

FEATURES

- High sensitivity
- Built-in thermoelectric cooler
- Low noise

APPLICATIONS

- Photoluminescence measurement
- Singlet oxygen measurement
- Atmospheric LiDAR



SPECIFICATIONS

(at +25 °C)

Parameter			Description / Value	Unit
Spectral response			950 to 1700	nm
Peak sensitivity wavelength			1500	nm
Photocathode material			InP/InGaAs	—
PMT operating temperature			-70	°C
Guaranteed PMT operating voltage			-500 to -900	V
Operating ambient temperature			+5 to +40	°C
Storage temperature			-20 to +50	°C
Max. average output signal current			1	μA
Cathode ①②	Quantum efficiency	Min.	1	%
		Typ.	2	
	Radiant sensitivity	Min.	12	mA/W
		Typ.	24	
Anode ①②	Radiant sensitivity	Min.	6×10^3	A/W
		Typ.	2.4×10^4	
	Dark current ③	Typ.	0.8	nA
		Max.	2	
Dark count ③	Typ.	5000	s ⁻¹	
	Gain ②	Min.	5×10^5	—
Typ.		1×10^6		
Time response ②	Anode pulse rise time	Typ.	0.9	ns
	Anode pulse fall time	Typ.	1.7	
	Transit time spread	Typ.	0.4	
Cooling method			Thermoelectric (Forced air cooling)	—
Optical fiber	Input connector		FC connector	—
	NA		0.37 ±0.02	—
	Core diameter		φ0.2	mm
Cooling time required for operation			Approx. 60	min
Protection function			High voltage interlock for inappropriate temperature	—
Controller rating	Input voltage (AC)		90 to 264 (50 Hz / 60 Hz)	V
	Power consumption		100	VA
Weight ④⑤	Main unit		Approx. 2.20	kg
	Controller		Approx. 3.13	

- NOTE:** ① At peak sensitivity wavelength.
 ② At -800 V input voltage and -70 °C operating temperature.
 ③ After 30 min storage with cooling in darkness. (Anode radiant sensitivity 1.0×10^4 A/W)
 ④ Including resistor box with BNC connectors.
 ⑤ Including high voltage cable and control cable.

