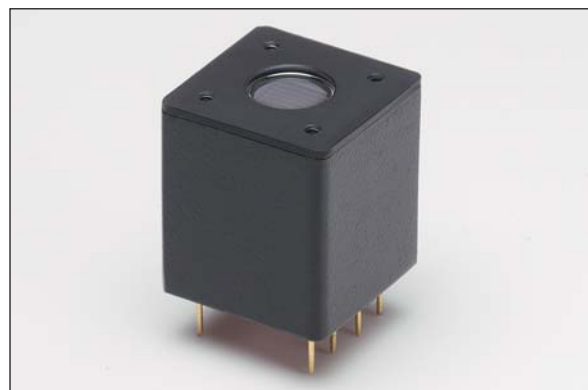


OVERVIEW

The H14950 series are compact photosensor modules containing a metal package PMT and a low-voltage power supply circuit. Despite the size nearly equal to photodiodes, this module delivers high gain, wide dynamic range, and high-speed response.



PRODUCT VARIATIONS

Type No.	Spectral response	Photocathode material	Input window material
H14950-100	300 nm to 650 nm	Super bialkali	Borosilicate glass
H14950-103	185 nm to 650 nm	Super bialkali	UV glass
H14950-200	300 nm to 650 nm	Ultra bialkali	Borosilicate glass
H14950-01	300 nm to 870 nm	Multialkali	Borosilicate glass
H14950-04	185 nm to 870 nm	Multialkali	UV glass
H14950-20	300 nm to 920 nm	Extended red multialkali	Borosilicate glass

SPECIFICATIONS

Parameter		H14950 series				Unit		
Suffix		-100, -103	-200	-01, -04	-20	—		
Input voltage		+11.5 to +15.5				V		
Max. input voltage		+18.0				V		
Max. input current *1		12.0				mA		
Max. output signal current *2		100				μA		
Max. control voltage		+1.0 (Input impedance 30 kΩ)				V		
Recommended control voltage adjustment range		+0.5 to +1.0 (Input impedance 30 kΩ)				V		
Effective area		φ8				mm		
Peak sensitivity wavelength		400	400	400	630	nm		
Cathode	Luminous sensitivity	Min.	80	100	100	350	μA/lm	
		Typ.	105	135	200	500		
	Blue sensitivity index	Typ.	13.5	14.5	—	—	—	
	Red/White ratio	Typ.	—	—	0.25	0.45	—	
Radiant sensitivity *3		Typ.	110	130	77	78	mA/W	
Anode	Luminous sensitivity *2	Min.	30	40	40	140	A/lm	
		Typ.	105	135	200	500		
	Radiant sensitivity *2*3		Typ.	1.1 × 10 ⁵	1.3 × 10 ⁵	0.8 × 10 ⁵	0.8 × 10 ⁵	A/W
	Dark current *2*4		Typ.	0.5	0.5	1	10	nA
Max.			5	5	10	100		
Rise time *2		Typ.	0.6			ns		
Ripple noise *2*5 (peak to peak)		Max.	0.6			mV		
Settling time *6		Max.	0.2			s		
Operating ambient temperature *7		+5 to +50				°C		
Storage temperature *7		-20 to +50				°C		
Weight		32				g		

*1: Input voltage=+15.0 V, Control voltage=+0.9 V, Output current= Dark current *2: Control voltage=+0.9 V

*3: Measured at the peak sensitivity wavelength *4: After 30 minutes storage in darkness

