

Photon counting units are 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.

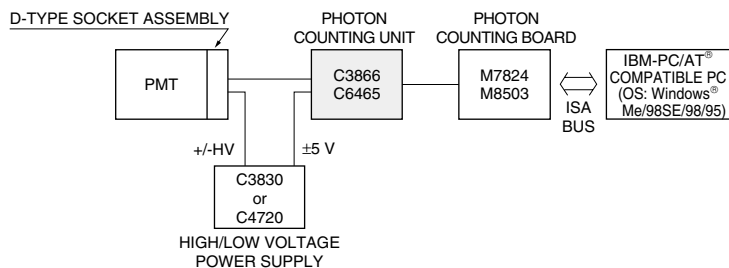
The C3866 uses a high-speed electronic circuit that allows measurement with an excellent output linearity up to 10^7 s^{-1} . The C3866 also has a prescaler (division by 10) eliminating the need for a high-speed counter.

The C6465 provides an output linearity up to 10^6 s^{-1} and an output pulse width of 30 ns, making it suitable for use with a general-purpose counter.



Left: C3866, Right: C6465

COMBINATION EXAMPLE



TPHOC0005EA

SPECIFICATIONS

Parameter	C3866	C6465
Input Impedance	50 Ω	50 Ω
Discrimination Level (Converted Into Input)	-0.5 mV to -16 mV	-2.2 mV to -31 mV
Gain Required in PMT (Recommendation)	3×10^6	5×10^6
Prescaler	$\div 1, \div 10^{\text{A}}$	— [Ⓑ]
Maximum Count Rate (Random Pulse: -10 % deviation)	$\div 1$: $4 \times 10^6 \text{ s}^{-1}$ (Typ.) $\div 10$: $1 \times 10^7 \text{ s}^{-1}$ (Typ.)	$1 \times 10^6 \text{ s}^{-1}$ (Typ.) [Ⓑ]
Pulse Pair Resolution	$\div 1$: 25 ns $\div 10$: 10 ns	60 ns [Ⓑ]
Output Pulse [Ⓒ]	TTL Compatible positive logic (C-MOS 5 V)	TTL Positive logic
Output Pulse Width	$\div 1$: 10 ns $\div 10$: Depending on count rate	30 ns [Ⓑ]
Supply Voltage	+5.2 V ± 0.2 V, 150 mA -5.2 V ± 0.2 V, 300 mA	+5 V ± 0.2 V, 60 mA -5 V ± 0.2 V, 120 mA
Connectors	Input	BNC
	Output	BNC
	Remote	BNC
	Power Supply	HIROSE SR30-10R-4S [Ⓓ]
Operating Temperature	0 °C to +40 °C	0 °C to +40 °C
Storage Temperature	-15 °C to +60 °C	-15 °C to +60 °C
Size (W × H × D)	88 mm × 32 mm × 170 mm	60 mm × 43.2 mm × 105 mm
Weight	Approx. 320 g	Approx. 250 g

NOTE: [Ⓐ]: Selectable by the switch or remote control.

[Ⓑ]: C6465 does not have a prescaler.

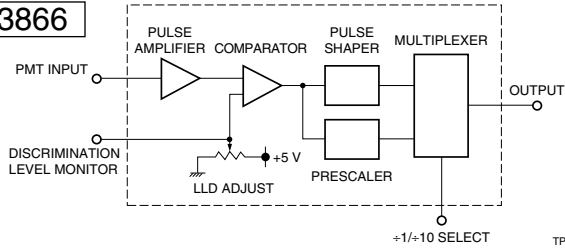
[Ⓒ]: Output stage C3866: ADVANCED C-MOS (National Semiconductor 74AC153), C6465: ADVANCED C-MOS (TOSHIBA TC74ACT04)

[Ⓓ]: Fitting plug (HIROSE SR30-10PQ-4P) with cable is supplied with C3866 (1 m)

[Ⓔ]: Fitting plug with cable is supplied with C6465 (1.5 m)

