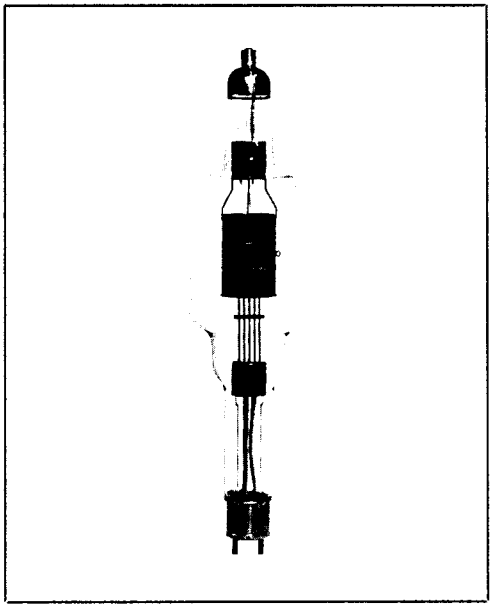
The Machlett Laboratories, Inc.
1063 Hope Street • Stamford, Conn. 06907
Tel. 203-348-7511 • TWX 203-327-2496



ISSUED 6-65

ML-5576/200

MACHLETT

High-Voltage Rectifier

150 PKV

DESCRIPTION

The ML-5576/200 is a high-vacuum rectifier tube having maximum ratings of 150 PKV inverse voltage and 2.5 amperes peak anode current. It has been specially developed for use in power supply units associated with mass spectrometers for large-scale isotope separation, and also finds application in connection with various other devices requiring extremely high voltage and current capacity, such as linear accelerators and long-range radar.

This tube incorporates those special features of construction which characterize Machlett high-vacuum rectifiers for high-power-level applications. These features insure ruggedness, long life, low internal voltage drop and high average-load-current capacity. The cathode is a pure tungsten filament of the catenary type, allowing close anode-to-cathode spacing without distortion of the filament by electrostatic forces. The anode is a cylindrical tantalum plate treated to insure a maximum rate of heat dissipation, providing a high safety factor against accidental overload.

GENERAL CHARACTERISTICS

ELECTRICAL

Filament Voltage	20	V
Filament Current, approximate	32	A
Filament Heating Time, minimum (Before applying Plate Voltage)	30	sec
Tube Voltage Drop, maximum (Ib = 2.5A, Ef = 20V)	1000	V

MECHANICAL

Mounting Position	Optional	
Mounting Socket, Machlett Part No.	P-8835	
Type of Cooling	Radiation	
Insulating Medium	Air	
Net Weight, approximate	3	lb

MAXIMUM RATINGS

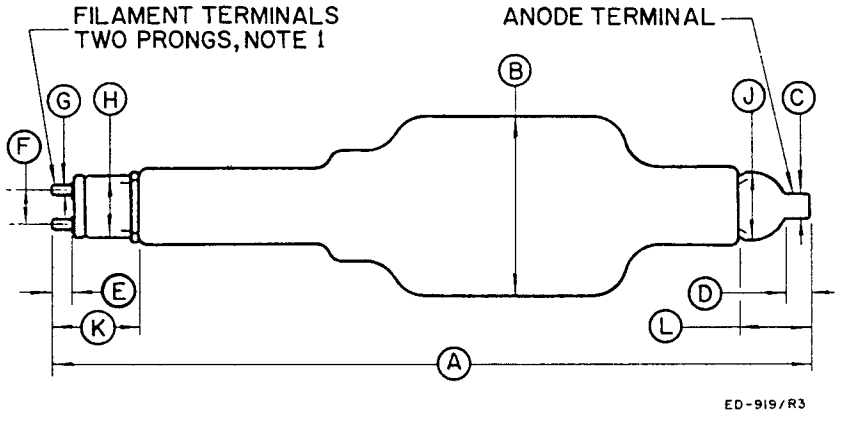
Peak Inverse Anode Voltage	150000	v
Peak Anode Current	2.5	a
Plate Dissipation	1000	W

WARNING: Operation of this tube might produce x-rays. Adequate rayproof shielding must therefore be provided in the equipment.

