Photosensor Modules

HAMAMATSU

H7826 Series



The H7826 series photosensor modules consist of a 19-mm (3/4") diameter head-on photomultiplier tube and a high-voltage power supply circuit. The length of the photomultiplier tube used here is short compared to other photomultiplier tubes of the same diameter, making it compact even though it has a large light input diameter of 15 mm. The H7826 also has excellent resistance to vibration and shock compared to other photomultiplier tubes, making it ideal for use in portable equipment.

Product Variations

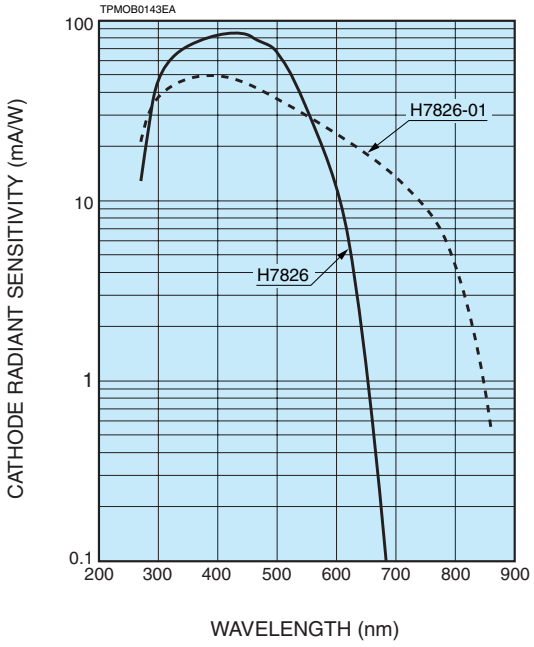
Type No.	Spectral Response	Features
H7826	300 nm to 650 nm	For general applications in visible range
H7826P		For photon counting
H7826-01	300 nm to 850 nm	For general applications in visible to near IR range
H7826P-01		For photon counting

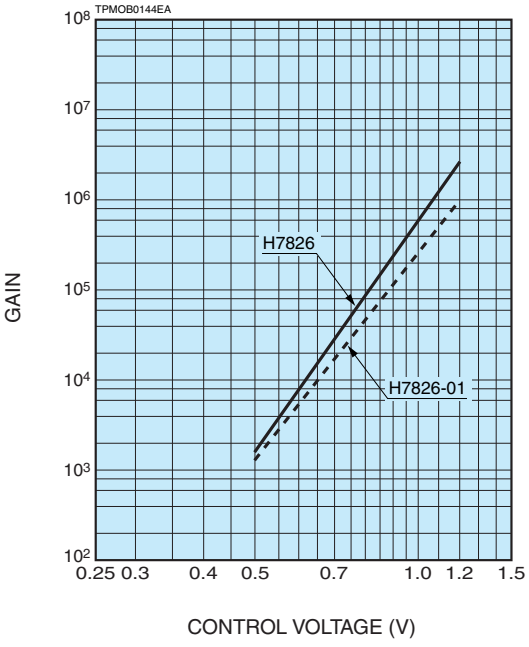
Specifications

Parameter			H7826	H7826-01	H7826P	H7826P-01	Unit
Input Voltage			+11.5 to +15.5				V
Max. Input Voltage			+18				V
Max. Input Current			40				mA
Max. Output Signal Current			100				μA
Max. Control Voltage			+1.2 (Input impedance 100 kΩ)				V
Recommended Control Voltage Adjustment Range			+0.5 to +1.1				V
Effective Area			φ15				mm
Sensitivity Adjustment Range			1: 10^3				—
Peak Sensitivity Wavelength			420	380	420	380	nm
Cathode	Luminous Sensitivity	Min.	60	80	60	80	μA/lm
		Typ.	90	120	90	120	
	Blue Sensitivity Index (CS 5-58)	Typ.	10.5	—	10.5	—	—
	Red/White Ratio	Typ.	—	0.2	—	0.2	—
	Radiant Sensitivity *1	Typ.	85	49	85	49	mA/W
Anode	Luminous Sensitivity *2	Min.	10		—		A/lm
		Typ.	50	30	—		
	Radiant Sensitivity *1 *2	Typ.	4.7×10^4	1.3×10^4	—		A/W
	Dark Current *2 *3	Typ.	3		3		nA
		Max.	20		20		
	Gain *2	Min.	—		1.8×10^6	1×10^6	—
	Dark Count *3 *4	Typ.	—		200	2000	s^{-1}
		Max.	—		500	3500	
Rise Time *2		Typ.	1.5				ns
Ripple Noise *2 *5 (peak to peak)		Max.	0.5				mV
Settling Time *6		Max.	0.2				s
Operating Ambient Temperature *7			+5 to +45				°C
Storage Temperature *7			-20 to +50				°C
Weight			70				g

