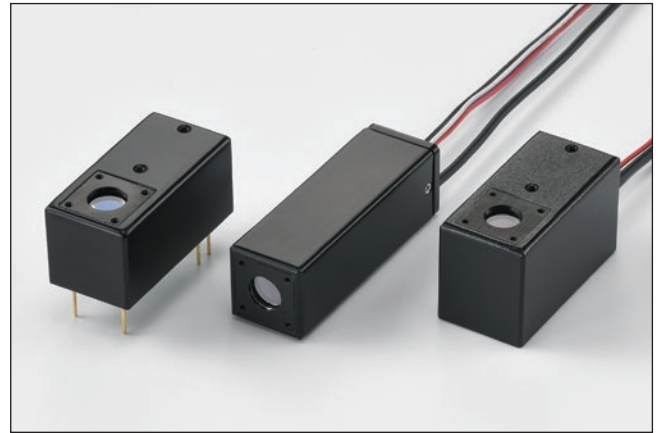


FEATURES

- High quantum efficiency photocathode
GaAsP(-40)
Ex-Red GaAsP(-42)
GaAs(-50)
- Compact
- For photoncounting (P type)



▲Left: H16200 Series, Center: H16201 Series, Right: H16204 Series

SPECIFICATIONS

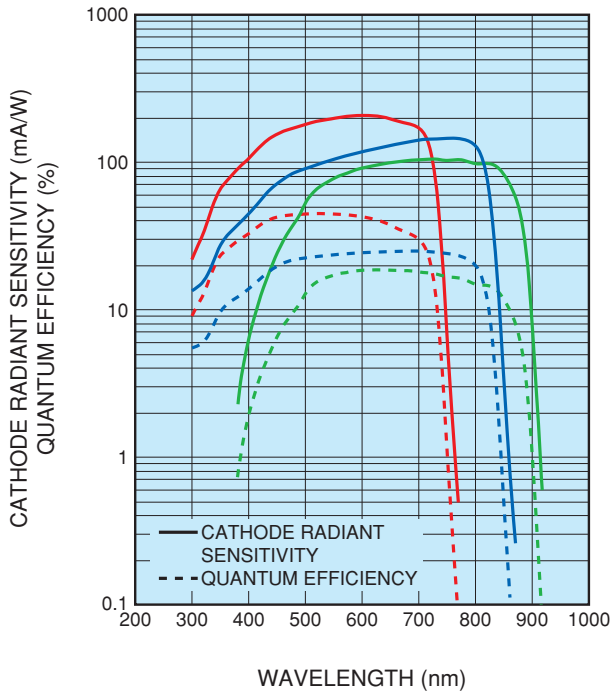
(at 25 °C)

Parameter				-40	-42	-50	Unit			
Input voltage				+11.5 to +15.5			V			
Max. input voltage				+18			V			
Max. input current ^①				12			mA			
Max. output signal current				40			μA			
Max. control voltage ^②				+0.9			V			
Recommended control voltage adjustment range ^②				+0.5 to +0.8			V			
Effective area				φ5			mm			
Spectral response				300 to 740	300 to 840	380 to 900	nm			
Peak quantum efficiency wavelength				520	660	630	nm			
Cathode	Quantum efficiency	at peak quantum efficiency wavelength	Min.	40	15	14	%			
			Typ.	45	25	19				
		at 800 nm	Min.	—	12	11				
	Radiant sensitivity	at peak quantum efficiency wavelength	Min.	168	80	70	mA/W			
			Typ.	189	133	95				
		at 800 nm	Min.	—	78	71				
				Typ.			—	129	97	
Anode	Radiant sensitivity	at peak quantum efficiency wavelength	Min.	1.0 × 10 ⁵	4.8 × 10 ⁴	4.2 × 10 ⁴	A/W			
			Typ.	1.9 × 10 ⁵	1.3 × 10 ⁵	9.5 × 10 ⁴				
		at 800 nm	Min.	—	4.7 × 10 ⁴	4.3 × 10 ⁴				
			Typ.	—	1.3 × 10 ⁵	9.7 × 10 ⁴				
	Dark current ^{③④}			Typ.	3	3	4	nA		
				Max.	10	11	12			
	Dark count ^{④⑤} (P type)			Typ.	6000	6900	7500	s ⁻¹		
				Max.	18 000	20 700	22 500			
Gain ^③				Typ.			—			
Gain ^③ (P type)				Typ.			—			
Rise time ^③				Typ.			1.0	ns		
Ripple noise ^{③⑥} (peak to peak)				Max.			0.6	mV		
Settling time ^⑦				Max.			0.2	s		
Operating ambient temperature ^⑧							+5 to +35	°C		
Storage temperature ^⑧							-20 to +50	°C		
Weight				H16200: 76 / H16201: 100 / H16204: 106			g			

