

**For Scintillation Counting, Fast Time Response
28 mm (1-1/8 Inch) Diameter, Bialkali Photocathode, 10-stage, Head-on Type**

SPECIFICATIONS

GENERAL

| Parameter | | Description / Value | Unit |
|--------------------------------|------------------------|---------------------|------|
| Spectral Response | | 300 to 650 | nm |
| Wavelength of Maximum Response | | 420 | nm |
| Window Material | | Borosilicate glass | — |
| Photocathode | Material | Bialkali | — |
| | Minimum Effective Area | φ25 | mm |
| Dynode | Structure | Linear focused | — |
| | Number of Stages | 10 | — |
| Base | | JEDEC No. B20-102 | — |
| Operating Ambient Temperature | | -30 to +50 | °C |
| Storage Temperature | | -80 to +50 | °C |
| Suitable Socket | | E678-20B (supplied) | — |

MAXIMUM RATINGS (Absolute Maximum Values)

| Parameter | | Value | Unit |
|-----------------------|---------------------------|-------|------|
| Supply Voltage | Between Anode and Cathode | 1750 | V |
| Average Anode Current | | 0.1 | mA |

CHARACTERISTICS (at 25 °C)

| Parameter | | Min. | Typ. | Max. | Unit |
|--|----------------------------------|------|-----------------------|------|-------|
| Cathode Sensitivity | Luminous (2856 K) | 70 | 95 | — | μA/lm |
| | Blue Sensitivity Index (CS 5-58) | 9 | 10 | — | — |
| Anode Sensitivity | Luminous (2856 K) | — | 190 | — | A/lm |
| Gain | | — | 2.0 × 10 ⁶ | — | — |
| Anode Dark Current (After 30 minute storage in darkness) | | — | 5 | 50 | nA |
| Time Response | Anode Pulse Rise Time | — | 1.1 | — | ns |
| | Electron Transit Time | — | 13 | — | ns |
| | Transit Time Spread (FWHM) | — | 200 | — | ps |
| Pulse Linearity (±2 % deviation) | | — | 10 | — | mA |

NOTE: Anode characteristics are measured with a voltage distribution ratio and supply voltage shown below.

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

| Electrodes | K | G | Dy1 | Dy2 | Dy3 | Dy4 | Dy5 | Dy6 | Dy7 | Dy8(Acc) | Dy9 | Dy10 | P |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|-----|------|---|
| Ratio | 1.3 | 4.8 | 1.5 | 1.5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Supply Voltage: 1500 V, K: Cathode, Dy: Dynode, P: Anode, G: Grid, Acc to be connected Dy8

PHOTOMULTIPLIER TUBE R9980

Figure 1: Typical Spectral Response

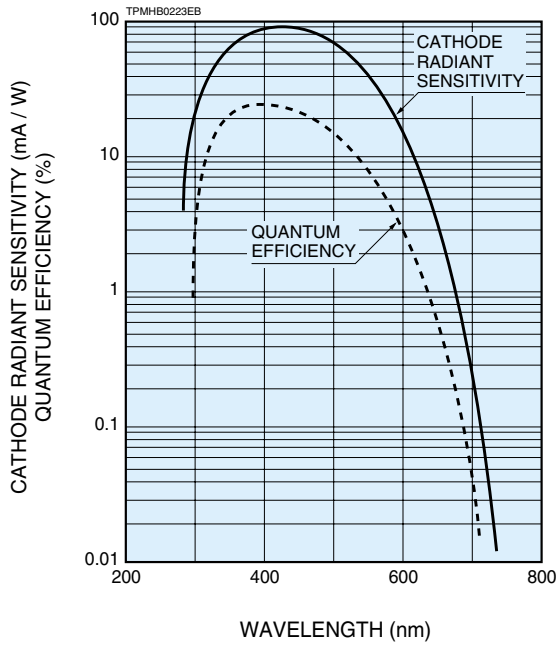


Figure 2: Typical Gain

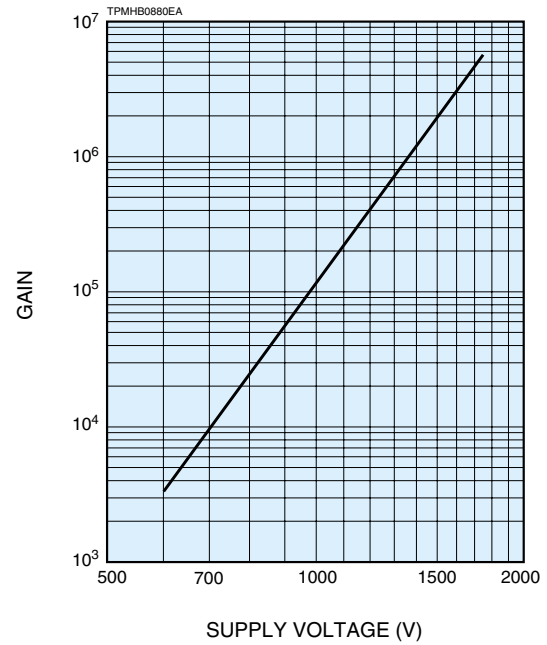
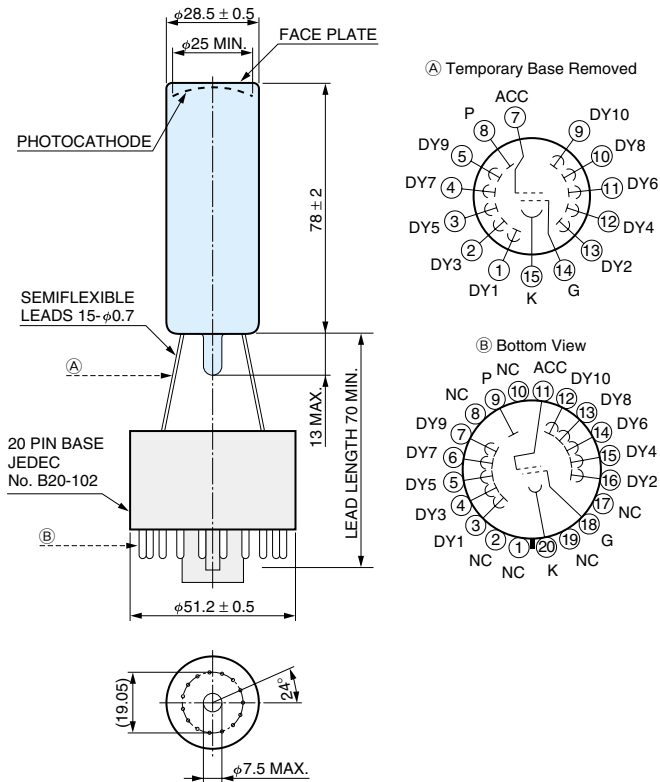


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



NOTES

The material in the R9980 contains Copper-beryllium (CuBe) Alloy. Please follow the applicable regulations regarding disposal of hazardous materials and industrial wastes in your country, state, region or province.

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