HAMAMATSU

PHOTOMULTIPLIER TUBE
R1288A

For High Temperature Scintillation Counting, Ruggedized, Low Profile, 25 mm (1 Inch) Diameter, High Temp. Bialkali Photocathode, 10-stage, Head-on Type

GENERAL

Parameter		Description	Unit
Spectral Response		300 to 650	nm
Peak Wavelength		375	nm
Photocathode	Material	High Temp. Bialkali	—
	Minimum Effective Area	22	mm dia.
Window Material		Borosilicate glass	—
Dynode	Structure	Linear focused	—
	Number of Stages	10	—
Base configuration		Flying Lead Temporary Base	—
Suitable Socket		E678-12A (supplied)	—
Operating Ambient Temperature		-30 to +175	°C
Storage Temperature		-80 to +175	°C

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1800	V
	Between Anode and Last Dynode	250	V
Average Anode Current		0.02	mA

CHARACTERISTICS (at 25 °C) with Standard Voltage Divider

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856 K)	20	40	—	μA/lm
	Quantum Efficiency at 375 nm	—	16.9	—	%
	Blue Sensitivity Index (CS 5-58)	4	6	—	—
Anode Sensitivity	Luminous (2856 K)	8	15	—	A/lm
Gain		—	3.8×10^5	—	—
Anode Dark Current (after 30 min storage in darkness)		—	0.1	10	nA
Time Response	Anode Pulse Rise Time	—	1.3	—	ns
	Electron Transit Time	—	13	—	ns

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

CHARACTERISTICS (at 175 °C) with Standard Voltage Divider

Parameter	Min.	Typ.	Max.	Unit
Anode Dark Current (after 30 min storage in darkness)	—	1000	—	nA

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	

Supply Voltage: 1500 V, K: Cathode, Dy: Dynode, P: Anode

ENVIRONMENTAL TESTING

Shock.....10 000 m/s^2, 0.5 ms, 3 impact shocks per direction (6 directions)
Vibration.....300 m/s^2, 50 Hz to 2000 Hz, 1 oct per minute, 3 sweeps per axis (3 axes)

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Figure 1: Typical Spectral Response

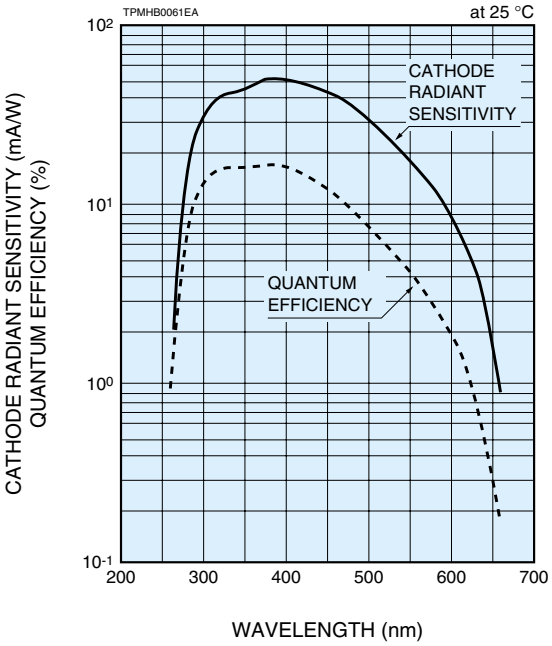


Figure 2: Typical Gain Characteristics

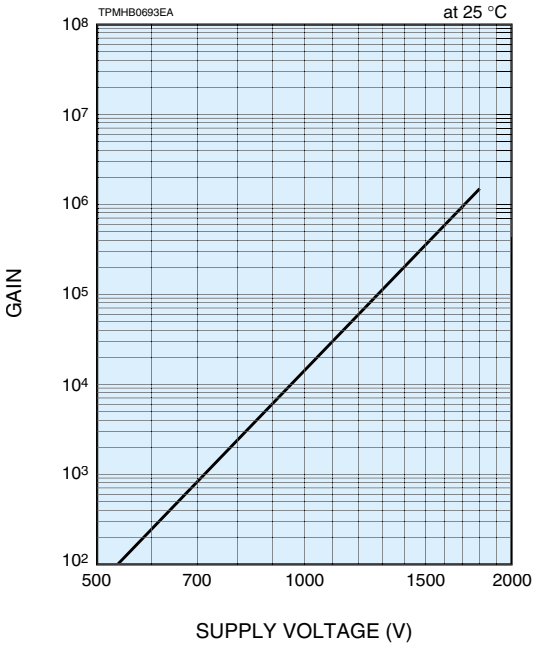
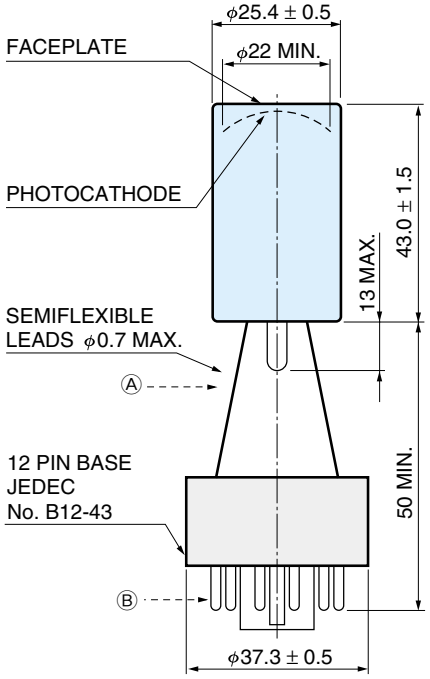
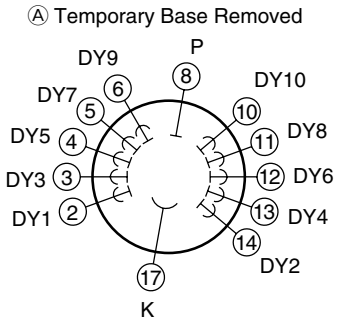
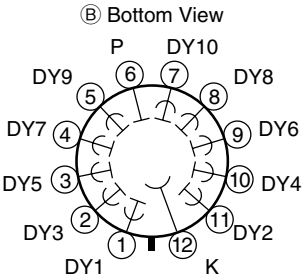


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)







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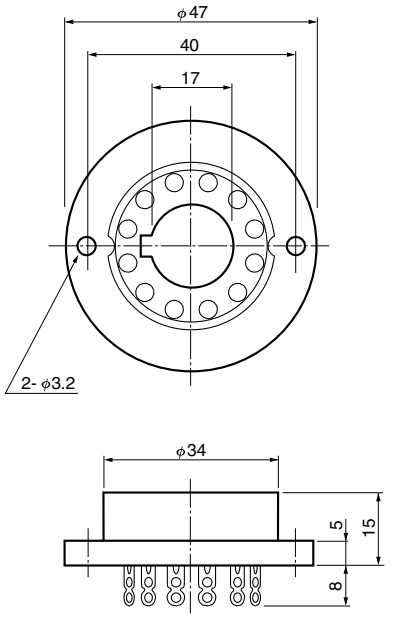
Socket E678-12A (Supplied)



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