

FEATURES

- High quantum efficiency: GaAsP photocathode
- Large effective area: □14 mm
- Low-noise & high-speed amplifier built-in photosensor



SPECIFICATIONS

GENERAL & CHARACTERISTICS (at 25 °C)

Parameter		Description / Value	Unit		
Input voltage		±4.5 to ±5.5	V		
Max. input voltage		±5.5	V		
Max. input current ^①		+26 / -23	mA		
Max. output signal voltage ^②		+2 (Load resistance 10 kΩ)	V		
Max. control voltage		+1.1 (Input impedance 1 MΩ)	V		
Recommended control voltage adjustment range		+0.5 to +1.1 (Input impedance 1 MΩ)	V		
Effective area		□14	mm		
Spectral response range		300 to 720	nm		
Peak quantum efficiency wavelength		520	nm		
Cathode sensitivity	Quantum efficiency ^③	Min.	40	%	
		Typ.	45	%	
	Luminous sensitivity	Min.	700	μA/lm	
		Typ.	850	μA/lm	
Radiant sensitivity ^③		Typ.	189	mA/W	
Anode sensitivity	Luminous sensitivity ^④	Min.	2.8 × 10 ⁷	V/lm	
		Typ.	3.4 × 10 ⁷	V/lm	
	Radiant sensitivity ^{③④}		Typ.	7.55	V/nW
	Voltage output depending on PMT dark current ^{④⑤}		Typ.	0.2	mV
Max.			1	mV	
Frequency bandwidth (-3 dB)		DC to 30 MHz	—		
Current-to-voltage conversion factor		0.02	V/μA		
Output offset voltage		Typ.	±5	mV	
Ripple noise ^{④⑥} (peak to peak)		Max.	1	mV	
Settling time ^⑦		Max.	10	s	
Operating ambient temperature ^⑧		+5 to +50	°C		
Storage temperature ^⑧		-20 to +50	°C		
Weight		Typ.	98	g	

- NOTE:** ① At ±5 V input voltage and +1.0 V control voltage in darkness
 ② At ±5 V input voltage, Averaged over any interval of 30 seconds maximum, Max pulse output signal voltage = +2 V.
 ③ Measured at the peak quantum efficiency wavelength
 ④ Control voltage = +1.0 V
 ⑤ After 30 minutes storage in darkness
 The actual output value in darkness is the sum of dark current and offset voltage.
 ⑥ Cable RG-174/U, Cable length 450 mm, Load resistance = 1 MΩ, Load capacitance = 15 pF
 ⑦ The time required for the output to reach a stable level following a change in the control voltage from +1.0 V to +0.5 V.
 ⑧ No condensation

