

**For Scintillation Counting, Fast Time Response  
51 mm (2 inch) Diameter, Biakali Photocathode, 10-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	Biakali	—
	Minimum Effective Area	φ46	mm
Dynode	Structure	Linear focused	—
	Number of Stages	10	—
Base		JEDEC No. B20-102 / Flying lead type	—
Operating Ambient Temperature		-30 to +50	°C
Storage Temperature		-80 to +50	°C
Suitable Socket		E678-20B (supplied)	—

### MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	2000	V
Average Anode Current		0.1	mA

### CHARACTERISTICS (at 25 °C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856 K)	70	95	—	μA/lm
	Blue Sensitivity Index (CS 5-58)	9	11	—	—
Anode Sensitivity	Luminous (2856 K)	80	400	—	A/lm
Gain		—	4.2 × 10 <sup>6</sup>	—	—
Anode Dark Current (After 30 minute storage in darkness)		—	50	300	nA
Time Response	Anode Pulse Rise Time	—	2	—	ns
	Electron Transit Time	—	24	—	ns
	Transit Time Spread (FWHM)	—	280	—	ps
Pulse Linearity (±2 % deviation)		—	50	—	mA

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

### VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	G	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7 (Acc)	Dy8	Dy9	Dy10	P
Ratio	1.3	4.8	1.5	1.5	1	1	1	1	1	1	1	1	1

Supply Voltage: 1750 V, K: Cathode, Dy: Dynode, P: Anode, G: Grid,  
Acc to be connected to Dy7 with a protection resistor in series.

