

For Ultraviolet Light Detection,  
Compact Size (15.9 mm diameter, 14.2 mm seated length),  
For Photon Counting (R9875P)

### SPECIFICATIONS

#### GENERAL

Parameter		Description / Value	Unit
Spectral Response		160 to 320	nm
Wavelength of Maximum Response		240	nm
Window Material		Synthetic silica	—
Photocathode	Material	Cs-Te	—
	Minimum Effective Area	φ8	mm
Dynode	Structure	Metal Channel	—
	Number of Stage	10	—
	Material	Dy1: Cs-I, Others: Sb	—
Base		12 pin base	—
Weight		6.5	g
Operating Ambient Temperature		-30 to +50	°C
Storage Temperature		-80 to +50	°C
Suitable Socket		E678-12-01 (Sold Separately)	—
Suitable D Type Socket Assembly		E10679 (Sold Separately)	—

#### MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1250	V
	Between Anode to Last Dynode	60	V
Average Anode Current		0.01	mA

#### CHARACTERISTICS (at 25 °C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Radiant <sup>(A)</sup>	16	25	—	mA/W
	Quantum Efficiency <sup>(A)</sup>	8	13	—	%
Anode Sensitivity	Radiant <sup>(A)</sup>	$1.6 \times 10^3 / 8.0 \times 10^3$ <sup>(B)</sup>	$1.0 \times 10^4 / 2.5 \times 10^4$ <sup>(B)</sup>	—	A/W
Gain		$1.0 \times 10^5 / 5.0 \times 10^5$ <sup>(B)</sup>	$4.0 \times 10^5 / 1.0 \times 10^6$ <sup>(B)</sup>	—	—
Anode Dark Current (after 30 min storage in darkness)		—	0.01	0.1	nA
Dark Count <sup>(B)(C)</sup>		—	15	50	s <sup>-1</sup>
Time Response	Anode Pulse Rise Time	—	1.2	—	ns
	Electron Transit Time	—	7	—	ns

NOTE: <sup>(A)</sup>At 254 nm    <sup>(B)</sup>Photon counting type (R9875P)    <sup>(C)</sup>At  $1 \times 10^6$  gain

#### VOLTAGE DISTRIBUTION RATIO

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	P
Ratio	1	1	1	1	1	1	1	1	1	1	1	0.5

