HAMAMATSU

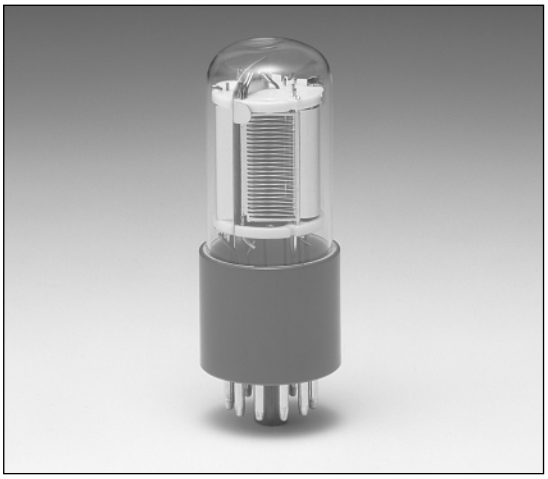
PHOTOMULTIPLIER TUBE R4632

For Single Photon Counting, Dark Counts 50 s^{-1} Typ. at 25 °C
For Extremely Low Light Level Detection
28 mm (1-1/8 Inch) Diameter, 9-stage, Multialkali Photocathode, Side-On Type
185 nm to 850 nm Spectral Response

SPECIFICATIONS

GENERAL

Parameter		Description/Value	Unit
Spectral Response		185 to 850	nm
Wavelength of Maximum Response		430	nm
Photocathode	Material	Multialkali	—
	Minimum Effective Area	8 × 24	mm
Window Material		UV glass	—
Dynode	Structure	Circular-cage	—
	Number of Stages	9	—
Direct Interelectrode Capacitances	Anode to Last Dynode	Approx. 4	pF
	Anode to All Other Electrodes	Approx. 6	pF
Base		11-pin base JEDEC No. B11-88	—
Weight		Approx. 45	g
Operating Ambient Temperature		-30 to +50	°C
Storage Temperature		-30 to +50	°C
Suitable Socket		E678–11A (Sold Separately)	—
Suitable Socket Assembly		E717–63 (Sold Separately)	—



MAXIMUM RATINGS (Absolute Maximum Values)

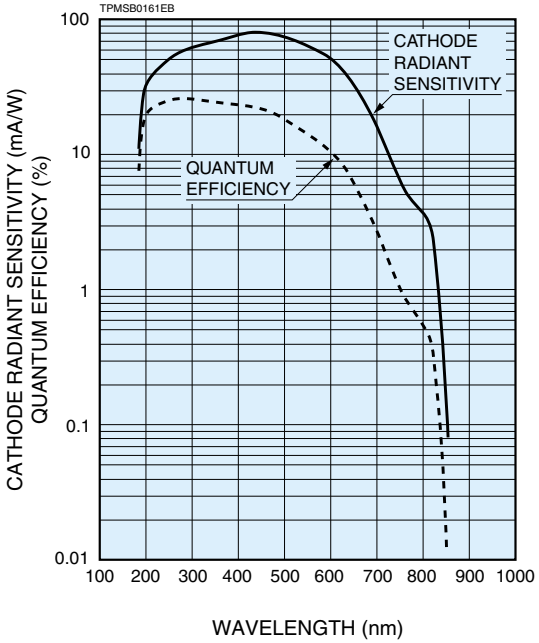
Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1250	V
	Between Anode and Last Dynode	250	V
Average Anode Current		0.1	mA

CHARACTERISTICS (at 25 °C)

Parameter			Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856K)		140	200	—	μA/lm
	Quantum Efficiency	at 400 nm	—	23.7	—	%
		at 500 nm	—	18.3	—	%
		at 600 nm	—	10.7	—	%
		at 700 nm	—	2.7	—	%
		at 800 nm	—	0.56	—	%
	Red/White Ratio		0.1	0.15	—	—
	Blue Sensitivity Index (CS 5-58)		—	7.5	—	—
Anode Sensitivity	Luminous (2856K)		300	700	—	A/lm
Gain			—	3.5×10^6	—	—
Dark Counts *			—	50	100	s^{-1}
Anode Dark Current (After 30 min Storage in Darkness)			—	0.2	1	nA
Time Response	Anode Pulse Rise Time		—	2.2	—	ns
	Electron Transit Time		—	22	—	ns
	Transit Time Spread (TTS)		—	1.2	—	ns