*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 +0.9 V to +0.5 V

*7: No condensation

PHOTOSENSOR MODULES H14950 SERIES

Figure 1: Characteristics

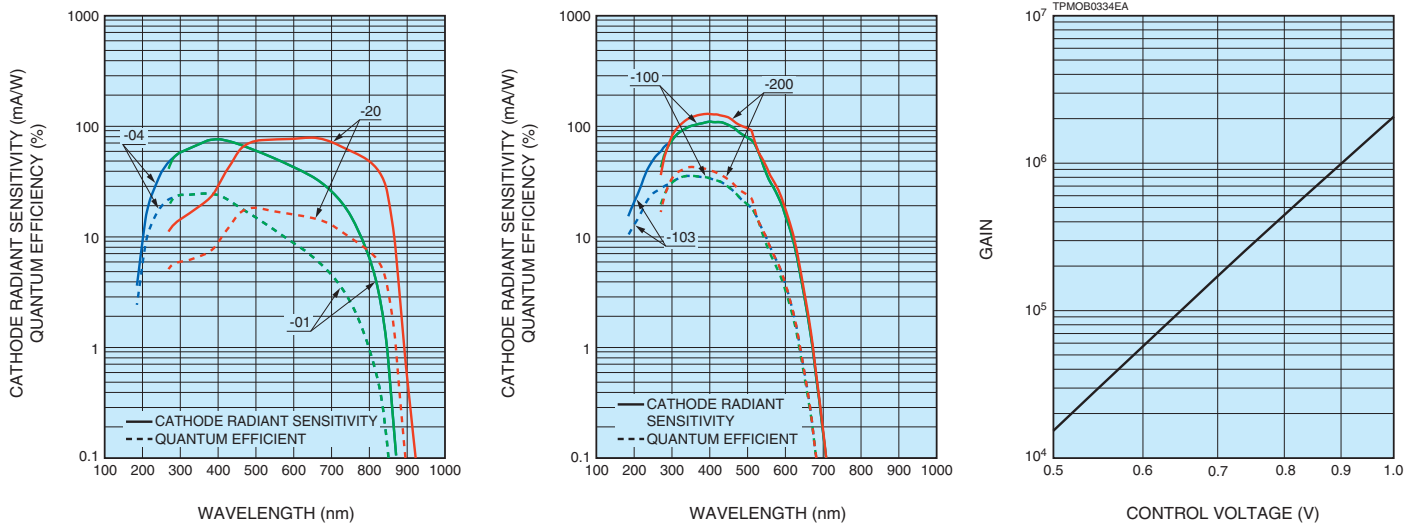


Figure 2: Sensitivity adjustment method

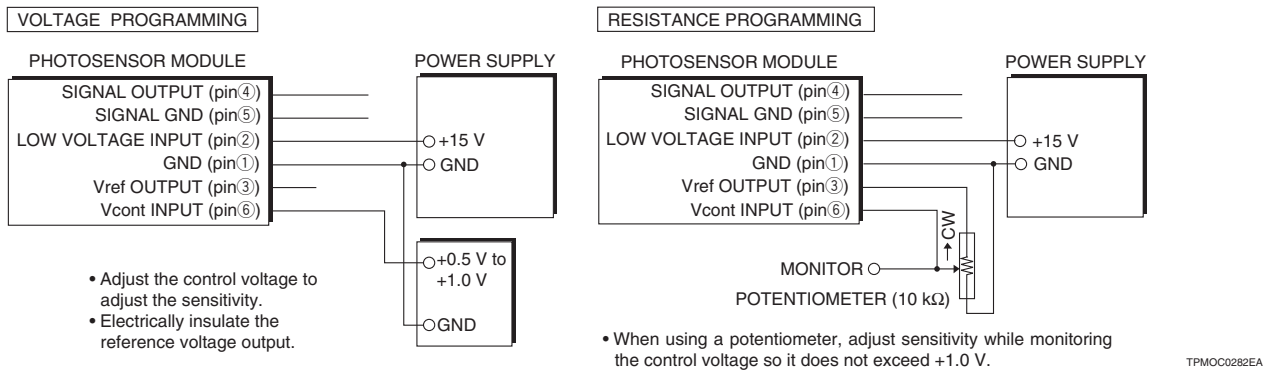
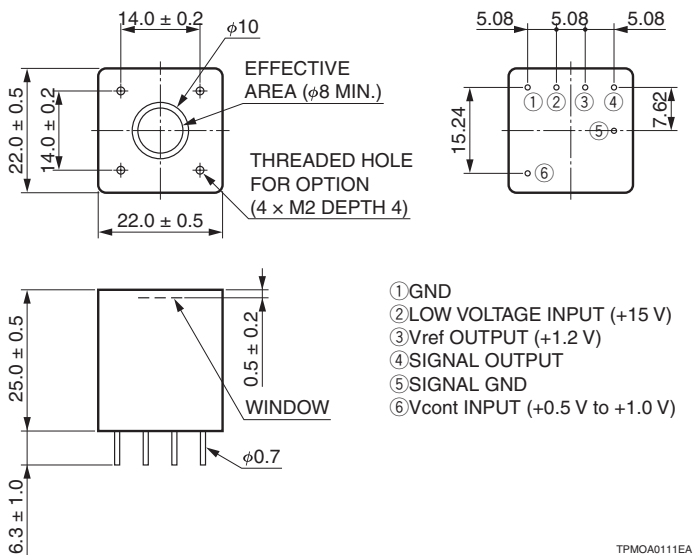
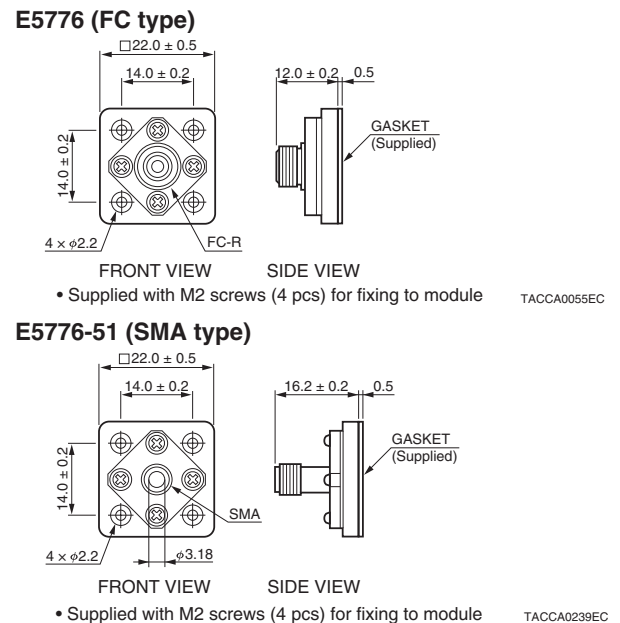


Figure 3: Dimensional Outline (Unit: mm)



Option (Optical fiber adapter) (Unit: mm)



Note: Optical blocks are available for these photosensor modules to make compact optical systems without light leakage.

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