

FEATURES

- Effective Area: 2400cm²
- R3600-02: Bare Tube Type
- R3600-06: With Waterproof Voltage Divider Type

APPLICATIONS

- For High Energy Physics

GENERAL

Parameter		Description/Value	Unit
Spectral Response		300 to 650	nm
Wavelength of Maximum Response		420	nm
Photocathode	Material	Bialkali	—
	Effective Area	2400	cm ² Typ.
Window Material		Borosilicate glass	—
Dynode	Structure	Venetian blind	—
	Number of Stages	11	—
Direct Interelectrode Capacitances (Approx.)	Anode to Last Dynode	36	pF
	Anode to All Other Dynode	40	pF
Base		20-pin base JEDEC B20-102	—
Weight	R3600-02	8	kg
	R3600-06	10	kg
Suitable Socket		E678-20A (supplied)	—

CHARACTERISTICS (at 25°C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856K)	—	60	—	μA/lm
	Radiant at 420nm	—	65	—	mA/W
	Blue (CS 5-58 filter)	—	8.0	—	μA/lm-b
	Quantum Efficiency at 390nm	—	20	—	%
Anode Sensitivity ¹⁾	Luminous (2856K)	—	600	—	A/lm
	Radiant at 420nm	—	6.5 × 10 ⁵	—	A/W
Gain ¹⁾		—	1.0 × 10 ⁷	—	—
Supply Voltage for Gain of 10 ⁷		—	2000	2500	V
Anode Dark Current (after 30min. storage in darkness) ¹⁾		—	200	1000	nA
Dark Count (after dark condition for 15 hours) ¹⁾		—	25	80	kcps
Time Response ¹⁾	Anode Pulse Rise Time	—	10	—	ns
	Electron Transit Time	—	95	—	ns
	Transit Time Spread (FWHM) ²⁾	—	5.5	—	ns
Single Photoelectron	PHD (Peak to Valley Ratio)	—	1.7	—	—
Magnetic characteristics (at 200mG/20μT)	Sensitivity Degradation	—	15	—	%

1) Measured with the condition shown in below.

2) Measured with 0.25 photoelectrons detection threshold (at single photoelectron/ event).

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	F2	F1	F3	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	Dy11	P
Ratio	5	1	2	0.02	3	1	1	1	1	1	1	1	1	1	1	1
Capacitors in μF														0.01	0.01	0.01

Supply Voltage: 2000Vdc, K: Cathode, Dy: Dynode, P: Anode, F: Focus

PHOTOMULTIPLIER TUBE R3600-02, -06

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	2500	Vdc
	Between Anode and Last Dynode	300	V
Average Anode Current		0.1	mA
Average Cathode Current		100	nA
Ambient Temperature		0 to +50	°C
Pressure		6	atm

