

Ruggedized, High Temperature (175°C) PMT for Oil Well Logging 13mm (1/2 Inch) Diameter, 10-Stage, Head-On Type

GENERAL

| Parameter | | Description/Value | Unit |
|--------------------------------|------------------------|---------------------|---------|
| Spectral Response | | 300 to 650 | nm |
| Wavelength of Maximum Response | | 375 | nm |
| Photocathode | Material | High temp. bialkali | — |
| | Minimum Effective Area | 10 | mm dia. |
| Window Material | | Borosilicate glass | — |
| Dynode | Structure | Linear focused | — |
| | Number of Stages | 10 | — |
| Suitable Socket | | E678-13A (supplied) | — |

MAXIMUM RATINGS (Absolute Maximum Values)

| Parameter | | Value | Unit |
|-----------------------|-------------------------------|-------------|------|
| Supply Voltage | Between Anode and Cathode | 1800 | Vdc |
| | Between Anode and Last Dynode | 250 | Vdc |
| Average Anode Current | | 0.02 | mA |
| Ambient Temperature | | -80 to +175 | °C |

CHARACTERISTICS (at 25°C)

| Parameter | | Min. | Typ. | Max. | Unit |
|---|-----------------------|------|---------------------|------|---------|
| Cathode Sensitivity | Luminous (2856K) | 20 | 40 | — | μA/lm |
| | Blue (CS 5-58 filter) | — | 6 | — | μA/lm-b |
| Anode Sensitivity | Luminous (2856K) | 10 | 20 | — | A/lm |
| Gain | | — | 5 × 10 ⁵ | — | — |
| Anode Dark Current (after 30min. storage in darkness) | | — | 0.5 * | 10 | nA |
| Time Response | Anode Pulse Rise Time | — | 2 | — | ns |
| | Electron Transit Time | — | 20 | — | ns |

* 1000nA at 175°C

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

| Electrodes | K | Dy1 | Dy2 | Dy3 | Dy4 | Dy5 | Dy6 | Dy7 | Dy8 | Dy9 | Dy10 | P |
|------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|---|
| Ratio | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

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

ENVIRONMENTAL TESTING

Shock 100g's, 11 ± 1ms, 3 impact shocks per direction (6 directions)
 Vibration Sine 20g's, 50 to 2000Hz, 1oct per minute, 1 sweep per axis (3 axes)

PHOTOMULTIPLIER TUBE R4177-01

Figure 1: Typical Spectral Response

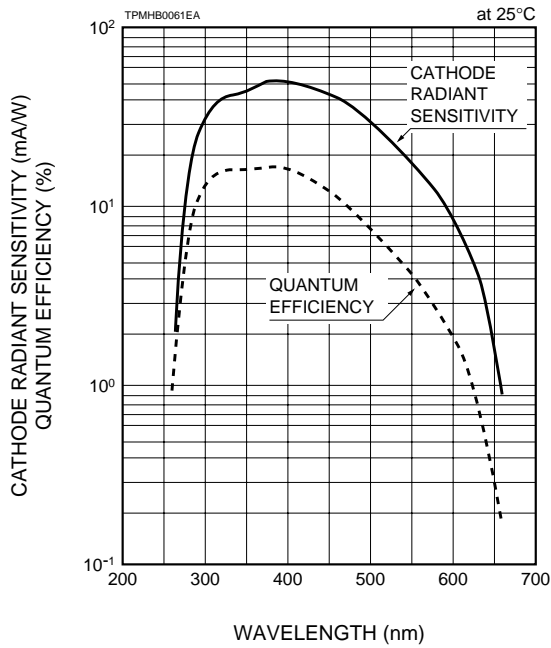


Figure 2: Typical Gain

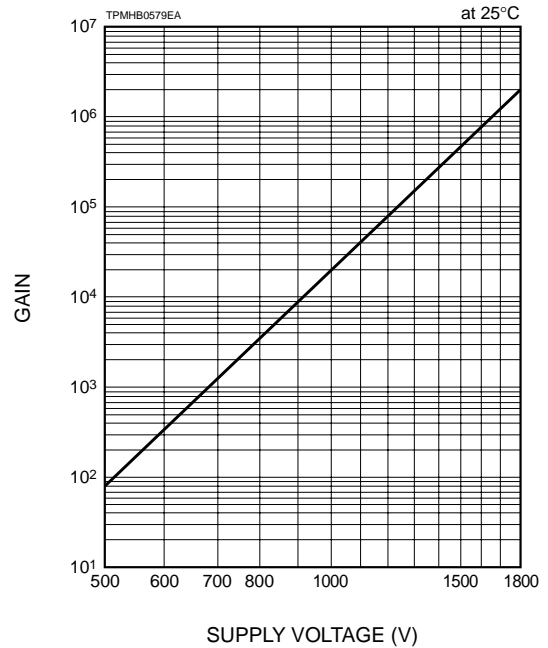
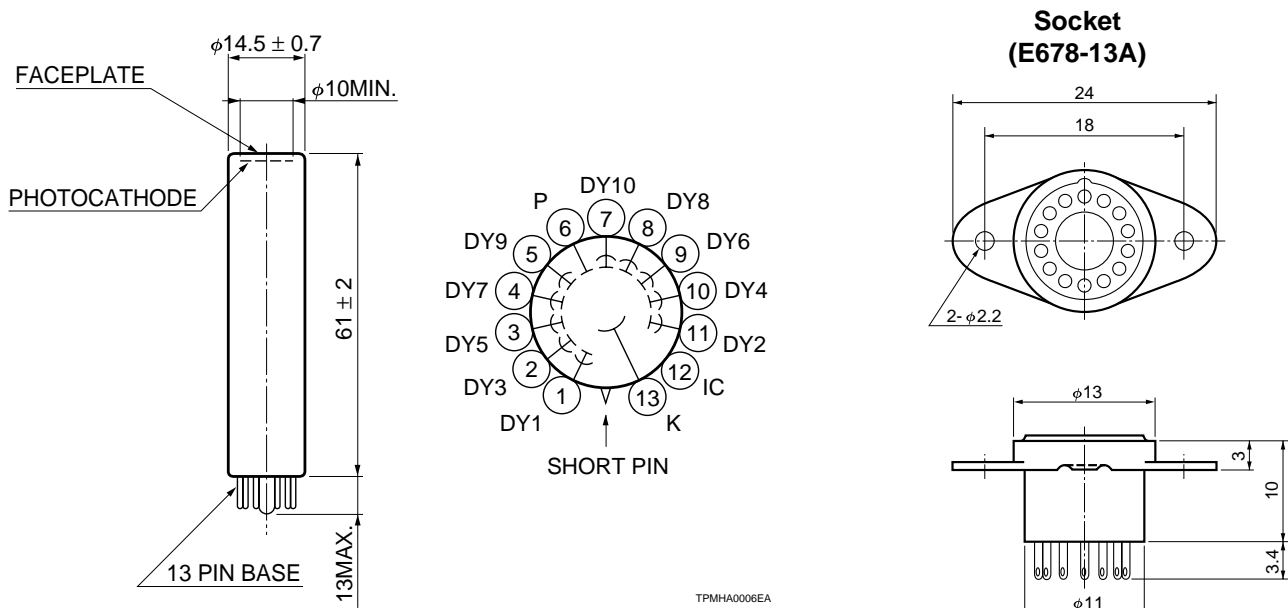


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



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