

**Ruggedized, High Temperature (175 °C) PMT for Oil Well Logging
51 mm (2 Inch) Diameter, 10-Stage, Head-on Type**

GENERAL

Parameter		Description / Value	Unit
Spectral Response		300 to 650	nm
Wavelength of Maximum Response		375	nm
Photocathode	Material	High temp. bialkali	—
	Minimum Effective Area	φ46	mm
Window Material		Borosilicate glass	—
Dynode	Structure	Circular and Linear-focused	—
	Number of Stages	10	—
Operating Ambient Temperature		-30 to +175	°C
Storage Temperature		-80 to +175	°C
Base		15-pin glass base	—
Suitable Socket		E678-15C (supplied)	—

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1800	V
	Between Anode and Last Dynode	250	V
Average Anode Current		0.2	mA

CHARACTERISTICS (at 25 °C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856 K)	20	40	—	μA/lm
	Radiant at 375 nm	—	51	—	mA/W
	Blue Sensitivity Index (CS 5-58)	4	6	—	—
Anode Sensitivity	Luminous (2856 K)	5	20	—	A/lm
	Radiant at 375 nm	—	2.5 × 10 ⁴	—	A/W
Gain		—	5 × 10 ⁵	—	—
Anode Dark Current (after 30 min storage in darkness)		—	3*	20	nA
Time Response	Anode Pulse Rise Time	—	2.2	—	ns
	Electron Transit Time	—	28	—	ns

* 1.5 μA at 175 °C

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: 1500 V dc, K: Cathode, Dy: Dynode, P: Anode

ENVIRONMENTAL TESTING

Shock 5000 m/s² (500G), 11 ±1 ms, 3 impact shocks per direction (6 directions)
 Vibration 200 m/s² (20G), 50 Hz to 2000 Hz, 1 oct per minute, 3 sweeps per axis (3 axes)
 (Only initial production tubes are tested)

PHOTOMULTIPLIER TUBE R4607A-01

Figure 1: Typical Spectral Response

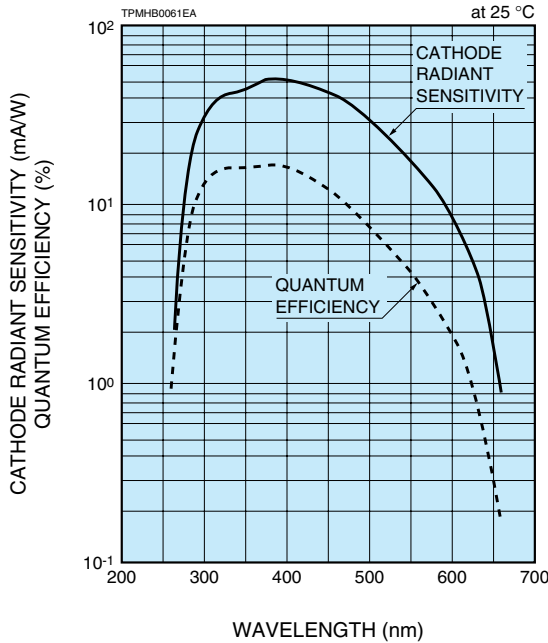


Figure 2: Typical Gain Characteristics

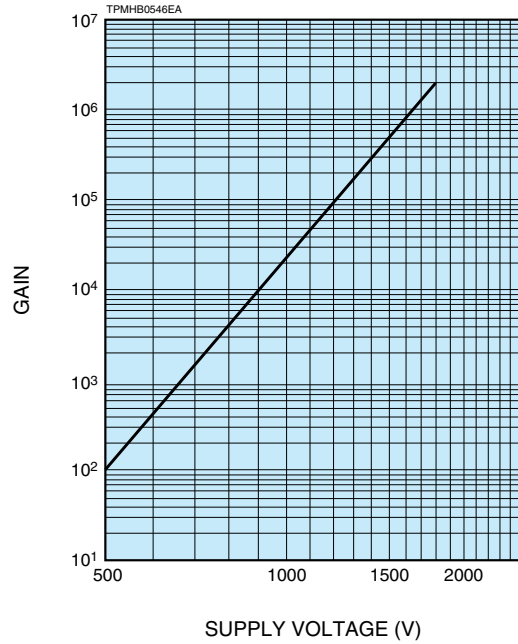
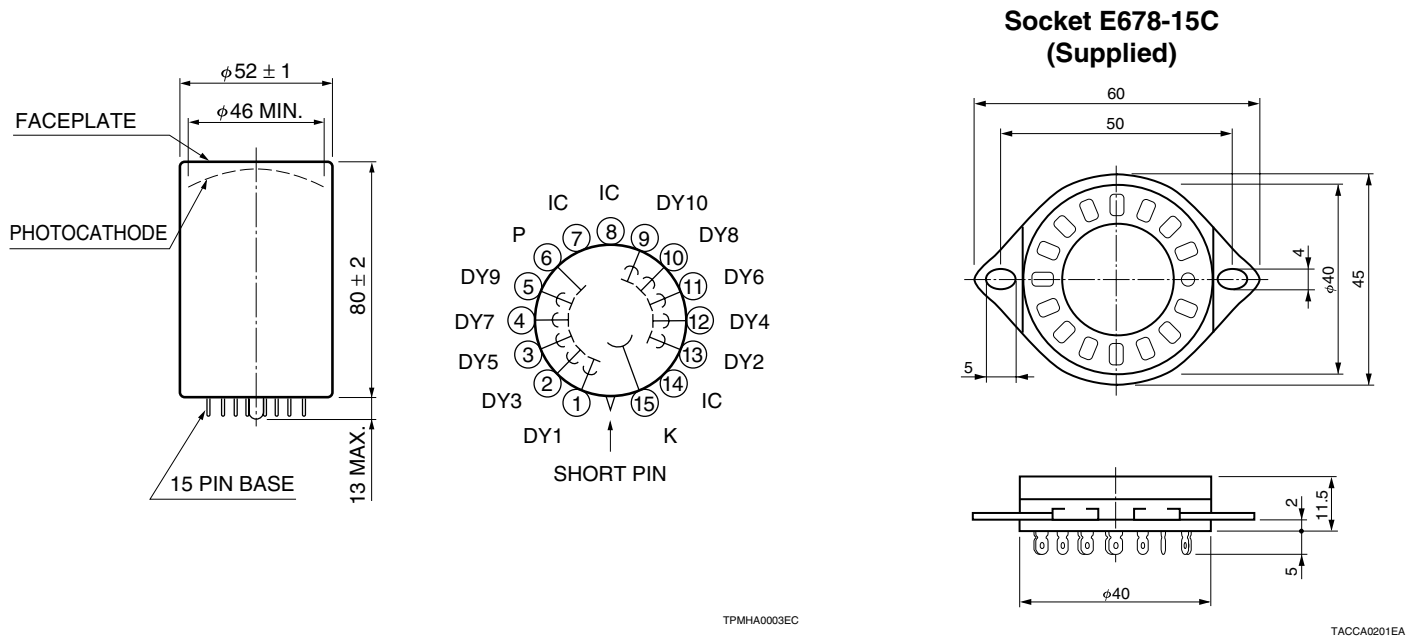


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



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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, 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.: 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-(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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