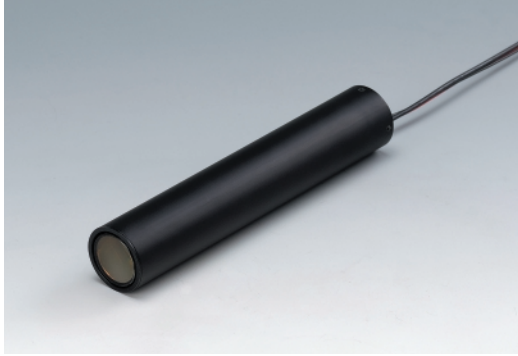


Head-on PMT

HAMAMATSU

Photon Counting Head H11123



The H11123 is a photon counting head device consisting of a 28-mm (1-1/8") diameter head-on photomultiplier tube, high-speed photon counting circuit, and high-voltage power supply circuit. The high voltage power supply for photomultiplier tube and the discrimination level are preset to optimum values, allowing photon counting measurement by just connecting a +5 V supply. The H11123 can operate at high count rate.

The effective photosensitive area is as large as 25 mm in diameter, so the incident light can be collected very efficiently.

Product Variations

Type No.	Spectral Response	Features
H11123	300 nm to 650 nm	High detection efficiency

Specifications

(at +25 °C)

Parameter		Value	Unit	
Input Voltage		+4.75 to +5.25	V	
Max. Input Voltage		+6	V	
Max. Input Current		70	mA	
Effective Area		φ25	mm	
Peak Sensitivity Wavelength		420	nm	
Count Sensitivity	Typ.	300 nm	1.9×10^5	s ⁻¹ .pw ⁻¹
		400 nm	4.4×10^5	
		500 nm	3.6×10^5	
		600 nm	1.1×10^5	
Count Linearity *1		5.0×10^6	s ⁻¹	
Dark Count *2	Typ.	100	s ⁻¹	
	Max.	200		
Pulse-Pair Resolution	Typ.	20	ns	
Output Pulse Width	Typ.	10	ns	
Output Pulse Height *3	Min.	2.0	V	
	Typ.	2.2		
Recommended Load Resistance		50	Ω	
Signal Output Logic		Positive logic	—	
Operating Ambient Temperature		+5 to +40	°C	
Storage Temperature *4		-20 to +50	°C	
Weight		259	g	

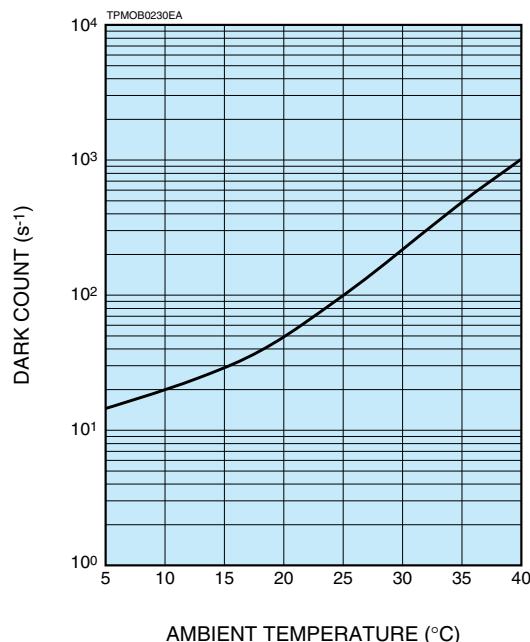
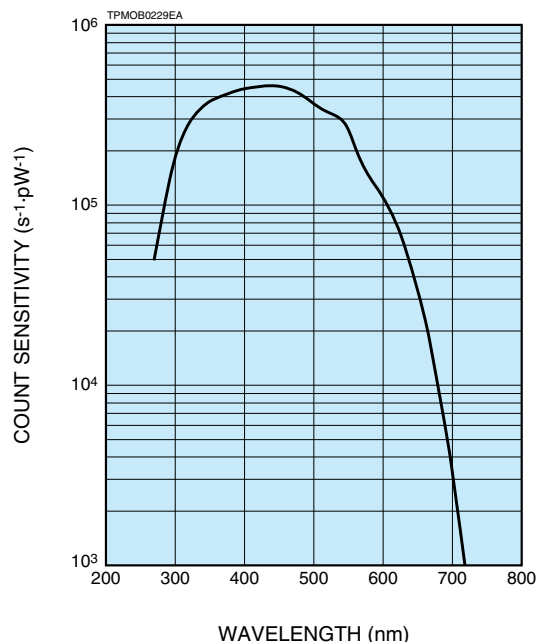
*1: Random pulse, at 10 % count loss

*2: After 30 minutes storage in darkness

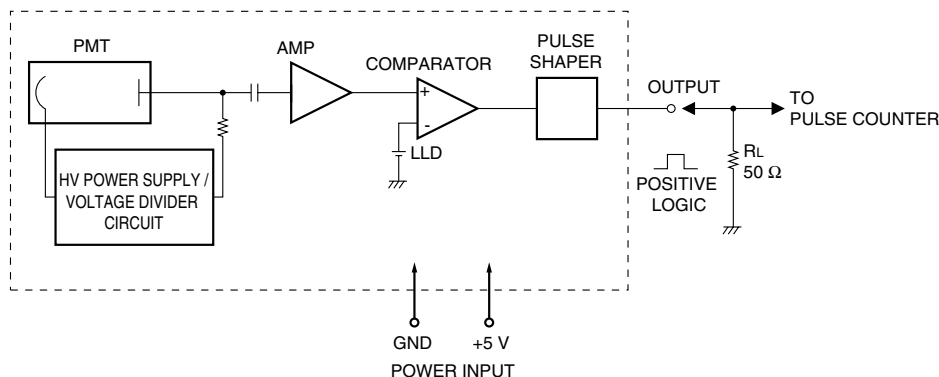
*3: With input voltage +5 V, Load resistance 50 Ω

*4: No condensation

Characteristics (Count sensitivity, Dark count)

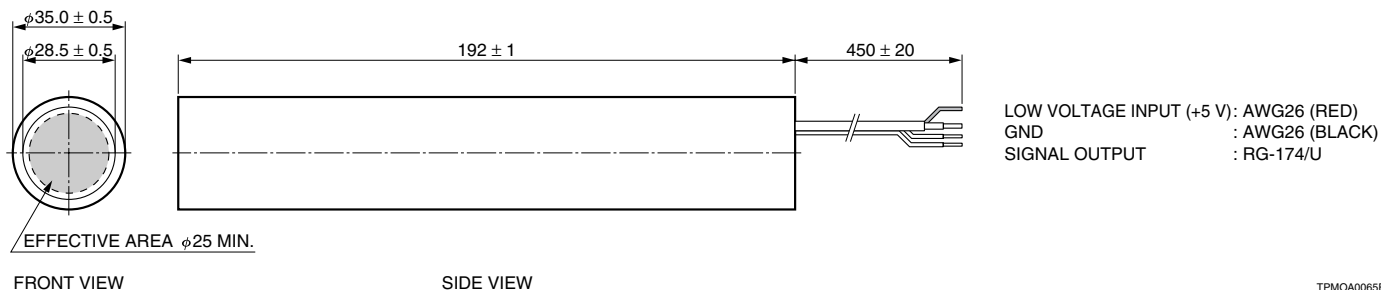


Block Diagram



TPMOC0233EA

Dimensional Outlines (Unit: mm)



LOW VOLTAGE INPUT (+5 V): AWG26 (RED)
 GND : AWG26 (BLACK)
 SIGNAL OUTPUT : RG-174/U

TPMOA0065EA

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