NOTE: ① Input voltage = +15 V, Control voltage = +0.8 V ② Input impedance = 30 kΩ ③ Control voltage = +0.8 V
 ④ After 30 min storage in darkness ⑤ Plateau voltage = control voltage
 ⑥ Load resistance = 1 MΩ, Load capacitance = 22 pF
 ⑦ The time required for the output to reach a stable level following a change in the control voltage from +0.8 V to +0.5 V.
 ⑧ No condensation

PHOTOMULTIPLIER TUBE MODULES H16200/H16201/H16204 SERIES

Figure 1: Typical spectral response



PHOTOCATHODE	Suffix color
GaAsP	-40: —
Ex-Red GaAsP	-42: —
GaAs	-50: —

Figure 2: Typical gain

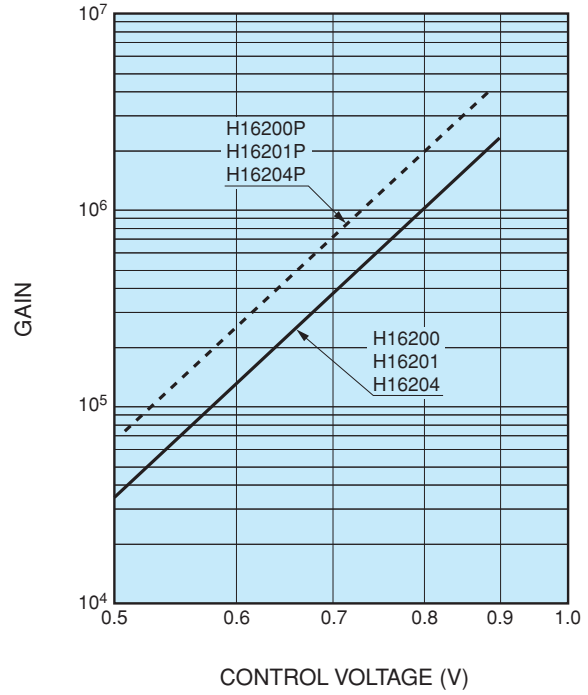
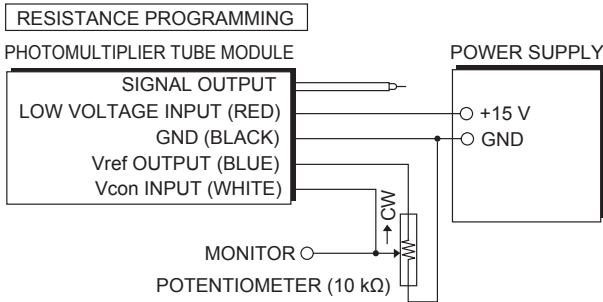
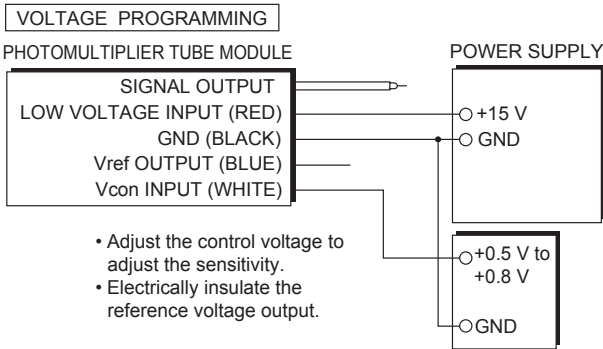


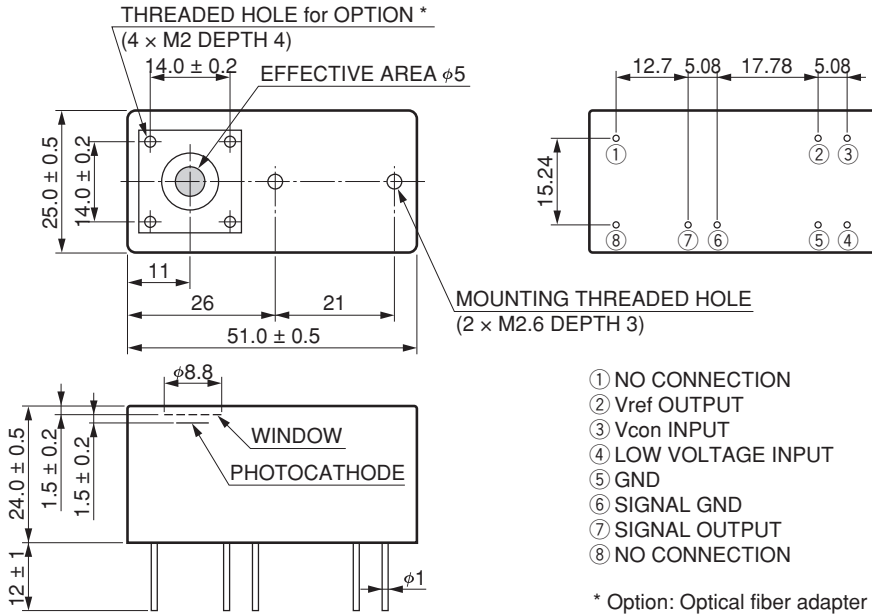
Figure 3: Sensitivity adjustment method



* When using a potentiometer, adjust sensitivity while monitoring the control voltage so it does not exceed +0.9 V.

