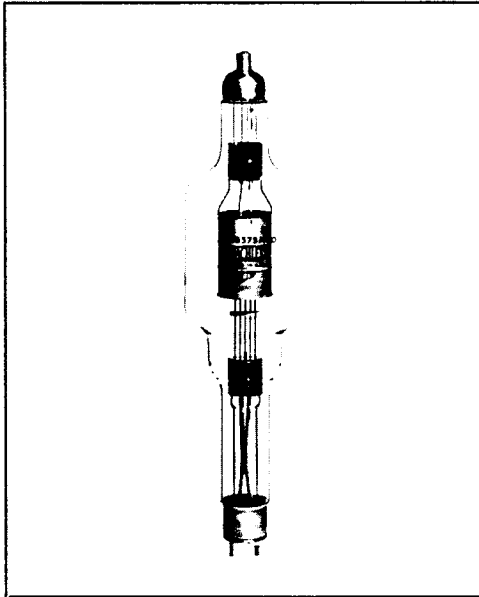


The Machlett Laboratories, Inc.
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ISSUED 6-67



ML-5575/100



High-Voltage Rectifier

150 PKV

DESCRIPTION

The ML-5575/100 is a high-vacuum rectifier tube having maximum ratings of 150 PKV inverse voltage and 1 ampere peak anode current. These ratings render it adaptable to a wide range of applications requiring high rectified voltages. For electrostatic particle precipitation service of extremely high power requirements, its high current capacity, low internal voltage drop, long life and ruggedness make its use particularly advantageous.

This tube incorporates those special features of construc-

tion 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 cylindrical tantalum anode provides an appreciable safety factor against accidental overload.

GENERAL CHARACTERISTICS

Electrical

Filament Voltage	20 V
Filament Current, approximate	24 A
Filament Heating Time, minimum (Before applying Plate Voltage)	30 Sec
Tube Voltage Drop, maximum ($I_a = 1.0A, E_f = 20V$)	800 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

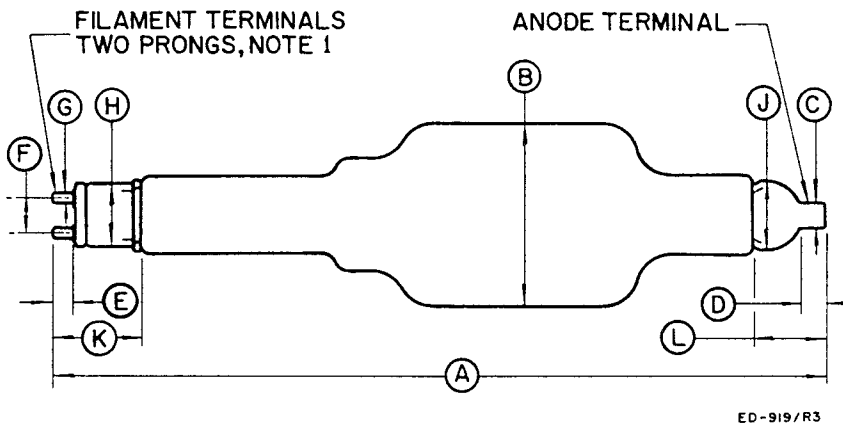
Peak Inverse Anode Voltage	150000 v
Peak Anode Current	1.0 a
Plate Dissipation	750 W

WARNING: Operation of this tube may 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	Peak Anode Current	Load Current Rating	
	Volts	Milliamperes	Unfiltered*	Filtered**
			Milliamperes	Milliamperes
Single-Phase, Two-Tube, Half Wave	20.0	1000	320
	19.0	700	225
	18.0	400	125
Single-Phase, Four-Tube, Full Wave	20.0	1000	640	1000
	19.0	700	445	700
	18.0	400	255	400
Three-Phase, Double-Y, Parallel	20.0	1000	1920	2000
	19.0	700	1350	1400
	18.0	400	770	800
Three-Phase, Full Wave	20.0	1000	960	1000
	19.0	700	675	700
	18.0	400	385	400

* 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.



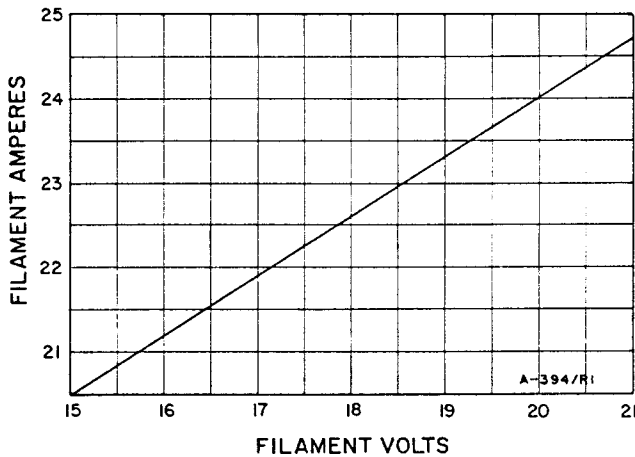
OUTLINE—ML-5575/100

DIMENSIONS FOR OUTLINE

Ref.	INCHES		
	Minimum	Nominal	Maximum
A	24.7	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

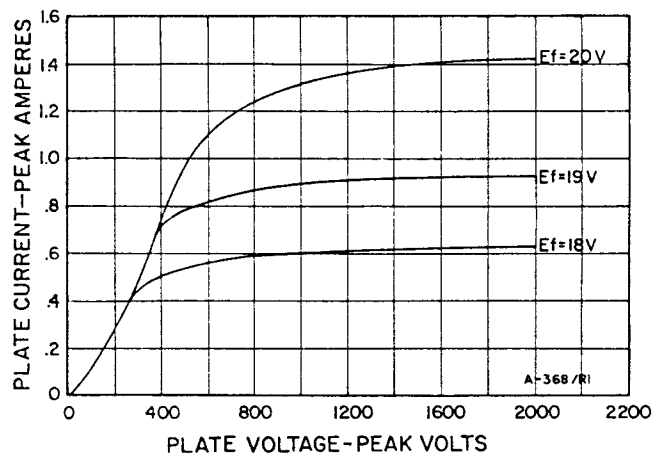


PLATE CURRENT CHARACTERISTICS



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