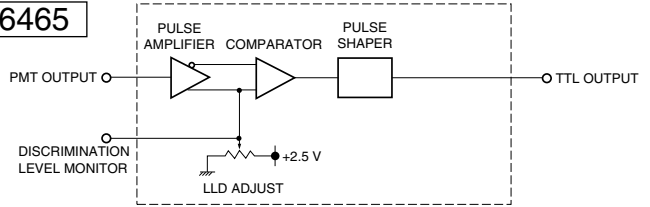
BLOCK DIAGRAM

C3866



TPHOC0006EA

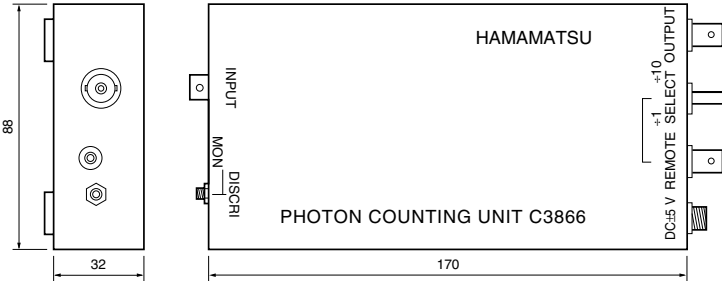
C6465



TPHOC0034EA

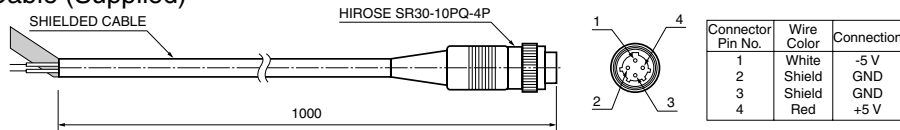
DIMENSIONAL OUTLINE (Unit: mm)

C3866



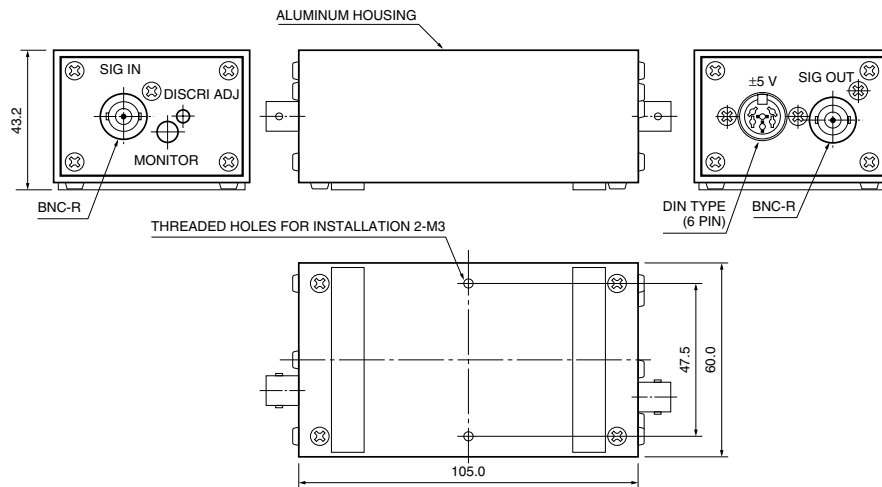
TPHOA0002EA

Power Supply Cable (Supplied)



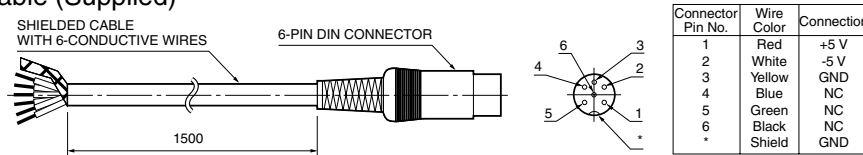
TPHOA0002EA

C6465



TPHOA0015EB

Power Supply Cable (Supplied)



TPHOA0016EA

★Windows is resisterd trademark of Microsoft Corporation in the U.S.A.
 ★IBM-PC/AT is a resisterd trademark of IBM Co.

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

TPHO1017E01
 AUG. 2001 IP
 (1000)