

GEIGER-MÜLLER TUBE

Halogen quenched γ and β (> 0.25 MeV) radiation counter tube.

QUICK REFERENCE DATA

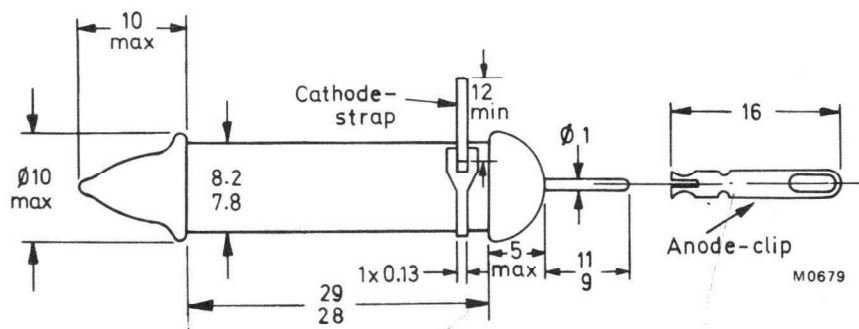
Dose rate range	10^{-3} to 10^2	mGy/h
Plateau threshold voltage	500	V
Plateau length	150	V
Recommended supply voltage	575	V
Chrome-iron cathode	32 to 40	mg/cm ²

This data must be read in conjunction with General Information Geiger-Müller tubes.

MECHANICAL DATA

Dimensions in mm

Fig.1



CATHODE

Thickness	32 to 40	mg/cm ²
Sensitive length	28	mm
Material	chrome-iron	

FILLING

neon, argon, halogen

CAPACITANCE

Anode to cathode	1.1	pF
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OPERATING CHARACTERISTICS (Ambient temperature $\approx 25\text{ }^{\circ}\text{C}$)

Measured in circuit of Fig.2

Starting voltage	max.	380	V
Plateau threshold voltage	max.	500	V
Plateau length		150	V
Recommended supply voltage		575	V
Plateau slope	max.	0.08	%/V
Background (shielded with 50 mm Pb with an inner liner of 3 mm Al), at recommended supply voltage	max.	12	count/min
Dead time. at recommended supply voltage	max.	45	μs

LIMITING VALUES (Absolute max. rating system)

Anode resistor	min.	2.2	$\text{M}\Omega$
Anode voltage	max.	650	V
Ambient temperature			
continuous operating	max.	+70	$^{\circ}\text{C}$
	min.	-40	$^{\circ}\text{C}$
storage	max.	+75	$^{\circ}\text{C}$

