

For Positron CT Scanner Using BaF₂ Scintillator 10mm (3/8 Inch) Diameter, 8-Stage, Head-On, Bialkali Photocathode

FEATURES

- Coincidence Resolving Time
with BaF₂-BaF₂/²²Na 0.45ns
- Fast Time Response
Transit Time Spread (FWHM) 0.6ns
- Quantum Efficiency at 225nm 18%

GENERAL

Parameter		Description/Value	Unit
Spectral Response		160 to 650	nm
Wavelength of Maximum Response		420	nm
Photocathode	Material	Bialkali	—
	Minimum Useful Area	8	mm dia.
Window Material		Fused silica	—
Dynode	Structure	Linear focused	—
	Number of Stages	8	—
Direct Interelectrode Capacitances	Anode to Last Dynode	0.7	pF
	Anode to All Other Electrodes	2.0	pF
Base		11-pin glass base	—
Weight		Approx. 5	g
Suitable Socket		E678-11N (supplied)	—

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1500	Vdc
Average Anode Current		0.03	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	—	76	—	mA/W
	Blue	—	9.5	—	μA/lm-b
Anode Sensitivity	Luminous (2856K)	30	100	—	A/lm
	Radiant at 420nm	—	8.0 × 10 ⁴	—	A/W
Gain		—	1.1 × 10 ⁶	—	—
Anode Dark Current (after 30 min. storage in darkness)		—	2	50	nA
Time Response	Anode Pulse Rise Time	—	0.7	—	ns
	Electron Transit Time	—	9.0	—	ns

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	P
Distribution Ratio	3	1.5	1.5	1	1	1	1	1	1	1

Supply Voltage: 1250Vdc, K: Cathode, Dy: Dynode, P: Anode

PHOTOMULTIPLIER TUBE R2496

Figure 1: Typical Spectral Response

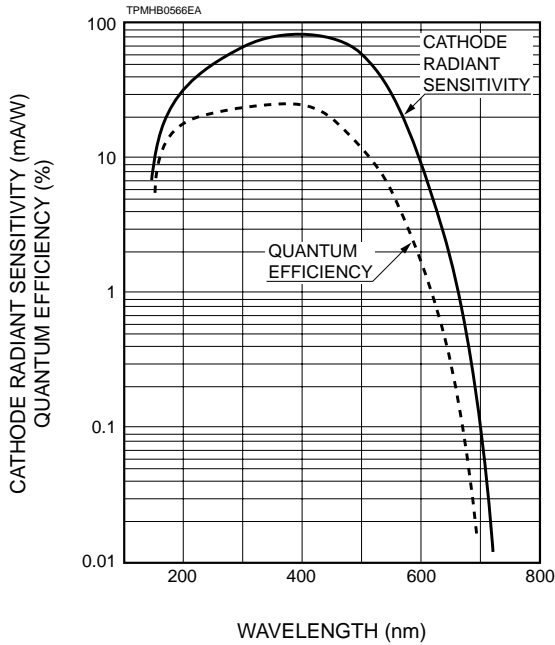


Figure 2: Typical Gain Characteristics

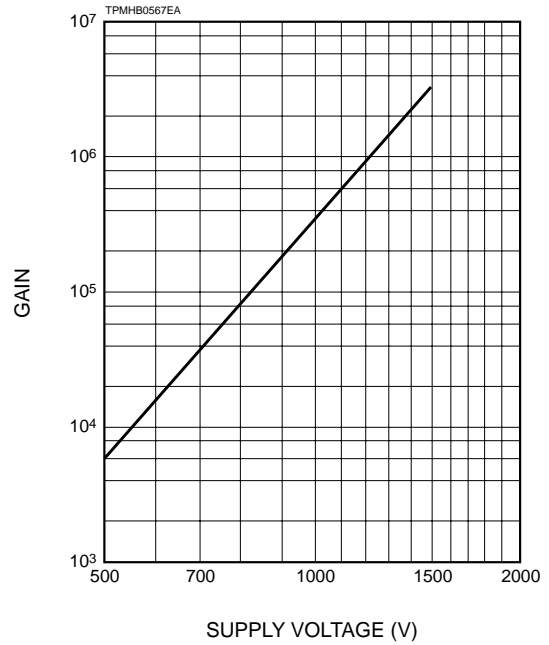
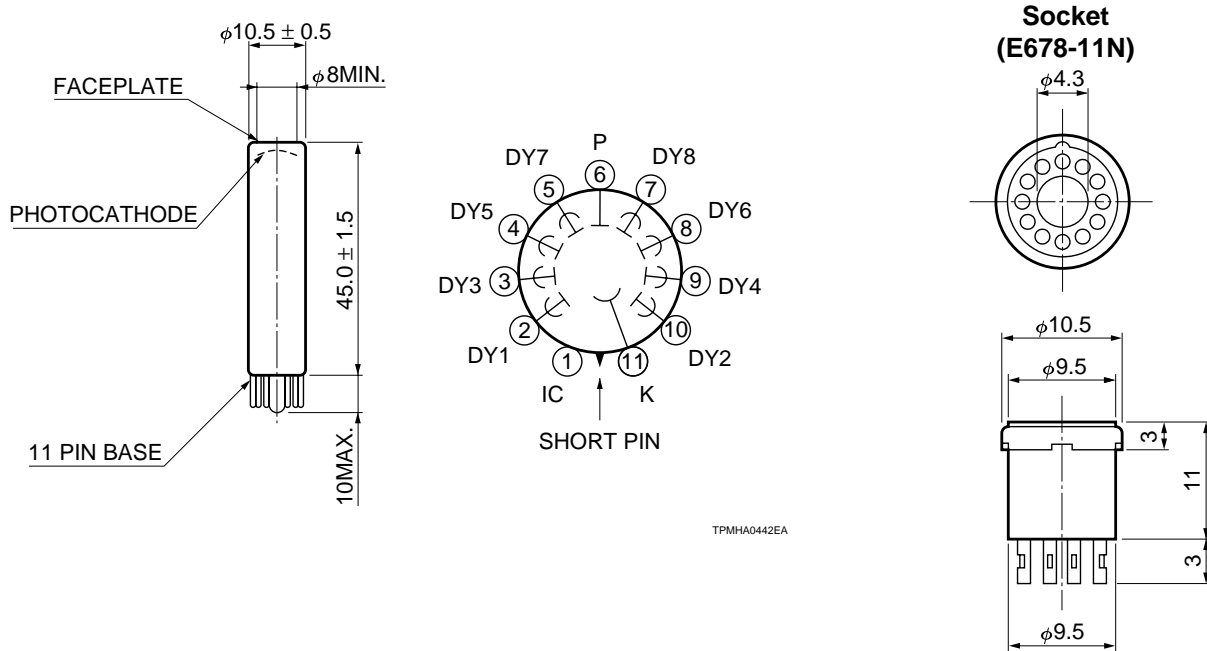


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



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