

Fast Time Response, For High Energy Physics and Scintillation Counting

GENERAL

| Parameter | | Description/Value | Unit |
|--------------------------------|------------------------|---------------------|---------|
| Spectral Response | | 300 to 650 | nm |
| Wavelength of Maximum Response | | 420 | nm |
| Photocathode | Material | Bialkali | — |
| | Minimum Effective Area | 25 | mm dia. |
| Window Material | | Borosilicate glass | — |
| Dynode | Structure | Linear focused | — |
| | Number of Stages | 8 | — |
| Base | | 14-pin glass base | — |
| Suitable Socket | | E678-14C (supplied) | — |

MAXIMUM RATINGS (Absolute Maximum Values)

| Parameter | | Value | Unit |
|-----------------------|-------------------------------|------------|------|
| Supply Voltage | Between Anode and Cathode | 1750 | Vdc |
| | Between Anode and Last Dynode | 300 | Vdc |
| Average Anode Current | | 0.2 | mA |
| Ambient Temperature | | -80 to +50 | °C |

CHARACTERISTICS (at 25°C)

| Parameter | | Min. | Typ. | Max. | Unit |
|--|----------------------------|------|-------------------|------|---------|
| Cathode Sensitivity | Luminous (2856K) | 60 | 95 | — | μA/lm |
| | Radiant at 420nm | — | 88 | — | mA/W |
| | Blue (CS-5-58 filter) | — | 11.0 | — | μA/lm-b |
| Anode Sensitivity | Luminous (2856K) | — | 45 | — | A/lm |
| | Radiant at 420nm | — | 4.4×10^4 | — | A/W |
| Gain | | — | 5×10^5 | — | — |
| Anode Dark Current (after 30 min. storage in darkness) | | — | 5 | 100 | nA |
| Time Response | Anode Pulse Rise Time | — | 1.3 | — | ns |
| | Electron Transit Time | — | 14 | — | ns |
| | Transit Time Spread (FWHM) | — | — | — | ps |
| Pulse Linearity (at ±2% deviation) | | — | 10 (100) | — | mA |

NOTE: Anode characteristics are measured with the voltage distribution ratio A shown below.
() : Pulse linearity is measured with the voltage distribution ratio B shown below.

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

| Electrodes | K | Dy1 | Dy2 | Dy3 | Dy4 | Dy5 | Dy6 | Dy7 | Dy8 | P |
|-------------------|---|-----|-----|-----|------|------|------|------|------|---|
| Ratio A | 4 | 1 | 1.5 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Ratio B (Tapered) | 4 | 1 | 1.5 | 1 | 1.2 | 1.5 | 2 | 3.3 | 3 | |
| Capacitors (μF) | | | | | 0.01 | 0.02 | 0.02 | 0.04 | 0.06 | |

