

FEATURES

- Fast time response

APPLICATIONS

- Characteristics evaluation of fast scintillator (BaF₂, CeBr₃, etc.)
- TOF counter in HEP experiment
- Radiation monitor in security instrument



SPECIFICATIONS

GENERAL

Parameter		Description	Unit
Spectral response		160 to 650	nm
Wavelength of maximum response		400	nm
Photocathode	Material	Super bialkali	—
	Minimum effective area	φ12	mm
Window material		Silica glass	—
Dynode	Structure	Linear focused	—
	Number of stages	8	—
Base		14 pin glass base	—
Suitable socket		E678-14C (supplied)	—
Operating ambient temperature		-30 to +50	°C
Storage temperature		-80 to +50	°C

MAXIMUM RATINGS (Absolute maximum values)

Parameter		Value	Unit
Supply voltage	Between anode and cathode	1750	V
Average anode current		0.01	mA

CHARACTERISTICS (at 25 °C)

Parameter		Min.	Typ.	Max.	Unit
Cathode sensitivity	Luminous (2856 K)	80	130	—	μA/lm
	Quantum efficiency at 350 nm	32	35	—	%
	Blue sensitivity index	12.5	13.5	—	—
Anode sensitivity	Luminous (2856 K)	50	150	—	A/lm
Gain		—	1.2 × 10 ⁶	—	—
Anode dark current (after 30 min storage in darkness)		—	3.0	30	nA
Time response	Anode pulse rise time	—	0.9	—	ns
	Electron transit time	—	7.8	—	ns
	Transit time spread (FWHM)	—	80	—	ps
Pulse linearity (±2 % deviation)		—	10	—	mA

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

STANDARD VOLTAGE DIVIDER AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6(Acc)	Dy7	Dy8	P
Ratio	6	3	3	1	1	1	1	1	1	1

Supply voltage: 1500 V, K: Cathode, Dy: Dynode, P: Anode, Acc: Accelerating electrode
Acc to be connected to Dy6.

