VACUUM GAUGE HEAD , BAYARD-ALPERT TYPE

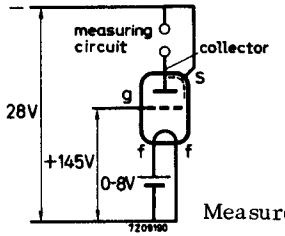
Glass envelope, ultra-high vacuum gauge head of the Bayard-Alpert type. Measuring range 10^{-3} torr to 10^{-10} torr; sensitivity approx. 12 per torr.

The gauge head is provided with an electrically conductive layer deposited on the inside of the glass envelope. By applying a fixed potential to the layer, excess primary electrons are attracted directly to the envelope rather than oscillating around the collector thereby leading to very stable measurements of low pressure.
Moreover the gauge head features a low thermal inertia and a low filament power consumption.

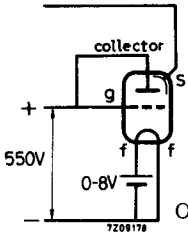
CHARACTERISTICS

Pressure range	10^{-3} to 10^{-10}	torr
Sensitivity (for nitrogen)	approx. 12 per	torr
Emission current range	1 μA to 75	mA
Filament characteristics	see page 3	
Insulation resistance		
Collector to other electrodes	min. 10^{14}	Ω
Grid to other electrodes	min. 10^{12}	Ω

TYPICAL OPERATING CONDITIONS



Measurement



Outgassing

Emission current (see also page 3)

measurement	100 μA, 1 mA or 10	mA
outgassing	75	mA

LIMITING VALUES

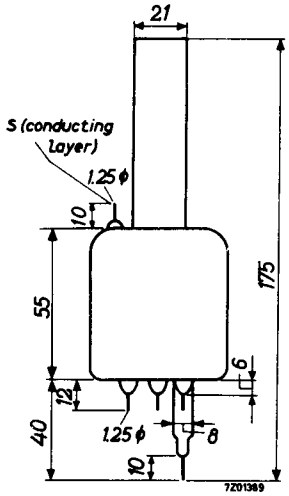
Pressure (filament litt)	max.	10^{-3}	torr
Filament voltage	max.	8	V
Emission current	max.	75	mA
Grid input power	max.	40	W
Bulb temperature during operation	max.	100	°C
Bake-out temperature	max.	450	°C

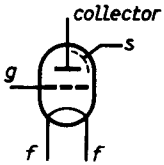
MECHANICAL DATA

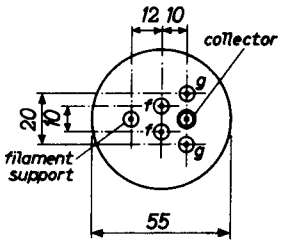
Dimensions in mm

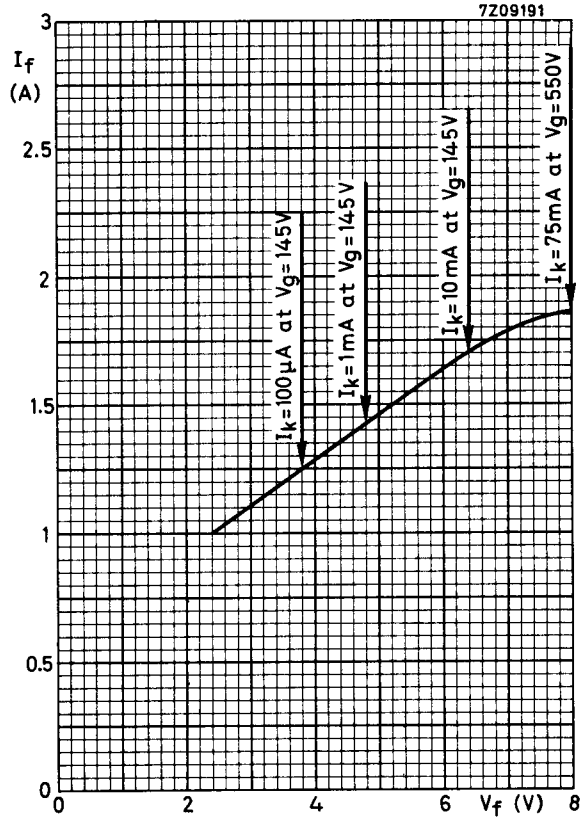
Material tubulation G28 glass

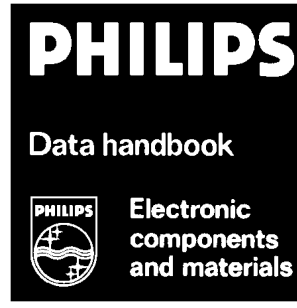
Filament Tungsten








7Z09191
I_f (A)
3
2.5
2
1.5
1
0.5
0
0
2
4
6
8
V_f (V)
I_k=100µA at Vg=145V
I_k=1mA at Vg=145V
I_k=10mA at Vg=145V
I_k=75mA at Vg=550V



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4	FP	2001.05.17