Supply Voltage: 1500Vdc, K: Cathode, Dy: Dynode, P: Anode

PHOTOMULTIPLIER TUBE R7525

Figure 1: Typical Spectral Response

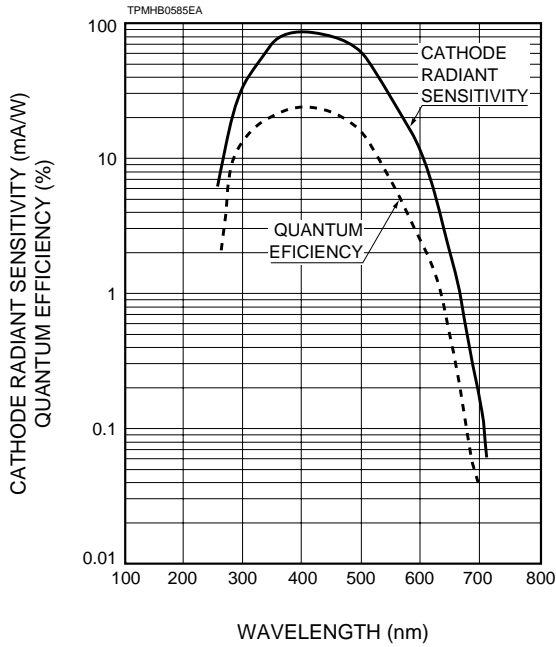


Figure 2: Typical Gain

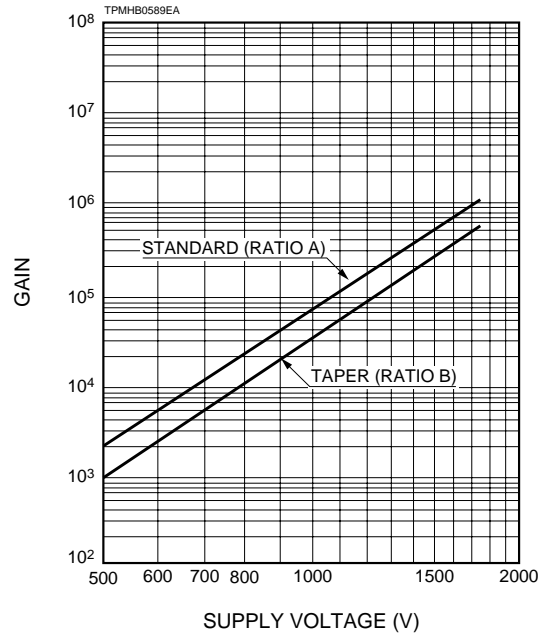
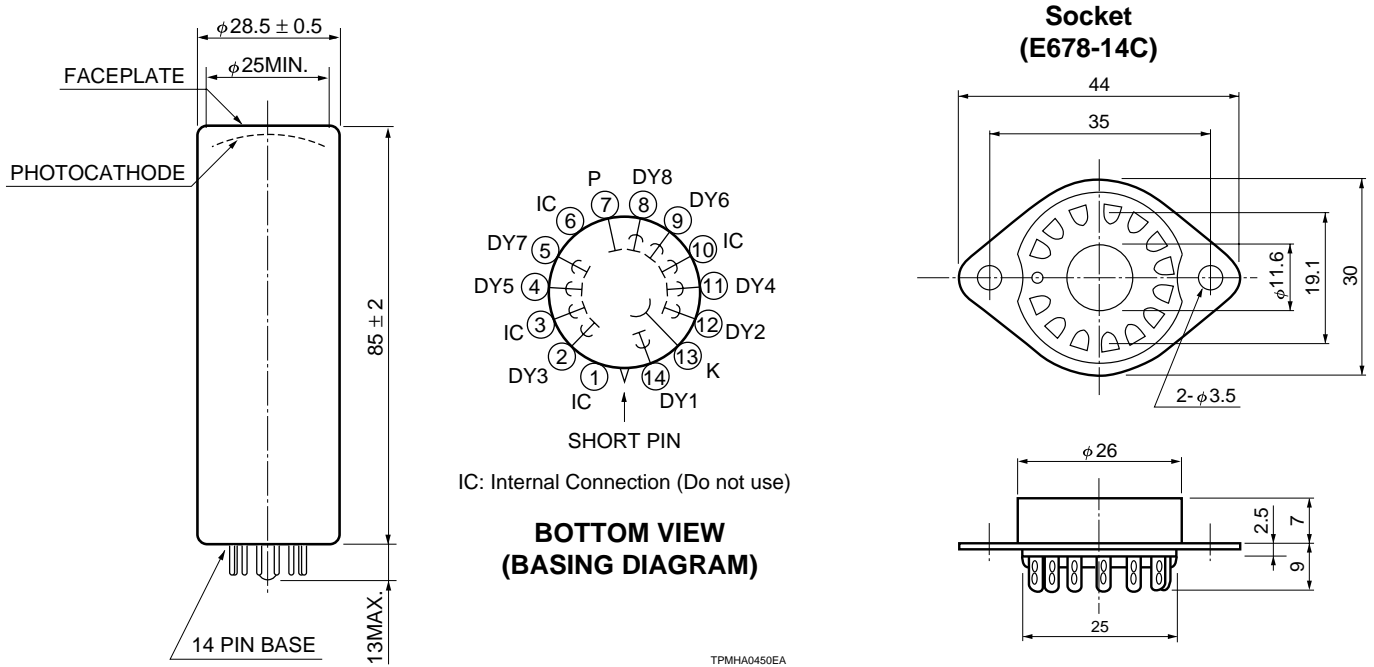


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



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