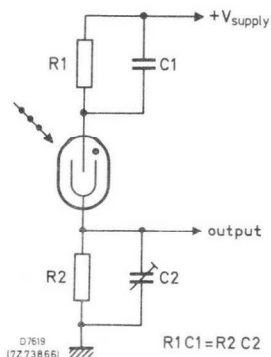
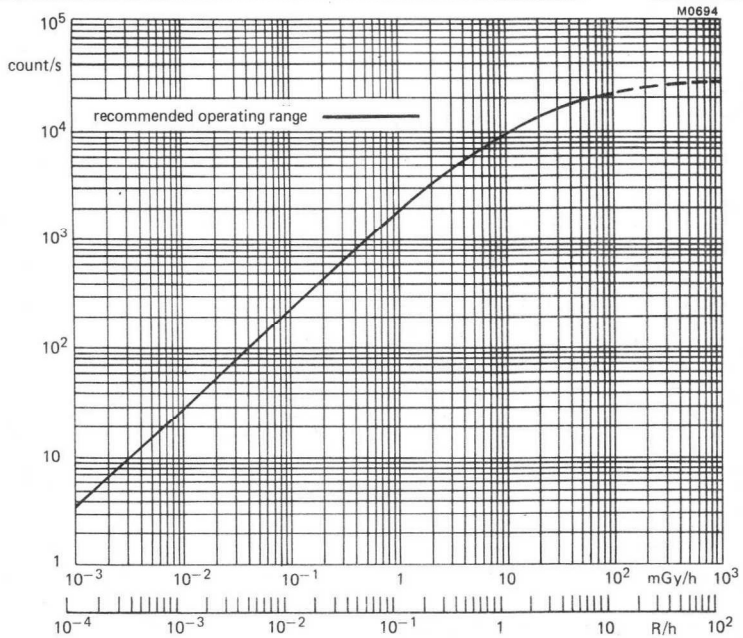
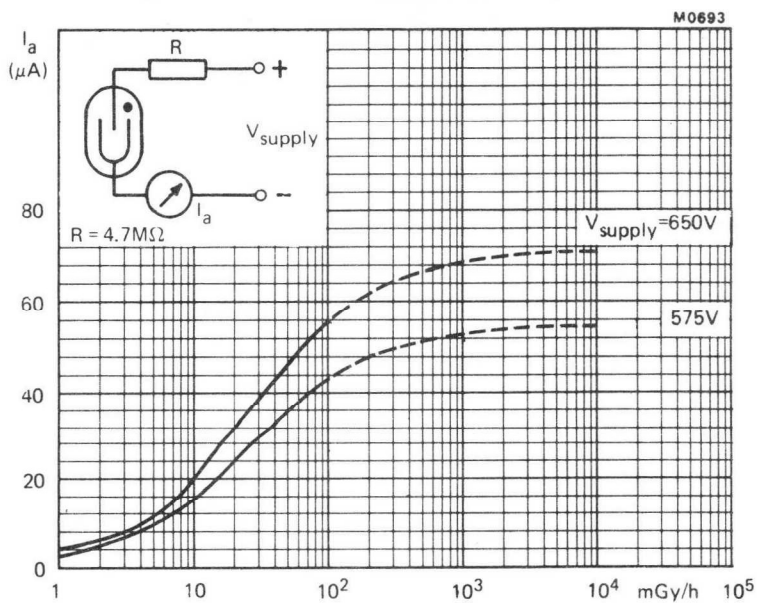
LIFE EXPECTANCYLife expectancy at $\approx 25\text{ }^{\circ}\text{C}$ 5×10^{10} count**MEASURING CIRCUIT** $R_1 = 4.7\text{ M}\Omega$ $R_2 = 100\text{ k}\Omega$ $C_1 = 1\text{ pF}$ 

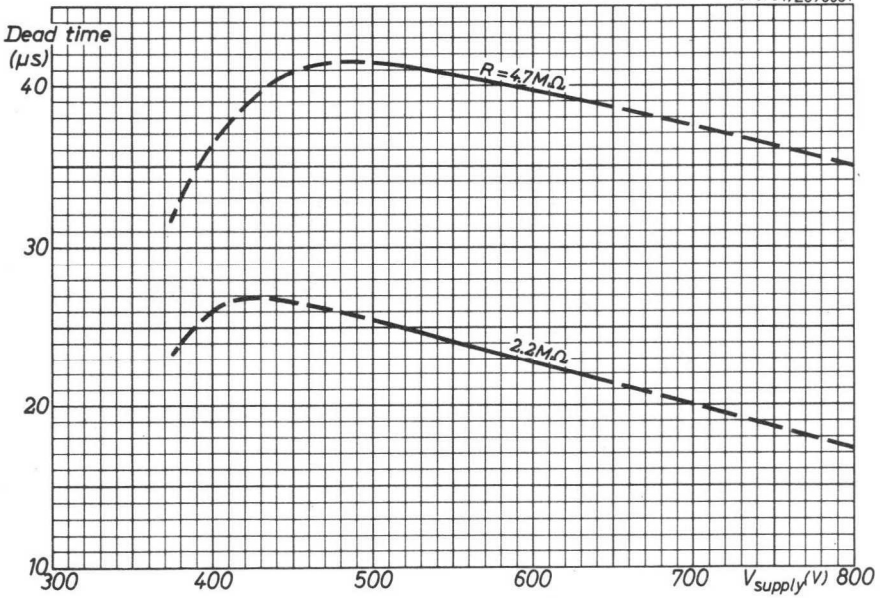
Fig.2



Typical counting rate as a function of dose rate (^{137}Cs)



Typical current as a function of dose rate (^{137}Cs)



Typical dead time as a function of supply voltage