

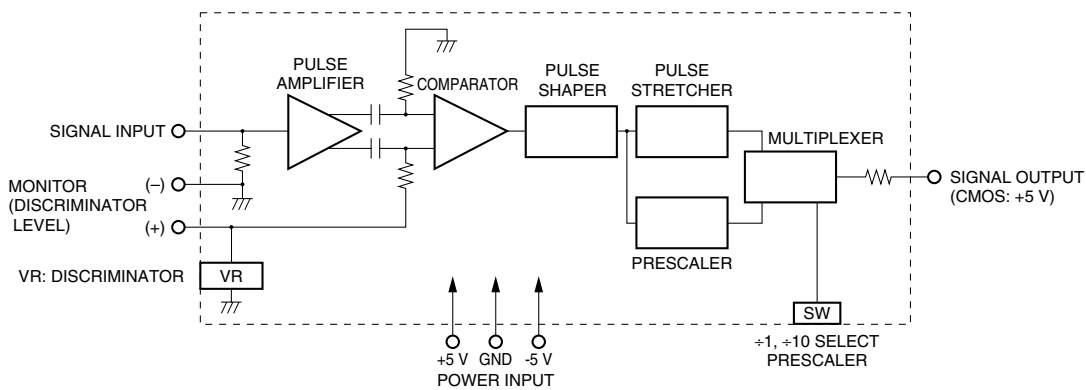
Photon counting unit is designed to convert single photoelectron pulses from a photomultiplier tube into 5 V digital signals by use of the built-in amplifier and discriminator circuits. Photon counting with a high S/N ratio can be performed by simply connecting a counter to the output of the photon counting 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	+1 +10	—
Count Linearity	4×10^6 (÷1) 1×10^7 (÷10)	s^{-1}
Pulse-pair Resolution	25 (÷1) 10 (÷10)	ns
Output Pulse	CMOS 5 V, POSITIVE LOGIC	—
Output Pulse Width	10 (÷1) Depends on count rate (÷10)	ns
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.

PHOTON COUNTING UNIT C9744

Figure 2: Combination Examples

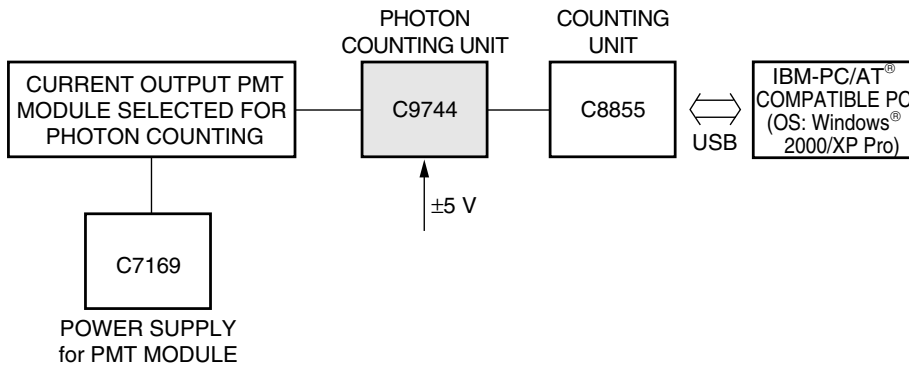
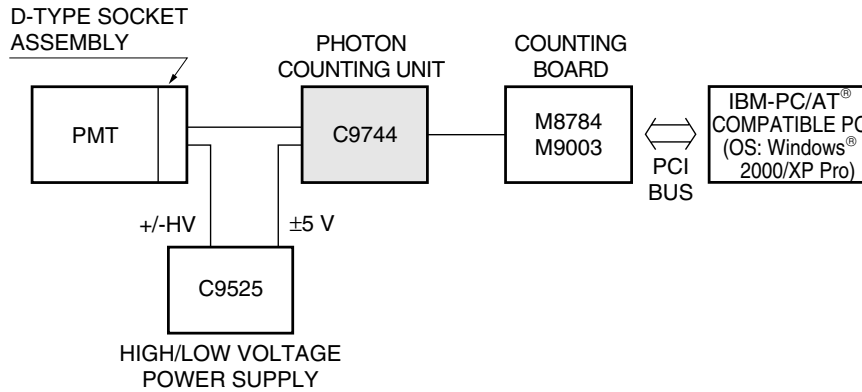
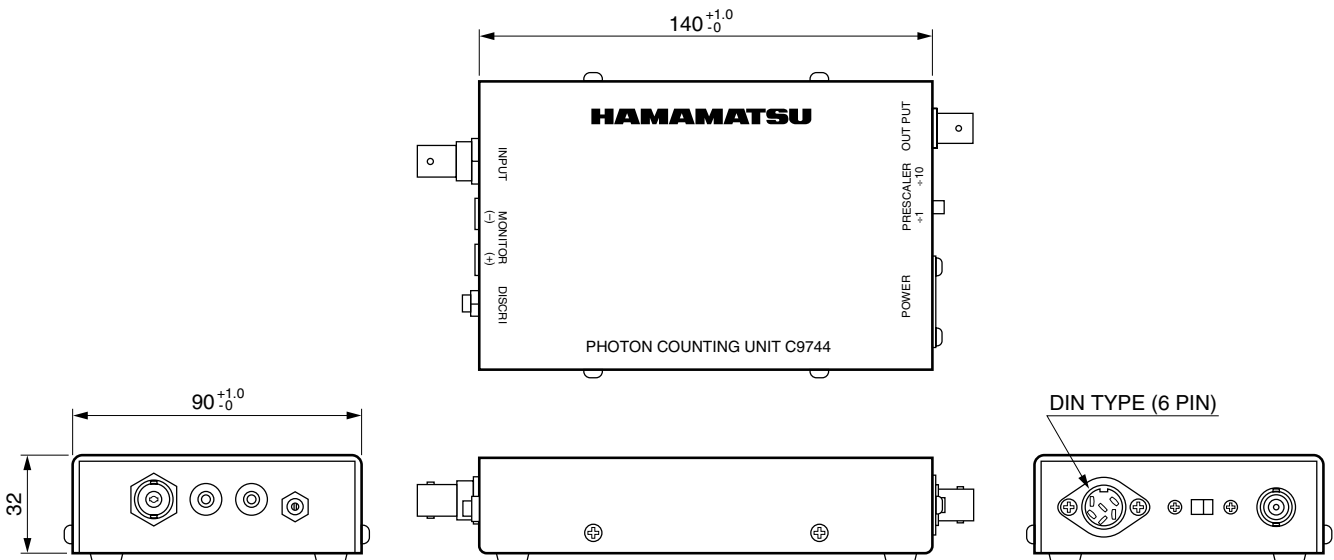


Figure 3: Dimensional Outline (Unit: mm)



HAMAMATSU

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