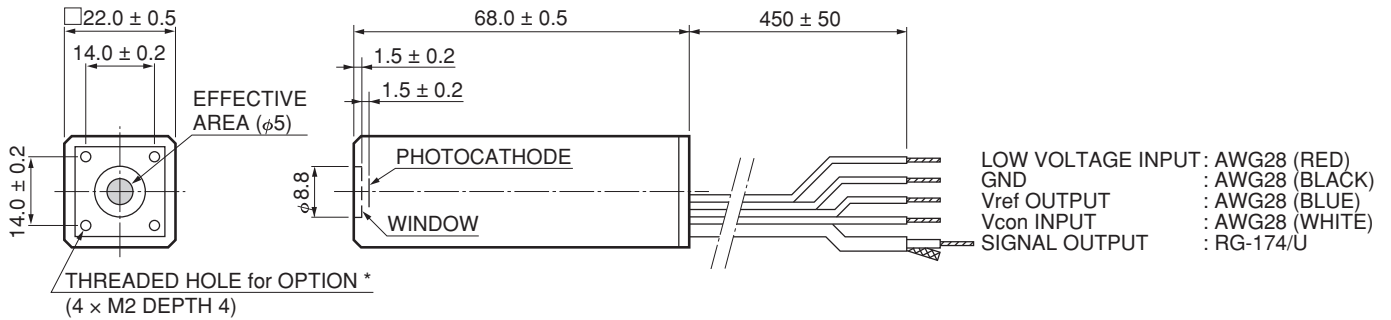
Figure 4: Dimensional outline (Unit: mm)

● **H16200 Series**



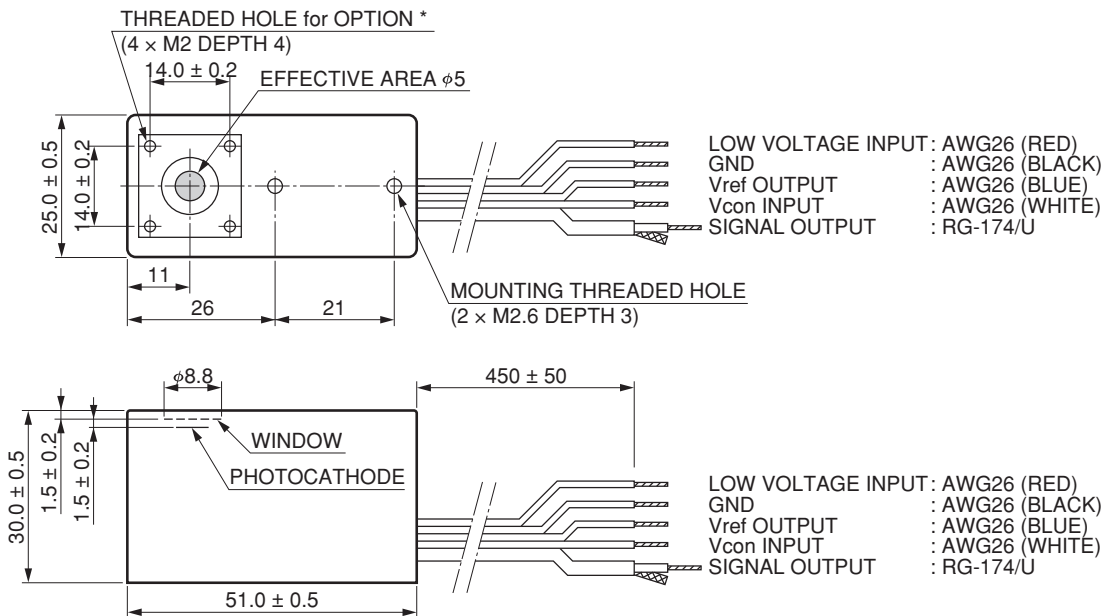
* Option: Optical fiber adapter (E5776 / E5776-51),
C-mount adapter (A9865)

● **H16201 Series**



*Option: Optical fiber adapter (E5776 / E5776-51), C-mount adapter (A9865)

● **H16204 Series**



* Option: Optical fiber adapter (E5776 / E5776-51),
C-mount adapter (A9865)

PHOTOMULTIPLIER TUBE MODULES H16200/H16201/H16204 SERIES

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 E-mail: usa@hamamatsu.com

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: infos@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: Torshamsgatan 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, Jiaming 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.: 8F-3, No.158, Section 2, Gongdao 5th Road, East District, Hsinchu, 300, Taiwan R.O.C. Telephone: (886)3-659-0080, Fax: (886)3-659-0081 E-mail: info@hamamatsu.com.tw

TPMO1112E02
DEC. 2022 IP