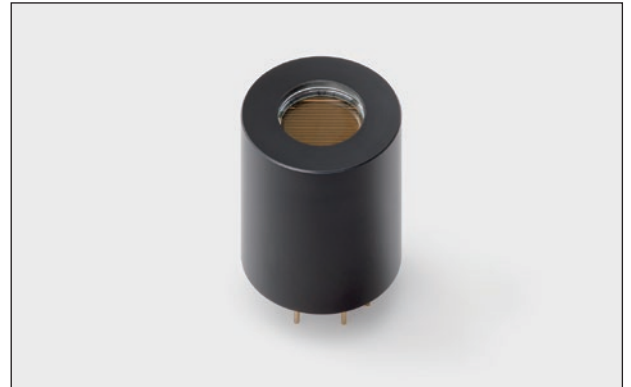


OVERVIEW

H17001 series is the photomultiplier tube assembly that incorporates a metal package PMT, divider circuit, and amplifier. H17001 series amplifies the PMT's weak and high impedance current signal and converts it into a low impedance voltage signal for output. It is available in three types of photocathode and frequency bandwidths for a total of nine variations to suit different applications.



MODEL NAME EXAMPLE

H17001-01-01

Frequency bandwidth of amplifier: -01 (DC to 200 kHz) / -02 (DC to 2 MHz) / -03 (DC to 20 MHz)
Photocathode type of PMT: -01 (Multialkali) / -20 (Extended red multialkali) / -110 (Super bialkali)

CHARACTERISTICS

BUILT-IN PMT / VOLTAGE-DIVIDER CIRCUIT / GENERAL

(at +25 °C)

Parameter			H17001-01-xx	H17001-20-xx	H17001-110-xx	Unit	
Photocathode			Multialkali	Extended red multialkali	Super bialkali	—	
Spectral response		Range	230 to 870	230 to 920	230 to 700	nm	
		Peak	400	630	400		
Cathode	Luminous	Min.	100	350	80	μA/lm	
		Typ.	200	500	105		
		Blue sensitivity index	Typ.	—			13.5
	Red / White ratio	Typ.	0.2	0.45	—	—	
	Radiant sensitivity ^①	Typ.	77	78	110	mA/W	
Anode ^②	Luminous	Min.	100	350	80	A/lm	
		Typ.	400	1000	210		
	Gain	Typ.	2.0 × 10 ⁶				—
Voltage divider Circuit	Recommended supply voltage		-500 to -1000				V
	Maximum supply voltage		-1100				V
	Total voltage divider resistance		3.46				MΩ
	Divider current ^②		0.29				mA
Operating ambient temperature ^③			0 to +40				°C
Storage temperature ^③			-15 to +50				°C
Weight			7.1				g

NOTE: ① Measured at peak wavelength ② HV = -1000 V ③ No condensation

AMPLIFIER

Parameter	H17001-xxx-01	H17001-xxx-02	H17001-xxx-03	Unit
Input voltage	±5.0			V
Maximum input current	±65			mA
Frequency bandwidth (-3 dB)	DC to 200 kHz	DC to 2 MHz	DC to 20 MHz	—
Current to voltage conversion factor	0.6 ① / 0.3 ②			V/μA
Offset voltage (Max.)	±1 ②			mV
Output noise voltage (Max.) ③	10 ④ / 64 ⑤			mV

NOTE: ① Load resistance = 10 kΩ ② Load resistance = 50 Ω ③ After 30 minutes storage in darkness.
④ H17001-01/110-xx ⑤ H17001-20-xx