PHOTOMULTIPLIER TUBE R16768-100

Figure 1: Typical spectral response

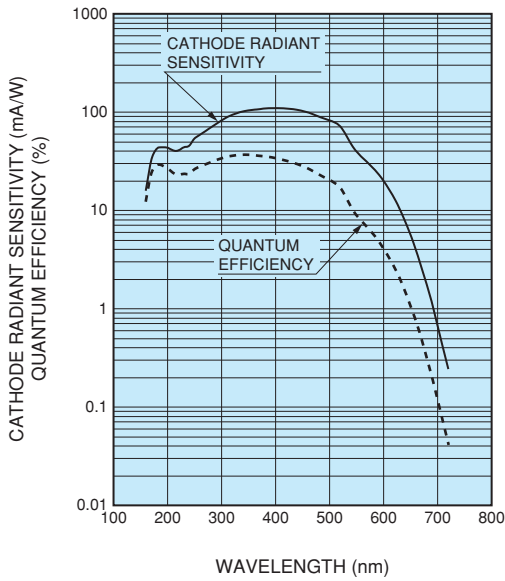


Figure 2: Typical gain

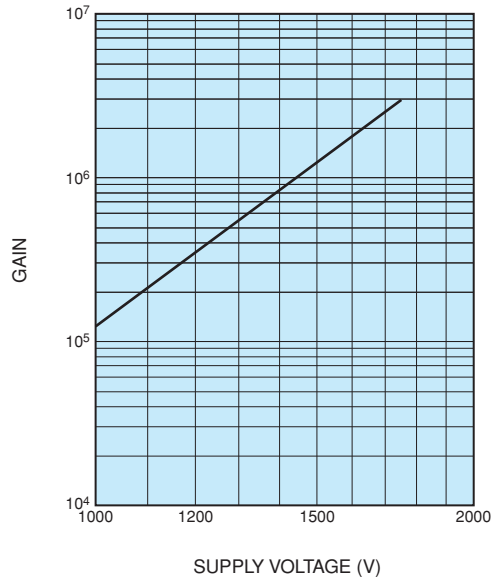


Figure 3: Typical T.T.S. characteristics

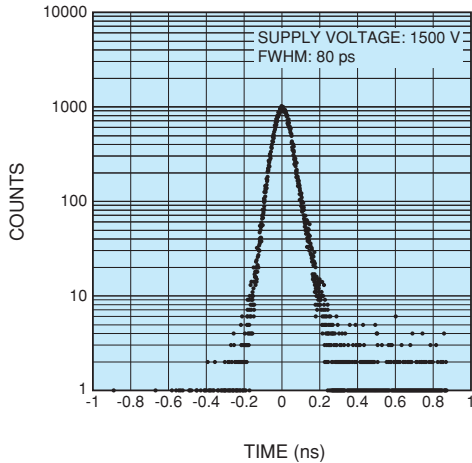


Figure 4: Dimensional outline and basing diagram (Unit: mm)

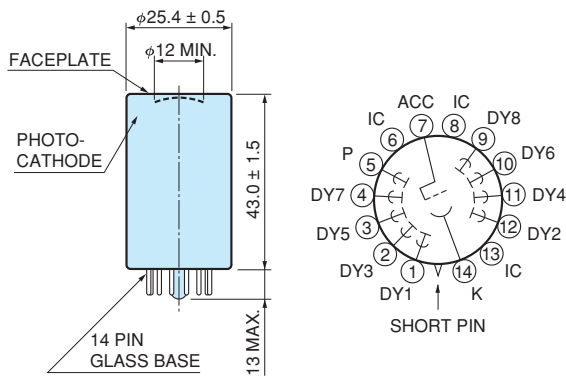
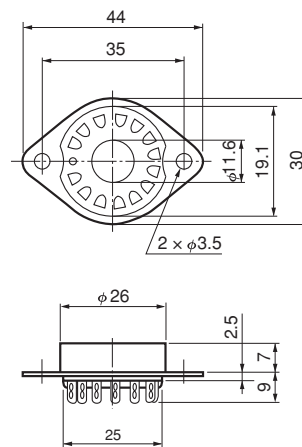


Figure 5: Accessories (Unit: mm)



HAMAMATSU PHOTONICS K.K. www.hamamatsu.com

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, Bridgewater, NJ 08807, U.S.A., Telephone: (1)908-231-0960, Fax: (1)908-231-1218

Germany: HAMAMATSU PHOTONICS DEUTSCHLAND GMBH.: Arzbergerstr. 10, 82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-265-8 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: info@hamamatsu.fr

United Kingdom: HAMAMATSU PHOTONICS UK LIMITED: 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire, AL7 1BW, UK, Telephone: (44)1707-294888, Fax: (44)1707-325777 E-mail: info@hamamatsu.co.uk

North Europe: HAMAMATSU PHOTONICS NORDEN AB: Torshamnsgatan 35, 16440 Kista, 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 int. 6 20044 Arese (Milano), Italy, Telephone: (39)02-93 58 17 33, Fax: (39)02-93 58 17 41 E-mail: info@hamamatsu.it

China: HAMAMATSU PHOTONICS (CHINA) CO., LTD.: 1201, Tower B, Jiamei Center, 27 Dongsanhuan Bellu, Chaoyang District, 100020 Beijing, P.R. China, Telephone: (86)10-6586-6006, Fax: (86)10-6586-2866 E-mail: hpc@hamamatsu.com.cn

Taiwan: HAMAMATSU PHOTONICS TAIWAN CO., LTD.: 13F-1, No.101, Section 2, Gongdao 5th Road, East Dist., Hsinchu City, 300046, Taiwan(R.O.C) Telephone: (886)3-659-0080, Fax: (886)3-659-0081 E-mail: info@hamamatsu.com.tw

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