2061

Photomultiplier Tube

S-11 RESPONSE
10-STAGE, HEAD-ON, FLAT-FACEPLATE

ELECTROSTATICALLY FOCUSED DYNODE STAGES

For Detection and Measurement of Nuclear Radiation and Other Low-Level Light Sources in Scintillation Counters

The **2061** *is electrically similar to type* **6342A** *except for the following performance characteristic and that the anode luminous sensitivity and equivalent noise input ratings shown for the* **6342A** *do not apply for type* **2061**.

The 2061 is supplied with a medium-shell diheptal base attached to flexible leads to facilitate testing. After testing, the attached base of the 2061 should be removed prior to installing the tube in a given system.

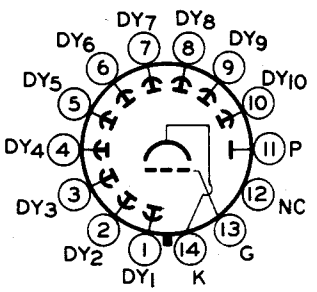
PERFORMANCE CHARACTERISTIC

Minimum Pulse Height[a]. . . . . **0.13 V**

[a] Pulse height is defined as the amplitude of the anode pulse voltage (referred to anode) measured across a 100 ± 5%-kilohm resistor and a total capacitance of 92 ± 3% pF in parallel. An anode-to-cathode voltage of 1130 volts is applied across a voltage-divider network having a 1.5 ± 5% megohm resistor between cathode and dynode No.1, 450 ± 5%—kilohm resistors between each succeeding stage including dynode No.10 to anode. The focusing electrode is adjusted to that value between 0% and 60% of dynode No.1 potential (referred to cathode) which will provide maximum anode current. The 662-KeV photon from an isotope of cesium having an atomic mass of 137 (Cs^{137}) and a cylindrical 2 inch x 2 inch thallium-activated sodium-iodide scintillator [NaI(Tl)] type 8D8, or equivalent are used. The scintillator is manufactured by the Harshaw Chemical Corporation, 1945 East 97th Street, Cleveland 6, Ohio. The Cs^{137} is in direct contact with the metal end of the scintillator. The faceplate end of the crystal is coupled to the 2061 by a coupling fluid such as Dow Corning Corp., Type DC200 (Viscosity of 100 centipoise) manufactured by the Dow Corning Corp., Midland, Michigan, or equivalent.

BASING DIAGRAM (Bottom View)
With Base Attached

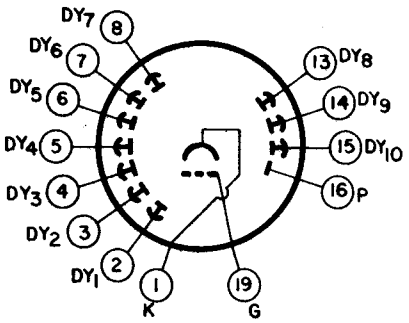
Pin 1 – Dynode No.1
Pin 2 – Dynode No.2
Pin 3 – Dynode No.3
Pin 4 – Dynode No.4
Pin 5 – Dynode No.5
Pin 6 – Dynode No.6
Pin 7 – Dynode No.7
Pin 8 – Dynode No.8
Pin 9 – Dynode No.9
Pin 10 – Dynode No.10
Pin 11 – Anode
Pin 12 – No Connection
Pin 13 – Focusing Electrode
Pin 14 – Photocathode



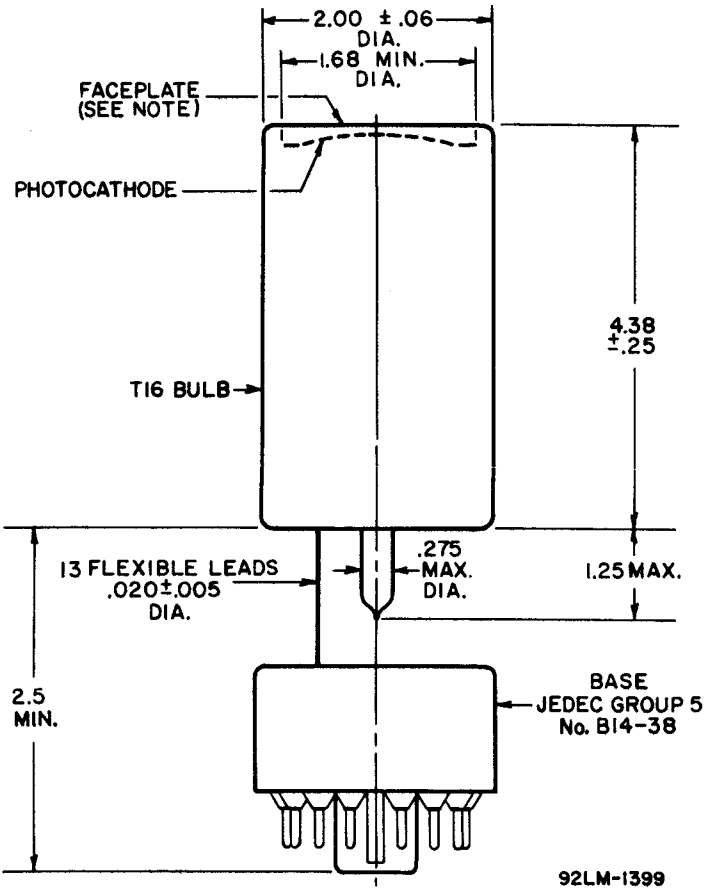
DIRECTION OF RADIATION:
INTO END OF BULB

TERMINAL CONNECTIONS (Bottom View)
With Base Removed

Lead 1 – Photocathode
Lead 2 – Dynode No. 1
Lead 3 – Dynode No. 2
Lead 4 – Dynode No. 3
Lead 5 – Dynode No. 4
Lead 6 – Dynode No. 5
Lead 7 – Dynode No. 6
Lead 8 – Dynode No. 7
Lead 13 – Dynode No. 8
Lead 14 – Dynode No. 9
Lead 15 – Dynode No. 10
Lead 16 – Anode
Lead 19 – Focusing Electrode



DIMENSIONAL OUTLINE



DIMENSIONS IN INCHES

Note: Within 1.68-inch diameter, deviation from flatness of external surface of faceplate will not exceed 0.010 inch from peak to valley.

RADIO CORPORATION OF AMERICA
Electronic Components and Devices Harrison, N. J.