

**Synthetic Silica Window¹⁾, High UV-VIS Sensitivity, Photon Counting²⁾,
Ruggedized, Low Profile, 25 mm (1 Inch) Diameter,
Bialkali Photocathode, 10-stage, Head-on Type**

GENERAL

Parameter		Description	Unit
Spectral Response		160 to 650	nm
Peak Wavelength		420	nm
Photocathode	Material	Bialkali	—
	Minimum Effective Area	φ 22	mm
Window Material		Synthetic silica	—
Dynode	Structure	Linear focused	—
	Number of Stages	10	—
Base		14 pin glass base	—
Suitable Socket		E678-14C (supplied)	—
Operating Ambient Temperature		-30 to +50	°C
Storage Temperature		-80 to +50	°C

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1250	V
	Between Anode and Last Dynode	250	V
Average Anode Current		0.1	mA

CHARACTERISTICS (at 25 °C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856 K)	60	90	—	μA/lm
	Radiant at 420 nm	—	85	—	mA/W
	Blue Sensitivity Index (CS 5-58)	9	10.5	—	—
Anode Sensitivity	Luminous (2856 K)	50	180	—	A/lm
Gain		—	2.0 × 10 ⁶	—	—
Anode Dark Current (after 30 min storage in darkness)		—	3	20	nA
Time Response	Anode Pulse Rise Time	—	1.5	—	ns
	Electron Transit Time	—	17	—	ns
	Transit Time Spread (T.T.S.)	—	0.9	—	ns
Pulse Linearity at ±2 % deviation		—	30	—	mA

NOTE: Anode characteristics are measured with the voltage distribution ratio shown below.

STANDARD VOLTAGE DIVIDER AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	P
Ratio	3	1	1	1	1	1	1	1	1	1	1	1

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

ENVIRONMENTAL TESTING (Only initial production tubes are tested)¹⁾

Shock.....1000 m/s², 1 ms, 3 impact shocks per direction (6 directions)

Vibration.....200 m/s², 50 Hz to 2000 Hz, 1 oct per minute, 3 sweeps per axis (3 axes)

1) To hold the PMT, never apply any pressure on the graded seal portion of the bulb.

2) Photon counting selection is recommended.