LOAD CURRENT RATINGS
(Average Direct Current Delivered To Load)

Circuit	Filament Voltage Volts	Peak Anode Current Amperes	Load Current Rating Unfiltered* Amperes	Load Current Rating Filtered** Amperes
Single-Phase, Two-Tube, Half Wave	20.0 19.0 18.0	2.5 1.5 1.0	.80 .48 .32	....
Single-Phase, Four-Tube, Full Wave	20.0 19.0 18.0	2.5 1.5 1.0	1.59 .96 .64	2.5 1.5 1.0
Three-Phase, Double-Y, Parallel	20.0 19.0 18.0	2.5 1.5 1.0	4.80 2.90 1.93	5.0 3.0 2.0
Three-Phase, Full Wave	20.0 19.0 18.0	2.5 1.5 1.0	2.40 1.45 .96	2.5 1.5 1.0

* Unfiltered Load Current Ratings are based on sine-wave voltage input and resistance load without inductive or capacitive effects.
** Filtered Load Current Ratings are based on sine-wave voltage input and infinite inductance choke input filter.

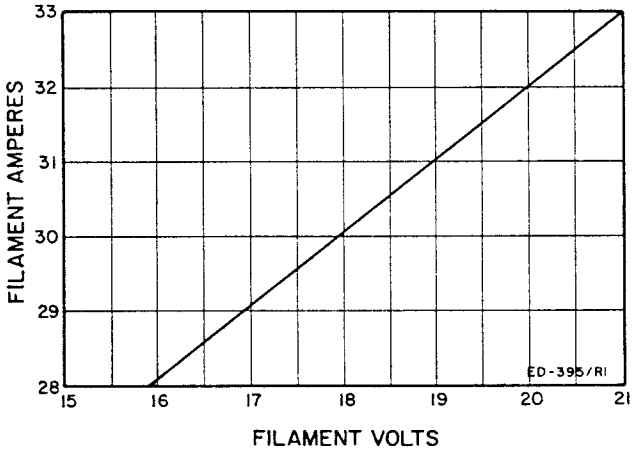


OUTLINE — ML-5576/200

DIMENSIONS FOR OUTLINE

Ref.	INCHES Minimum	Nominal	Maximum
A	—	25.0	25.3
B	—	—	6.2
C	.790	.800	.810
D	.75	.81	—
E	.82	.88	.94
F	1.240	1.250	1.260
G	.292	.312	.332
H	—	2.19	2.22
J	—	2.25	2.29
K	2.81	2.88	2.95
L	2.21	2.28	2.35

NOTE:
1. Cathode base fits Machlett mounting socket part P-8835.



FILAMENT CHARACTERISTICS

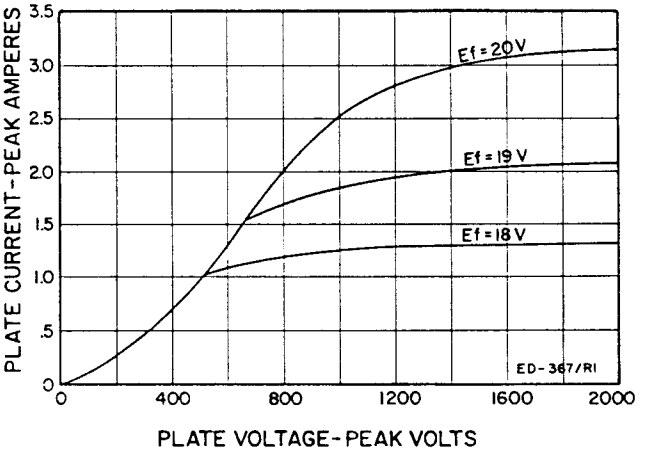


PLATE CURRENT CHARACTERISTICS

RAYTHEON

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