

**Fast Time Response  
10 mm (3/8 Inch) Diameter, 8-stage, Head-on, Bialkali Photocathode**

**FEATURES**

- Coincident Resolving Time  
with BaF<sub>2</sub>-BaF<sub>2</sub>/<sup>22</sup>Na ..... 0.45 ns
- Fast Time Response  
Transit Time Spread (FWHM) ..... 0.6 ns
- Quantum Efficiency at 225 nm ..... 18 %

**GENERAL**

| Parameter                          |                               | Description / Value | Unit |
|------------------------------------|-------------------------------|---------------------|------|
| Spectral Response                  |                               | 160 to 650          | nm   |
| Wavelength of Maximum Response     |                               | 420                 | nm   |
| Photocathode                       | Material                      | Bialkali            | —    |
|                                    | Minimum Effective Area        | φ8                  | mm   |
| Window Material                    |                               | Fused silica        | —    |
| Dynode                             | Structure                     | Linear focused      | —    |
|                                    | Number of Stages              | 8                   | —    |
| Direct Interelectrode Capacitances | Anode to Last Dynode          | 0.7                 | pF   |
|                                    | Anode to All Other Electrodes | 2.0                 | pF   |
| Base                               |                               | 11-pin glass base   | —    |
| Operating Ambient Temperature      |                               | -30 to +50          | °C   |
| Storage Temperature                |                               | -80 to +50          | °C   |
| Weight                             |                               | Approx. 5           | g    |
| Suitable Socket                    |                               | E678-11N (supplied) | —    |

**MAXIMUM RATINGS (Absolute Maximum Values)**

| Parameter             |                           | Value | Unit |
|-----------------------|---------------------------|-------|------|
| Supply Voltage        | Between Anode and Cathode | 1500  | V    |
| Average Anode Current |                           | 0.03  | mA   |

**CHARACTERISTICS (at 25 °C)**

| Parameter  |                                  | Min. | Typ.                  | Max. | Unit  |
|--|----------------------------------|------|-----------------------|------|-------|
| Cathode Sensitivity                                      | Luminous (2856 K)                | 60   | 100                   | —    | μA/lm |
|  | Radiant at 420 nm                | —    | 80                    | —    | mA/W  |
|  | Blue Sensitivity Index (CS 5-58) | —    | 10.0                  | —    | —     |
| Anode Sensitivity  | Luminous (2856 K)                | 30   | 100                   | —    | A/lm  |
|  | Radiant at 420 nm                | —    | 8.0 × 10 <sup>4</sup> | —    | A/W   |
| Gain   |                                  | —    | 1.0 × 10 <sup>6</sup> | —    | —     |
| Anode Dark Current (After 30 minute storage in darkness) |                                  | —    | 2                     | 50   | nA    |
| Time Response  | Anode Pulse Rise Time            | —    | 0.7                   | —    | ns    |
|  | Electron Transit Time            | —    | 9.0                   | —    | ns    |
|  | Transit Time Spread (FWHM)       | —    | 0.6                   | —    | ns    |

**VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE**

| Electrodes         | K | Dy1 | Dy2 | Dy3 | Dy4 | Dy5 | Dy6 | Dy7 | Dy8 | P |
|--------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|---|
| Distribution Ratio | 3 | 1.5 | 1.5 | 1   | 1   | 1   | 1   | 1   | 1   | 1 |

Supply Voltage: 1250 Vdc, K: Cathode, Dy: Dynode, P: Anode

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# PHOTOMULTIPLIER TUBE R2496

