

FEATURES

- Sensitivity in the vacuum ultraviolet region
 - R10824..... 115 nm to 320 nm
 - R10825..... 115 nm to 195 nm
- High quantum efficiency
 - R10824 (at 254 nm) 19.5 % (Typ.)
 - R10825 (at 121.6 nm) 26.0 % (Typ.)
- High anode sensitivity
 - R10824 (at 254 nm)..... 1.6×10^5 A/W (Typ.)
 - R10825 (at 121.6 nm)..... 1.0×10^5 A/W (Typ.)

APPLICATIONS

- Atomic emission spectrophotometer
- VUV-UV spectrophotometer

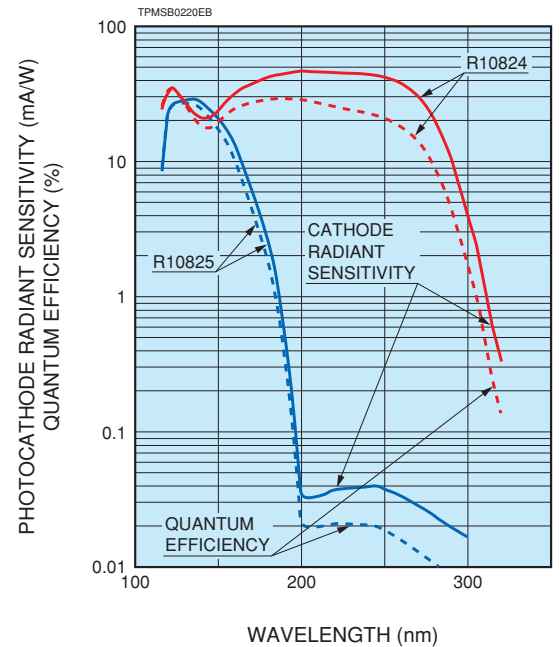


SPECIFICATIONS

GENERAL

Parameter		R10824	R10825	Unit
Spectral response		115 to 320	115 to 195	nm
Wavelength of maximum response		200	130	nm
Photocathode material		Cs-Te	Cs-I	—
Window material		MgF ₂		—
Minimum effective area		4 × 9.5		mm
Dynode	Structure	Circular-cage		—
	Number of stage	9		—
	Material	Sb-Cs		—
Direct interelectrode capacitances	Anode to dynode No.9	Approx. 1.7		pF
	Anode to all other electrodes	Approx. 2.0		pF
Base		11-pin base		—
Weight		7.0	7.2	g
Operating ambient temperature		-30 to +50		°C
Storage temperature		-30 to +50		°C
Suitable socket for base (supplied)		E678-11U		—

Figure 1: Typical spectral response



PHOTOMULTIPLIER TUBES R10824, R10825

MAXIMUM RATINGS (Absolute maximum values)

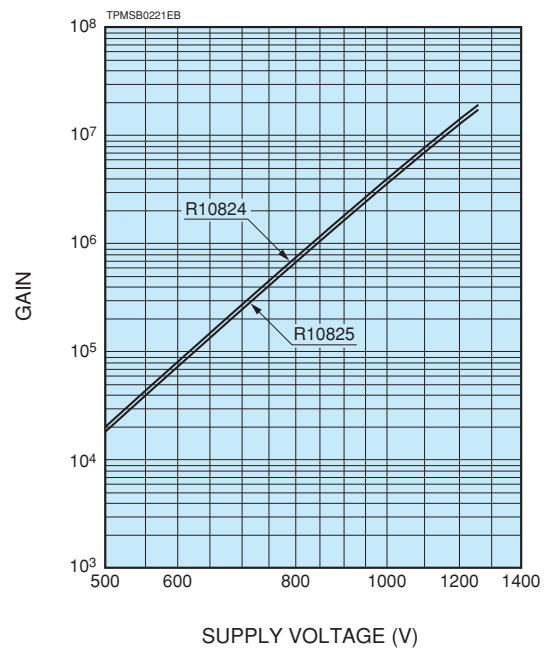
Parameter		Value	Unit
Supply voltage	Between anode and cathode	1250	V
	Between each succeeding electrode	150	V
Average anode current		0.01	mA