Figure 1: Typical Spectral Response

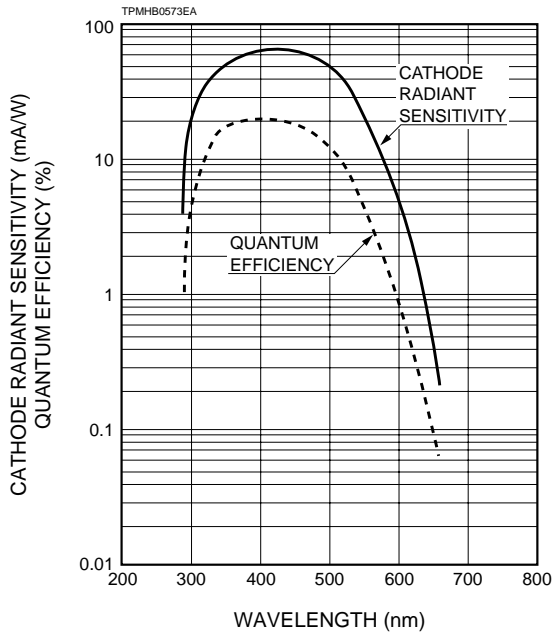


Figure 2: Anode Sensitivity, Gain and Dark Current Characteristics

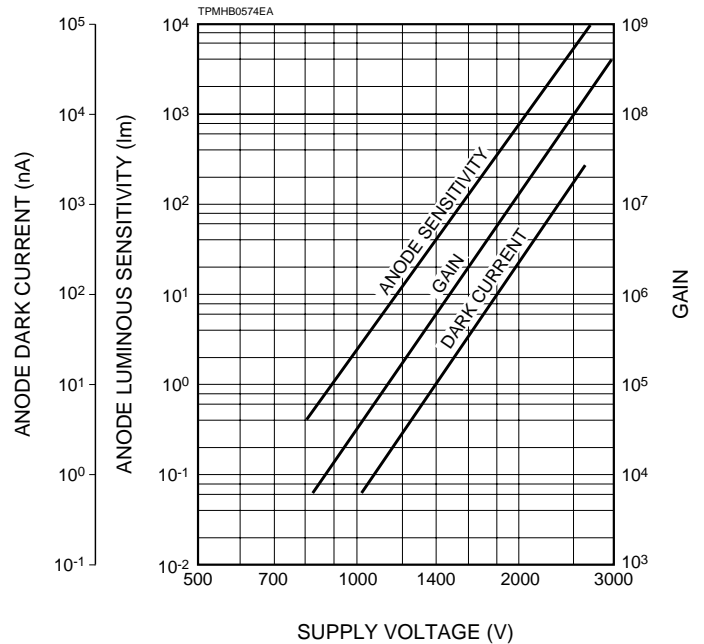


Figure 3: Typical Time Response

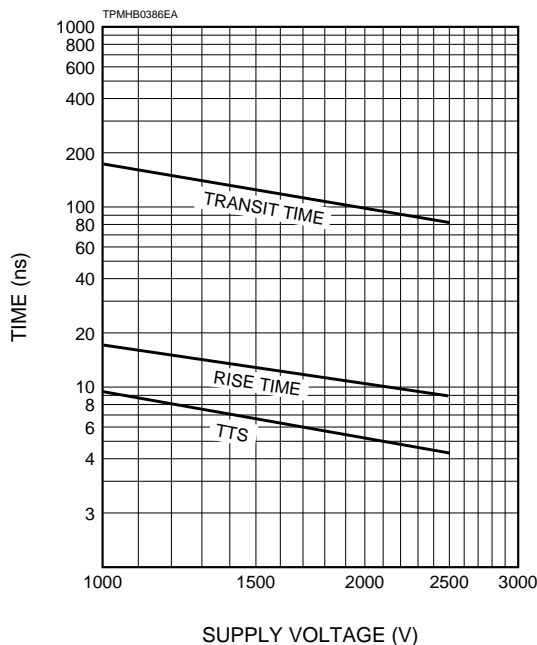


Figure 4: Typical Temperature Coefficient of Anode Sensitivity

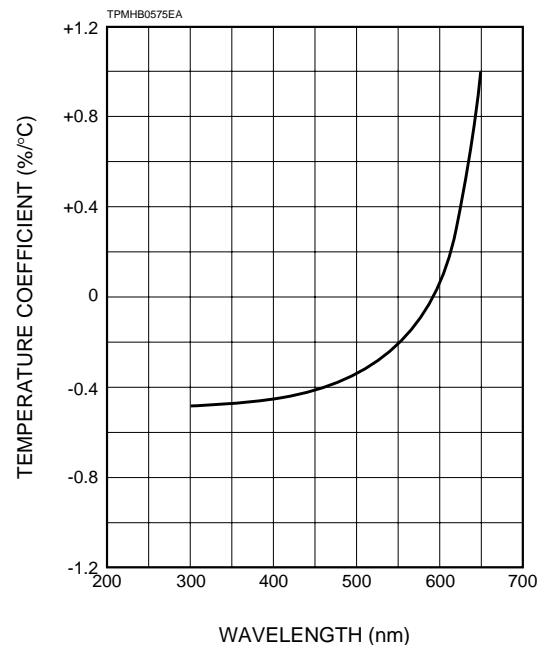