Figure 1: Typical Spectral Response

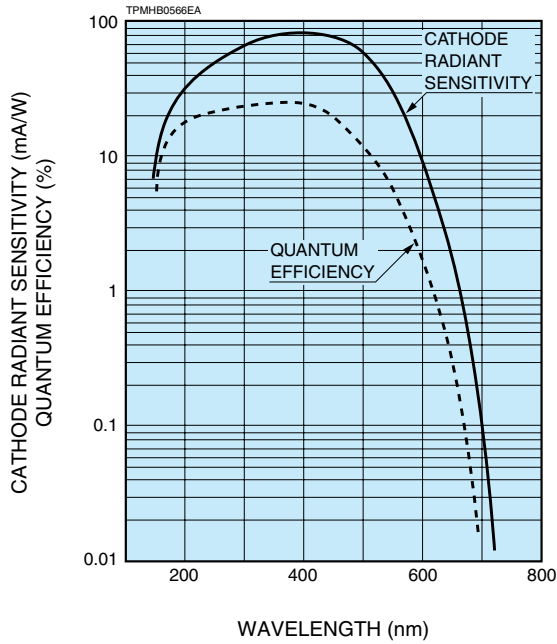


Figure 2: Typical Gain Characteristics

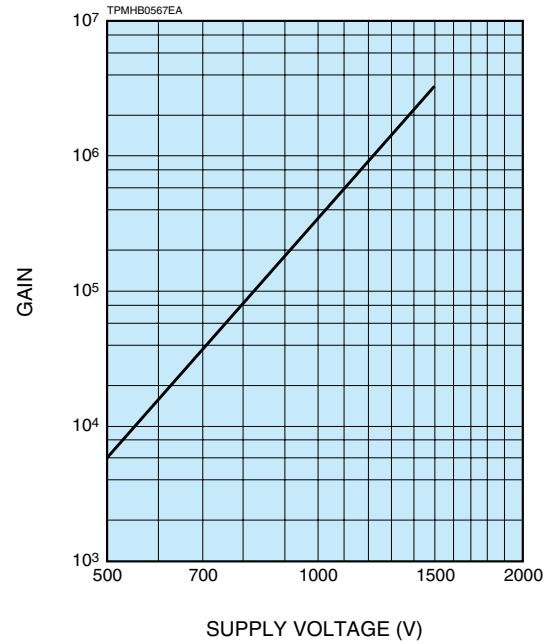
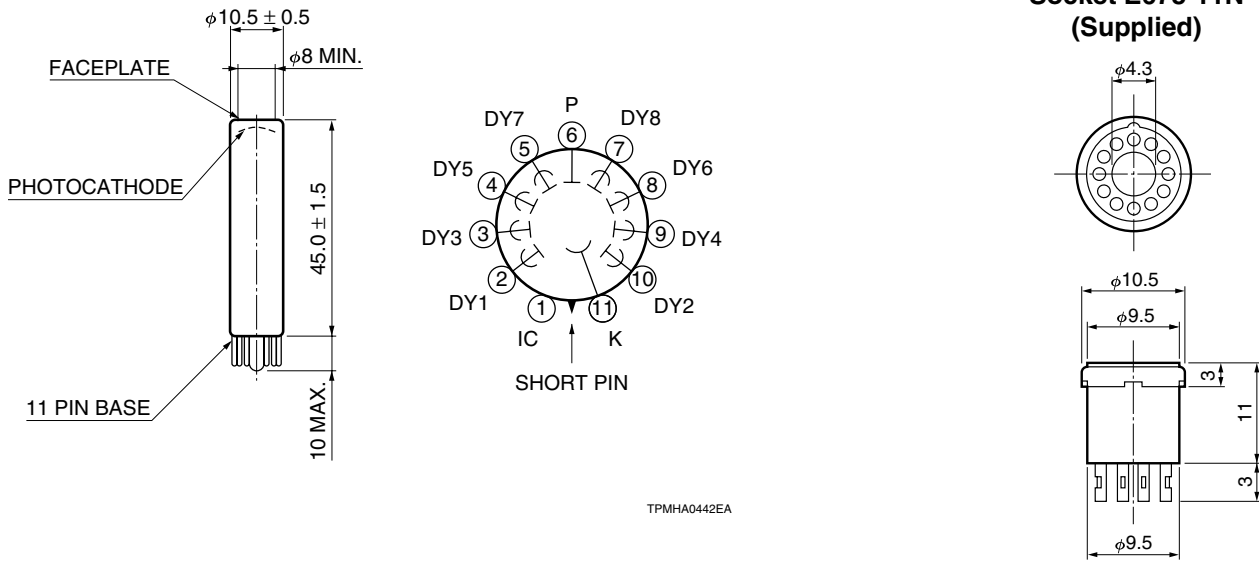


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



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