PHOTOSENSOR MODULE H15460-40

Figure 1: Spectral response

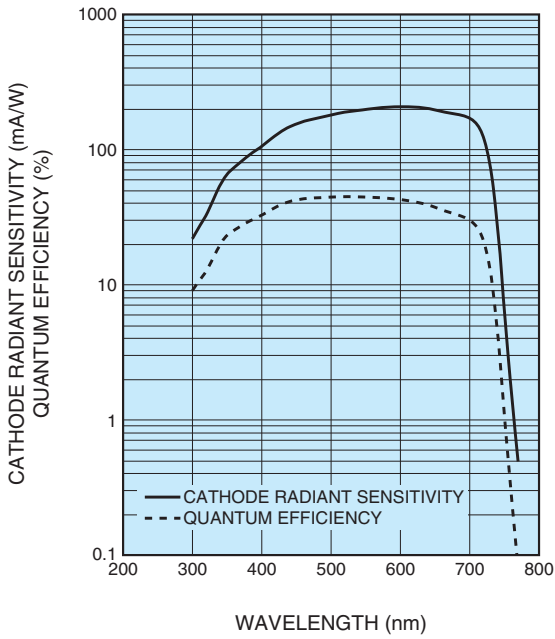


Figure 2: Typical gain

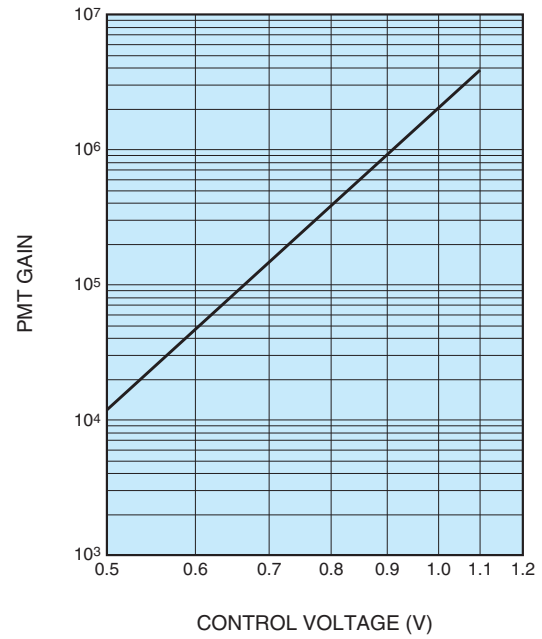


Figure 3: Typical frequency response

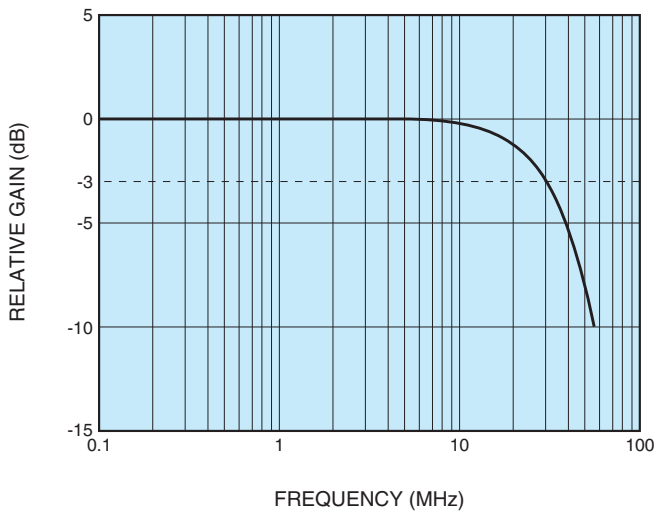


Figure 4: Typical ripple noise

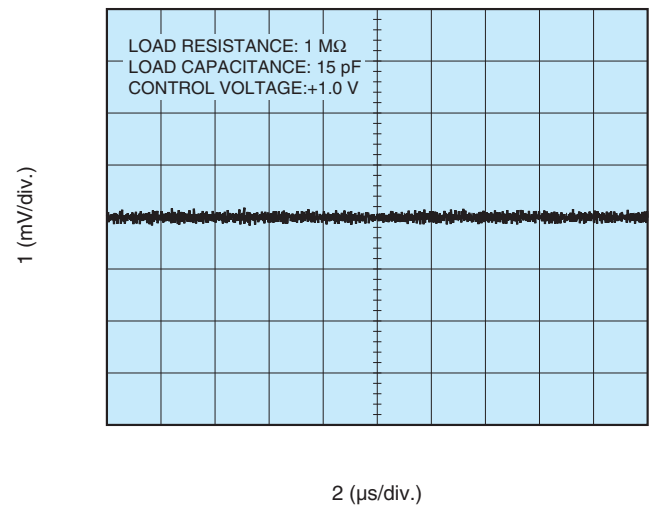


Figure 5: Typical output characteristics

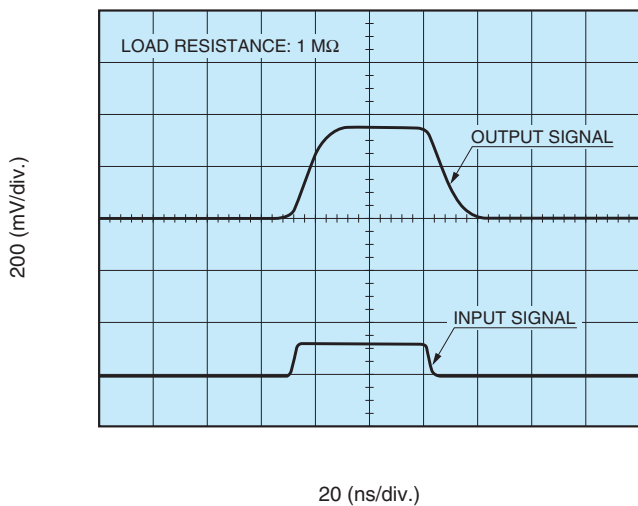


Figure 6: Schematic diagram

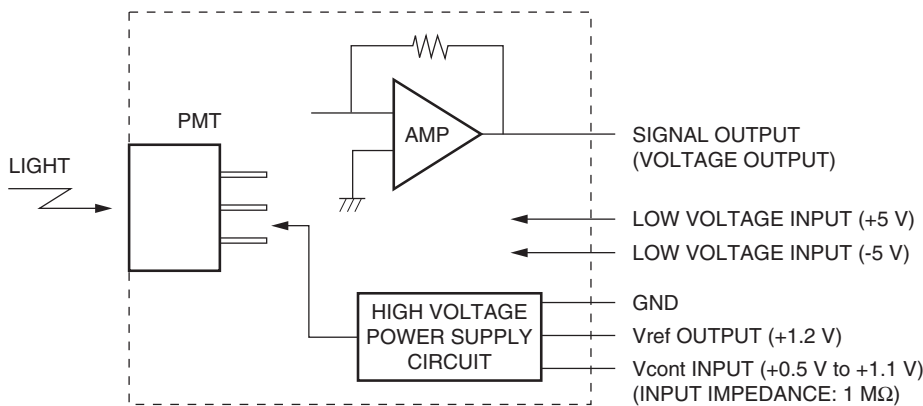


Figure 7: Sensitivity adjustment method