CHARACTERISTICS

Figure 1: Spectral response

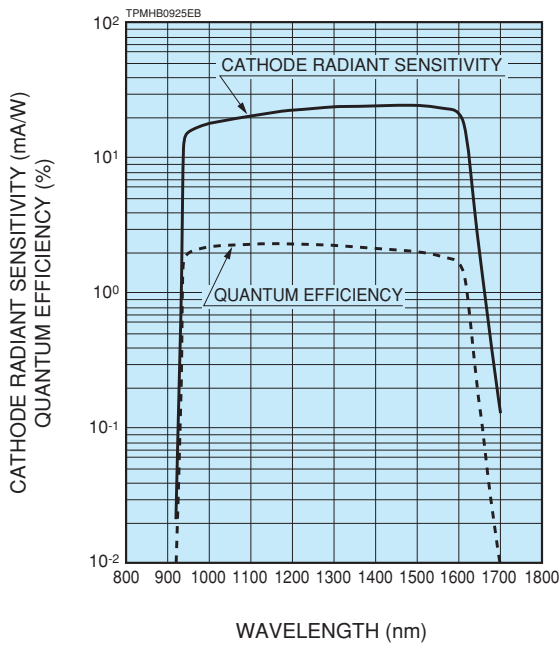


Figure 2: Typical gain

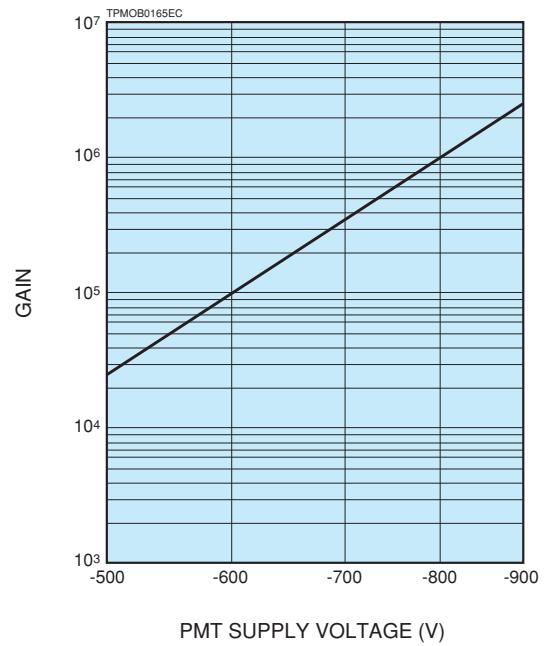


Figure 3: Waveform

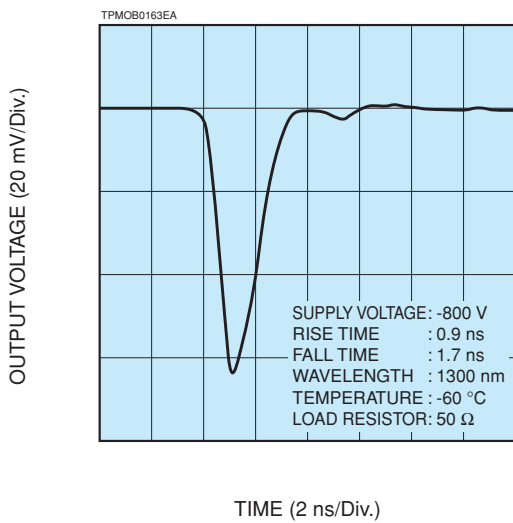
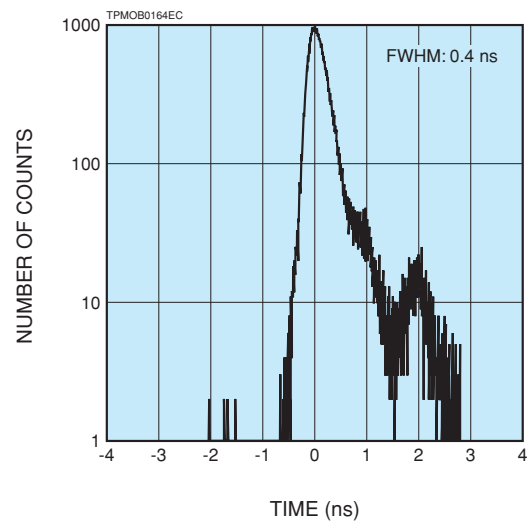


Figure 4: Transit time spread (T.T.S.)



