

**For Single Photon Counting, Dark Counts 50cps Typ. at 25°C
For Extremely Low Light Level Detection
28mm (1-1/8 Inch) Diameter, 9-stage, Multialkali Photocathode, Side-On Type
185 to 850nm Spectral Response**

GENERAL

| Parameter | | Description/Value | Unit |
|------------------------------------|-------------------------------|---------------------------|------|
| Spectral Response | | 185 to 850 | nm |
| Wavelength of Maximum Response | | 430 | nm |
| Photocathode | Material | Multialkali | — |
| | Minimum Effective Area | 8 × 24 | mm |
| Window Material | | UV glass | — |
| Dynode | Structure | Circular-cage | — |
| | Number of Stages | 9 | — |
| Direct Interelectrode Capacitances | Anode to Last Dynode | Approx. 4 | pF |
| | Anode to All Other Electrodes | Approx. 6 | pF |
| Base | | JEDEC No. B11-88 | — |
| Weight | | Approx. 45 | g |
| Suitable Socket | | E678-11A (option) | — |
| Suitable Socket Assembly | | E717-21, E717-37 (option) | — |

MAXIMUM RATINGS (Absolute Maximum Values)

| Parameter | | Value | Unit |
|-----------------------|-------------------------------|------------|------|
| Supply Voltage | Between Anode and Cathode | 1250 | Vdc |
| | Between Anode and Last Dynode | 250 | |
| Average Anode Current | | 0.1 | mA |
| Ambient Temperature | | -80 to +50 | °C |

CHARACTERISTICS (at 25°C)

| Parameter | | Min. | Typ. | Max. | Unit | |
|---|------------------------------|----------|-----------------------|---------|-------|---|
| Cathode Sensitivity | Luminous (2856K) | 140 | 200 | — | μA/lm | |
| | Quantum Efficiency | at 400nm | — | 23.7 | — | % |
| | | at 500nm | — | 18.3 | — | |
| | | at 600nm | — | 10.7 | — | |
| | | at 700nm | — | 2.7 | — | |
| | | at 800nm | — | 0.56 | — | |
| Red/White Ratio | 0.1 | 0.15 | — | — | | |
| Blue (CS-5-58 filter) | — | 7.5 | — | μA/lm-b | | |
| Anode Sensitivity | Luminous (2856K) | 300 | 700 | — | A/lm | |
| Gain | | — | 3.5 × 10 ⁶ | — | — | |
| Dark Counts * | | — | 50 | 100 | cps | |
| Anode Dark Current (after 30min. storage in darkness) | | — | 0.2 | 1 | nA | |
| Time Response | Anode Pulse Rise Time | — | 2.2 | — | ns | |
| | Electron Transit Time | — | 22 | — | | |
| | Transit Time Spread (T.T.S.) | — | 1.2 | — | | |

* Measured at the voltage producing the gain of 1 × 10⁶

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

| Electrodes | K | Dy1 | Dy2 | Dy3 | Dy4 | Dy5 | Dy6 | Dy7 | Dy8 | Dy9 | P |
|------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
| Ratio | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Supply Voltage: 1000Vdc, K: Cathode, Dy: Dynode, P: Anode