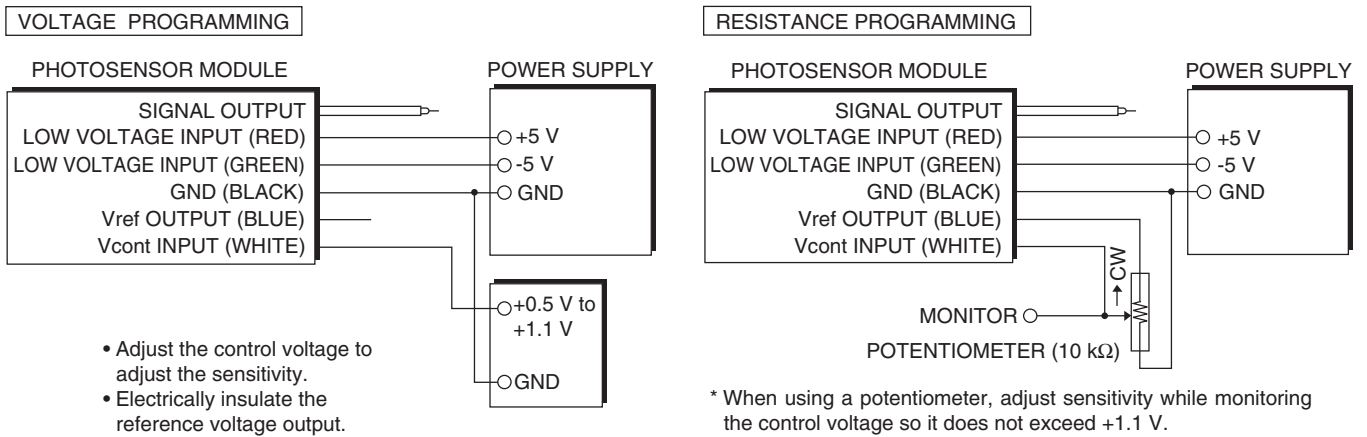
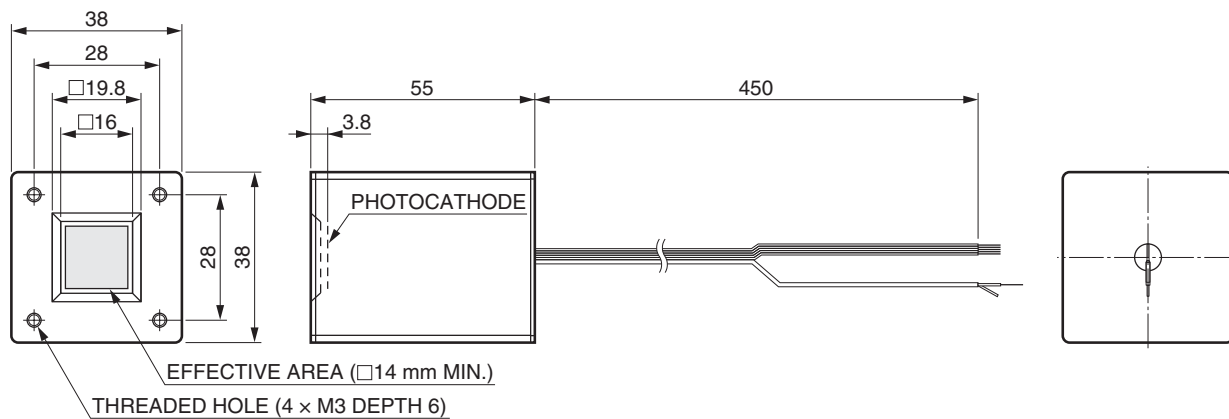


Figure 8: Dimensional outline (Unit: mm)



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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, D-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: 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, 20020 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 Beilu, 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

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