TYPE No. GUIDE

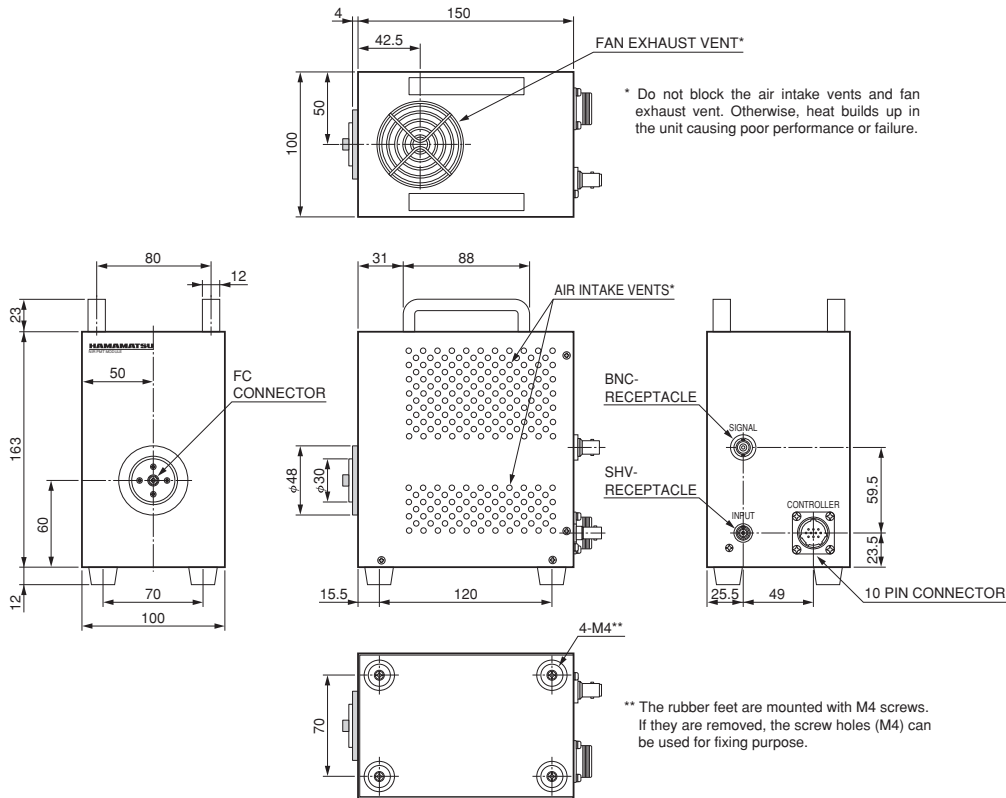
H12397A-75-C□

Number in □ indicates power cable specifications

- 2: For Japan / For North America
- 3: For EU
- 4: For China
- 5: For UK
- 6: For Australia

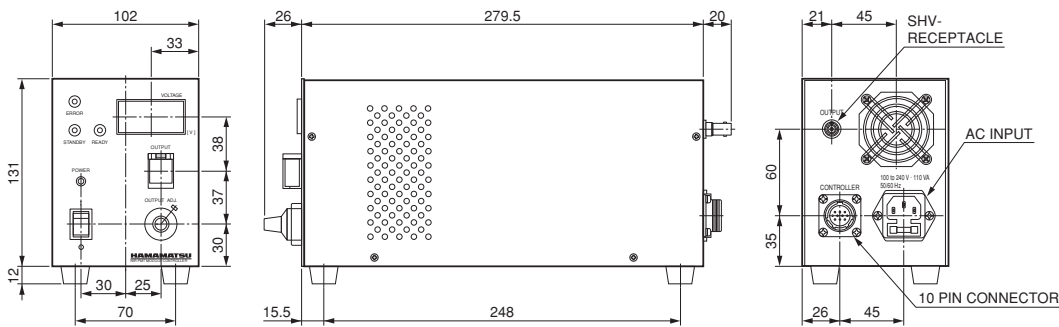
Figure 5: Dimensional outlines (Unit: mm)

●NIR-PMT main unit



TPMHA0607EA

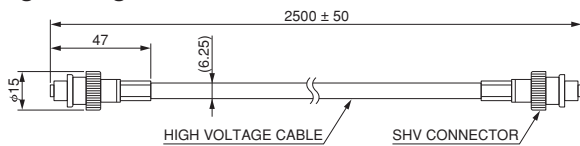
●NIR-PMT unit controller



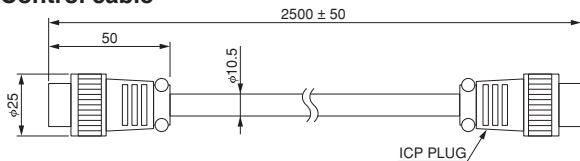
TPMOA0041EC

●Accessories

High voltage cable



Control cable



NIR-PMT UNITS H12397A-75

OPTIONS

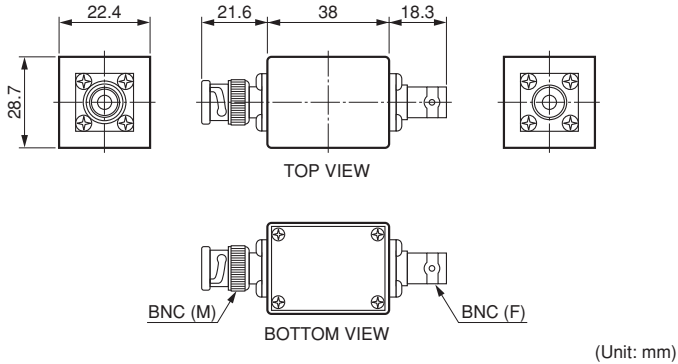
Sold separately

● Resistor box with BNC connectors A9267 series

A 50 Ω resistor box with BNC connectors (A9267-01) is available.

Use the 100 k Ω resistor box (A9267-02, supplied with H12397A-75) for use with a lock-in amplifier.

* Please contact your local Hamamatsu office for any assistance.



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