PHOTOMULTIPLIER TUBE R4632

Figure 1: Typical Spectral Response

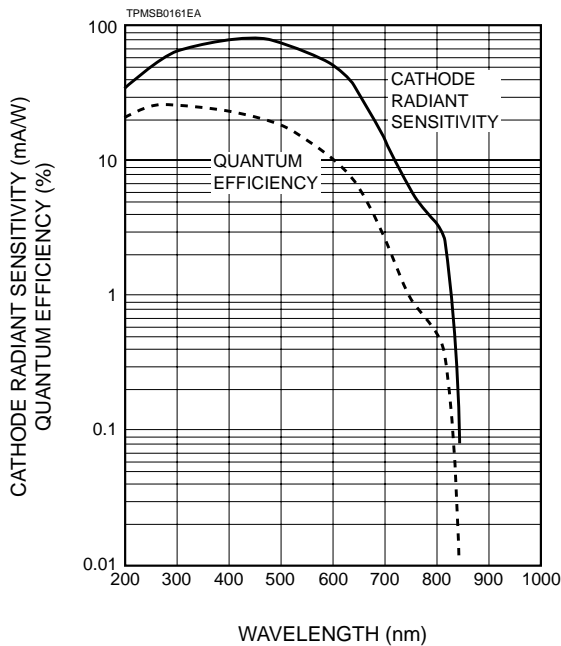


Figure 2: Anode Luminous Sensitivity and Gain Characteristics

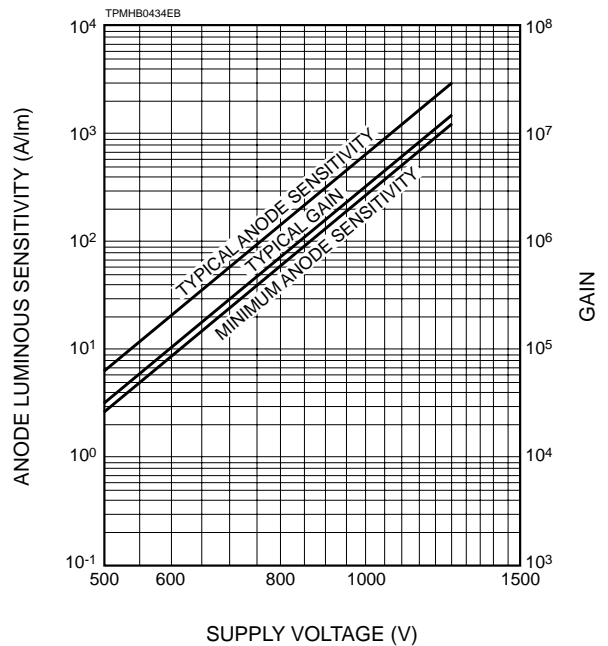


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)

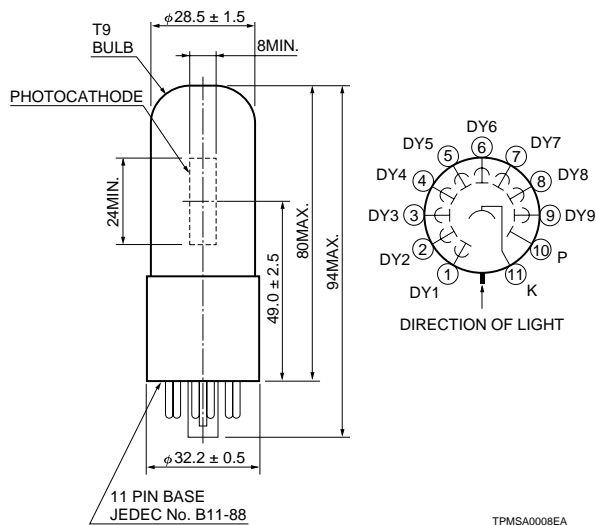
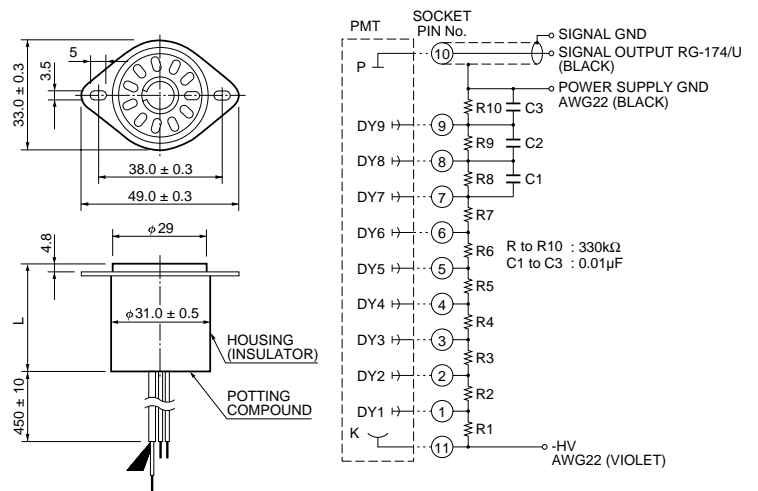


Figure 4: Optional Accessory (Unit: mm)

D Type Socket Assembly E717-21



* MHV/BNC connector type E717-37 is also available.

HAMAMATSU

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