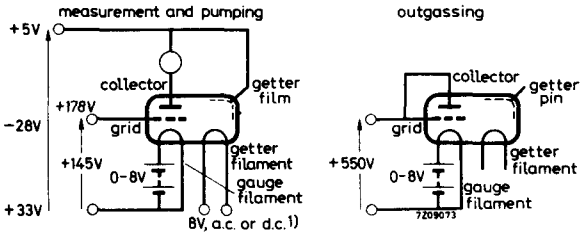
EVAPORATION ION PUMP

One-shot evaporation ion pump, consisting of a Bayard-Alpert gauge with the addition of a zirconium getter filament. The getter is evaporated from the getter filament, the pumping speed being enhanced by the ionising action of the gauge.
The Bayard-Alpert gauge can be used independently for measuring purposes.

CHARACTERISTICS

Pressure range, pumping	10^{-3} to 10^{-11}	torr
measurement	10^{-3} to 10^{-10}	torr
Pumping speed average (for nitrogen) at 10 mA emission current	0.4	l/s
Gauge sensitivity (for nitrogen)	approx. 12	per torr
Gauge filament characteristics	see page 3	
Gauge emission current range	1 μA to 75	mA
Insulation resistance before pumping		
Collector to other electrodes	min. 10^{14}	Ω
Grid to other electrodes	min. 10^{12}	Ω

TYPICAL OPERATING CONDITIONS



potentials are given with respect to earth

Gauge emission current (see also page 2)		
measurement	100 μA, 1 mA or 10	mA
outgassing	75	mA

[1]) Getter filament current at the given supply voltage 8 A

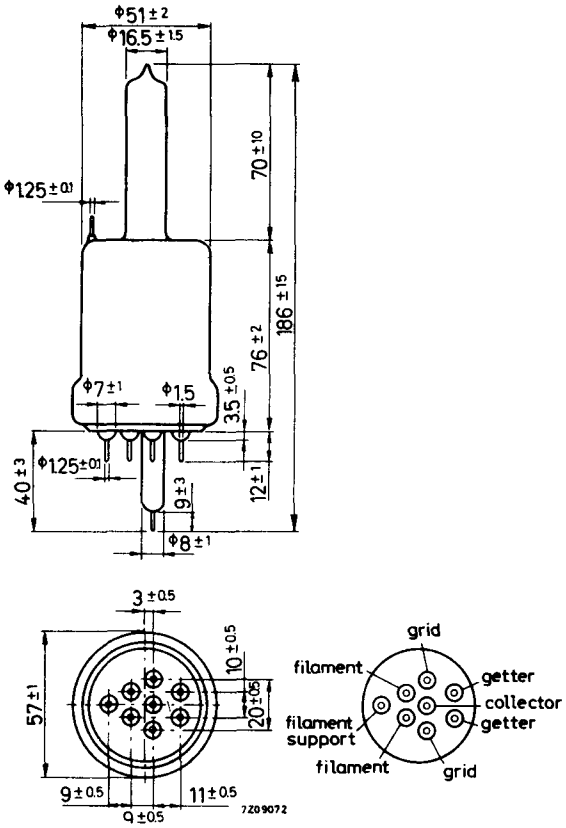
LIMITING VALUES

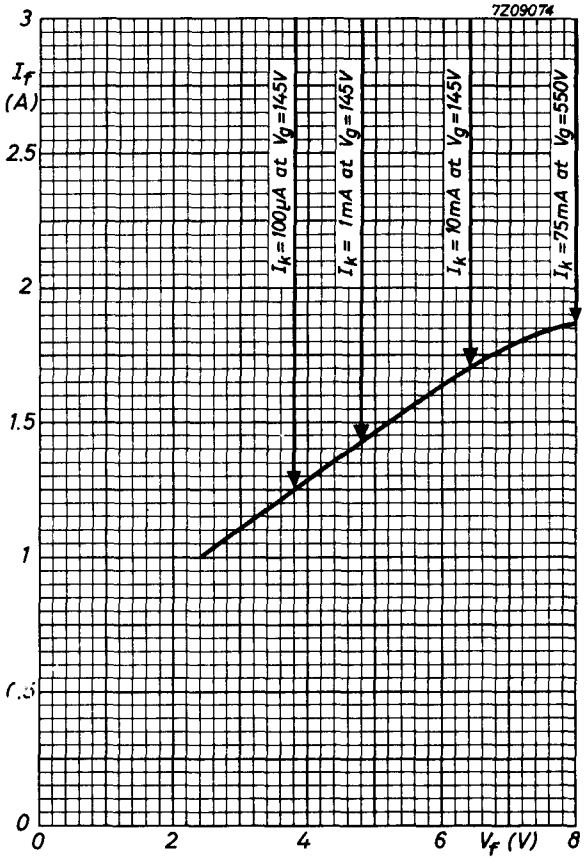
Gauge filament voltage	max.	8	V
Gauge emission current	max.	75	mA
Getter filament current	max.	10	A
Grid wattage	max.	40	W
Bulb temperature during operation	max.	100	°C
Bake-out temperature	max.	450	°C

MECHANICAL DATA

Dimensions in mm

Material W1 glass




7Z09074
3
I_f
(A)
2.5
2
1.5
1
0.5
0
0
2
4
6
V_f (V)
8
I_k = 100μA at V_g = 145V
I_k = 1mA at V_g = 145V
I_k = 10mA at V_g = 145V
I_k = 75mA at V_g = 550V

PHILIPS

Data handbook

Electronic components and materials

EIP12

page	sheet	date
1	1	1968.03
2	2	1970.01
3	3	1970.01
4	FP	2001.05.17