PHOTOMULTIPLIER TUBE R7378A

Figure 1: Typical Spectral Response

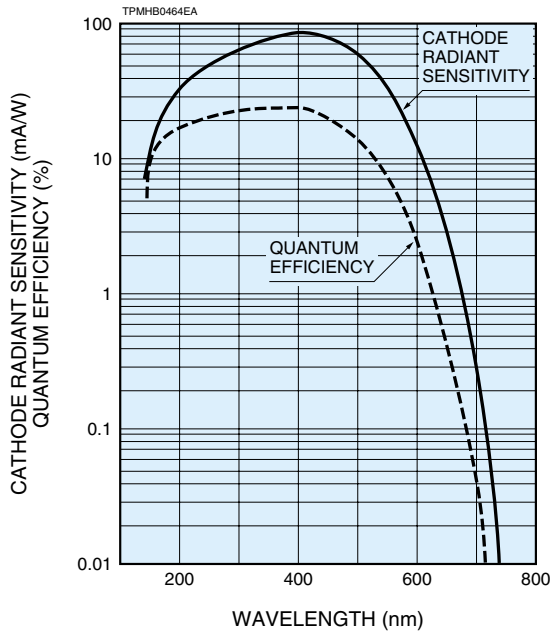


Figure 2: Typical Gain and Dark Current Characteristics

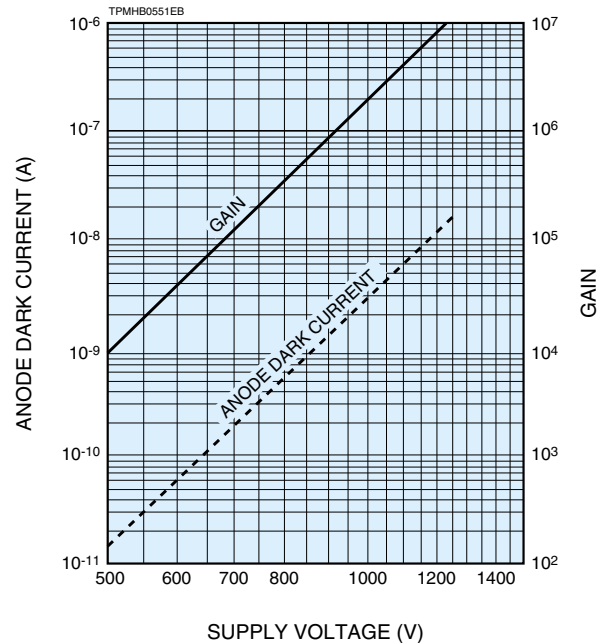
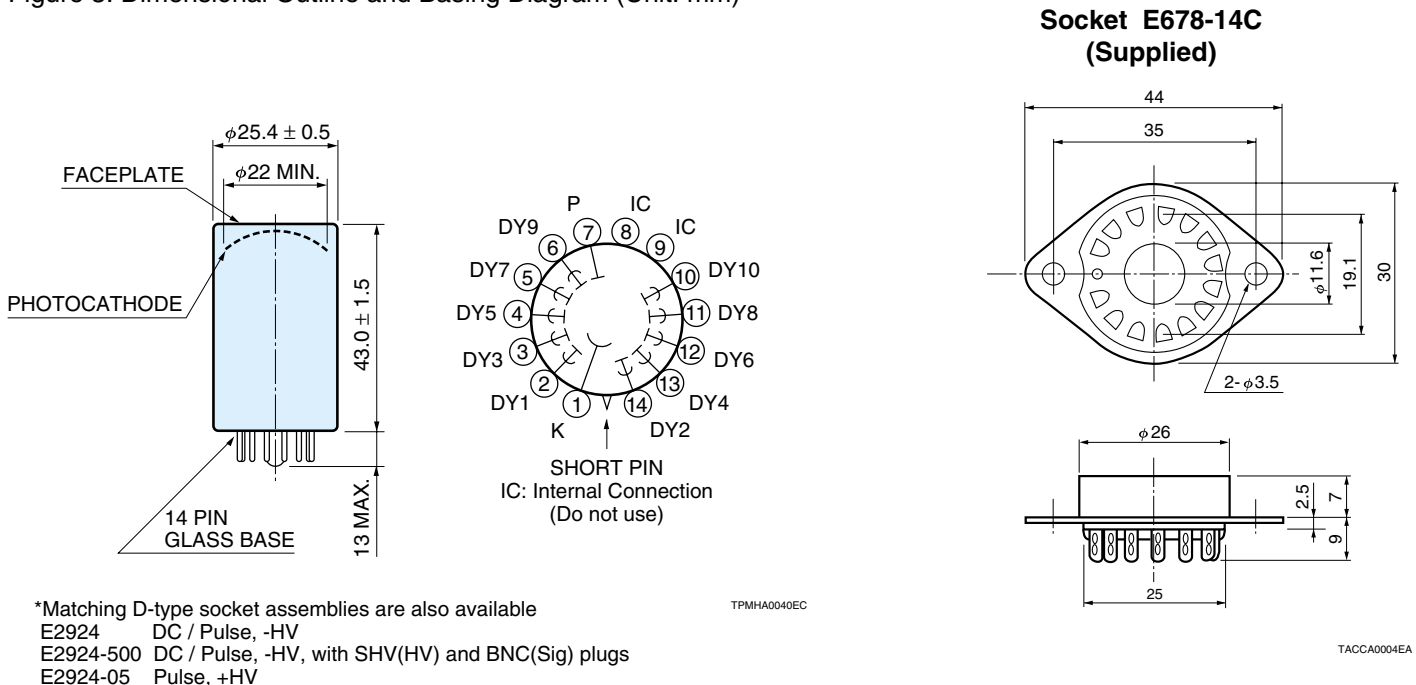


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



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