

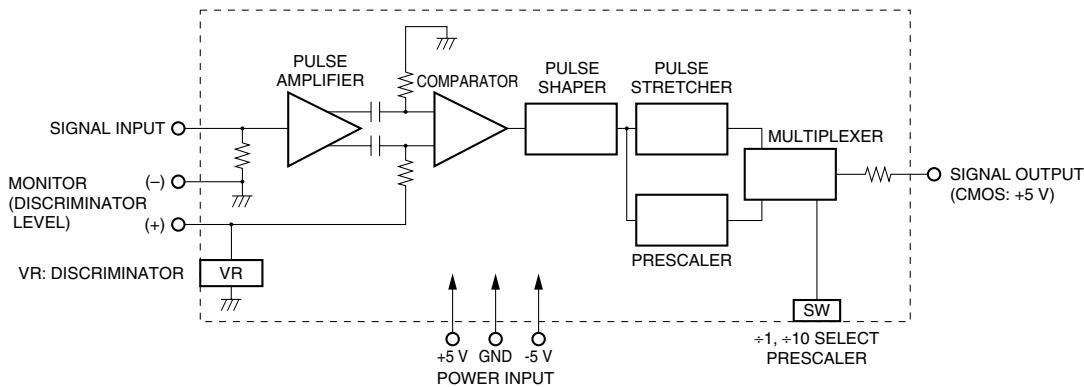
Photon counting unit is designed to convert single photoelectron pulses from a photomultiplier tube into 5 V digital signals by use of the built-in amplifier and discriminator circuits. Photon counting with a high S/N ratio can be performed by simply connecting a counter to the output of the photon counting unit.

The C9744 uses a high-speed electronic circuit that allows measurement with an excellent output linearity up to 10^7 s^{-1} . The C9744 also has a prescaler (division by 10) eliminating the need for a high-speed counter.



TACCF0195

Figure 1: Block Diagram



TPHOC0056EA

SPECIFICATIONS

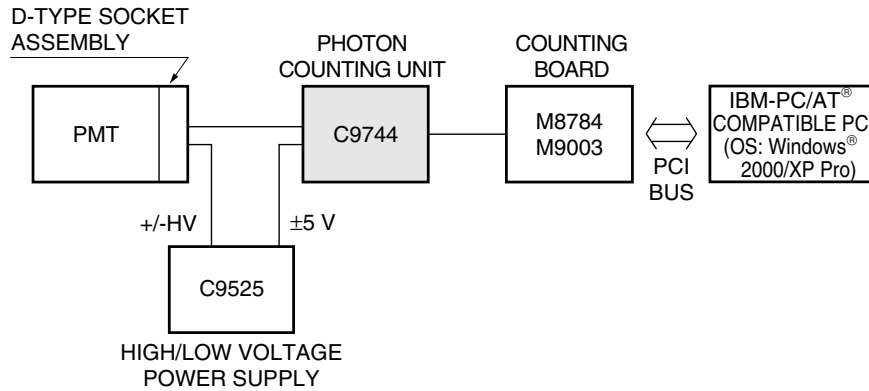
Parameter		C9744	Unit
Input Impedance		50	Ω
Discrimination Level (input conversion)		-0.4 to -16	mV
Required PMT Gain		3×10^6	—
Prescaler		$\div 1$ $\div 10$	—
Count Linearity	$\div 1$	4×10^6	s^{-1}
	$\div 10$	1×10^7	
Pulse-pair Resolution	$\div 1$	25	ns
	$\div 10$	10	
Output Pulse		CMOS 5 V, POSITIVE LOGIC	—
Output Pulse Width	$\div 1$	10	ns
	$\div 10$	Depends on count rate	—
Supply Voltage		+5.0 V \pm 0.2 V, 130 mA / -5.0 V \pm 0.2 V, 50 mA	—
Connector	Input	BNC-R	—
	Output	BNC-R	—
	Power	DIN (6-pin) [Ⓑ]	—
Dimensions (W \times H \times D)		90 \times 32 \times 140	mm
Operating Ambient Temperature [Ⓐ]		0 to +50	$^{\circ}\text{C}$
Storage Temperature [Ⓐ]		-15 to +60	$^{\circ}\text{C}$
Weight		Approx. 250	g

NOTE: [Ⓐ]No condensation [Ⓑ]Supplied with a cable (1.5 m) attached to the mating plug.

