

Stable Operation in High Magnetic Fields beyond 1 Tesla 25 mm (1 Inch) Diameter, Proximity Photocathode and Fine Mesh Dynodes

GENERAL

Parameter		Description/Value	Unit
Spectral Response		300 to 650	nm
Wavelength of Maximum Response		420 ± 50	nm
Photocathode	Material	Bialkali	—
	Minimum Effective Area	17.5	mm dia.
Window	Material	Borosilicate glass	—
	Shape	Plano-plano	—
Dynode	Secondary Emitting Surface	Bialkali	—
	Structure	Fine mesh	—
	Number of Stages	15	—
Base		17-pin glass base	—
Suitable Socket		E678-17A (supplied)	—

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	2300	V dc
	Between Anode and Last Dynode	200	V dc
Average Anode Current		0.01	mA

CHARACTERISTICS (at 25 °C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856K)	—	80	—	μA/lm
	Blue Sensitivity Index (CS 5-58)	—	9.5	—	—
	Quantum Efficiency at 390nm	—	23	—	%
Anode Sensitivity	Luminous (2856K)	—	40	—	A/lm
Gain	At 0 tesla	—	5.0 × 10 ⁵	—	—
	At 1 tesla	—	1.8 × 10 ⁴	—	—
Anode Dark Current (after 30min. storage in darkness)		—	5.0	30	nA
Time Response	Anode Pulse Rise Time	—	1.5	—	ns
	Electron Transit Time	—	5.6	—	ns
	Transit Time Spread (FWHM)	—	0.35	—	ns
Pulse Linearity (at 2 % Deviation)		—	180	—	mA

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

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy15	P
Ratio	2	1	1	1	1	1	1	1	1

Supply Voltage : 2000 V dc, K : Cathode, Dy : Dynode, P : Anode

※ R5506 (UV glass window) is also available.

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PHOTOMULTIPLIER TUBE R5505

Figure 1: Typical Spectral Response

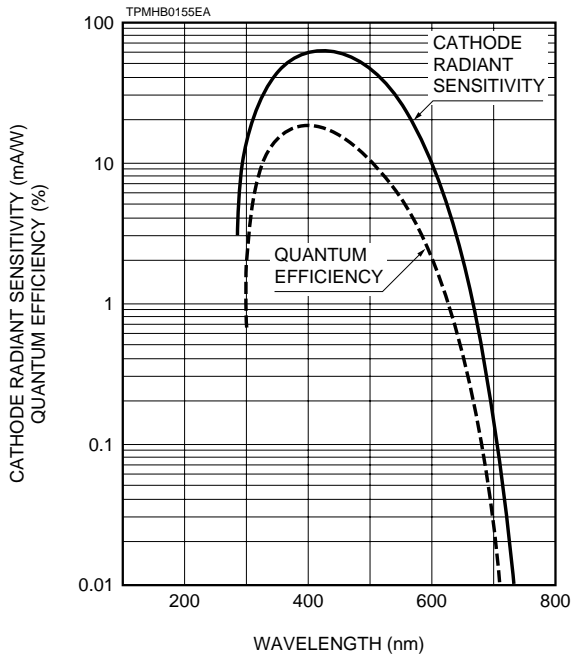


Figure 2: Typical Gain in Magnetic Fields (Parallel to Tube Axis)

