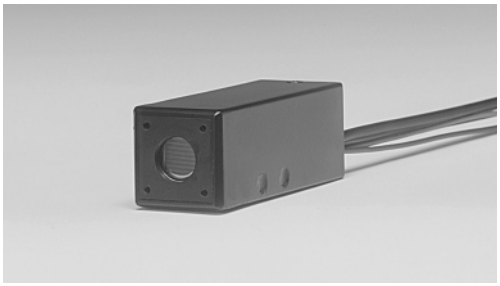
Metal package PMT

Photosensor Modules H5784 Series



The H5784 series photosensor modules are comprised of a metal package photomultiplier tube, a low-power consumption high-voltage power supply and a low noise amplifier. The electrical current from the photomultiplier tube is converted to a voltage by an amplifier for easy signal processing. The H5784 is highly resistant to noise since the amplifier is installed near the anode output pin of the photomultiplier tube. The amplifier feedback resistance of 1 MΩ allows a current-to-voltage conversion factor of 1 V/μA, and covers a frequency bandwidth from DC to 20 kHz.

Product Variations

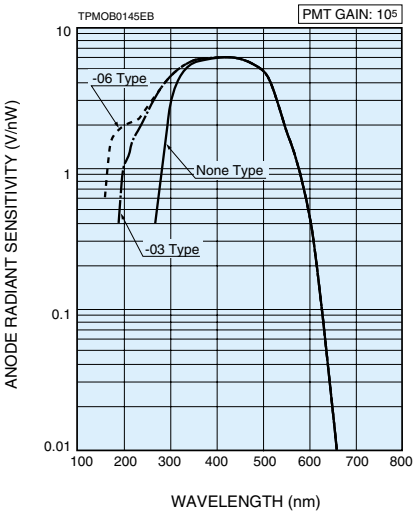
Type No.	Spectral Response	Current-to-voltage Conversion Factor	Frequency Bandwidth	Features
H5784	300 nm to 650 nm	1 V/μA	DC to 20 kHz	For general applications in visible range
H5784-01	300 nm to 850 nm			For general applications in visible to near IR range
H5784-02	300 nm to 880 nm			High sensitivity in near IR range.
H5784-03	185 nm to 650 nm			For UV to visible range
H5784-04	185 nm to 850 nm			For UV to near IR range
H5784-06	185 nm to 650 nm			For UV to visible range (synthetic silica window) with higher sensitivity below 300 nm than -03 type
H5784-20	300 nm to 900 nm			Infrared-extended multialkali photocathode with enhanced sensitivity

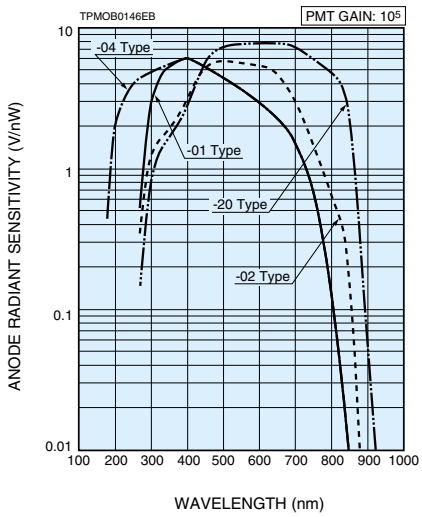
Specifications

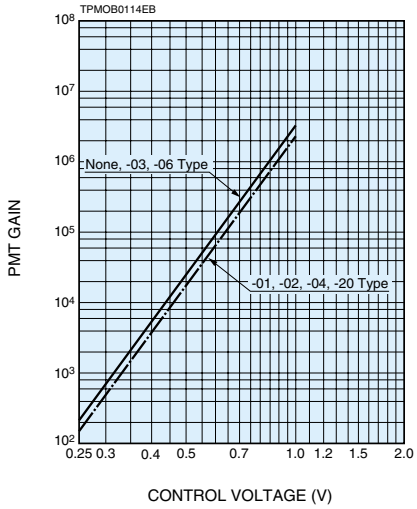
Parameter			H5784 Series				Unit
Suffix			None/-03/-06	-01/-04	-02	-20	—
Input Voltage			±11.5 to ±15.5				V
Max. Input Voltage			±18				V
Max. Input Current			+9/-1				mA
Max. Output Signal Voltage			+10 (load resistance 10 kΩ)				V
Max. Control Voltage			+1.0 (Input impedance 100 kΩ)				V
Recommended Control Voltage Adjustment Range			+0.25 to +0.9				V
Effective Area			φ8				mm
Sensitivity Adjustment Range			$1: 10^4$				—
Peak Sensitivity Wavelength			420	400	500	630	nm
Cathode	Luminous Sensitivity	Min.	40	80	200	350	μA/lm
		Typ.	70	150	250	500	
	Blue Sensitivity Index (CS 5-58)		8	—	—	—	—
	Red/White Ratio		—	0.2	0.25	0.45	—
	Radiant Sensitivity *1		62	60	58	78	mA/W
Anode	Luminous Sensitivity *2	Min.	1.0×10^7	1.5×10^7	2.5×10^7	3.5×10^7	V/lm
		Typ.	5.0×10^7	7.5×10^7	1.25×10^8	2.5×10^8	
	Radiant Sensitivity *1 *2		43	30	29	39	V/nW
	Voltage Output Depending on PMT Dark Current *2 *3	Typ.	0.2	0.4	2	2	mV
		Max.	2	4	20	20	
Current-to-Voltage Conversion Factor			1				V/μA
Offset Voltage *2		Typ.	±3				mV
Ripple Noise *2 *4 (peak to peak)		Max.	2				mV
Settling Time *5			2				s
Operating Ambient Temperature			+5 to +50				°C
Storage Temperature			-20 to +50				°C
Weight			100				g