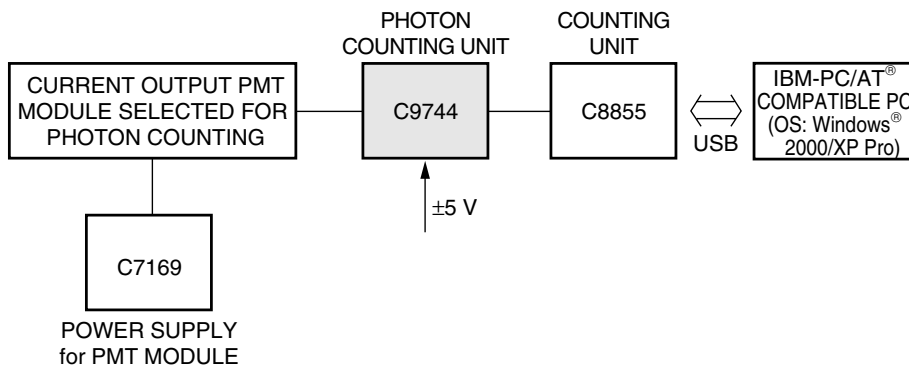
Subject to local technical requirements and regulations, availability of products included in this promotional material may vary. Please consult with our sales office. Information furnished by HAMAMATSU is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions. Specifications are subject to change without notice. No patent rights are granted to any of the circuits described herein. ©2006 Hamamatsu Photonics K.K.

PHOTON COUNTING UNIT C9744

Figure 2: Combination Examples

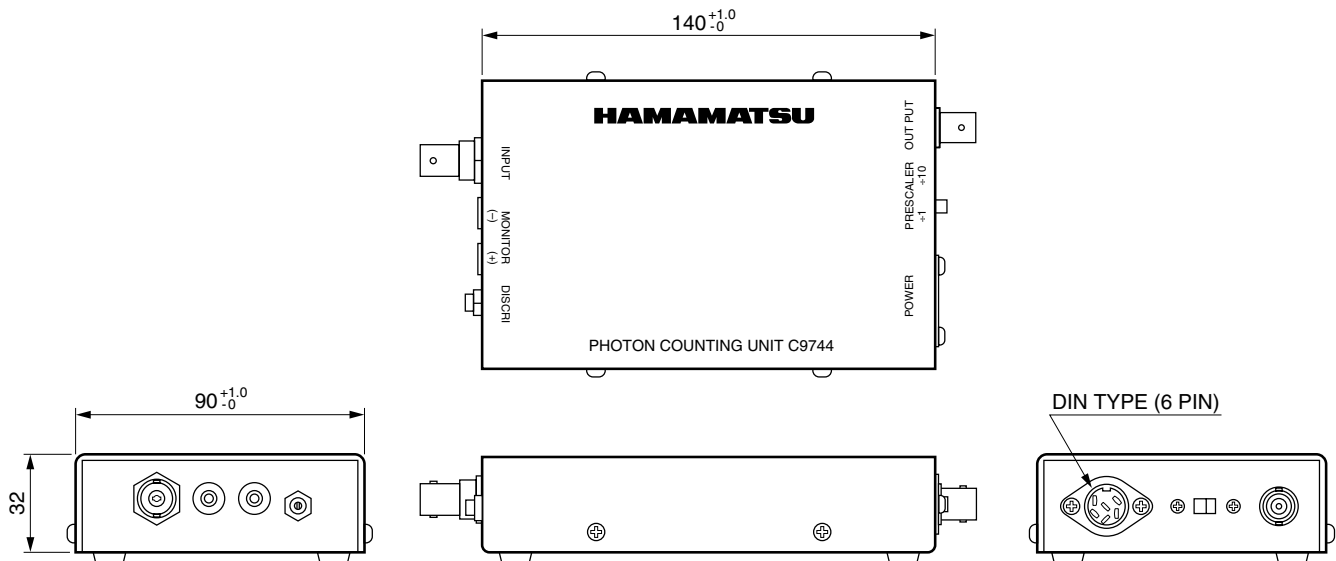


TPHOC0055EA



TPHOC0057EA

Figure 3: Dimensional Outline (Unit: mm)



TPHOA0031EA

HAMAMATSU

WEB SITE www.hamamatsu.com

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

TPHO1023E02
NOV. 2006 IP