

GEIGER MÜLLER TUBE

End window halogen-quenched β and γ radiation counter tube.

QUICK REFERENCE DATA

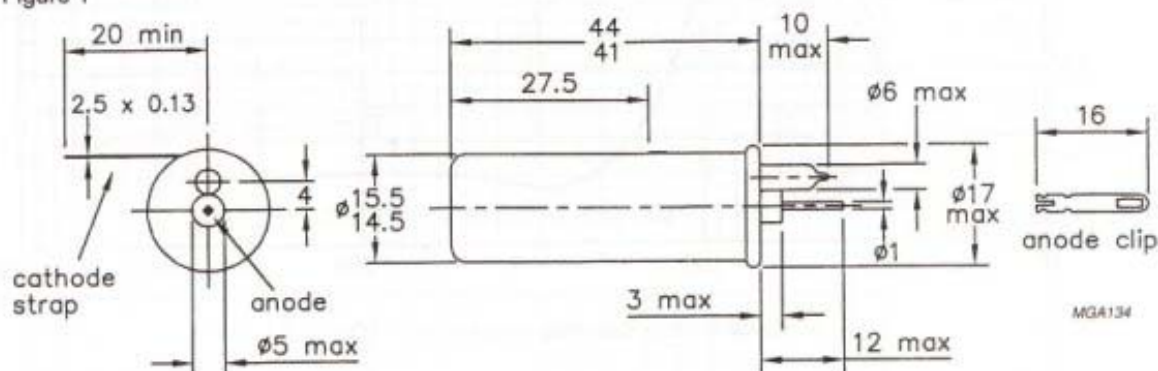
Dose rate range	10^{-3} to 10^2	mGy/h
	10^{-4} to 10	R/h
Plateau threshold voltage	400	V
Plateau length	200	V
Recommended supply voltage	500	V
Chrome iron cathode	250	mg/cm ²
Mica window (9 mm diameter)	2.0 to 3.0	mg/cm ²

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

MECHANICAL DATA

Dimensions in mm

Figure 1



WINDOW

Thickness	2.0 to 3.0	mg/cm ²
Useful diameter	9	mm
Material	mica	

CATHODE

Thickness	250	mg/cm ²
Sensitive length	39	mm
Material	chrome iron	

ENVIRONMENTAL

Shock (half sine wave 3 ms duration) - peak acceleration	392	m/s ²
Vibration (50 Hz continuous sine wave) - acceleration	24.5	m/s ²

FILLING

neon, argon, halogen

CAPACITANCE

Capacitance				
Anode to cathode	1.1			pF

TUBE WEIGHT

TUBE WEIGHT	7.0	g
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OPERATING CHARACTERISTICS (Ambient temperature $\approx 25^\circ\text{C}$)

Measured in circuit of Figure 2.

Starting voltage	max	325	V
Plateau threshold voltage	max	400	V
Plateau length		200	V
Recommended supply voltage		500	V
Plateau slope	max	0.04	%/V
Background (shielded with 50 mm Pb with an inner liner of 3 mm Al), at recommended supply voltage	max	10	count/min
Dead time, at recommended supply voltage	max	90	μs

LIMITING VALUES (Absolute max. rating system)

Anode resistor	min	4.7	M Ω
Anode voltage	max	600	V
Ambient temperature			
- continuous operating	max	+70	$^\circ\text{C}$
	min	-40	$^\circ\text{C}$
- storage	max	+75	$^\circ\text{C}$

LIFE EXPECTANCY

Life expectancy at $\approx 25^\circ\text{C}$	5×10^{10}	count
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BETA RESPONSE

Point source ($^{90}\text{Sr}/^{90}\text{Y}$)	0.25	c/s/Bq
Extended source ($^{90}\text{Sr}/^{90}\text{Y}$)	0.42	c/s/Bq cm^{-2}

MEASURING CIRCUIT

$R_1 = 10 \text{ M}\Omega$
 $R_2 = 220 \text{ k}\Omega$
 $C_1 = 1 \text{ pF}^*$

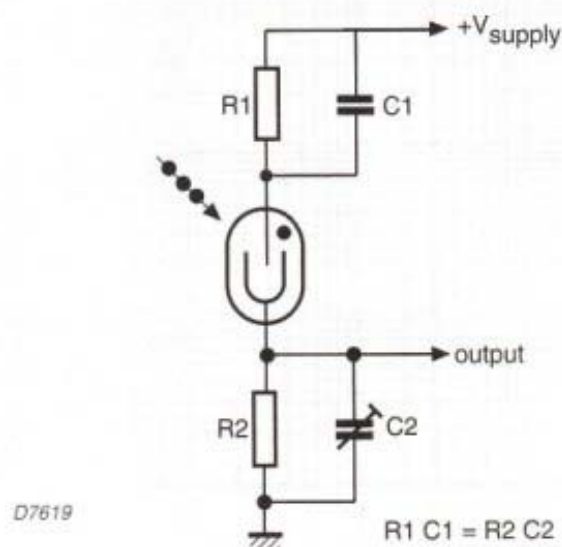


Figure 2

* See General Information (Paragraph 5.5)

