

Metal package PMT

Photon Counting Head H7155 Series



The H7155 series are compact photon counting head devices consisting of a metal package photomultiplier tube along with a high-speed photon counting circuit and a high-voltage power supply circuit. The high voltage supply for photomultiplier tube and the discriminator level are preset to optimum values, allowing photon counting measurement by just connecting a +5 V supply. The H7155-20 has an internal prescaler of division by 4. This prescaler improves the count linearity 4-fold compared to the H7155.

Product Variations

Type No.	Spectral Response	Prescaler
H7155	300 nm to 650 nm	No
H7155-20		Yes

Specifications

Parameter		H7155	H7155-20	Unit
Input Voltage		+4.5 to +5.5		V
Max. Input Voltage		+6		V
Max. Input Current		50	70	mA
Effective Area		$\phi 8$		mm
Peak Sensitivity Wavelength		420		nm
Count Sensitivity	300 nm	1.2×10^5	1.2×10^5 *2	s ⁻¹ ·pW ⁻¹
	400 nm	2.7×10^5	2.7×10^5 *2	
	500 nm	2.2×10^5	2.2×10^5 *2	
	600 nm	2.1×10^4	2.1×10^4 *2	
Count Linearity *1		1.5×10^6	10×10^6 *2	s ⁻¹
Dark Count *3	Typ.	100	100 *2	s ⁻¹
	Max.	500	500 *2	
Pulse-pair Resolution		70	10	ns
Output Pulse Width		30	Depends on count rate.	ns
Output Pulse Height *4	Typ.	3.6	2.2	V
	Min.	3.0	2.0	
Recommended Load Resistance		50		Ω
Signal Output Logic		Positive logic		—
Operating Ambient Temperature		+5 to +40		°C
Storage Temperature		-20 to +50		°C
Weight		75		g

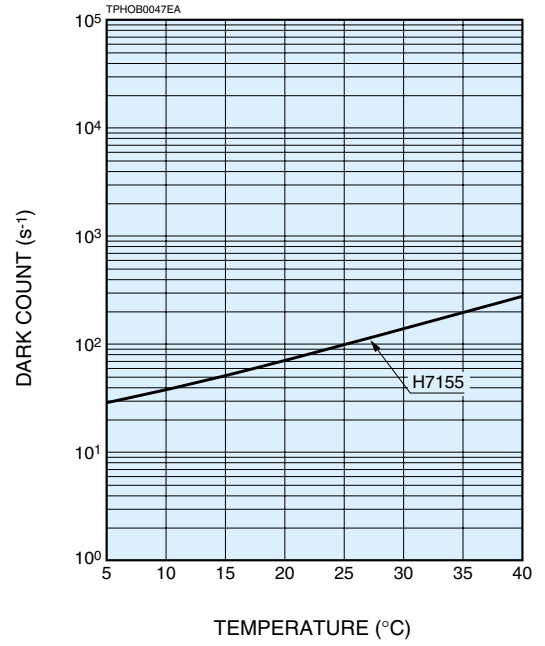
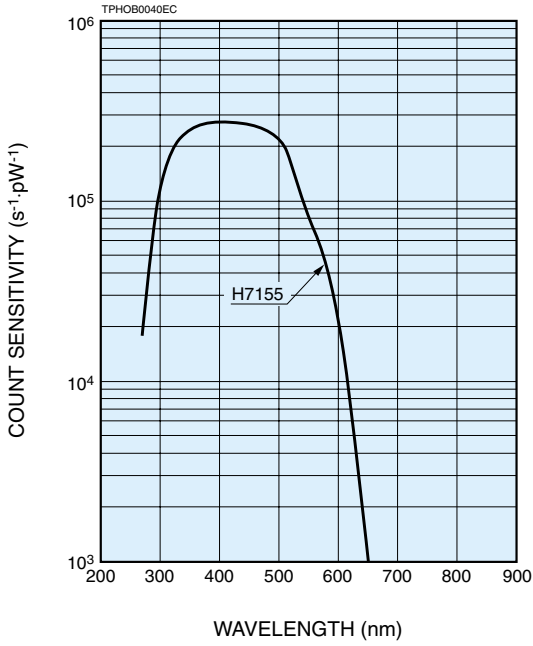
*1: Random pulse, at 10 % count loss

*2: Output count will be decreased to 1/4 after the prescaler.

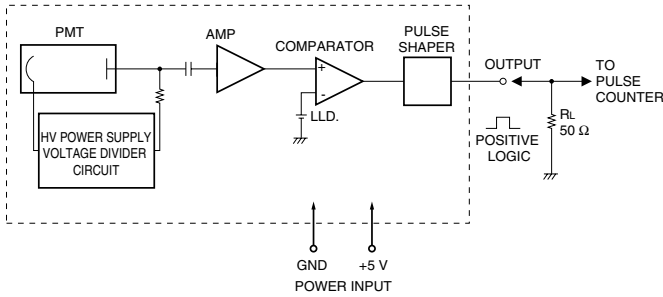
*3: After 30 minute storage in darkness

*4: With input voltage +5 V, Load resistance 50 Ω and Coaxial cable RG-174/U (450 mm)

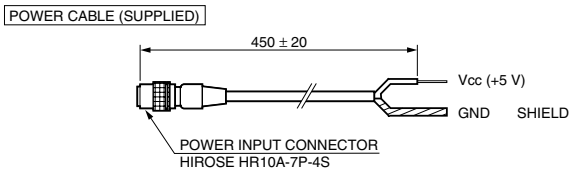
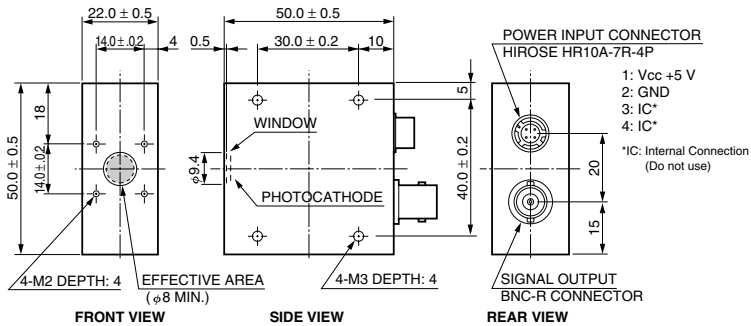
Characteristics (Count sensitivity, Dark count)



Block Diagram



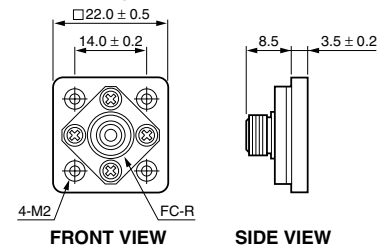
Dimensional Outlines (Unit: mm)



Option

(Optical Fiber Adapter) (Unit: mm)

E5776 (FC Type)



E5776-51 (SMA Type)

