

FEATURES

- Low dark count: 350 s⁻¹ Max.
- High gain

APPLICATIONS

- For photon counting



SPECIFICATIONS

GENERAL

Parameter		Description / Value	Unit
Spectral response		300 to 850	nm
Wavelength of maximum response		420	nm
Photocathode	Material	Multialkali	—
	Minimum effective area	5 × 8	mm
Window material		Borosilicate glass	—
Dynode	Structure	Box and Grid	—
	Number of stages	12	—
Operating ambient temperature		-30 to +50	°C
Storage temperature		-30 to +50	°C
Base		21-pin glass base	—
Suitable socket		E678-21C (supplied)	—

MAXIMUM RATINGS (Absolute maximum values)

Parameter		Value	Unit
Supply voltage	Between anode and cathode	1500	V
Average anode current		0.01	mA

CHARACTERISTICS (at 25 °C)

Parameter		Min.	Typ.	Max.	Unit
Cathode sensitivity	Luminous (2856 K)	80	120	—	μA/lm
	Radiant at 420 nm	—	51	—	mA/W
Red / White ratio (R-68)		—	0.2	—	—
Anode sensitivity	Luminous (2856 K)	100	800	—	A/lm
	Radiant at 420 nm	—	3.4 × 10 ⁵	—	A/W
Gain		—	6.7 × 10 ⁶	—	—
Anode dark count		—	200	350	s ⁻¹
Time response	Anode pulse rise time	—	13	—	ns
	Electron transit time	—	70	—	ns

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

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	G	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	Dy11	Dy12	P
Ratio	4	0	2.5	1.5	1	1	1	1	1	1	1	1	1	1	1

Supply voltage: 1000 V, K: Cathode, Dy: Dynode, G: Grid, P: Anode

PHOTOMULTIPLIER TUBE R649

Figure 1: Typical spectral response

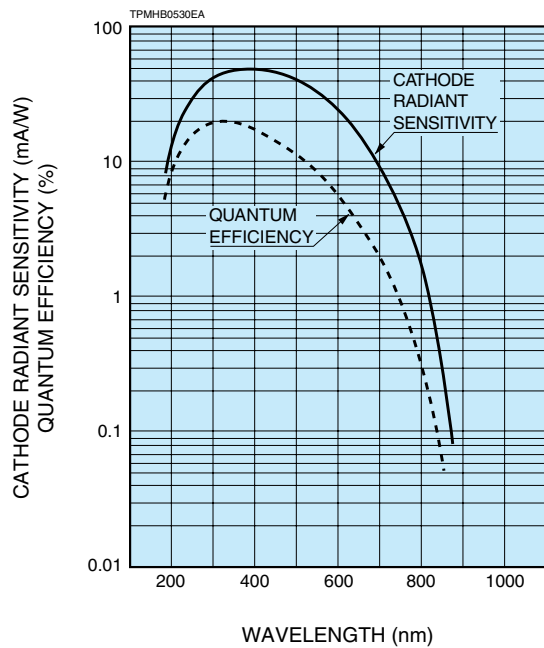


Figure 2: Typical gain

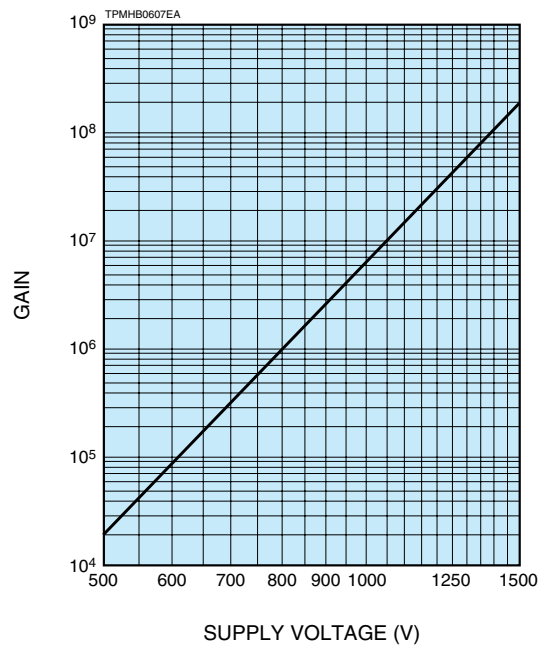
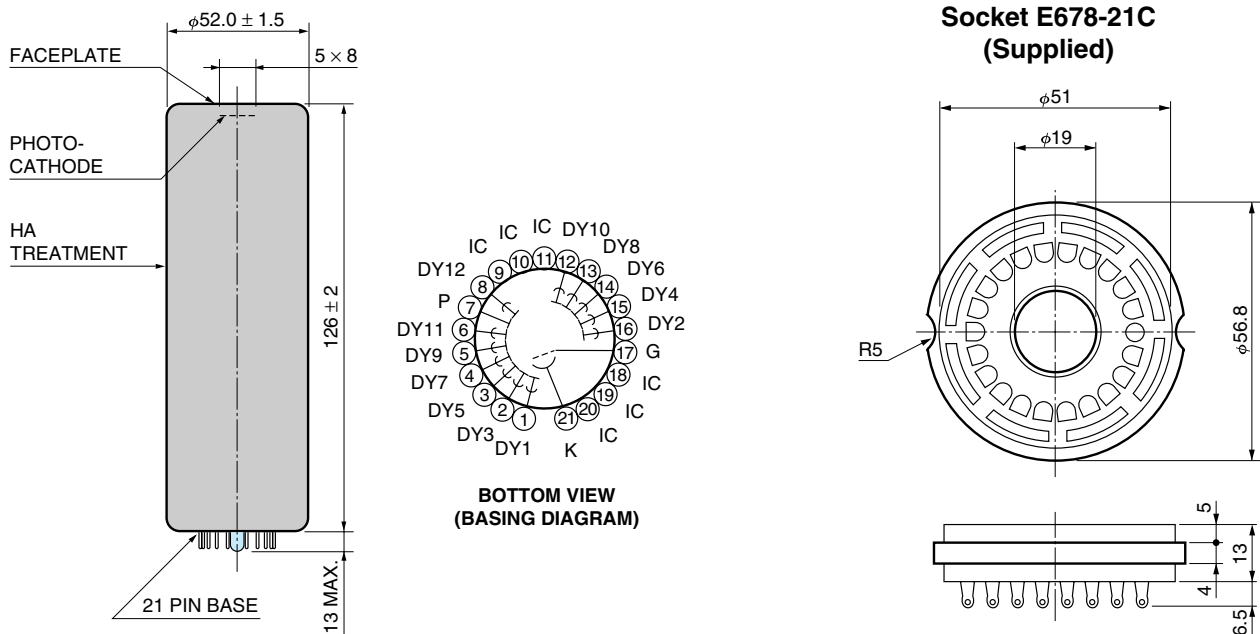


Figure 3: Dimensional outline and basing diagram (Unit: mm)



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* HAMAMATSU also provides C11152 series compact high voltage power supply modules.

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