Figure 5: Typical Temperature Characteristic of Dark Count

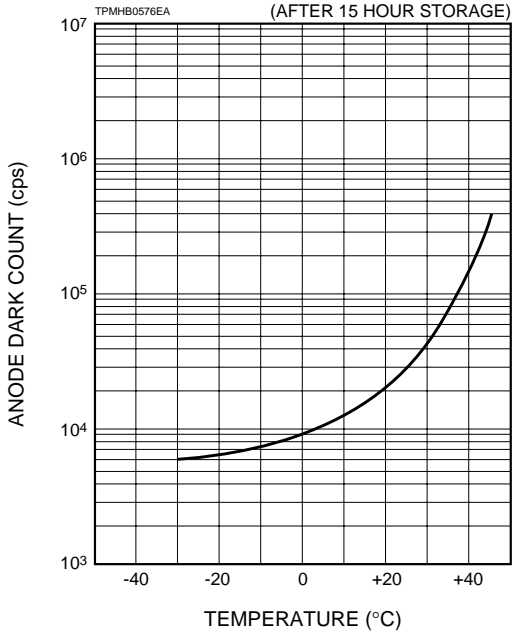


Figure 6: Pulse Height Distribution

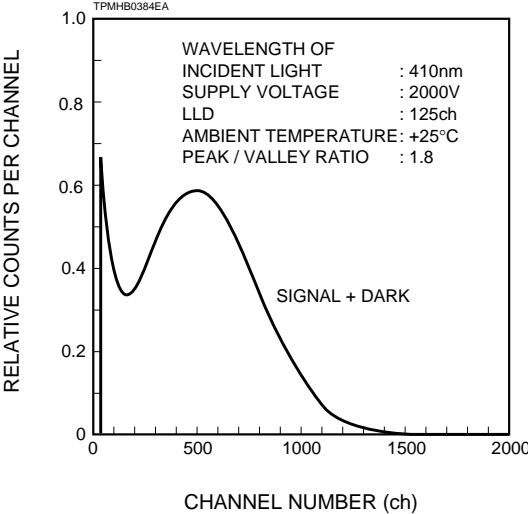
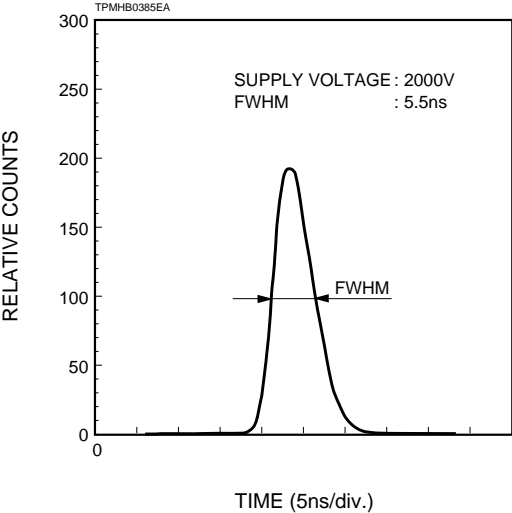


Figure 7: Transit Time Spread



PHOTOMULTIPLIER TUBE R3600-02, -06

Figure 8: Dimensional Outline and Voltage Divider for R3600-02 (Unit: mm)

