

For Photon Counting 5 mm × 8 mm Bialkali Photocathode
51 mm (2 Inch) Diameter, Head-on Type

GENERAL

Parameter		Description / Value	Unit
Spectral Response	R464	300 to 650	nm
	R585	160 to 650	nm
Wavelength of Maximum Response		420	nm
Photocathode	Material	Bialkali	—
	Minimum Effective Area	5 × 8	mm
Window Material	R464	Borosilicate glass	—
	R585	Synthetic silica glass	—
Dynode	Structure	Box and Grid	—
	Number of Stages	12	—
Operating Ambient Temperature		-30 to +50	°C
Storage Temperature		-80 to +50	°C
Base		21-pin glass base	—
Suitable Socket		E678-21C (supplied)	—

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1500	V
Average Anode Current		0.01	mA

CHARACTERISTICS (at 25 °C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856 K)	30	50	—	μA/lm
	Radiant at 420 nm	—	50	—	mA/W
Anode Sensitivity	Luminous (2856 K)	100	300	—	A/lm
	Radiant at 420 nm	—	3.0 × 10 ⁵	—	A/W
Gain		—	6.0 × 10 ⁶	—	—
Anode Dark Counts (after 30 min storage in darkness)		—	5	15	s ⁻¹
Time Response	Anode Pulse Rise Time	—	13	—	ns
	Electron Transit Time	—	70	—	ns

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

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrode	K	G	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	Dy11	Dy12	P
Ratio	4	0	2.5	1.5	1	1	1	1	1	1	1	1	1	1	1

Supply Voltage: 1000 Vdc, K: Cathode, Dy: Dynode, G: Grid, P: Anode

PHOTOMULTIPLIER TUBES R464, R585

Figure 1: Typical Spectral Response

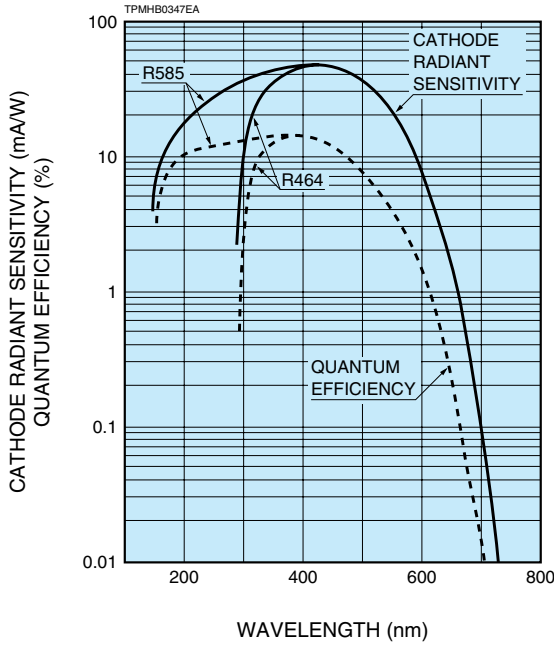


Figure 2: Typical Gain

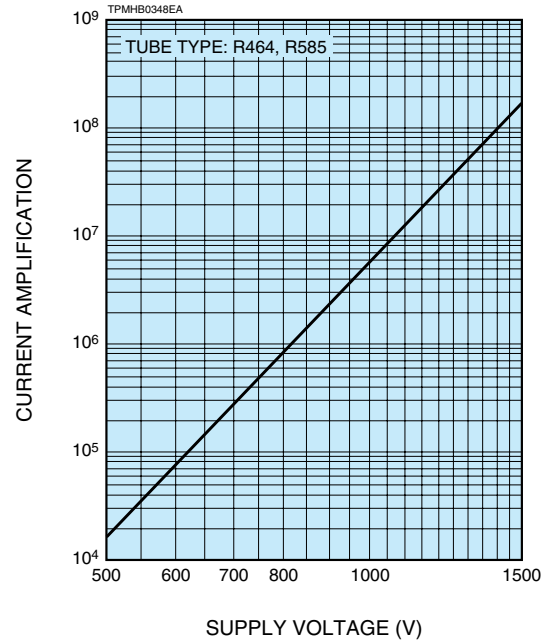


Figure 3: Typical Single Pulse Height Distribution of Dark Current

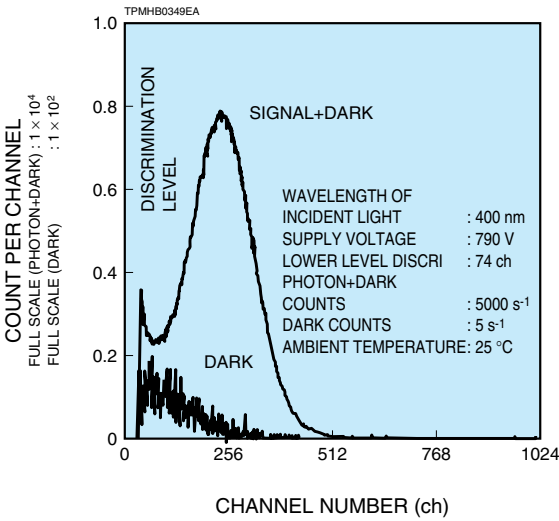
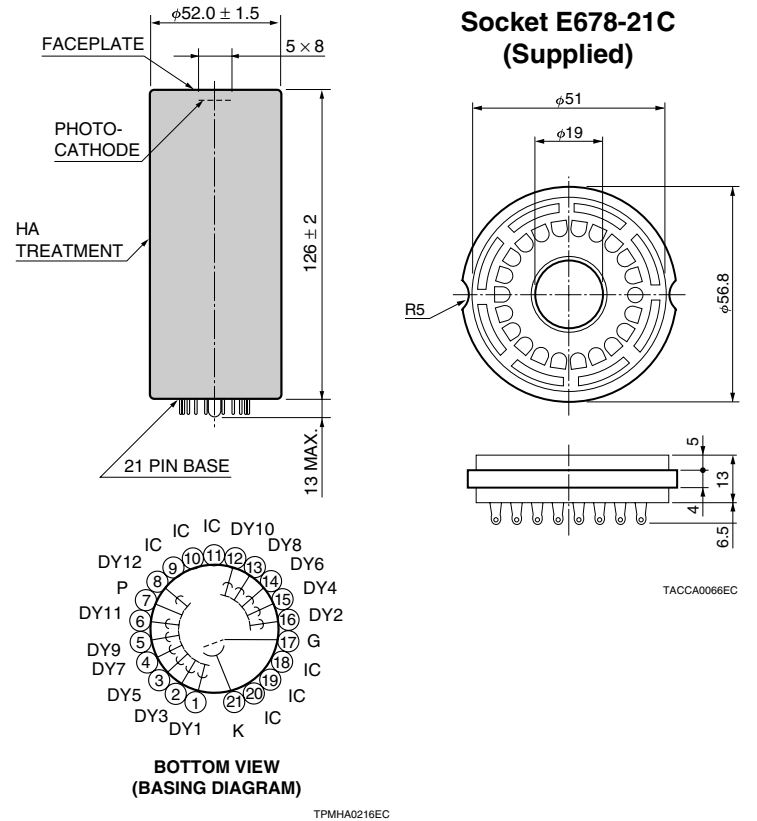


Figure 4: Dimensional Outline and Basing Diagram (Unit: mm)



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