CV2316

DEPARTMENT OF ATOMIC ENERGY - A.E.R.E.

VALVE ELECTRONIC

Specification D.At.En/CV.2316 Issue 3, dated 2/7/57 To be read in conjunction with K.1001.	SECURITY Specification: UNCLASSIFIED VALVE: UNCLASSIFIED

____ Indicates a change

TYPE OF VALVE - Electron Multiplier Photocell
ENVELOPE - Glass
PROTOTYPE - E.M.I. Type 6097B

RATING		Note
Max. safe interstage potential (V)	200	A
Max. voltage between anode and D.11 (V)	300	A
Max. voltage between cathode and D.1 (V)	300	A
Max. safe D.C. (or average) collector current (mA)	1	B
Max. operating D.C. (or average) collector current (mA)	0.1	C
Max. ambient temperature (°C)	70	D
Nominal overall current gain	10^7	E
Max. output current linear with respect to light input within 10% (mA)	1	E & F

MARKING
See K.1001/4.1

BASE
E.M.I. 15 Pin
Pressed Glass Base
Drawing No. 6260 D.21

CONNECTIONS

PIN	ELECTRODE
1	Dynode 5
2	Dynode 7
3	Dynode 9
4	Dynode 11
5	Not connected
6	Collector anode
7	Not connected
8	Dynode 10
9	Dynode 8
10	Dynode 6
11	Dynode 4
12	Dynode 2
13	Photocathode
14	Dynode 1
15	Dynode 3

DIMENSIONS
See Drawing Page 4.

NOTES ON PAGE 2.

NOTES

A. A protective load resistance of at least 10 K is recommended on each electrode.

B. By "safe" is meant that which will not cause permanent change or damage to the tube. Tube should not be exposed to room light when operating potentials are applied.

C. This is the maximum current advised for reliable and repeatable measurements free from errors due to fatigue, etc.

D. This is limit above which permanent damage may occur. Dark current increases rapidly with temperature.

E. At 160 V/Stage.

F. This can be increased by increasing volts progressively on all stages.

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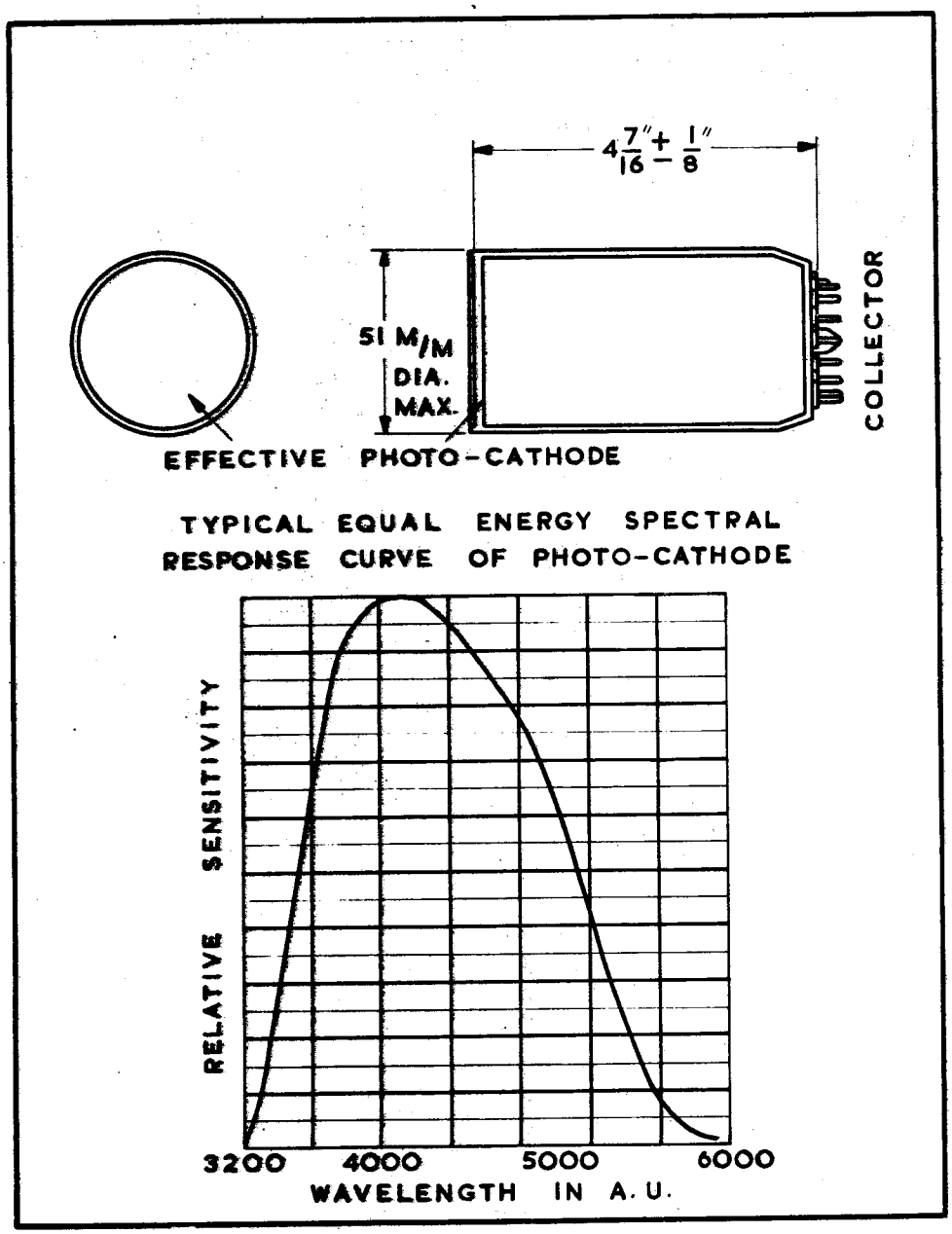
TESTS

To be performed in addition to those in K.1001

Test Conditions			Test	Limits. Min.	Limits. Max.	No. Tested	Note
a.			CAPACITANCES of Collector to all electrodes		10	T.A.	
b.	300V. between cathode and all other electrodes tied together.	Light Flux Lumens 0.01	Photocathode sensitivity u A/lumen	30		100%	1.2 ←
c.	160 volts between adjacent electrodes	x	Overall sensitivity amps/lumen	200		100%	3
d.	Sufficient volts equally divided between adjacent electrodes to give specified min. sensitivity.	0	Dark current uA		0.1	100%	4

1. Light flux incident on 1.1/2" diameter patch at centre of cathode.
2. Tested with standard lamp source at colour temperature 2848°K.
3. Measured directly by diffused light of the order of 10^{-7}L or by flying spot.
   x is a known variable light flux adequate to produce a conveniently measured output current.
4. The dark current is measured at room temperature (15 - 25°C) after up to two hours in dark if required.



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