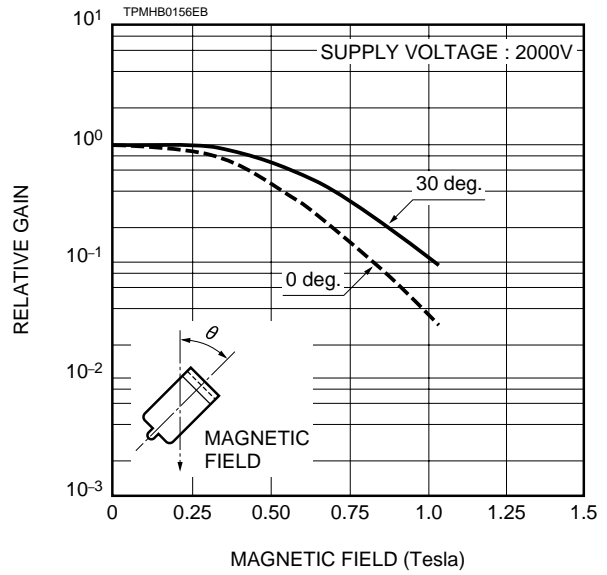
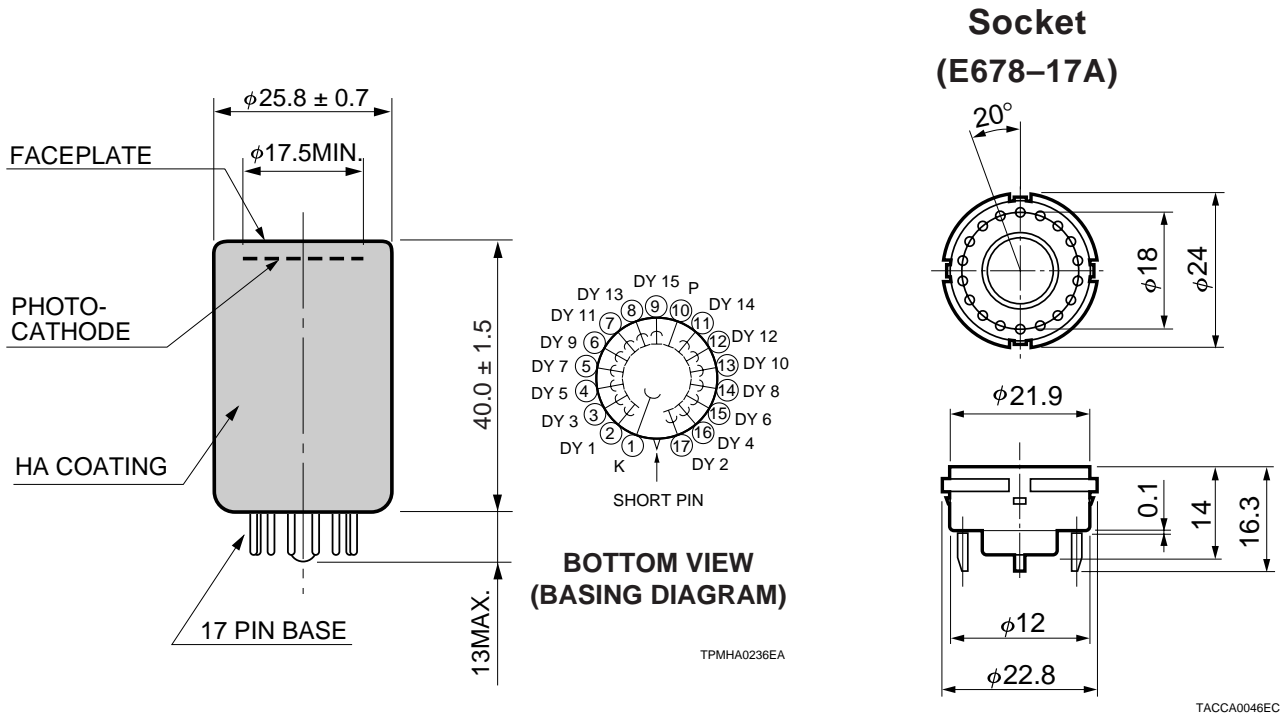


Figure 3: Dimensional Outline and Basing Diagram (Unit : mm)



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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, P. O. Box 6910, 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.: 8, Rue du Saulé 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-(0)1707-294888, Fax: 44(0)1707-325777 E-mail: info@hamamatsu.co.uk

North Europe: Hamamatsu Photonics Norden AB: Smidesvägen 12, SE-171-41 SOLNA, 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/E, 20020 Arese, (Milano), Italy, Telephone: (39)02-935 81 733, Fax: (39)02-935 81 741 E-mail: info@hamamatsu.it

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