

**For Photon Counting Applications, Low Dark Counts (10cps Typ.)
φ10mm Effective Area, 28mm(1-1/8 inch) Diameter
Bialkali Photocathode, Head - On Type**

GENERAL

Parameter		R7205-01	R7207-01	Unit
Spectral Response		300 to 650	160 to 650	nm
Wavelength of Maximum Response		420		nm
Photocathode	Material	Bialkali		—
	Minimum Effective Area	10		mm dia.
Window Material		Borosilicate glass	Synthetic silica	—
Dynode	Structure	Box and Line		—
	Number of Stages	11		—
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		0.01	mA
Ambient Temperature		-80 to +50	°C

CHARACTERISTICS (at 25°C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856K)	40	70	—	μA/lm
	Radiant at 420 nm	—	72	—	mA/W
	Blue (CS - 5 - 58 filter)	—	9.0	—	μA/lm-b
Anode Sensitivity	Luminous (2856K)	200	700	—	A/lm
	Radiant at 420 nm	—	7.5×10^5	—	A/W
Gain		—	1×10^7	—	—
Anode Dark counts		—	10	30	s ⁻¹
Anode Dark current (after 30min storage in darkness)		—	—	3	nA
Time Response	Anode Pulse Rise Time	—	1.7	—	ns
	Electron Transit Time	—	26	—	ns

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

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrode	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	Dy11	P
Ratio	2	1	1	1	1	1	1	1	1	1	1	1	1

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

PHOTOMULTIPLIER TUBES R7205-01, R7207-01

Figure 1: Typical Spectral Response

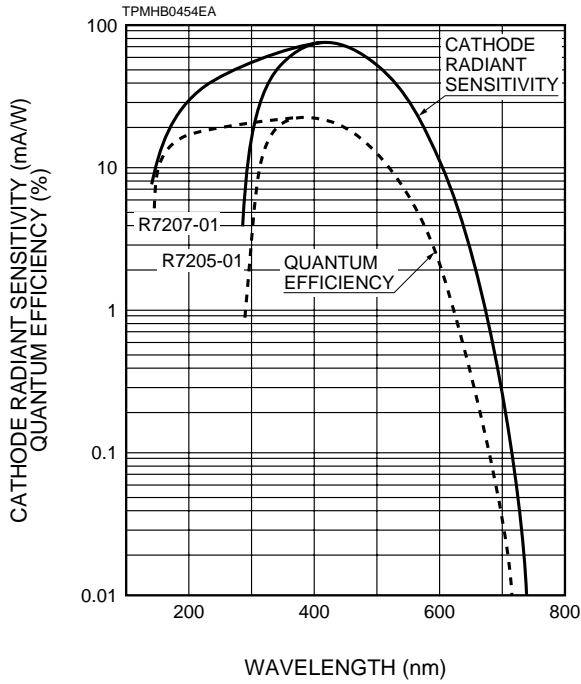


Figure 2: Typical Gain

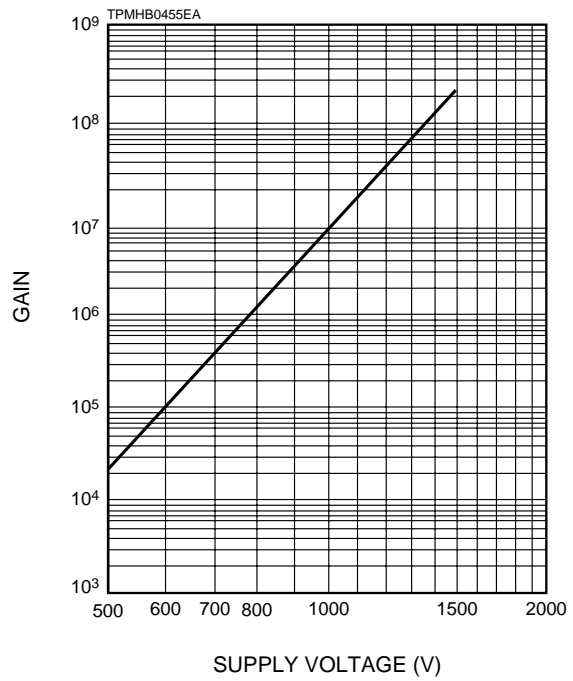


Figure 3: Typical Single Photoelectron Pulse Height Distribution

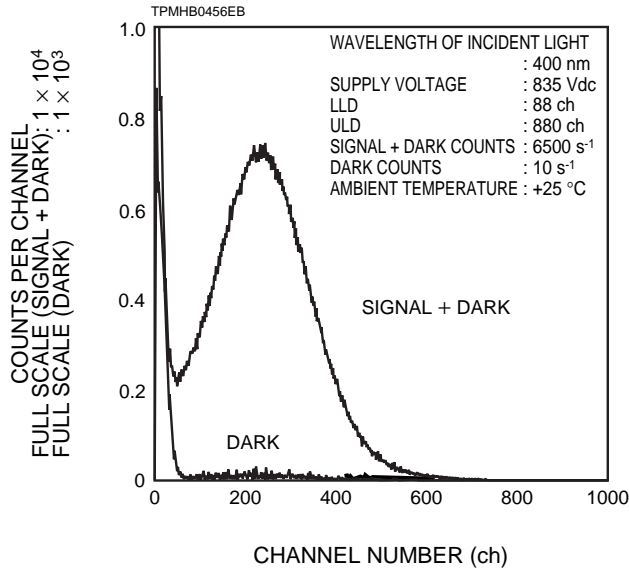
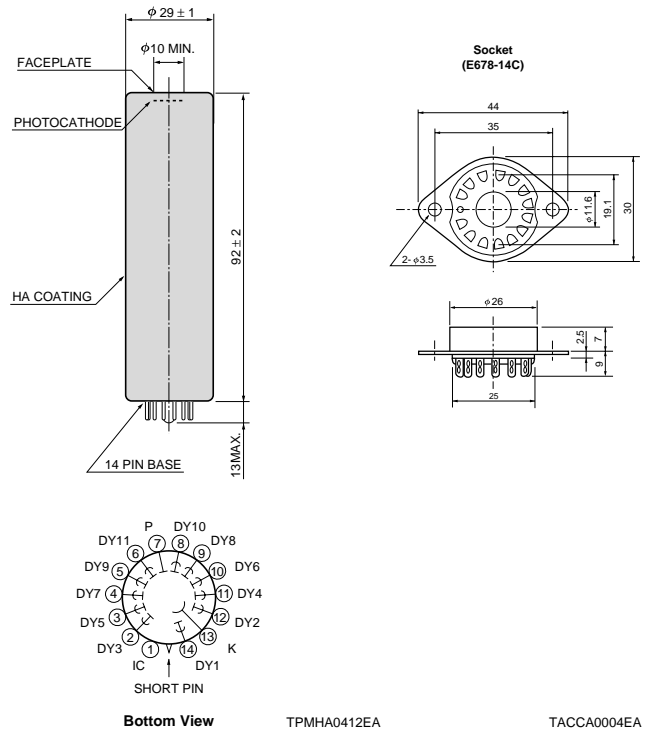


Figure 4: Dimensional Outline and Basing Diagram (Unit: mm)



HAMAMATSU

HOME PAGE URL <http://www.hamamatsu.com>

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 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

TPMH1195E02

OCT. 2000 IP

Printed in Japan (500)