* Measured at the voltage producting the gain of 1×10^6

Figure 1: Typical Spectral Response



VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	P
Ratio	1	1	1	1	1	1	1	1	1	1	

Supply Voltage: 1000 V, K: Cathode, Dy: Dynode, P: Anode

Figure 2: Anode Luminous Sensitivity and Gain Characteristics

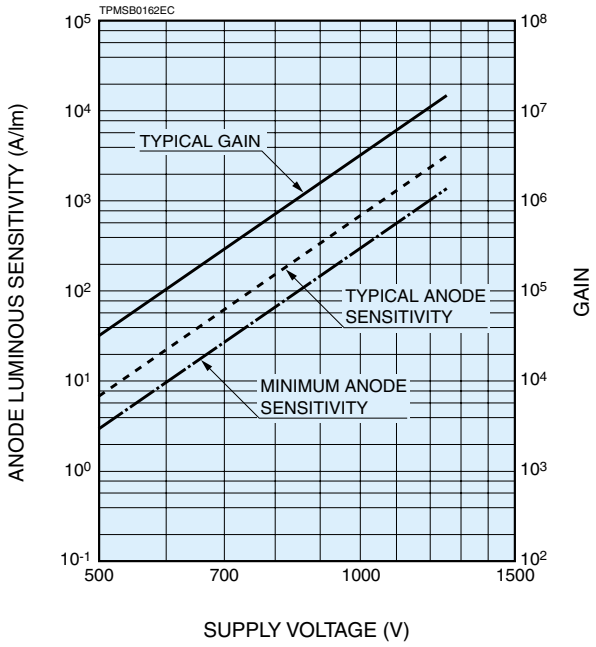


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)

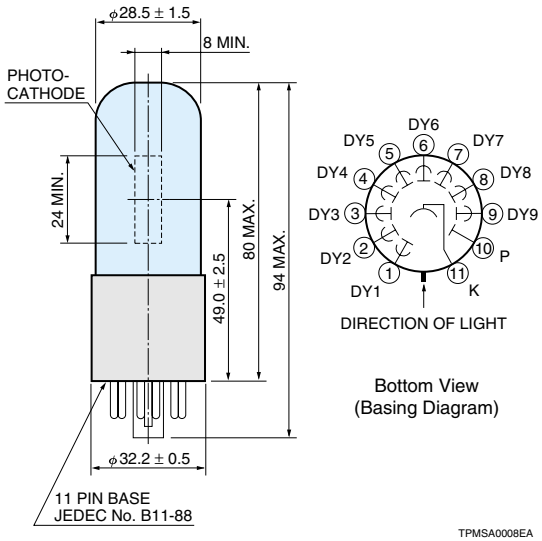
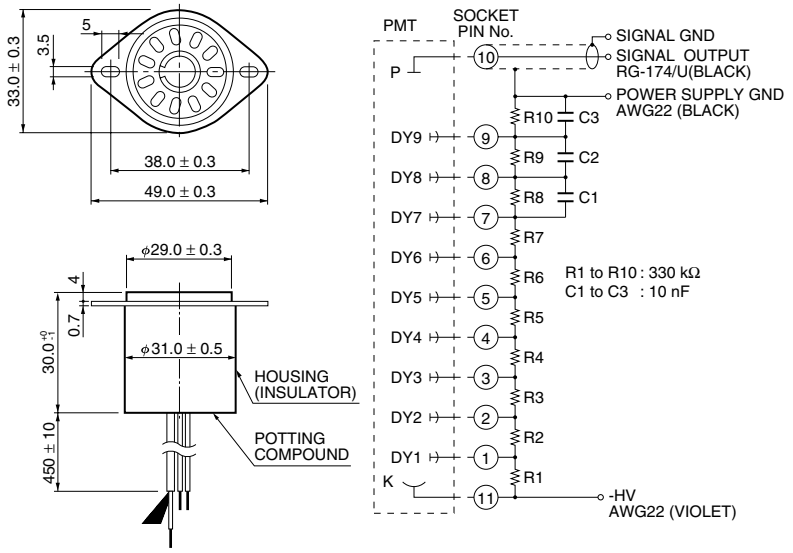


Figure 4: Accessories (Unit: mm) Sold Separately

D Type Socket Assembly E717-63



* Hamamatsu also provides C4900 series compact high voltage power supplies and C6270 series DP type socket assemblies which incorporate a DC to DC converter type high voltage power supply.

Warning–Personal Safety Hazards

Electrical Shock–Operating voltages applied to this device present a shock hazard.

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