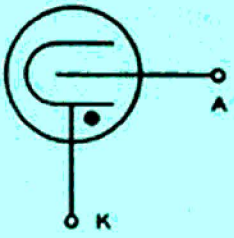
1B85

BETA GAMMA COUNTER TUBE



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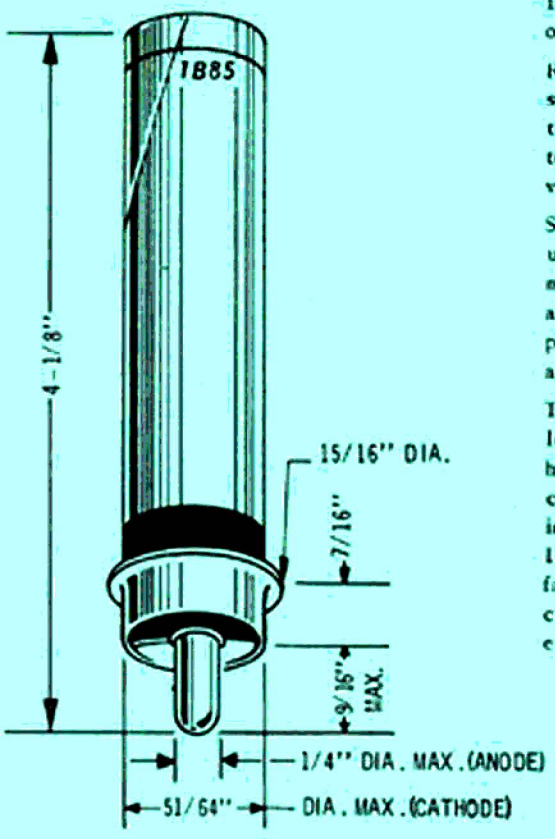

The 1B85 is a widely used metal wall, beta-gamma counter tube skillfully designed and constructed to provide consistent high performance. This general purpose tube is designed to replace most thin-walled glass tubes. Recent improvements have resulted in better low temperature performance and reduced temperature coefficients of threshold voltage.

Shock and vibration resistance is substantially greater than for glass-walled tubes. The aluminum shell, although thin, resists implosion, and even if dented the 1B85 counter will continue to operate satisfactorily.

Reliability, owing to high uniformity of construction, is an outstanding feature. Fill gas is of the self-quenching type; hence, the useful life is a function of voltage, counting rate, and life-test end point. The 1B85 is interchangeable with nearly all 900 volt counter tubes.

Simple mounting and replacement of tubes is achieved through the use of a standard RETMA type A1-82 coaxial base. Water-tight mounting is easy to obtain with the coaxial base. Several standard mountings are available: Victoreen 380-26 probe socket, 389-4 probe assembly, 631-56 probe assembly and the 5100-81-S18 Tru-arc ring for chassis mounting.

The extremely consistent uniformity and rugged construction, coupled with the simple coaxial base mounting, are features which have contributed to selection of the 1B85 counter tube as first choice for use in portable survey instruments, area monitoring instruments, and precision laboratory measuring equipment. The 1B85s are ideally suited for multiple tube counters which compare favorably with scintillation counters in cost and performance. Decoupling networks are unnecessary. The tubes are also well suited for coincidence and anti-coincidence circuits.

RATINGS

OPERATING VOLTAGE	(MIN)	850	VOLTS
	(MAX)	950	VOLTS
AMBIENT TEMPERATURE	(MIN)	-30	°C
	(MAX)	80	°C
RELATIVE HUMIDITY	(MAX)	100	%
BETA ENERGY	(MIN)	160	KeV

CHARACTERISTICS

THRESHOLD VOLTAGE* (MAX)	800	VOLTS
PLATEAU LENGTH* (MIN)	200	VOLTS
PLATEAU SLOPE* (V_o = 800 TO 1000 V)	3	%/100 VOLTS
RECOVERY TIME	100	μSEC
BACKGROUND (V_o = 900 V)	40	C/M
LIFE (AT 6000 C/M, V_o = 900 V)	10^8	COUNTS
LIFE TEST END POINT, SLOPE (V_o = 850 TO 950 V)	10	%/100 VOLTS
ACTIVE LENGTH	2.75	INCHES
WALL (ALUMINUM)	30	MG/CM^2
ELECTRODE CAPACITANCE	2	$\mu\mu f$

* NEW TUBES

THE VICTOREEN INSTRUMENT CO.

COMPONENTS DIVISION 3800 PERKINS AVENUE, CLEVELAND, 14, OHIO

CHARACTERISTICS

THRESHOLD VOLTAGE*	(MAX)	800	VOLTS
PLATEAU LENGTH*	(MIN)	200	VOLTS
PLATEAU SLOPE* (V_o = 800 TO 1000 V)		5	%/100 VOLTS
RECOVERY TIME		100	μSEC
BACKGROUND (V_o = 900 V)		40	C/M
LIFE (AT 6000 C/M, V_o = 900 V)		10^8	COUNTS
LIFE TEST END POINT, SLOPE (V_o = 850 TO 950 V)		10	%/100 VOLTS
ACTIVE LENGTH		2.75	INCHES
WALL (ALUMINUM)		30	MG/CM^2
ELECTRODE CAPACITANCE		2	$\mu\mu f$

*NEW TUBES

RATINGS

OPERATING VOLTAGE	(MIN)	850	VOLTS
	(MAX)	950	VOLTS
AMBIENT TEMPERATURE	(MIN)	−10°	C
	(MAX)	100°	C
RELATIVE HUMIDITY	(MAX)	95	%
BETA ENERGY	(MIN)	160	KEV