

Metal Package PMT with Internal Charge Amp+ADC Type

Photosensor Modules H7468 Series



The H7468 series are photosensor modules assembled with a photomultiplier tube, an AD converter circuit and a microcontroller. These photosensor modules operate from a single +5 V supply and convert the photomultiplier tube analog signals into 12-bit digital data which can be sent to a PC (personal computer) through the RS-232C interface. The photomultiplier tube supply voltage and measurement start/stop can also be controlled from the PC.

Product Variations

Type No.	Spectral Response	Features
H7468	300 nm to 650 nm	For visible range
H7468-01	300 nm to 850 nm	For visible to near IR range
H7468-03	185 nm to 650 nm	For UV to visible range
H7468-20	300 nm to 900 nm	High sensitivity in near IR range

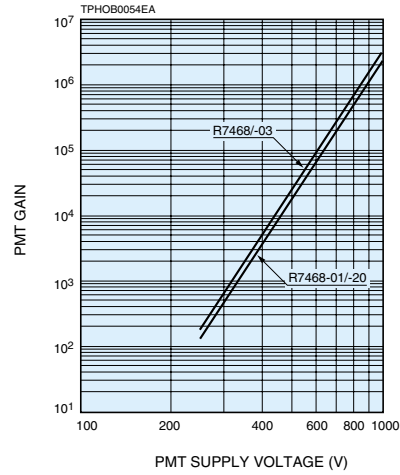
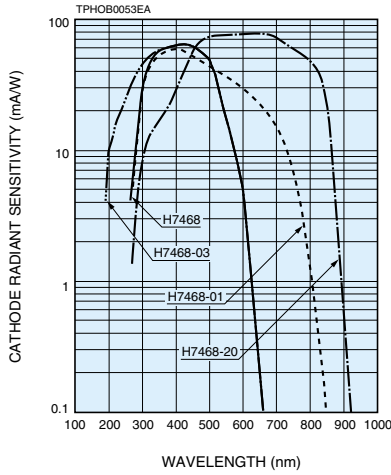
Specifications

Parameter		H7468				Unit	
		None	-01	-03	-20		
Suffix		None	-01	-03	-20	—	
Input Voltage (Vcc)		+4.75 to +5.25				V	
Max. Input Voltage		+6				V	
Max. Input Current		35				mA	
Effective Area		φ8				mm	
Digital Output: Maximum Output Current		25				mA	
Digital Output: Maximum Sink Current		25				mA	
Voltage between Digital Input and GND		-0.3 to Vcc +0.3				V	
Peak Sensitivity Wavelength		420	400	420	630	nm	
Cathode Sensitivity	Luminous Sensitivity	Min.	40	80	40	350	A/lm
		Typ.	70	150	70	500	
	Blue Sensitivity Index (CS 5-58)	8.0	—	8.0	—	—	
	Red/White Ratio	—	0.2	—	0.45	—	
Radiant Sensitivity *1		62	60	62	78	mA/W	
Gain *2	Typ.	7.0×10^5	5.0×10^5	7.0×10^5	5.0×10^5	—	
Anode Dark Current *2, *3	Typ.	0.2	0.4	0.2	2	nA	
	Max.	2	4	2	20		
Integration Capacitance		1000				pF	
AD Converter Resolution		12				bit	
Integration Time		0.04 to 500 (0.01 step)				ms	
Dead Time		0.01 to 500 (0.01 step)				ms	
Sampling Time	Continuous Reading	4 to 1000				ms	
	Fixed Set Reading	0.05 to 1000					
Measurement Count (fixed set reading)		1 to 127				—	
PMT Supply Voltage		0 to 1000				V	
Digital High-Level Input Voltage	Min.	4				V	
Digital Low-Level Input Voltage	Max.	1				V	
Digital High-Level Output Voltage	Min.	Vcc -0.7				V	
Digital Low-Level Output Voltage	Max.	0.6				V	
RS-232C Interface Setting		RS-232C, 9600 baud, Parity none, 8 data bits, 1 stop bit				—	
Operating Ambient Temperature		+5 to +50				°C	
Storage Temperature		-20 to +50				°C	
Weight		105				g	