Supply Voltage: 1000 V, K: Cathode, Dy: Dynode, P: Anode

# METAL PACKAGE PHOTOMULTIPLIER TUBE

## R9875U, R9875P

Figure 1: Typical Spectral Response

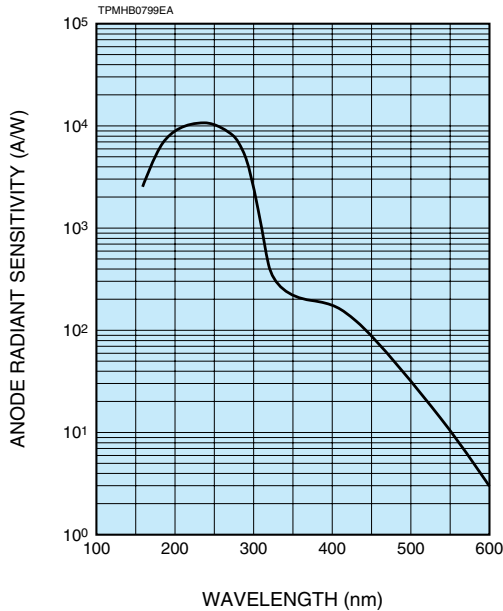


Figure 2: Typical Gain and Dark Current

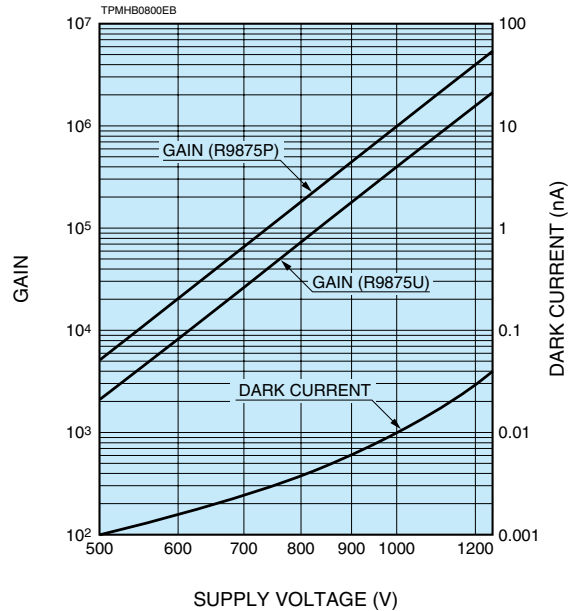
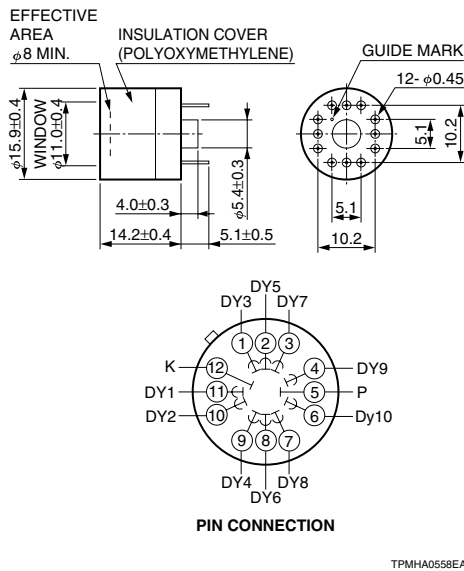


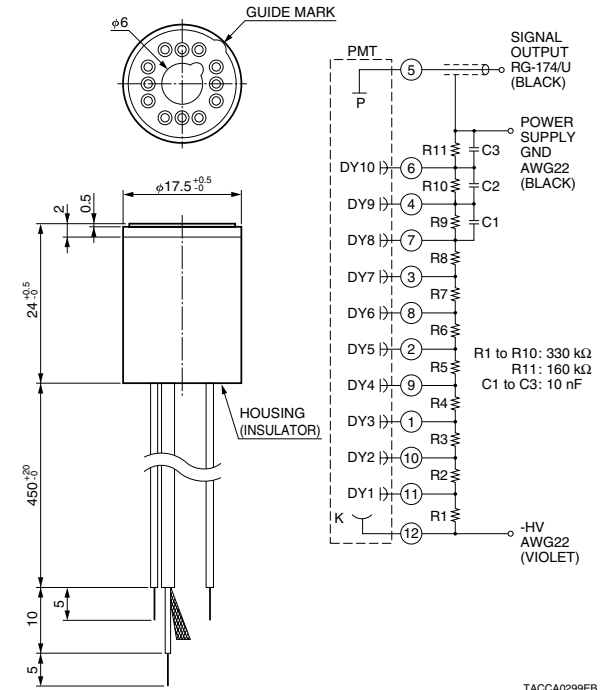
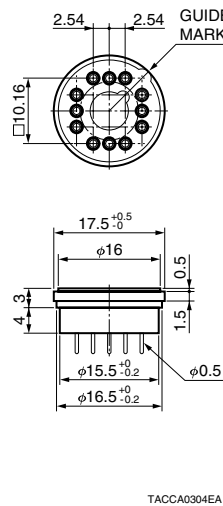
Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



[ACCESSORIES] (Unit: mm) **SOLD SEPARATELY**

● Socket E678-12-01

● D Type Socket Assembly E10679



Handling precautions

- Operate below  $10^{-1}$  Pa condition or atmospheric pressure.

**HAMAMATSU PHOTONICS K.K.** [www.hamamatsu.com](http://www.hamamatsu.com)

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