CHARACTERISTICS (at 25 °C)

Parameter	R10824			R10825			Unit	
	Min.	Typ.	Max.	Min.	Typ.	Max.		
Cathode sensitivity	Radiant ^(A)	—	40	—	—	25.5	mA/W	
	Quantum efficiency ^(A)	—	19.5	—	—	26.0	%	
Anode radiant sensitivity ^(A)	—	1.6×10^5	—	—	1.0×10^5	—	A/W	
Gain	—	4.0×10^6	—	—	3.9×10^6	—	—	
Anode dark current (after 30 min storage in darkness)		—	0.1	2	—	0.05	1	nA
Time response	Anode pulse rise time	—	1.4	—	—	1.4	—	ns
	Electron transit time	—	15	—	—	15	—	ns

NOTE: ^(A)R10824 at 254 nm, R10825 at 121.6 nm

Figure 2: Typical gain characteristics

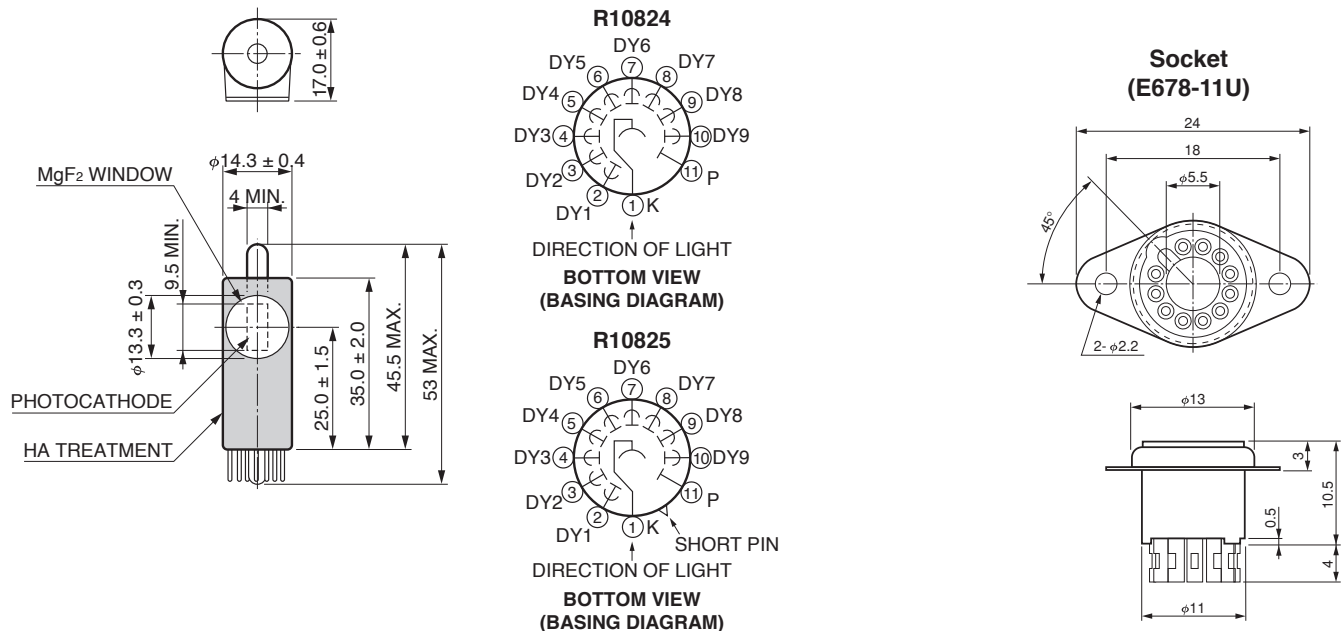


VOLTAGE DISTRIBUTION RATIO

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

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

Figure 3: Dimensional outline and basing diagram (Unit: mm)



Handling precautions

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

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