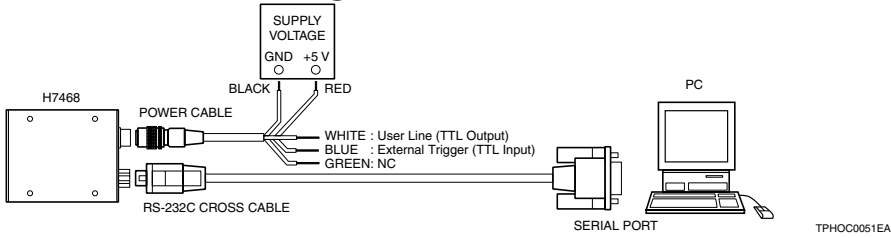
*1: Measured at the peak sensitivity wavelength
*3: After 30 minute storage in darkness

*2: PMT supply voltage: 800 V

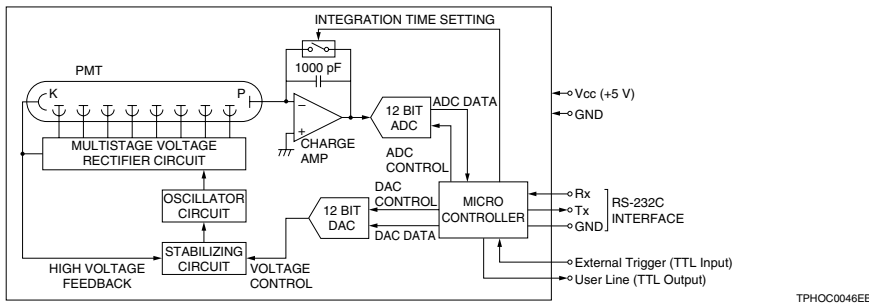
Characteristics (Cathode radiant sensitivity, PMT gain)



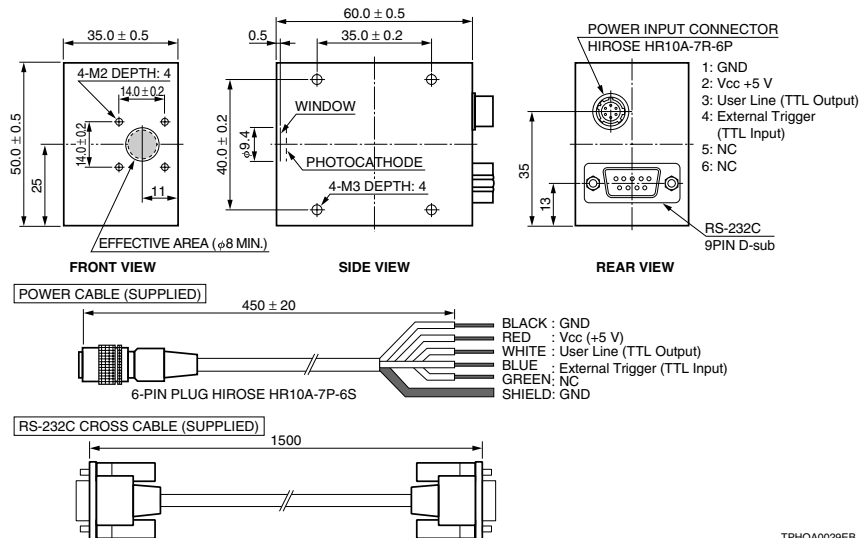
Connection Diagram



Block Diagram



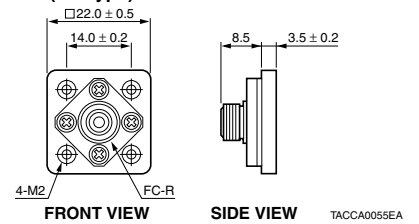
Dimensional Outlines (Unit: mm)



Option

(Optical Fiber Adapter) (Unit: mm)

E5776 (FC Type)



E5776-51 (SMA Type)

