

Photomultiplier Tube

9-STAGE, SIDE-ON TYPE

S-5 RESPONSE

For Detection and Measurement of Ultraviolet and Visible Radiation

The 1P28A is the same as the 1P28 except for the following items:

CHARACTERISTICS RANGE VALUES

Under conditions with dc supply voltage (E) across a voltage divider providing 1/10 of E between cathode and dynode No.1; 1/10 of E for each succeeding dynode stage, and 1/10 of E between dynode No.9 and anode.

With E = 1000 volts

Min Typ Max

Sensitivity

Luminous J.	35	200	500	A/1m
"Red-to-White" Ratio	7	-	-	%

^j Under the following conditions: The light source is a tungsten-filament lamp having a lime-glass envelope. It is operated at a color temperature of 2870 °K and a light input of 10 microlumens is used.

RED-TO-WHITE RATIO

The sensitivity of the 1P28A above the wavelength of 5800 angstroms is controlled. This control is important in applications where a high-level of sensitivity in the red region of the spectral-response characteristic is required. The degree of this controlled sensitivity in the red region is specified by a "red-to-white" ratio of anode currents. Anode current is measured first using a tungsten-lamp source, and then measured with a red filter interposed between the light source and phototube.

The anode current comprising the "white" portion of this ratio is measured with a light input of 10 microlumens. The light source is a tungsten-filament lamp having a lime-glass envelope. It is operated at a color temperature of 2870 °K.

The anode current comprising the "red" portion of the ratio is measured under conditions identical with the "white" measurement except that the light input of 10 microlumens is transmitted through a red filter (Corning C.S. No.2-112-manufactured by the Corning Glass Works, Corning, N.Y., or equivalent) which has the following characteristics: the transmittance of all wavelengths from 3000 to 5790 angstroms is less than 0.5%; the 37% transmittance point lies between 6030 and 6070 angstroms; the transmittance from 6400 to 7000 angstroms is greater than 80%; and the difference between the wavelengths where transmittance is 15% and 60% is not greater than 150 angstroms.