PHOTOMULTIPLIER TUBE ASSEMBLY

H17001 SERIES

Figure 1: Spectral response

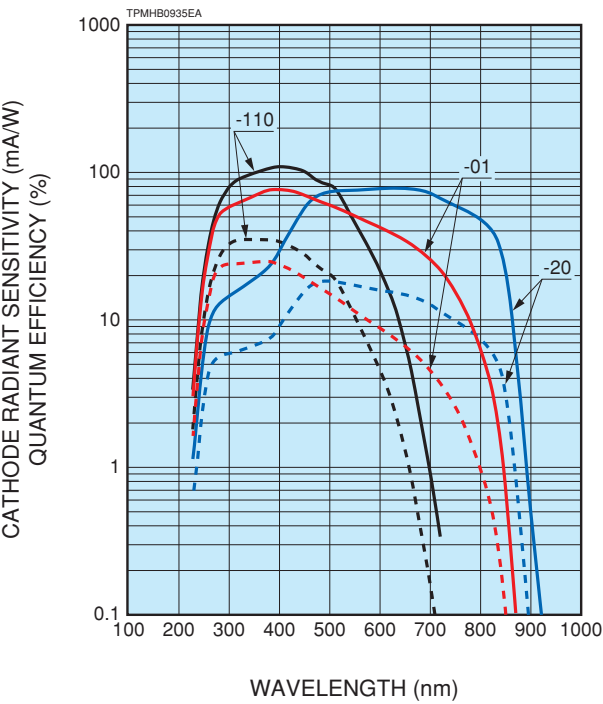


Figure 2: Gain

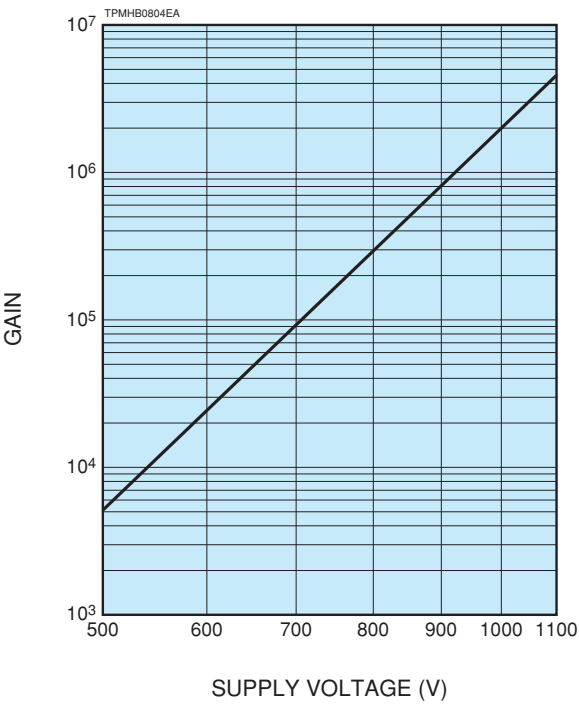
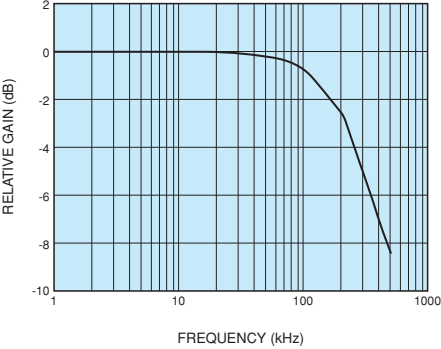
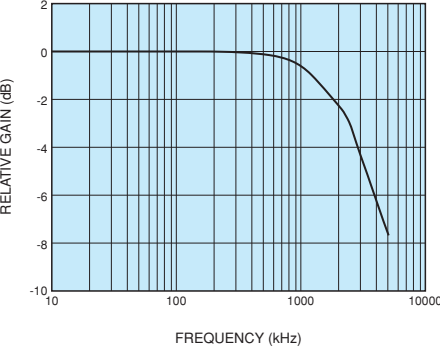


