

**For Scintillation Counting and High Energy Physics
38 mm (1-1/2 Inch) Diameter, 10-stage, Bialkali Photocathode, Head-on Type**

GENERAL

Parameter		Description	Unit
Spectral Response		300 to 650	nm
Wavelength of Maximum Response		420	nm
Photocathode	Material	Bialkali	—
	Minimum Effective Area	φ34	mm
Window Material		Borosilicate glass	—
Dynode	Structure	Linear focused	—
	Number of Stages	10	—
Direct Interelectrode	Anode to Last Dynode	3	pF
Capacitances	Anode to All Other Electrodes	7	pF
Operating Ambient Temperature		-30 to +50	°C
Storage Temperature		-30 to +50	°C
Base		JEDEC No. B12-43	—
Suitable Socket		E678-12A (supplied)	—

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1750	V
	Between Anode and Last Dynode	350	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
	Radiant at 420 nm	—	88	—	mA/W
	Blue Sensitivity Index (CS 5-58)	9	11	—	—
	Quantum Efficiency at 420 nm	—	27	—	%
Anode Sensitivity	Luminous (2856 K)	10	100	—	A/lm
Gain		—	1.1 × 10 ⁶	—	—
Anode Dark Current (after 30 min storage in darkness)		—	3	20	nA
Time Response	Anode Pulse Rise Time	—	2.7	—	ns
	Electron Transit Time	—	37	—	ns
	Transit Time Spread (FWHM)	—	4.5	—	ns
Pulse Linearity (±2 % deviation) *		—	150	—	mA

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

* Measured with the special voltage distribution ratio shown below.

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	P
Ratio	2	1	1	1	1	1	1	1	1	1	1	1

Supply Voltage : 1250 V, K : Cathode, Dy : Dynode, P : Anode

SPECIAL VOLTAGE DISTRIBUTION RATIO FOR PULSE LINEARITY MEASUREMENT

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	P
Ratio	2	1	1	1	1	1	1.2	1.5	2.2	3.6	3	
Parallel Capacitors in μF									0.01	0.02	0.04	0.06

Supply Voltage : 1500 V

PHOTOMULTIPLIER TUBE R580

Figure 1: Typical Spectral Response

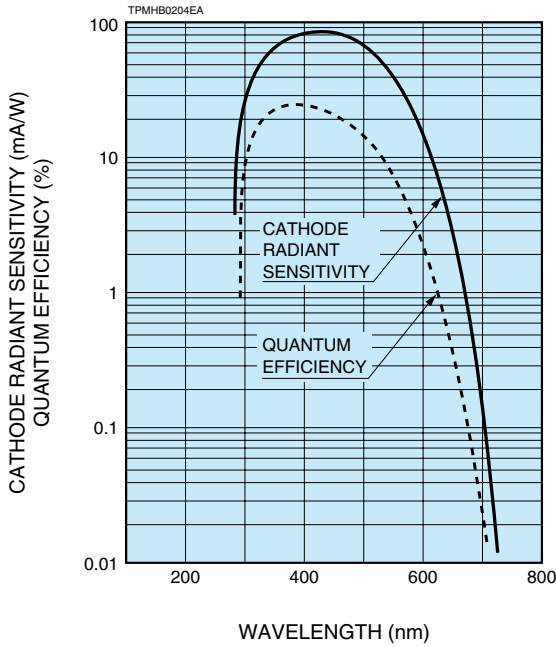
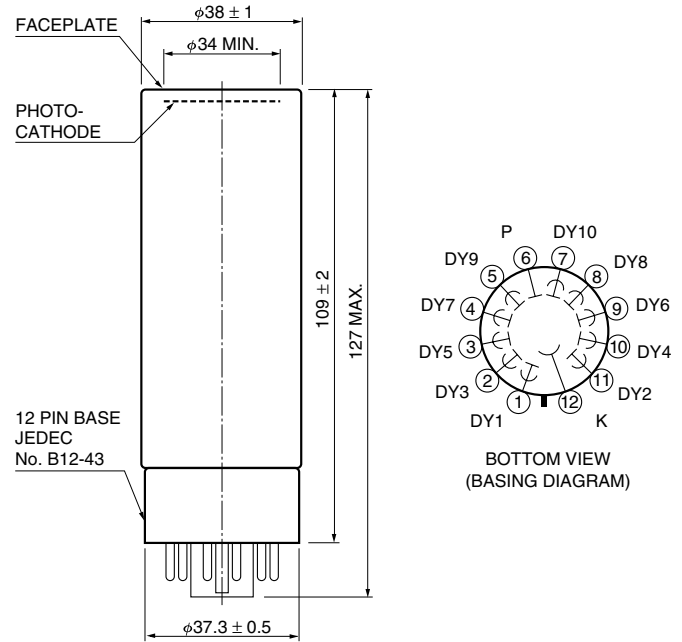


