

For Scintillation Counting, 127 mm (5 Inch) Diameter Bialkali Photocathode, 10-Stage, 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	$\phi 111$	mm
Window Material	R877	Borosilicate glass	—
	R877-01	K-free Borosilicate glass	—
Dynode	Structure	Box and Grid	—
	Number of Stages	10	—
Direct Interelectrode Capacitances	Anode to Last Dynode	6	pF
	Anode to All Other Electrodes	7	pF
Operating Ambient Temperature		-30 to +50	°C
Storage Temperature		-30 to +50	°C
Base		14-pin base JEDEC No. B14-38	—
Suitable Socket		E678-14W (sold separately)	—

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1500	V
	Between Anode and Last Dynode	300	V
Average Anode Current		0.1	mA

CHARACTERISTICS (at 25 °C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856 K)	60	90	—	$\mu\text{A/lm}$
	Radiant at 420 nm	—	85	—	A/lm
	Blue Sensitivity Index (CS 5-58)	—	10.5	—	—
Anode Sensitivity	Luminous (2856 K)	20	40	—	A/W
	Radiant at 420 nm	—	3.8×10^4	—	A/W
Gain		—	4.4×10^5	—	—
Anode Dark Current (after 30 min storage in darkness)		—	10	50	nA
Time Response	Anode Pulse Rise Time	—	20	—	ns
	Electron Transit Time	—	115	—	ns
	Transit Time Spread (FWHM)	—	18.5	—	ns
Pulse Linearity (at standard ratio)	2 % Deviation	—	10	—	mA
	5 % Deviation	—	20	—	mA

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

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	G	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	P
Standard Ratio	1	1	1	1	1	1	1	1	1	1	1	1	1
Tapered Ratio	1	1	1	1	1	1	1	1	1.5	2.5	3	2.3	

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

PHOTOMULTIPLIER TUBES R877, R877-01

Figure 1: Typical Spectral Response

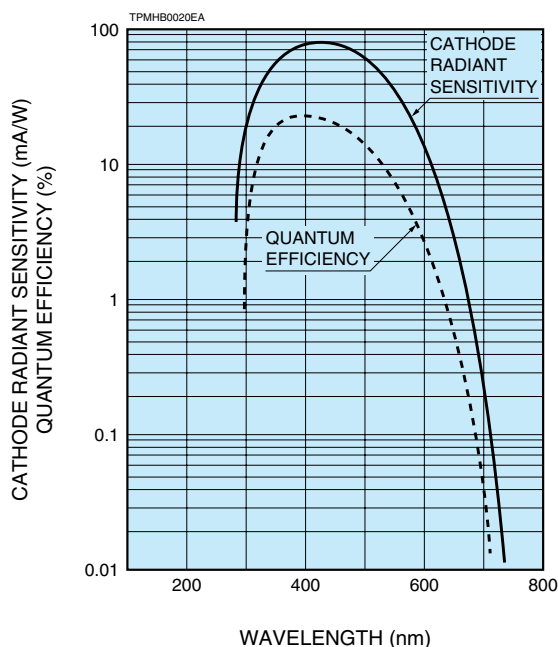
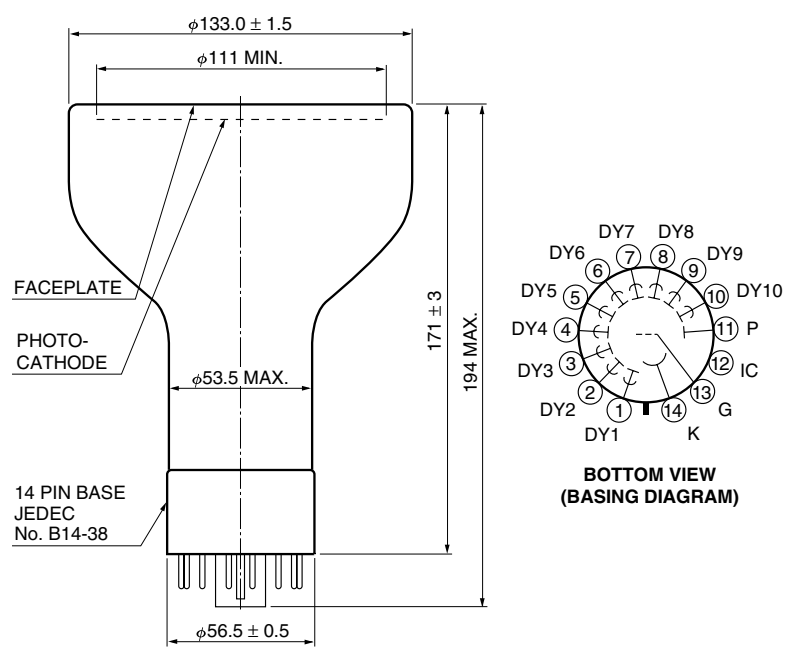


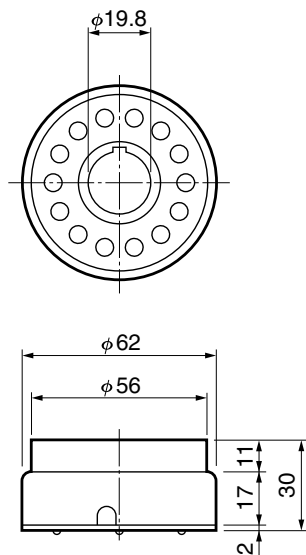
Figure 2: Dimensional Outline and Basing Diagram (Unit: mm)



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Figure 3: Accessories (Unit: mm)

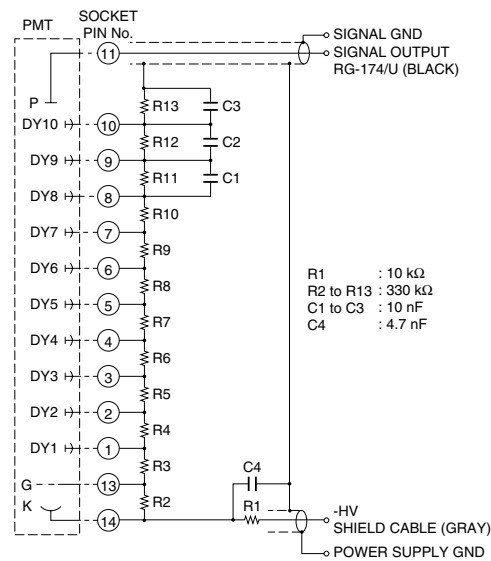
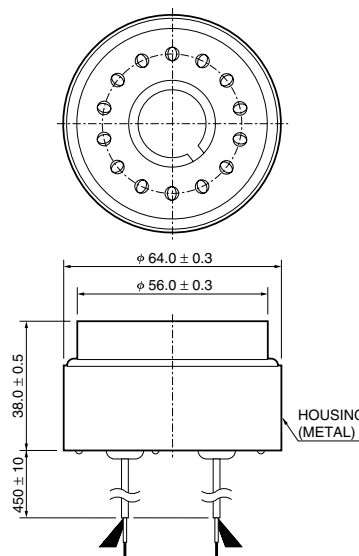
●Socket E678-14W (Sold separately)



* Pins are housed in the socket.

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●D-type Socket Assembly E1198-22 (Sold separately)



* E1198-22 is for the standard voltage distribution ratio.

** The housing is internally connected to the GND.

*** High voltage shielded cable can be connected to a connector for RG-174/U.

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

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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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