

**For Photon Counting, Low Light Level Detection, Ruggedized,
Low Profile, 25 mm (1 Inch) Diameter, Low Noise Bialkali Photocathode,
70 °C Operation, 10-stage, Head-on Type**

GENERAL

Parameter		Description	Unit
Spectral Response		300 to 650	nm
Peak Wavelength		375	nm
Photocathode	Material	Low Noise Bialkali	—
	Minimum Effective Area	22	mm dia.
Window Material		Borosilicate glass	—
Dynode	Structure	Linear focused	—
	Number of Stages	10	—
Base		14 pin glass base	—
Suitable Socket		E678-14C (supplied)	—
Operating Ambient Temperature		-30 to +70	°C
Storage Temperature		-80 to +70	°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) with Standard Voltage Divider

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856 K)	30	50	—	μA/lm
	Quantum Efficiency at 375 nm	—	18	—	%
	Blue Sensitivity Index (CS 5-58)	5	7	—	—
Anode Sensitivity	Luminous (2856 K)	45	100	—	A/lm
Gain		1.5×10^6	2.0×10^6	—	—
Anode Dark Current (after 30 min storage in darkness)		—	0.5	4	nA
Anode Dark Count		—	20	60	s ⁻¹
Time Response	Anode Pulse Rise Time	—	1.5	—	ns
	Electron Transit Time	—	17	—	ns

NOTE: Anode characteristics are measured with a 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

Shock.....1000 m/s², 11 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)

PHOTOMULTIPLIER TUBE R3550A

Figure 1: Typical Spectral Response

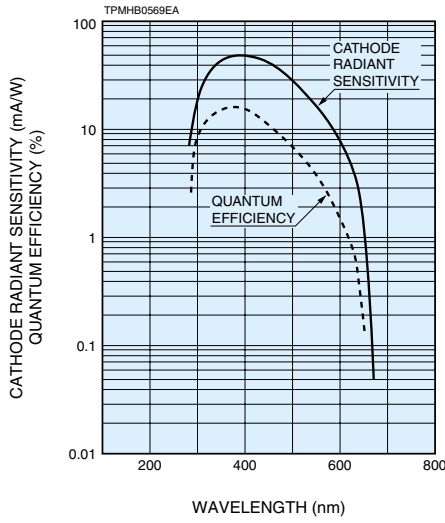


Figure 2: Typical Gain and Dark Current Characteristics

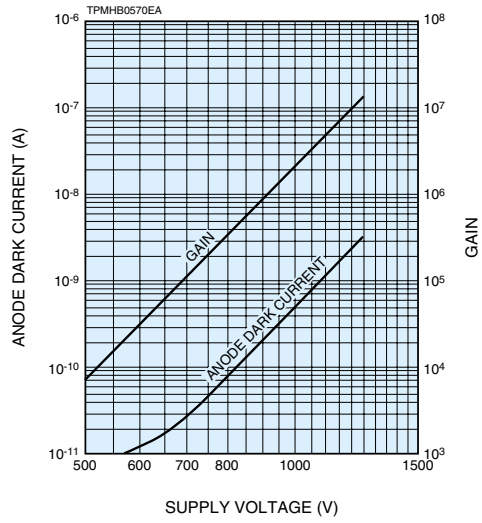


Figure 3: Typical Characteristics of Dark Count

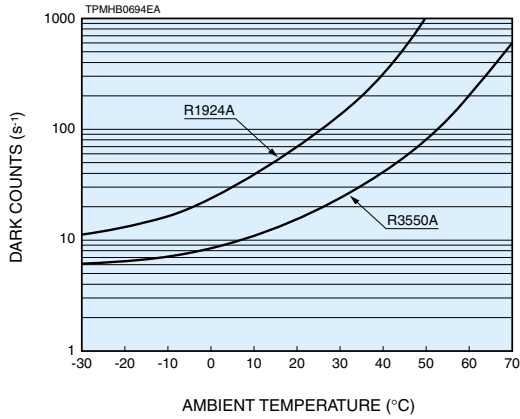
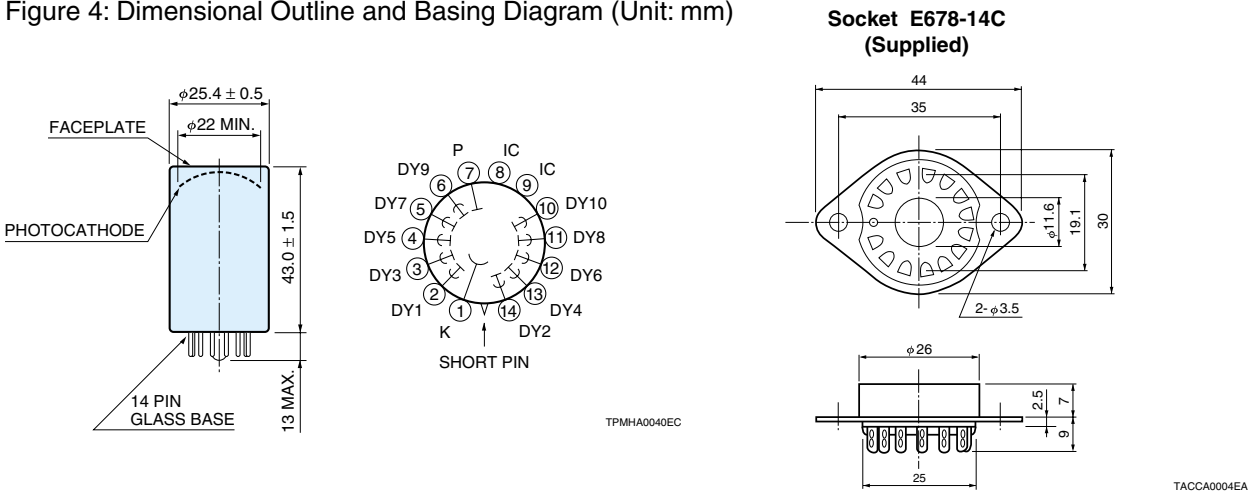


Figure 4: Dimensional Outline and Basing Diagram (Unit: mm)



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