

**For High Energy Physics and Scintillation Counting,
28mm(1-1/8 Inch) Diameter, Low Profile,
Bialkali Photocathode, 9-Stage, Head-On Type**

GENERAL

Parameter		Description / Value	Unit
Spectral Response		300 to 650	nm
Wavelength of Maximum Response		420	nm
Photocathode Material	Material	Bialkali	-
	Minimum Effective Area	25	mm dia.
Window Material		Borosilicate glass	-
Dynode	Structure	Box(3) and Line(6)	-
	Number of Stages	9	-
Base		14-pin glass base	-
Suitable Socket		E678-14C (Supplied)	-

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1500	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
Cathode Sensitivity	Luminous (2856K)	60	90	-	μ A/lm
	Radiant at 420nm	-	85	-	mA/W
	Blue (CS-5-58 filter)	-	10.5	-	μ A/lm-b
Anode Sensitivity	Luminous (2856K)	50	120	-	A/lm
	Radiant at 420nm	-	1.1 × 10 ⁵	-	A/W
Gain		-	1.3 × 10 ⁶	-	-
Anode Dark Current (after 30min. storage in darkness)		-	2	10	nA
Time Response	Anode Pulse Rise Time	-	3.4	-	ns
	Electron Transit Time	-	23	-	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	P
Ratio		3	1	1	1	1	1	1.5	1	1	1	1

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

PHOTOMULTIPLIER TUBE R3998-02

Figure 1: Typical Spectral Response

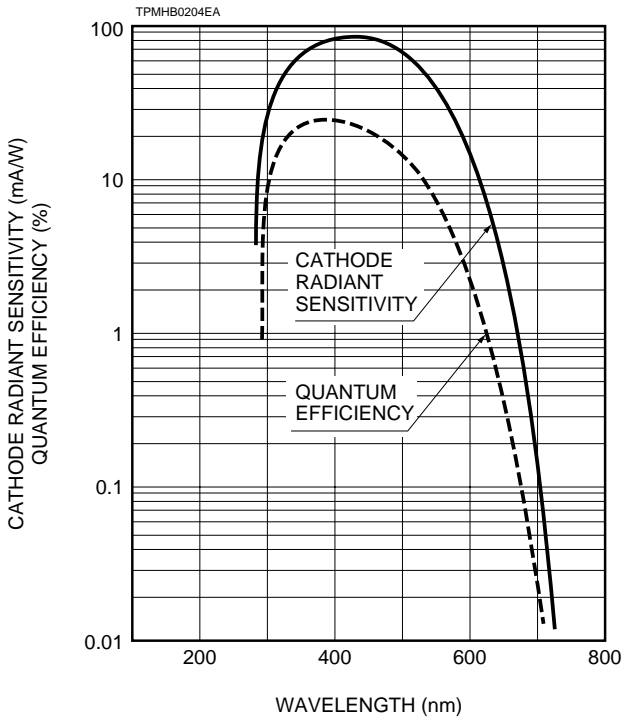
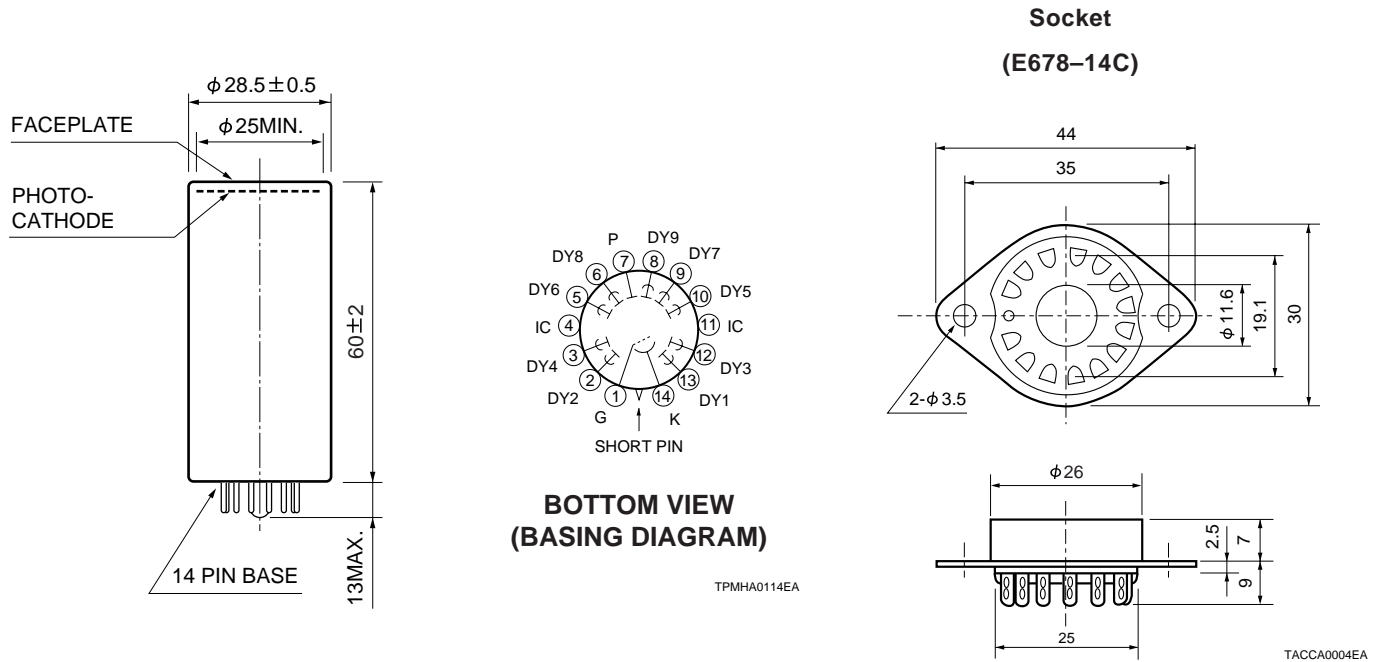


Figure 2: Dimensional Outline and Basing Diagram (Unit : mm)



HAMAMATSU

HAMAMATSU PHOTONICS K.K., Electron Tube Center

314-5, Shimokanzo, Toyooka-village, Iwata-gun, Shizuoka-ken, 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

Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-2658

France: Hamamatsu Photonics France S.A.R.L.: 8, 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

United Kingdom: Hamamatsu Photonics UK Limited: Lough Point, 2 Gladbeck Way, Windmill Hill, Enfield, Middlesex EN2 7JA, United Kingdom, Telephone: (44)181-367-3560, Fax: (44)181-367-6384

North Europe: Hamamatsu Photonics Norden AB: Färögatan 7, S-164-40 Kista Sweden, Telephone: (46)8-703-29-50, Fax: (46)8-750-58-95

Italy: Hamamatsu Photonics Italia: S.R.L.: Via Della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39)2-935 81 733, Fax: (39)2-935 81 741

TPMH1150E01
APR. 1996