# PHOTOMULTIPLIER TUBE R10533

Figure 1: Typical Spectral Response

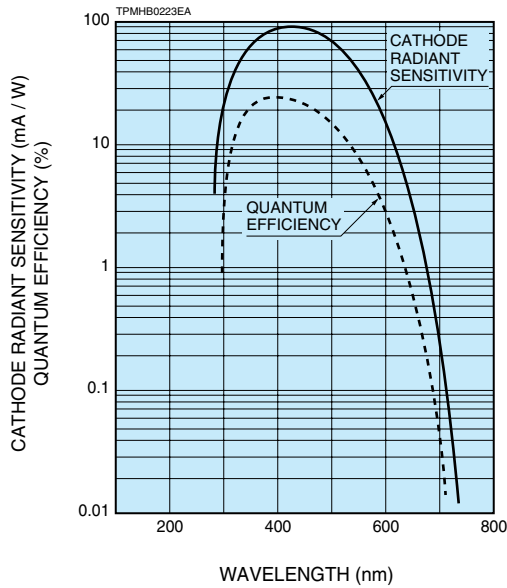


Figure 2: Typical Gain

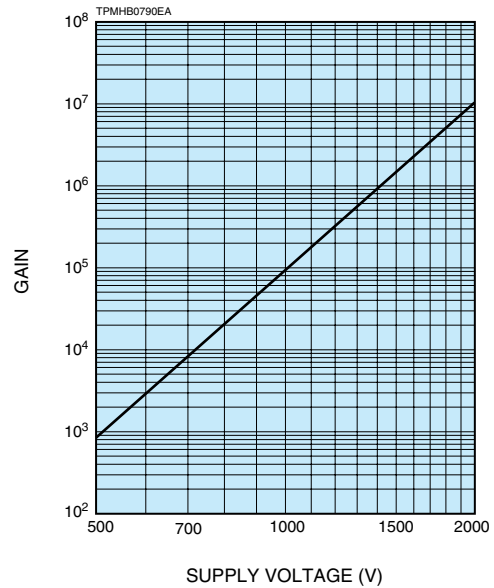
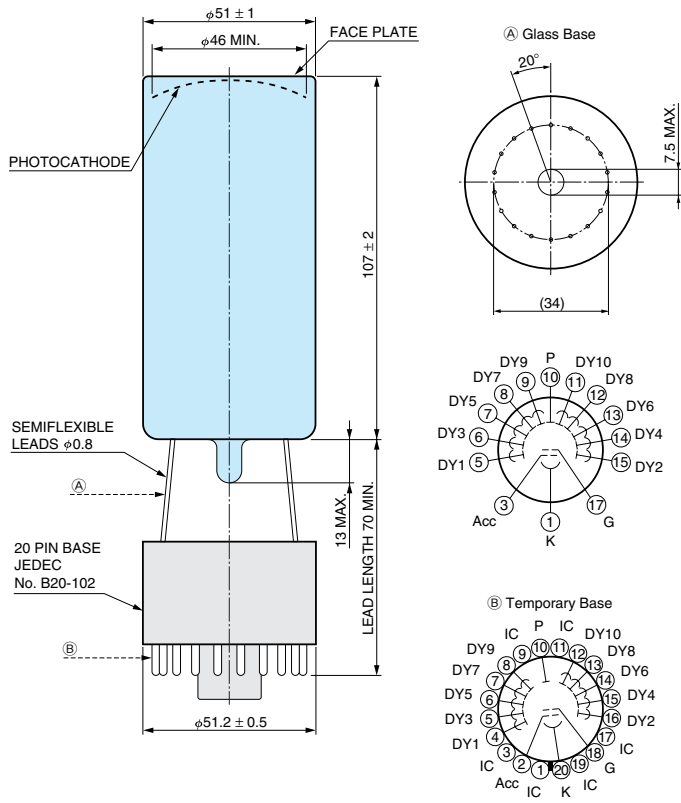
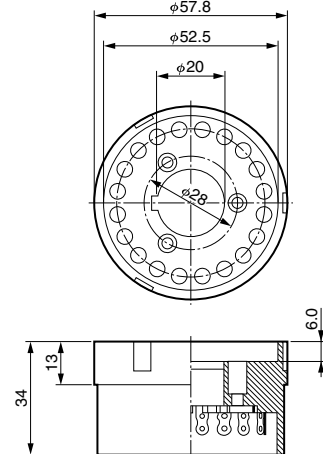


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



Socket E678-20B (Supplied)



TACCA0309EA

HAMAMATSU also provides C1152 series and C9619 series compact high voltage power supply modules.

**NOTES**

The material in the R10533 contains Copper-Beryllium (CuBe) Alloy. Please follow the applicable regulations regarding disposal of hazardous materials and industrial wastes in your country, state, region or province.

**HAMAMATSU PHOTONICS K.K.** [www.hamamatsu.com](http://www.hamamatsu.com)

**HAMAMATSU PHOTONICS K.K., Electron Tube Division**

**314-5, Shimokanzo, Iwata City, Shizuoka Pref., 438-0193, Japan, Telephone: (81)539/62-5248, Fax: (81)539/62-2205**

**U.S.A.:** Hamamatsu Corporation: 360 Foothill Road, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1)908-231-0960, Fax: (1)908-231-1218 E-mail: [usa@hamamatsu.com](mailto:usa@hamamatsu.com)

**Germany:** Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-2658 E-mail: [info@hamamatsu.de](mailto:info@hamamatsu.de)

**France:** Hamamatsu Photonics France S.A.R.L.: 19, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: (33)1 69 53 71 00, Fax: (33)1 69 53 71 10 E-mail: [infos@hamamatsu.fr](mailto:infos@hamamatsu.fr)

**United Kingdom:** Hamamatsu Photonics UK Limited: 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire AL7 1BW, United Kingdom, Telephone: (44)1707-294888, Fax: (44)1707-325777 E-mail: [info@hamamatsu.co.uk](mailto:info@hamamatsu.co.uk)

**North Europe:** Hamamatsu Photonics Norden AB: Torshamnsgatan 35 SE-164 40 Kista, Sweden, Telephone: (46)8-509-031-00, Fax: (46)8-509-031-01 E-mail: [info@hamamatsu.se](mailto:info@hamamatsu.se)

**Italy:** Hamamatsu Photonics Italia S.r.l.: Strada della Moia, 1 int. 6, 20020 Arese (Milano), Italy, Telephone: (39)02-93581733, Fax: (39)02-93581741 E-mail: [info@hamamatsu.it](mailto:info@hamamatsu.it)

**China:** Hamamatsu Photonics (China) Co., Ltd.: B1201 Jiaming Center, No.27 Dongsanhuan Beilu, Chaoyang District, Beijing 100020, China, Telephone: (86)10-6586-6006, Fax: (86)10-6586-2866 E-mail: [hpc@hamamatsu.com.cn](mailto:hpc@hamamatsu.com.cn)

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