

For Scintillation Counting and High Energy Physics 51mm(2 Inch) Diameter, Fast Time Response, Bialkali Photocathode, 10-Stage, Head-On Type

GENERAL

Parameter		Description/Value	Unit
Spectral Response		300 to 650	nm
Wavelength of Maximum Response		420	nm
Photocathode	Material	Bialkali	-
	Minimum Useful Size	46	mm dia.
Window Material		Borosilicate glass	-
Dynode	Structure	Linear focused	-
	Number of Stages	10	-
Base		14-pin base JEDEC No. B14-38	-
Suitable Socket		E678-14A(supplied)	-

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1600	Vdc
	Between Anode and Last Dynode	350	Vdc
Average Anode Current		0.1	mA
Ambient Temperature		-30 to +50	°C

CHARACTERISTICS (at 25°C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856K)	60	90	-	μA/lm
	Blue (CS 5-58 filter)	-	10.5	-	μA/lm-b
	Radiant at 420nm	-	85	-	mA/W
	Quantum Efficiency at 420nm	-	26	-	%
Anode Sensitivity	Luminous (2856K)	20	90	-	A/lm
	Radiant at 420nm	-	8.5×10^4	-	A/W
Gain		-	1.0×10^6	-	-
Anode Dark Current (after 30min. storage in darkness)		-	5	20	nA
Time Response	Anode Pulse Rise Time	-	3.4	-	ns
	Transit Time Spread (FWHM)	-	3.6	-	ns
Pulse Linearity (at ± 2% Deviation)*		-	150	-	mA

* Measured with the special voltage distribution ratio "B".

NOTE: Anode characteristics are measured with the voltage distribution ratio "A" except for Pulse Linearity.

VOLTAGE DISTRIBUTION RATIO "A" 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 : 1250Vdc, K : Cathode, Dy : Dynode, P : Anode

SPECIAL VOLTAGE DISTRIBUTION RATIO "B" 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	
Capacitors(μF)							0.01	0.01	0.01	0.01	0.02	

