

HAMAMATSU

PHOTOMULTIPLIER TUBE R9800

For Scintillation Counting, Fast Time Response
25 mm (1 Inch) Diameter, Bialkali Photocathode, 8-stage, Head-on Type

SPECIFICATIONS

GENERAL

Parameter		Description / Value	Unit
Spectral Response		300 to 650	nm
Wavelength of Maximum Response		420	nm
Window Material		Borosilicate glass	—
Photocathode	Material	Bialkali	—
	Minimum Effective Area	$\phi 22$	mm
Dynode	Structure	Linear focused	—
	Number of Stages	8	—
Base		Flying lead type	—
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	1500	V
Average Anode Current		0.1	mA

CHARACTERISTICS (at 25 °C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856 K)	—	95	—	$\mu\text{A/lm}$
	Blue Sensitivity Index (CS 5-58)	—	11	—	—
Anode Sensitivity	Luminous (2856 K)	—	95	—	A/lm
Gain		—	1.0×10^6	—	—
Anode Dark Current (After 30 minute storage in darkness)		—	5	50	nA
Time Response	Anode Pulse Rise Time	—	1.0	—	ns
	Electron Transit Time	—	11	—	ns
	Transit Time Spread (FWHM)	—	270	—	ps
Pulse Linearity ($\pm 2\%$ deviation)		—	30	—	mA

NOTE: Anode characteristics are measured with a voltage distribution ratio and supply voltage shown below.

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	P
Ratio	4	1.5	1.5	1	1	1	1	1	1	1

Supply Voltage: 1300 V, K: Cathode, Dy: Dynode, P: Anode

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Figure 1: Typical Spectral Response

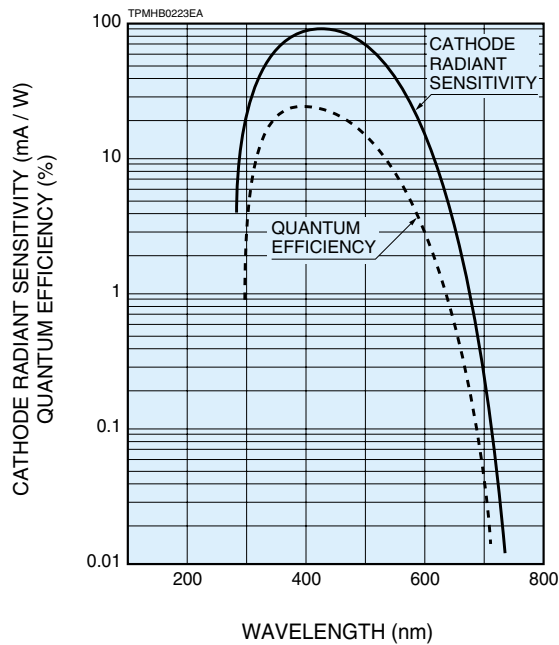


Figure 2: Typical Gain

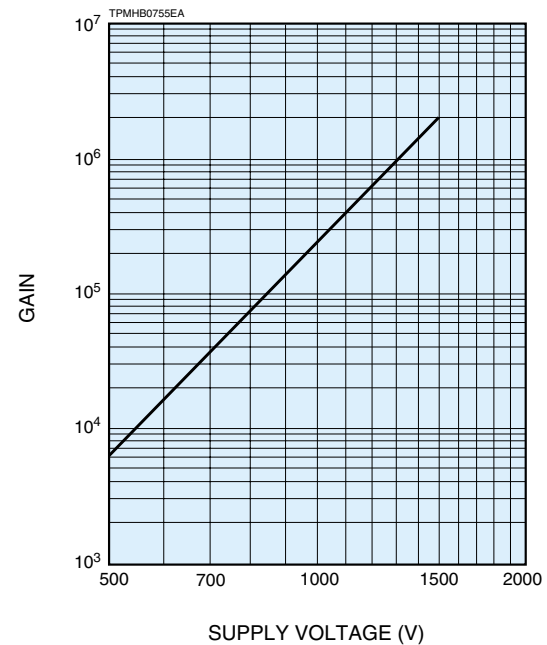
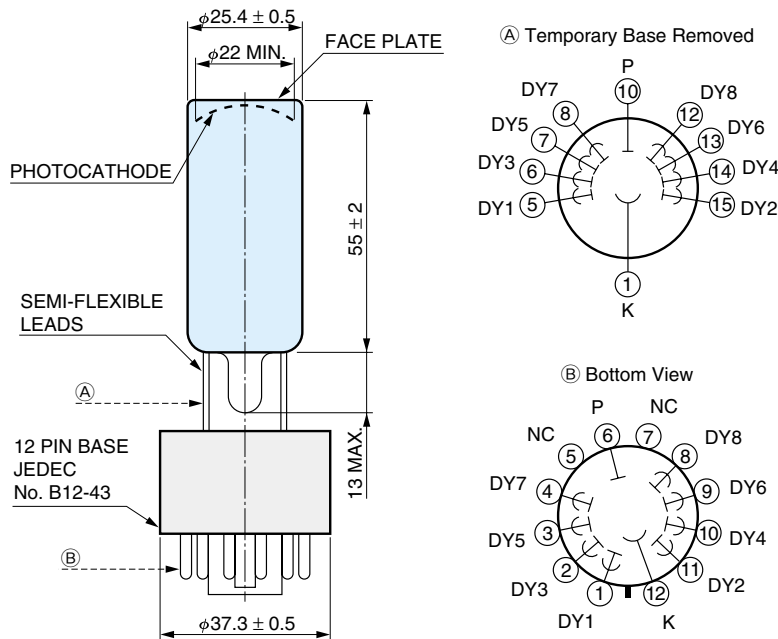


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



TPMHA0521EB

NOTES

The material in the R9800 contains beryllium. Please follow the applicable regulations regarding disposal of hazardous materials and industrial wastes in your country, state, region or province.

HAMAMATSU

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