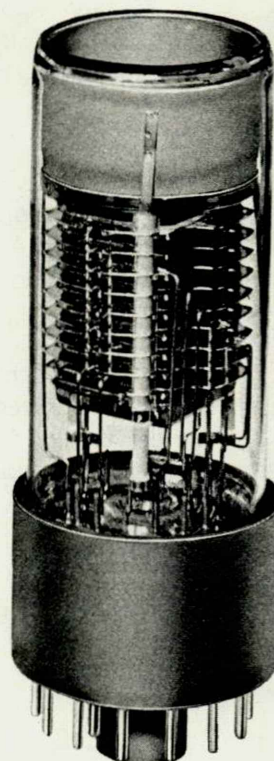
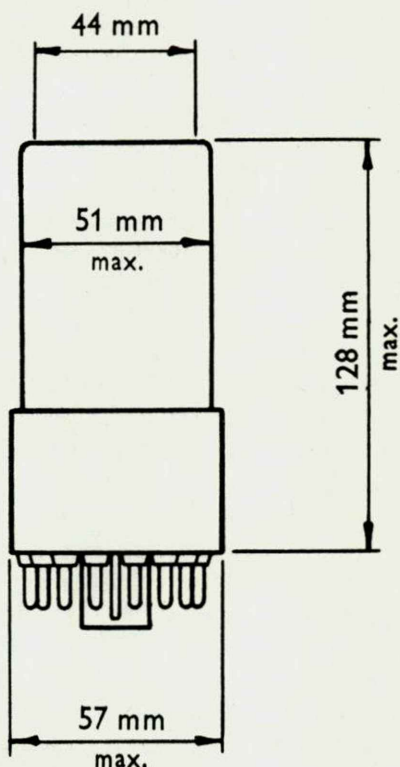


PHOTOMULTIPLIER TUBE TYPE 9536B



DESCRIPTION

The 9536B is a 2" diameter flat face, end window, 10 stage venetian blind tube with Antimony Caesium (CsSb) secondary emission surfaces which are free from gain variation with tube current. The tube is overcapped with a Bakelite diheptal base type B14A as used on many photomultipliers produced in the U.S.A.

BRIEF SPECIFICATION		
AMPERES/LUMEN	MAX VOLTAGE	DARK CURRENT
20	1500	0.02 μ A
50	1700	0.05 μ A
MINIMUM PHOTOSENSITIVITY:— 30 MICROAMPERES/LUMEN		

TECHNICAL DETAILS

When operated with uniform interstage potentials (linear dynode chain) and an overall voltage of 1700 volts the peak output current of the E.M.I. 9536B is linear to 10 mA with an overall gain of 50 amperes per lumen. With non-uniform interstage potentials (non-linear dynode chain), of 400 volts between dynodes $D_8 - D_9$, $D_9 - D_{10}$ and $D_{10} - \text{ANODE}$, the overall sensitivity for a typical tube at 2200 volts is 200 amperes per lumen and a linear peak current of 50mA is obtainable.

The standard 9536B has an Antimony-Caesium photocathode of S11 spectral response, and gives extremely good energy resolution when used in a scintillation gamma ray spectrometer (Ca 4% for light pulses equivalent to Cs^{137} in Thallium activated Sodium Iodide corresponding to 7½% for a good $1\frac{1}{2}'' \times 2''$ crystal).

The time spread at 1700 volts is 16 m μsec . At 2200 volts, with the non-uniform interstage potentials (400 volts between the last three stages), the time spread is 14 m μsec and the rise time (10% to 90%) 6 m μsec . The gain and output current available makes this tube suitable for coincidence work.

The sensitivity of the tube to magnetic fields is low and screening from the earth's field is not necessary. When operated in high magnetic fields a suitable screen should be used.

Tubes with BiAgCs(S10) and AgCsO(S1) Cathodes and also the E.M.I. "S" type cathode (suitable for low energy counting) are available to special order, as listed below.

VARIATIONS OF 10 STAGE PM TUBE TYPE 9536

Type No.	Nominal Seated Height	Cathode Type	Window Material	Description and Applications
9554	124mm	S10	Glass	Colour television Flying Spot scanners (Red channel). Spectrophotometers, etc.
9552	143mm	S13	Fused Silica	U.V. sensitive to near 1600 AU. For use in spectrophotometers and in gas scintillation counters.
9553	124mm	S1	Glass	Sensitive to 12000 AU. Near-Infrared spectrophotometers, infra-red flying spot scanners, infra-red communication systems, etc.
9536S	124mm	E.M.I. 'S' Type	Glass	CsSb photocathode processed for max. blue sensitivity consistent with extremely low thermionic emission. Suitable for C^{14} and H^3 counting in liquid scintillators.

E.M.I. 9536 BASE CONNECTIONS														
PIN NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14
ELECTRODE	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	D ₇	D ₈	D ₉	D ₁₀	A	—	—	K
D:—DYNODE A:—ANODE K:—CATHODE														

The base connections and overall dimensions of the E.M.I. 9536B are the same as the DuMont 6292 and the R.C.A. 6342, for which the 9536B is a direct replacement.

P.M. TUBE - TYPE: 9536 B.