Figure 3: Frequency response of built-in amplifier

●H17001-xxx-01



●H17001-xxx-02



●H17001-xxx-03

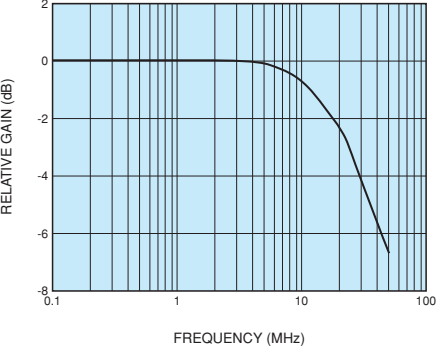


Figure 4: Circuit diagram

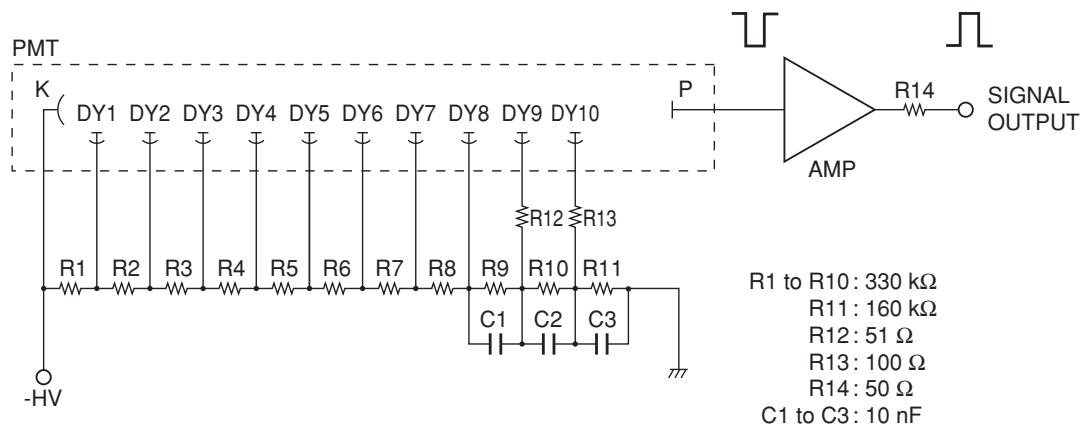
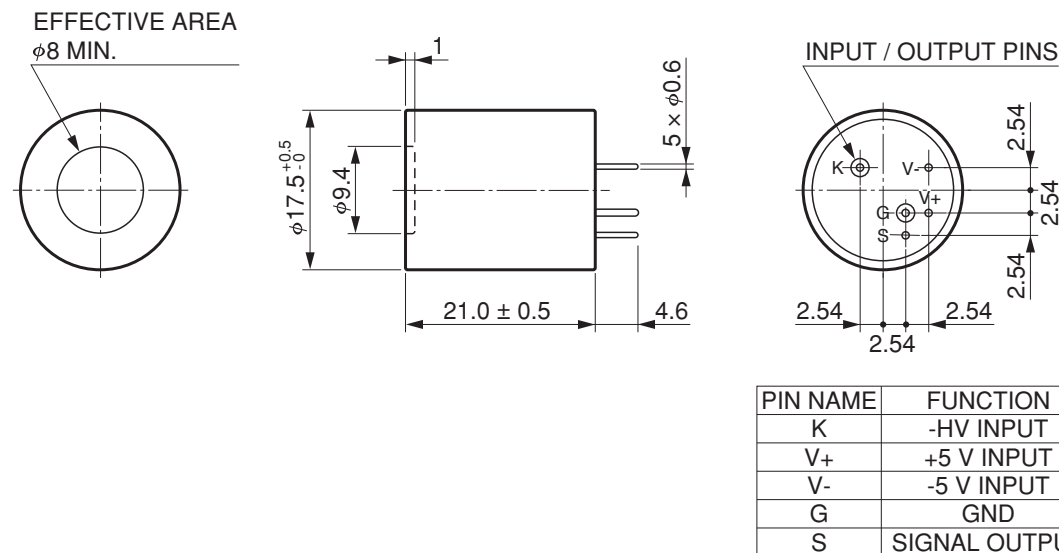


Figure 5: Dimensional outline (Unit: mm)



RELATED PRODUCTS

HIGH VOLTAGE POWER SUPPLY C10940 SERIES



Parameter	C10940-03	C10940-03-R2	C10940-53	C10940-53-R2	Unit
Input Voltage	+5 ± 0.5				V
Output Voltage	-10 to -1200		+10 to +1200		V
Specification guaranteed output range	-200 to -1200		+200 to +1200		V
Output Current	0.6				mA
Dimensions (W × H × D)	15 × 18 × 15				mm
Interface	—	RS-485	—	RS-485	—

PHOTOMULTIPLIER TUBE ASSEMBLY

H17001 SERIES

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JUN. 2024 IP