

A

CV2317

VALVE ELECTRONIC

Specification D.At.En/CV.2317 Issue 2, dated 1/11/55. To be read in conjunction with K.1001	<p style="text-align: center;"><u>SECURITY</u></p> Specification Valve UNCLASSIFIED UNCLASSIFIED
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→ Indicates a change

TYPE OF VALVE - Electron Multiplier Photocell <u>ENVELOPE</u> - Glass E.M.I. TYPE <u>PROTOTYPE</u> → .6097 C		<p style="text-align: center;"><u>MARKING</u></p> See K.1001/4.1																																	
		<p style="text-align: center;"><u>BASE</u></p> E.M.I. 15 Pin Pressed Glass Base Drawing No. 6260 D.21																																	
<u>RATING</u>		Note																																	
Max. safe interstage potential. (V)	200	A	<p style="text-align: center;">→ <u>CONNECTIONS</u></p> <table border="1"> <thead> <tr> <th>PIN</th> <th>ELECTRODE</th> </tr> </thead> <tbody> <tr><td>1</td><td>Dynode 5</td></tr> <tr><td>2</td><td>Dynode 7</td></tr> <tr><td>3</td><td>Dynode 9</td></tr> <tr><td>4</td><td>Dynode 11</td></tr> <tr><td>5</td><td>Not connected</td></tr> <tr><td>6</td><td>Collector anode</td></tr> <tr><td>7</td><td>Not connected</td></tr> <tr><td>8</td><td>Dynode 10</td></tr> <tr><td>9</td><td>Dynode 8</td></tr> <tr><td>10</td><td>Dynode 6</td></tr> <tr><td>11</td><td>Dynode 4</td></tr> <tr><td>12</td><td>Dynode 2</td></tr> <tr><td>13</td><td>Photocathode</td></tr> <tr><td>14</td><td>Dynode 1</td></tr> <tr><td>15</td><td>Dynode 3</td></tr> </tbody> </table>	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
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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.	5x10 ⁶	E																																	
Max. output current linear with respect to light input within 10% (mA)	1	E F																																	
			<u>DIMENSIONS</u>																																
			See Drawing Page 4																																
NOTES. SEE PAGE 2 .																																			

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NOTES

- A. A protective load resistance of at least 10-K.ohms 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 100 V/stage.
- F. This can be increased by increasing volts progressively on last stages.

TESTS

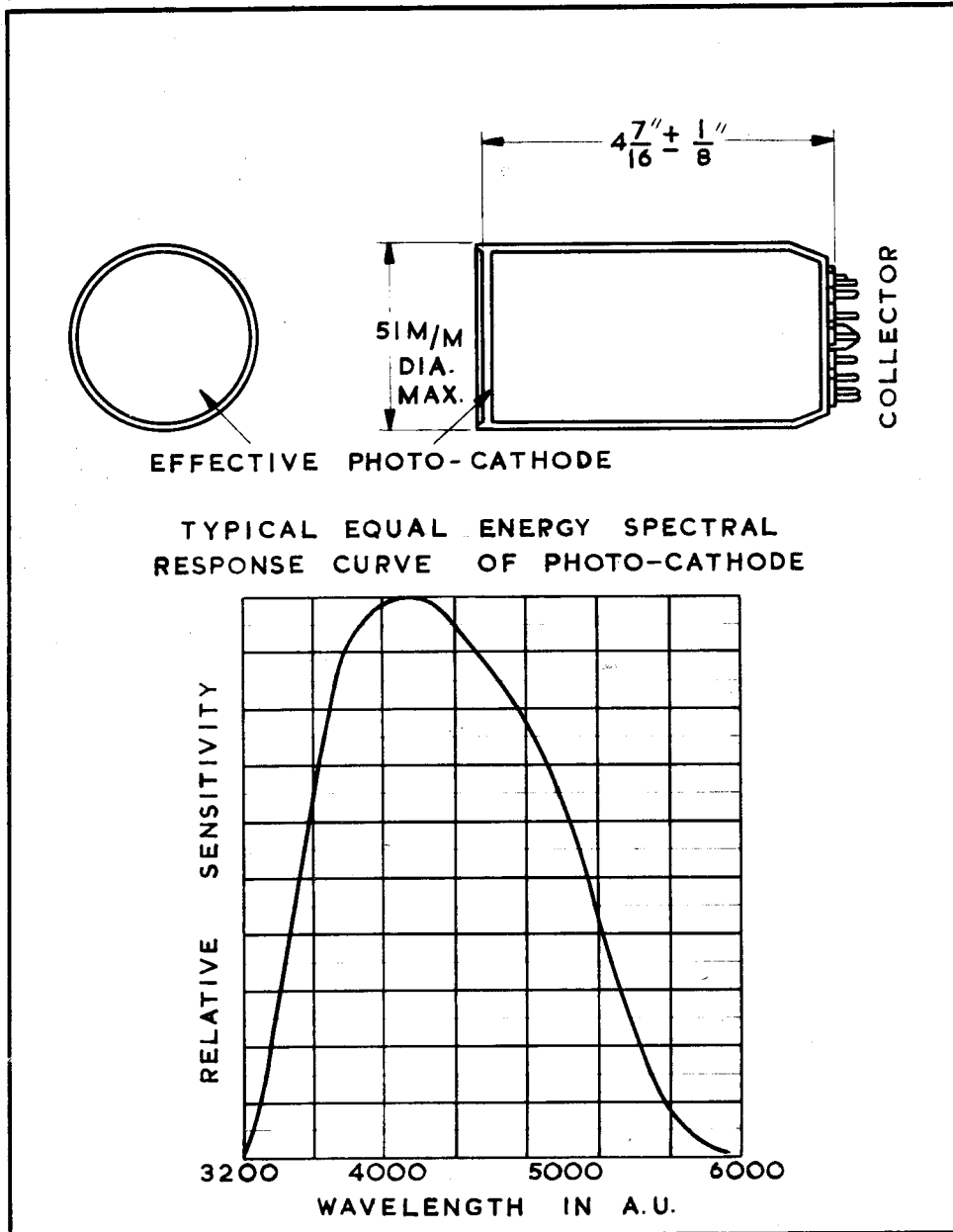
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To be performed in addition to those applicable
in K.1001.

Test Conditions	Test	Limits		No.. Tested	Note
		Max.	Min.		
a.	<u>CAPACITANCES</u> of Collector to all electrodes	10		T.A.	
b. 300 V between cathode and all other electrodes tied together	<u>Light Flux LUMENS</u> 0.01 Photoathode sensitivity (μ A/lumen)		10	100%	1.2
c. 160 V between adjacent electrodes	x Overall sensitivity (amps/lumen)		10	100%	3
d. Sufficient volts equally divided between adjacent electrodes to give specified min. sensitivity	0 Dark current μ A	0.05		100%	4.5

1. Light flux incident on 1.1/2" diameter patch at centre of cathode.
2. Tested with standard lamp source at colour temperature 2850°K.
3. Measured directly by diffused light of the order of 10^{-7} L or by flying spot. x Known variable light flux adequate to produce 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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