*1: Measured at the peak sensitivity wavelength *2: Control voltage = +0.8 V *3: After 30 minute storage in darkness
*4: Cable RG-174/U, Cable length 450 mm, Load resistance = 1 MΩ, Load capacitance = 22 pF
*5: 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.

Characteristics (Anode radiant sensitivity, PMT gain)

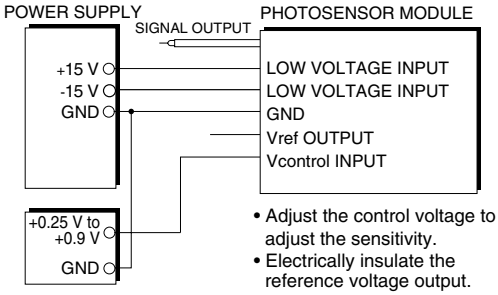






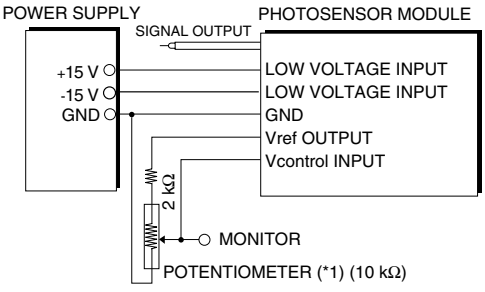
Sensitivity Adjustment Method

Voltage Programming



- Adjust the control voltage to adjust the sensitivity.
- Electrically insulate the reference voltage output.

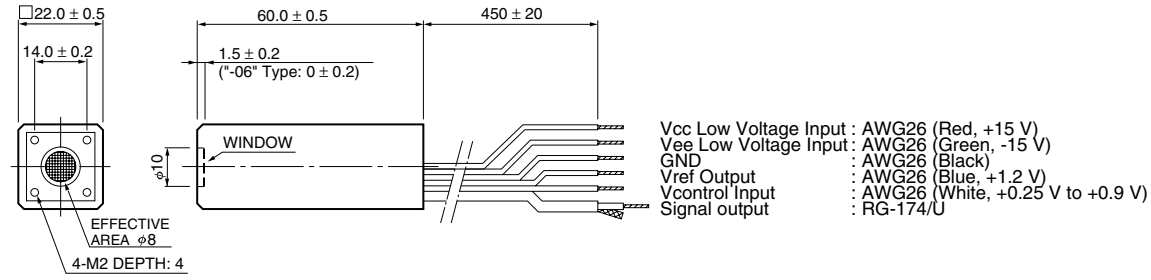
Resistance Programming



*1: When using a potentiometer to adjust sensitivity, monitor the control voltage so it does not exceed +1.0 V.

TPMOC0154EC

Dimensional Outlines (Unit: mm)

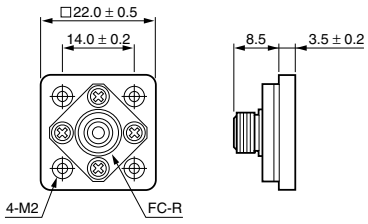


FRONT VIEW **SIDE VIEW**

TPMOA0012EC

Option (Optical Fiber Adapter) (Unit: mm)

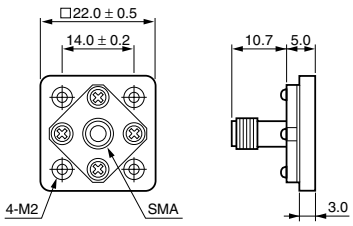
E5776 (FC Type)



FRONT VIEW **SIDE VIEW**

TACCA0055EA

E5776-51 (SMA Type)



FRONT VIEW **SIDE VIEW**

TACCA0239EA

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