Supply Voltage : 1500Vdc, K : Cathode, Dy : Dynode, P : Anode

PHOTOMULTIPLIER TUBE R2154-02

Figure 1: Typical Spectral Response

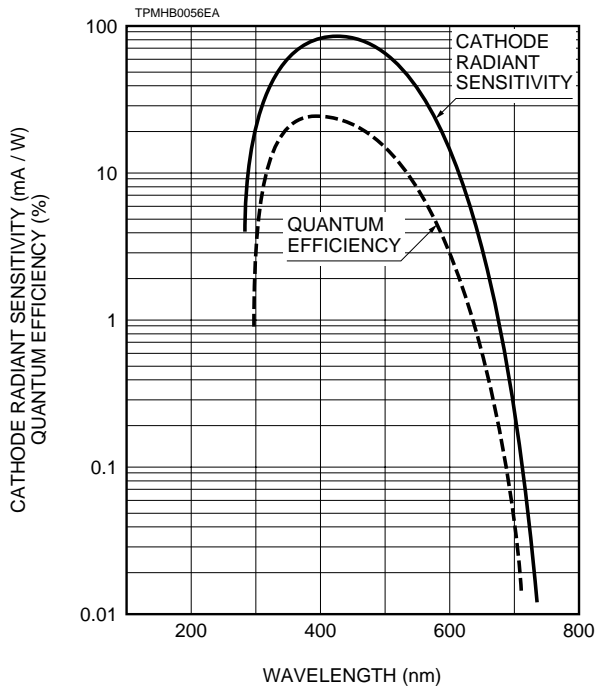


Figure 2: Typical Gain

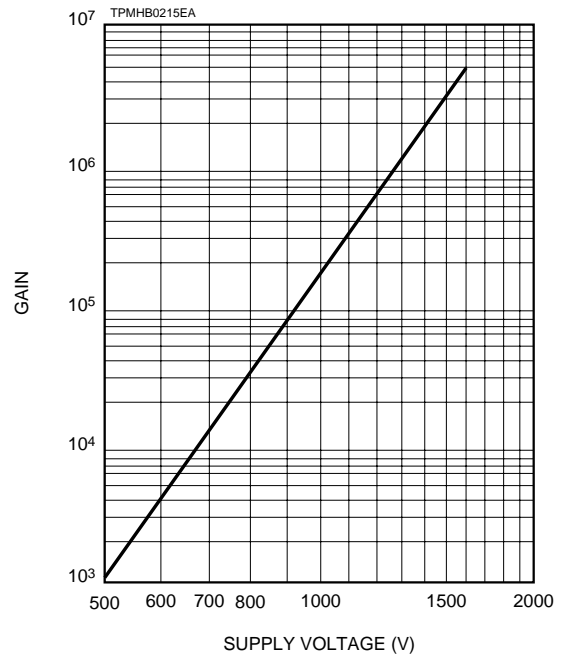
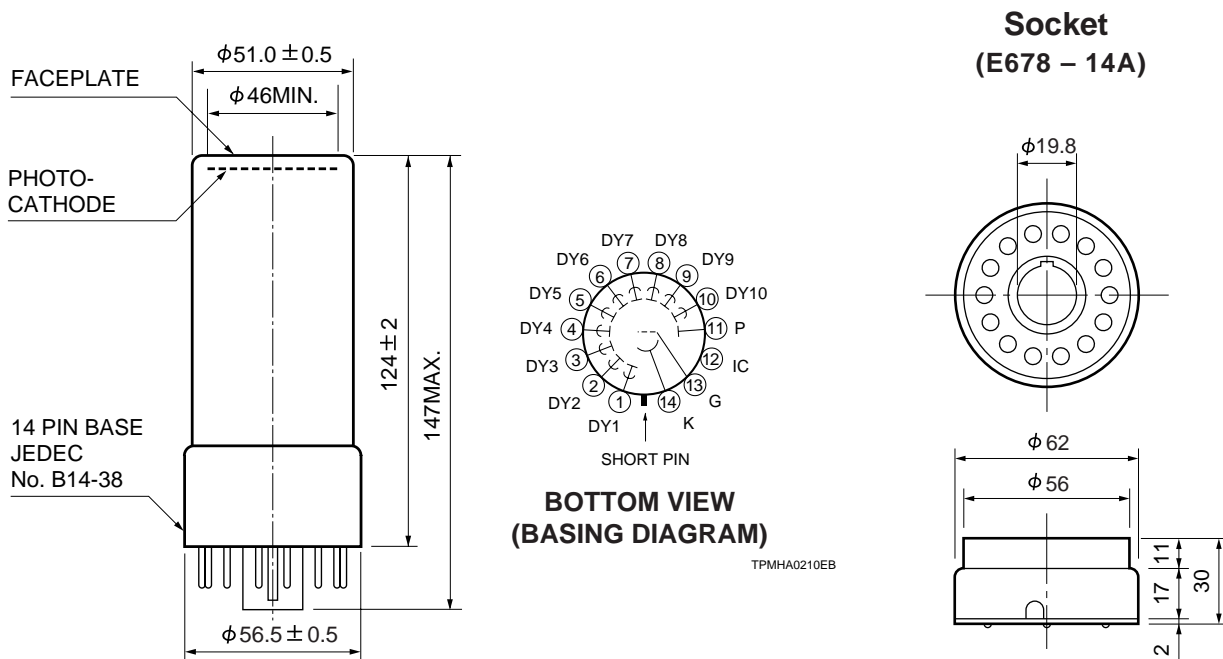


Figure 3: Dimensional Outline and Basing Diagram (Unit : mm)



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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

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(20)8-367-3560, Fax: 44(20)8-367-6384

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

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

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