

# 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		φ8		mm
Peak Sensitivity Wavelength		420		nm
Count Sensitivity	300 nm	$1.2 \times 10^5$	$1.2 \times 10^5$ *2	s <sup>-1</sup> ·pW <sup>-1</sup>
	400 nm	$2.7 \times 10^5$	$2.7 \times 10^5$ *2	
	500 nm	$2.2 \times 10^5$	$2.2 \times 10^5$ *2	
	600 nm	$2.1 \times 10^4$	$2.1 \times 10^4$ *2	
Count Linearity *1		$1.5 \times 10^6$	$10 \times 10^6$ *2	s <sup>-1</sup>
Dark Count *3	Typ.	100	100 *2	s <sup>-1</sup>
	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

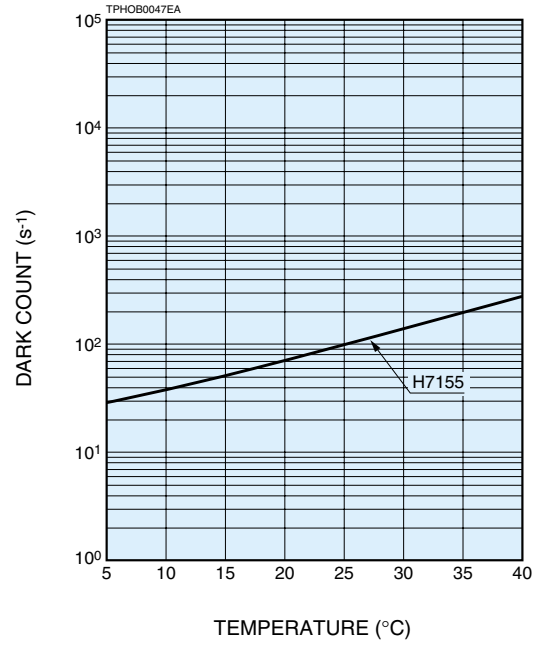
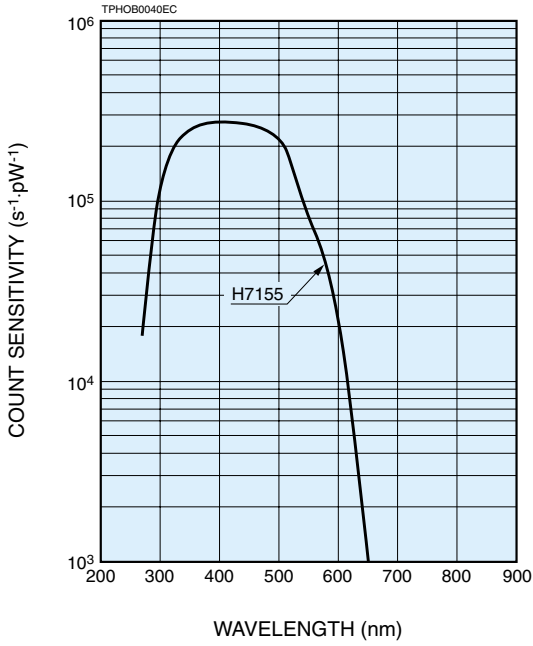
\*1: Random pulse, at 10 % count loss

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

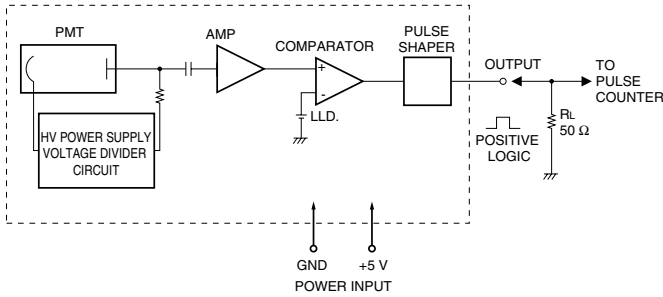
\*3: After 30 minute storage in darkness

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

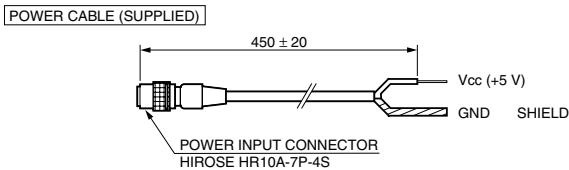
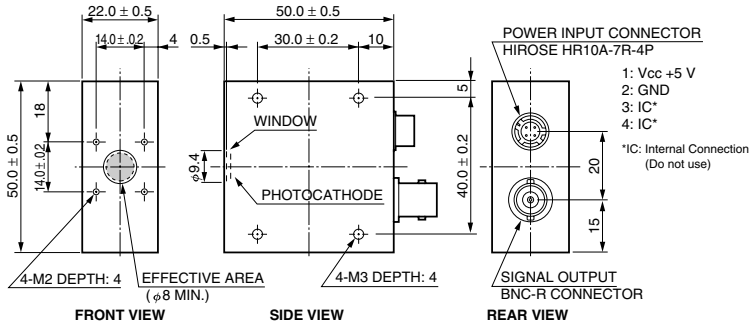
## Characteristics (Count sensitivity, Dark count)



## Block Diagram



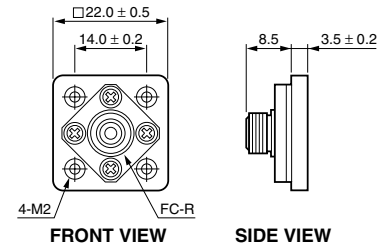
## Dimensional Outlines (Unit: mm)



## Option

(Optical Fiber Adapter) (Unit: mm)

### E5776 (FC Type)



### E5776-51 (SMA Type)