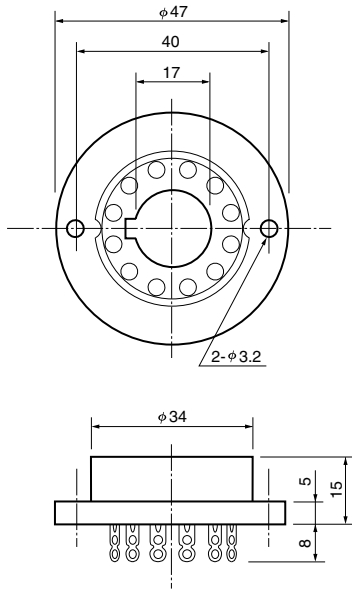
Figure 2: Dimensional Outline and Basing Diagram (Unit: mm)



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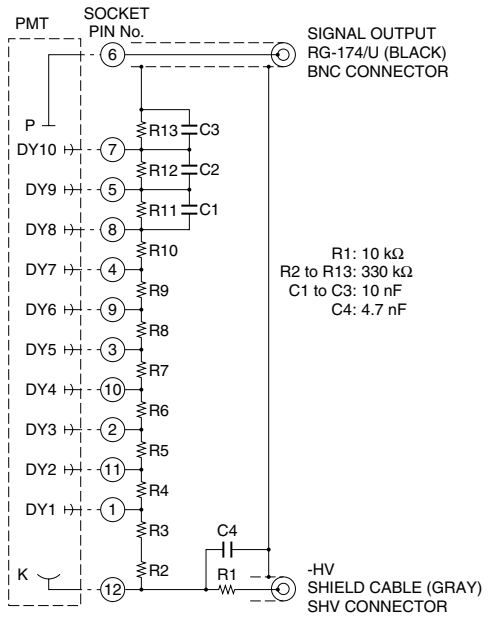
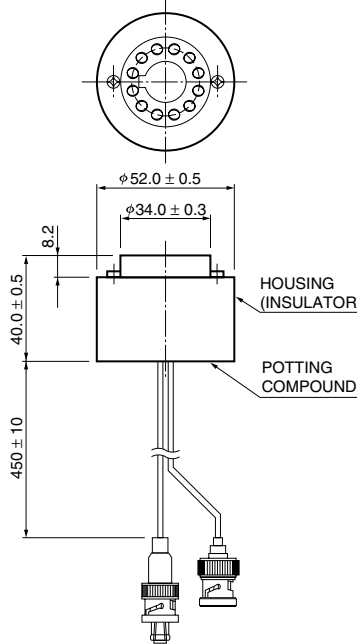
Figure 3: Accessories (Unit: mm)

Socket E678-12A (Supplied)



TACCA0009EB

D type Socket Assembly E2183-500 (Sold separately)



* E2183-15 (E2183-500 without connectors) is also available.
 ** E2183-500 is for the voltage distribution ratio. E2183-501 for the special voltage distribution ratio is also available.

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* HAMAMATSU also provides C9525 series bench-top type and C9619 series module type high voltage power supplies.

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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

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

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

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

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

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

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

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