

HAMAMATSU

PHOTOMULTIPLIER TUBE 1P21

FEATURES

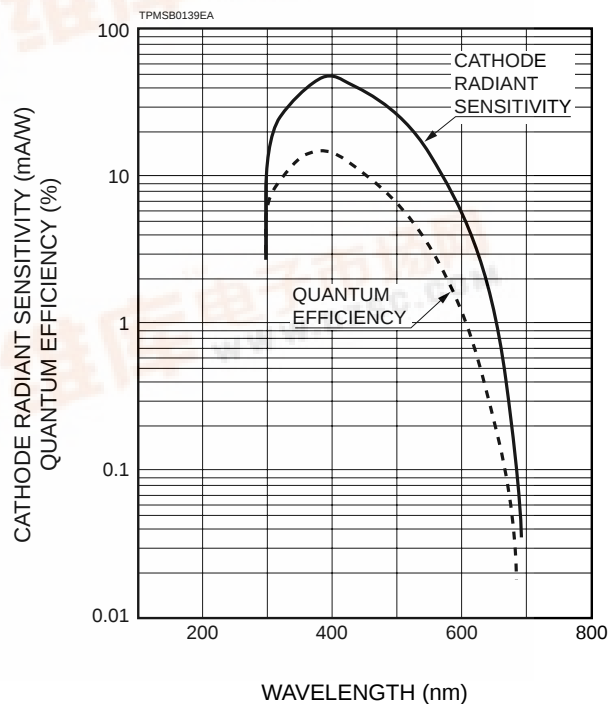
- 28mm (1-1/8 Inch) Diameter Side-on
- 300 to 650nm Spectral Response
- Low Dark Current Visible Range Photocathode



GENERAL

Parameter		Description/Value	Unit
Spectral Response		300 to 650	nm
Wavelength of Maximum Response		400	nm
Photo-cathode	Material	Sb-Cs	—
	Minimum Useful Size	8 × 24	mm
Window Material		Borosilicate glass	—
Dynode	Structure	Circular-cage	—
	Number of Stages	9	—
Direct Interelectrode Capacitances	Anode to Last Dynode	4	pF
	Anode to All Other Electrodes	6	pF
Base		JEDEC No. B11-88	—
Suitable Socket		E678-11A	—

Figure 1: Typical Spectral Response



WAVELENGTH (nm)



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MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1250	Vdc
	Between Anode and Last Dynode	250	Vdc
Average Anode Current		0.1	mA
Ambient Temperature		-80 to +50	°C

CHARACTERISTICS (at 25°C)

Parameter		Min.	Typ.	Max.	Unit
Anode Sensitivity	Luminous (2856K)	50	250	—	A/lm
Cathode Sensitivity	Radiant at 400nm	—	3.0×10^5	—	A/W
	Luminous (2856K)	25	40	—	μA/lm
	Radiant at 400nm	—	48	—	mA/W
Quantum Efficiency		—	13 at 350nm	—	%
Gain		—	6.25×10^6	—	—
Anode Dark Current (after 30 minute)		—	1	5	nA
Time Response	Anode Pulse Rise Time	—	2.2	—	ns
	Electron Transit Time	—	22	—	ns

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	1

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

Figure 2: Typical Gain Characteristics

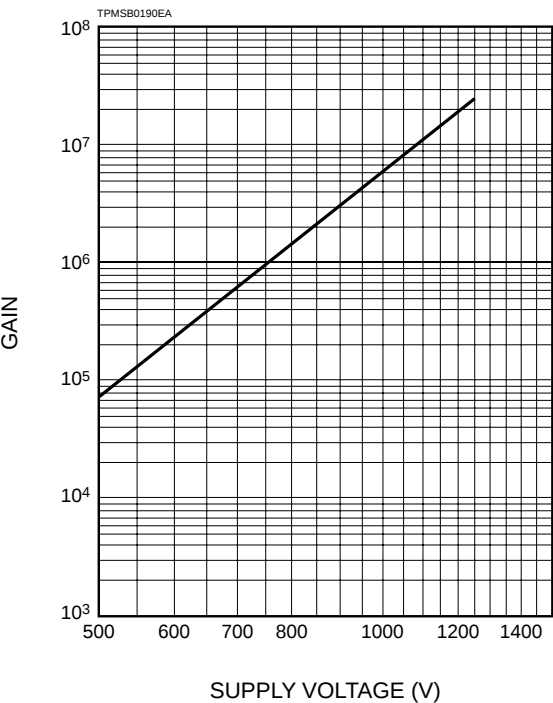
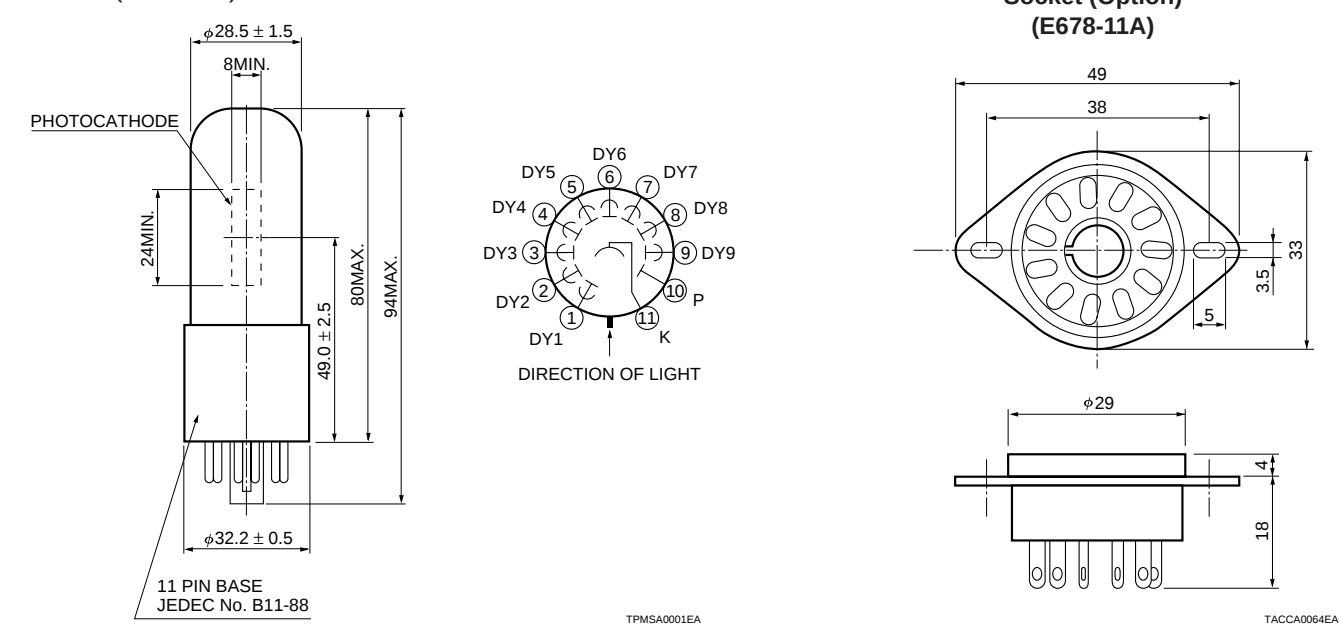


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



HAMAMATSU

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