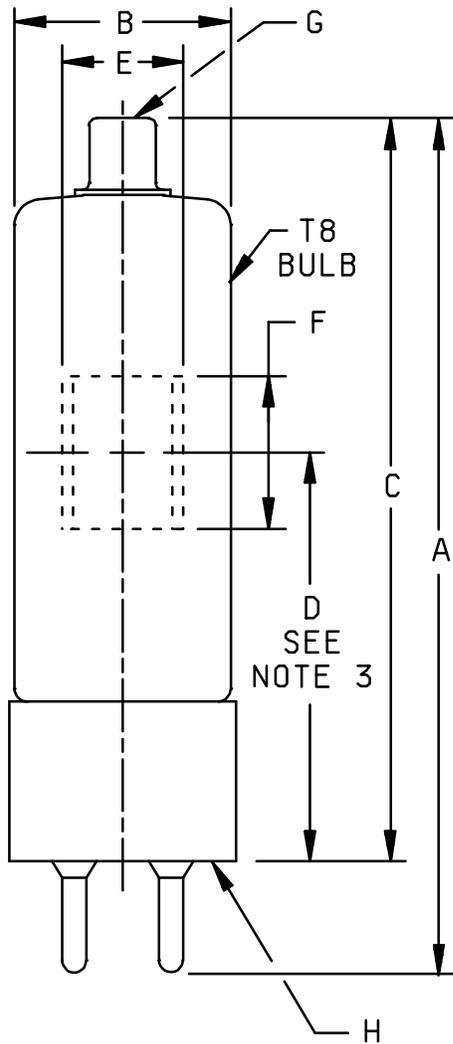
GENERAL:

Qualification - Required.

TABLE I. Testing and inspection.

Inspection	Method	Notes	Conditions	Symbol	Limits		Unit
					Min	Max	
<u>Conformance inspection, part 1</u>							
Anode current	5301	<u>5/</u>		lb	2.0	4.0	μA dc
Dark current	5301	<u>5/</u>		lb	---	0.00005	μA dc
Gas ratio	---	<u>3/ 5/</u>		Gr	---	1.5	---
<u>Conformance inspection, part 2</u>							
Secureness of base, cap, or insert	1101	<u>2/</u>		---	---	---	---
Permanence of marking	1105	---		---	---	---	---
<u>Conformance inspection, part 3</u>							
Life test	---	<u>4/</u>	Group C; Ebb = 250 V dc; t = 500 hours (min)	---	---	---	---
Life-test end points:	---						
Anode current	5301	---		lb	1.0	---	μA dc
Low-frequency vibration (25 Hz)	1031	<u>6/</u>	No voltages applied	---	---	---	---
Direct-interelectrode capacitance	1331	<u>6/</u>		Cpk	1.6	3.0	pF
Spectral response identification	5303	<u>6/</u>	S1	---	---	---	---

- 1/ The light during test, except in the case of life-test operating conditions, shall be incident upon a .500 inch (12.70 mm) diameter aperture whose center is located 2.13 inches (54.10 mm) above bottom edge of base, centered with respect to axis of tube.
- 2/ Immersion in water shall be omitted and tubes shall be tested dry. Torque shall be applied with 20.0 pound-inch minimum for base, 1.5 pound-inch for cap.
- 3/ Gas ratio = $\frac{(lb \text{ at } Ebb = 250V \text{ dc})}{(lb \text{ at } Ebb = 25V \text{ dc})}$.
- 4/ The luminous flux at the cathode shall be adjusted to give an average current of 9.0 mA on an average tube. Color temperature shall be greater than 2,000°K.
- 5/ This test to be performed at the conclusion of the holding period.
- 6/ This test shall be performed during the initial production and once each succeeding 12-calendar months in which there is production. A regular double sampling plan shall be used, with the first sample of three tubes with an acceptance number of zero, and a second sample of three tubes with a combined acceptance number of one. In the event of failure, the test will be made as a part of conformance inspection, part 2, code level D, with an acceptance level of 6.5. The regular "12-calendar month" double sampling plan shall be reinstated after three consecutive samples have been accepted.



Ltr	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
Conformance inspection, part 2				
A	---	4.500	---	114.30
Conformance inspection, part 3 (see 6/ in table I)				
B	---	1.190	---	30.23
C	---	3.875	---	98.43
D	2.031	2.219	51.59	56.36
E	.625	---	15.88	---
F	.812	---	20.62	---
G	Cap: C1-1			
H	Base: A4-5 or A4-26 (see note 3)			

NOTES:

1. Dimensions D, E, and F apply to usable cathode area.
2. For pin alignment, use gauge GA4-1.
3. Dimension D locates centerline of cathode.

FIGURE 1. Outline drawing of electron tube type CE-75V.

MIL-PRF-1/1298D

Custodians:

Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5960-3546-02)

Review activities:

Army - CR4
Navy - AS, CG, MC, OS
Air Force - 99