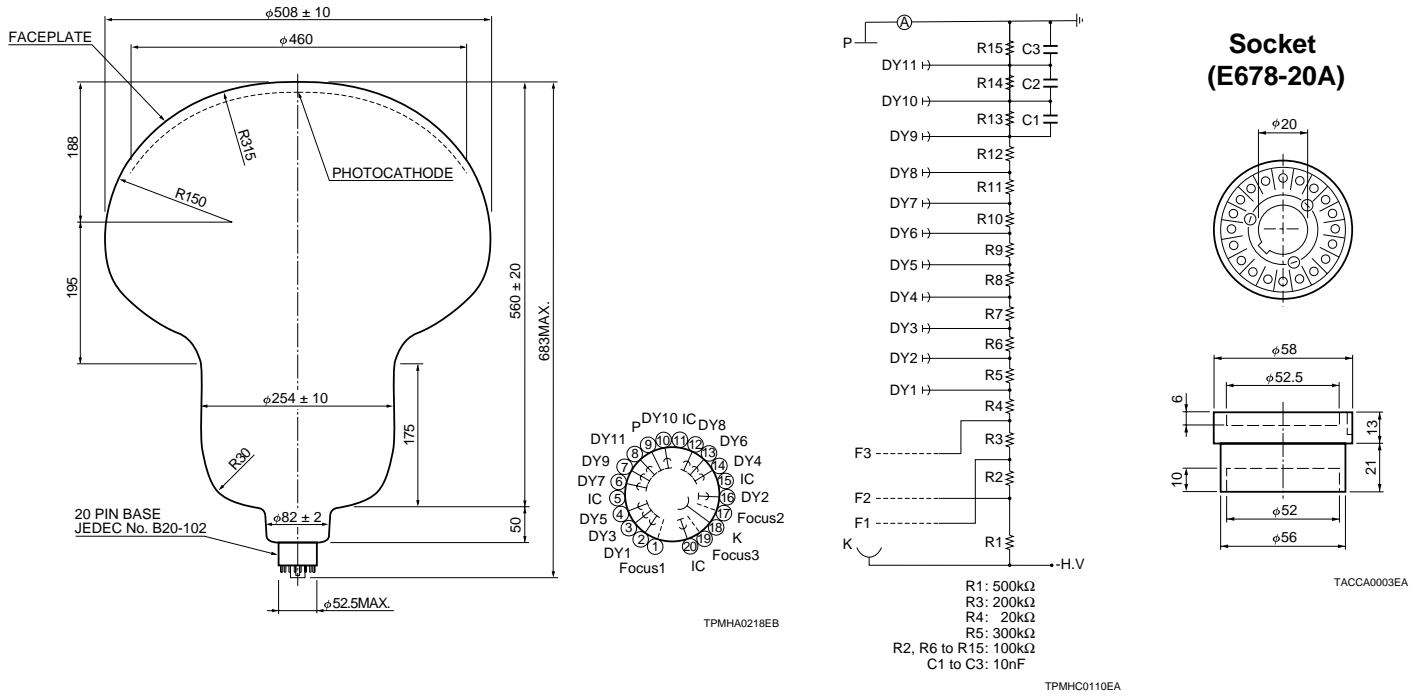
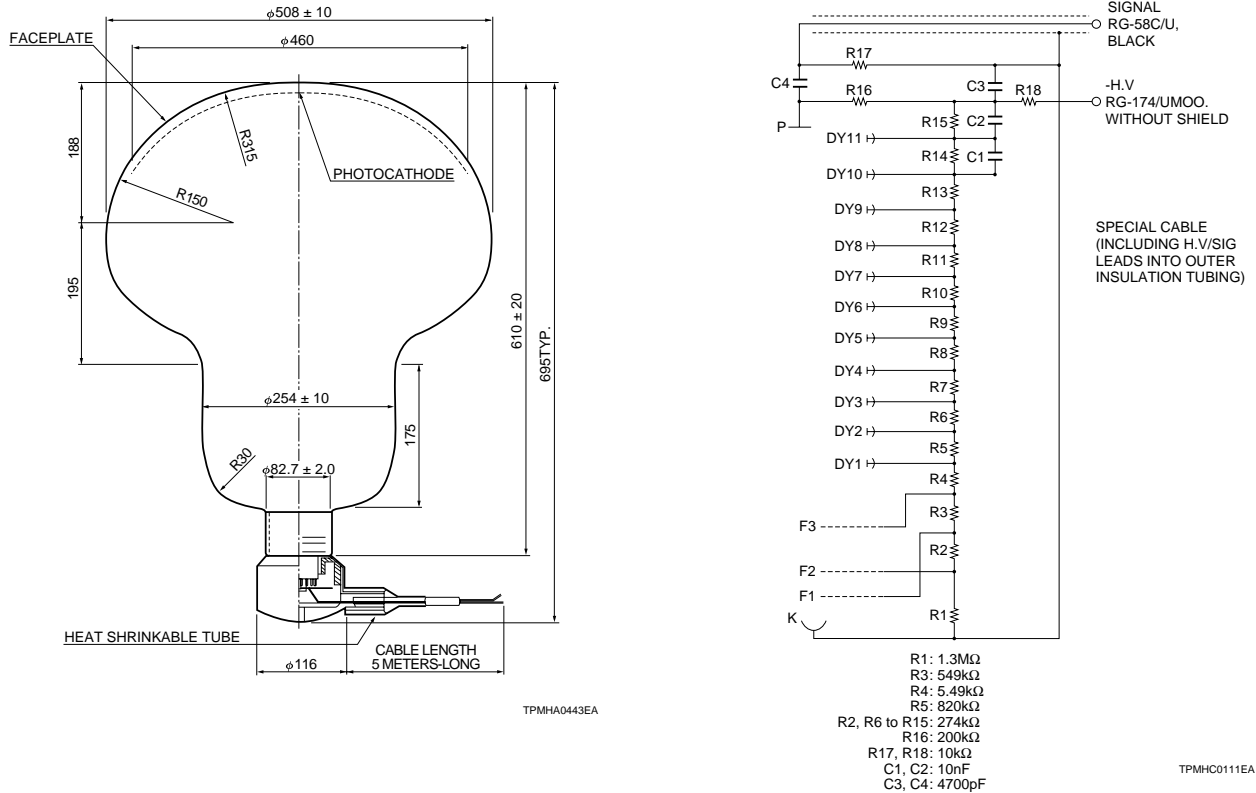


Figure 9: Dimensional Outline and Voltage Divider for R3600-06 (Unit: mm)



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