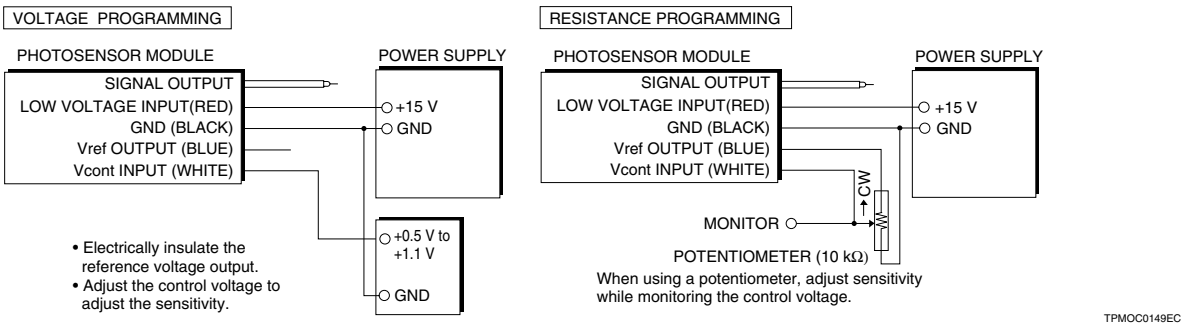
*1: Measured at the peak sensitivity wavelength *2: Control voltage = +1.0 V *3: After 30 minutes storage in darkness
*4: Control voltage: Plateau voltage *5: Cable RG-174/U, Cable length 450 mm, load resistance = 1 MΩ, load capacitance = 22 pF
*6: The time required for the output to reach a stable level following a change in the control voltage from +1.0 V to +0.5 V. *7: No condensation

Characteristics (Cathode radiant sensitivity, Gain)



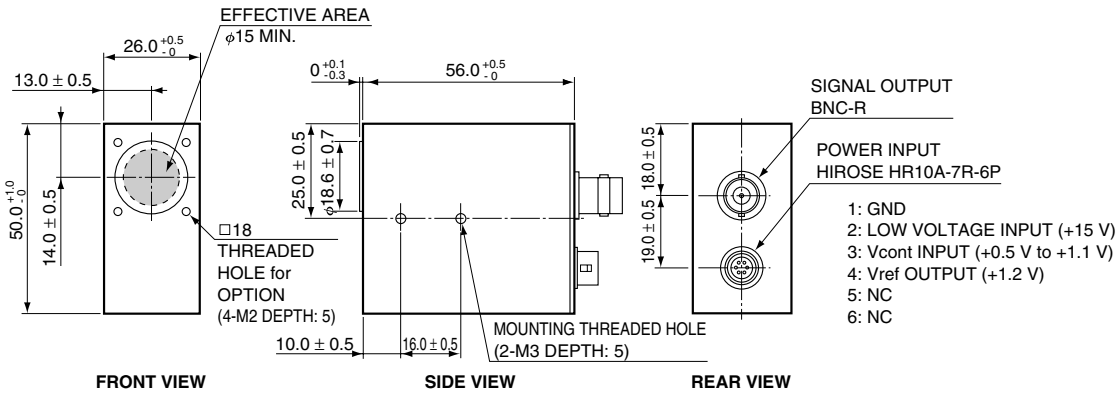


Sensitivity Adjustment Method

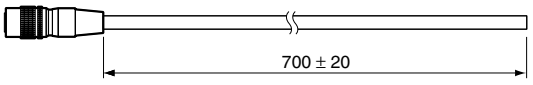


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Dimensional Outlines (Unit: mm)



Power cable with connector (HIROSE HR10A-7P-6S) is supplied with the H7826 series



BLACK: GND
RED: LOW VOLTAGE INPUT (+15 V)
WHITE: Vcont INPUT (+0.5 V to +1.1 V)
BLUE: Vref OUTPUT (+1.2 V)
GREEN: NC

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