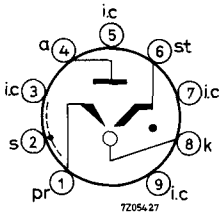
TRIGGER TUBE

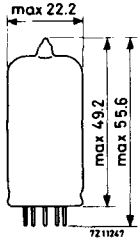
Gas filled cold cathode trigger tube with molybdenum cathode and electrical priming. The tube has been designed to be ignited with positive voltages on starter and anode only and can be fed from a.c. or d.c. anode voltages.

QUICK REFERENCE DATA				
Anode supply voltage	a.c.	V_{ba}	220	V
	d.c	V_{ba}	300	V
Anode maintaining voltage		V_m	112	V
Cathode current, max.		$I_{k\ max.}$	40	mA
Starter to cathode ignition voltage		$V_{st\text{-}ign}$	130	V
Transfer requirements: capacitance		C_{st}	330	pF
	current	I_{st}	200	μA

DIMENSIONS AND CONNECTIONS

Base: Noval





MOUNTING

Mounting position: any

Starter and primer resistances should be mounted directly on the corresponding socket soldering tag to avoid stray capacitances.

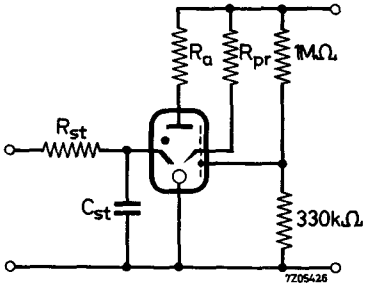
CHARACTERISTIC RANGE VALUES FOR EQUIPMENT DESIGN

The electrical characteristics assume the presence of a priming discharge. This priming discharge can be established by connecting the primer via a 10 MΩ resistor to the anode supply voltage.

A.C. OPERATION

(Anode and starter voltage in phase. When the tube is fed from an alternating supply voltage, the internal shield (s) shall be connected to a voltage divider across the anode supply voltage so that the voltage at s is ±5% of the anode voltage. See fig.1)

Anode voltage	V_a	min.	180	V_{RMS}
		max.	250	V_{RMS}
Starter ignition voltage	$V_{st\text{-}ign}$	min.	85	V_{RMS}
		max.	100	V_{RMS}
Transfer requirements				
current	I_{st}	min.	200	μA
capacitance	C_{st}	min.	200	pF
		max.	500	pF
Cathode current				
average (T_{av} max. 15 s)	I_k	max.	25	mA
average (T_{av} max. 20 ms)	I_k	max.	40	mA
average during any conduction period	I_k	min.	10	mA



CHARACTERISTIC RANGE VALUES FOR EQUIPMENT DESIGN

(continued)

D.C. OPERATION

Anode voltage	V_a	min.	250	V
		max.	350	V
Starter ignition voltage	$V_{st\text{-}ign}$	min.	120	V
		max.	140	V
Transfer requirements				
current	I_{st}	min.	200	μA
capacitance	C_{st}	min.	200	pF
Cathode current				
average (T_{av} max. 15 s)	I_k	max.	25	mA
average during conduction	I_k	min.	15	mA
Maintaining voltage (at I_a = 20 mA)	V_m	min.	106	V
		max.	115	V

LIMITING VALUES (Absolute max. rating system)

A.C. OPERATION (Anode and starter voltage in phase)

Anode voltage	V_a	max.	250	V_{RMS}
Cathode current				
average (T_{av} max. 15 s)	I_k	max.	25	mA
average (T_{av} max. 20 ms)	I_k	max.	40	mA
peak (f max. 60 Hz)	I_{k_p}	max.	200	mA
average during any conduction period	I_k	min.	10	mA
Negative starter current	$-I_{st}$	max.	200	μA
Voltage at internal shield (in phase with anode voltage)	V_s	min.	45	V_{RMS}
	V_s	max.	75	V_{RMS}
Temperature	t_{bulb}	min.	−55	°C
	t_{bulb}	max.	+70	°C+2 °C/mA

LIMITING VALUES (Absolute max. rating system) (continued)

D.C. OPERATION

Anode voltage				
positive	V_a	max.	350	V
negative	$-V_a$	max.	100	V
Cathode current				
average (T_{av} max. 15 s)	I_k	max.	25	mA
average during conduction	I_k	min.	15	mA
peak	I_{k_p}	max.	200	mA
surge ($T_{max.}$ 1 ms)	I_{surge}	max.	1	A
Starter to cathode capacitor	C_{st}	max.	10	nF [1]
Negative starter voltage	$-V_{st}$	max.	0	V
Temperature	t_{bulb}	min.	-55	°C
	t_{bulb}	max.	+70	°C + 2 °C/mA

[1]) Higher values of starter capacitor are permitted, provided a current limiting resistor of 1 kΩ to 10 kΩ is used in series with the starter.