

**28 mm (1-1/8 Inch) Diameter, 9-stage, Side-on Type
Low Noise Bialkali Photocathode + UV Glass, With a Peltier Device
Thermistor, and Insulation Cover Case Attached**

SPECIFICATIONS

GENERAL

Parameter	Description / Value	Unit
Spectral Response	185 to 710	nm
Wavelength of Maximum Response	410	nm
Photocathode	Material	Low noise bialkali
	Minimum Effective Area	8 × 24
Window Material	UV glass	—
Dynode	Structure	Circular-cage
	Number of Stages	9
Base	11-pin base JEDEC No. B11-88	—
Weight	Approx. 68	g
Operating Ambient Temperature	-30 to +50	°C
Storage Temperature	-30 to +50	°C
Suitable Socket	E678-11A (Sold separately)	—
Suitable Socket Assembly	E717-63 (Sold separately)	—

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter	Value	Unit
Supply Voltage Between Anode and Cathode	1250	V
Supply Voltage Between Anode and Last Dynode	250	V
Average Anode Current	0.1	mA

CHARACTERISTICS (at Ambient Temperature 25 °C)

Parameter	Min.	Typ.	Max.	Unit	
Cathode Sensitivity	Luminous (2856 K)	80	100	—	μA/lm
	Radiant at 410 nm	—	70	—	mA/W
	Quantum Efficiency at 410 nm	—	21.1	—	%
	Blue Sensitivity Index (CS 5-58)	—	8	—	—
Anode Sensitivity	Luminous (2856 K)	1000	1200	—	A/lm
	Radiant at 410 nm	—	8 × 10 ⁵	—	A/W
Gain	—	1.2 × 10 ⁷	—	—	
Anode Dark Current (After 30 min Storage in Darkness)	—	0.2 / 0.02 [Ⓐ]	0.5	nA	
Anode Dark Counts at Plateau Voltage	—	10 / 1 [Ⓐ]	50	s ⁻¹	
Time Response	Anode Pulse Rise Time	—	2.2	—	ns
	Electron Transit Time	—	22	—	ns

NOTE: [Ⓐ]The values are measured at ambient temperature 25 °C and a Peltier supply current of 2.73 A, with a heatsink attached to the R11715-01 for forced air cooling.

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

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



R11715-01 (R11715 with peltier device)

PELTIER DEVICE

Parameter	Value
Maximum Power Consumption	8.20 W
Maximum Supply Current	2.73 A
Maximum Applied Voltage	3.00 V
Maximum Operating Temperature	50 °C
Leak Current Between Cathode and Peltier GND	1 nA or less ^①

NOTE: ^①Insulation resistance at 25 °C: 1.0 × 10¹⁴ Ω

PELTIER COOLING PERFORMANCE

Parameter	Value
Cathode Cooling Temperature (ΔT)	-15 °C ^②
Time Required to Reach Target Cooling Temperature	3 min ^③

NOTE: ^②, ^③At a supply current of 2.73 A and with a heatsink attached to the R11715-01 for forced air cooling. Cooling temperature (ΔT) is the difference between the ambient temperature and the cathode temperature when fully cooled. When attaching a heatsink to the R11715-01, apply thermal grease to the surface of the Peltier device so that the heat on the hot side dissipates efficiently through the heatsink during operation. Temperature should be controlled by current during operation of the Peltier device.

PHOTOMULTIPLIER TUBE R11715-01 (Cooled PMT)

Figure 1: Typical Spectral Response

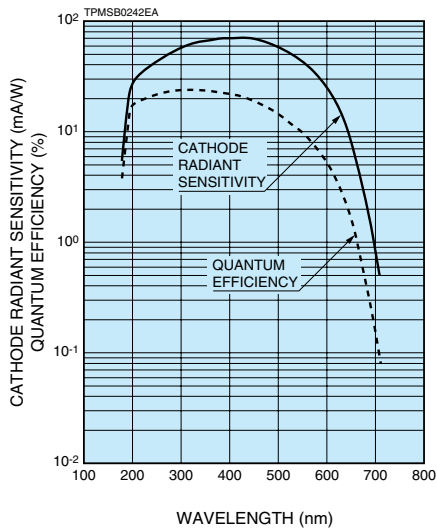


Figure 2: Typical Gain Characteristics

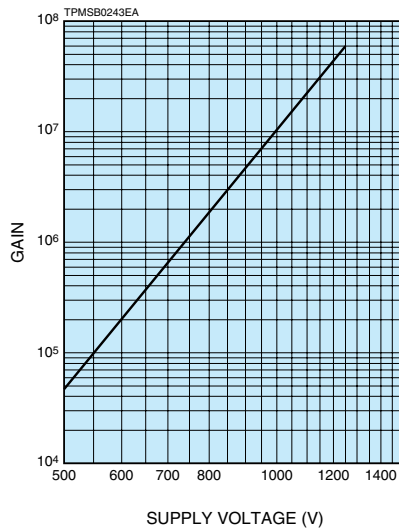
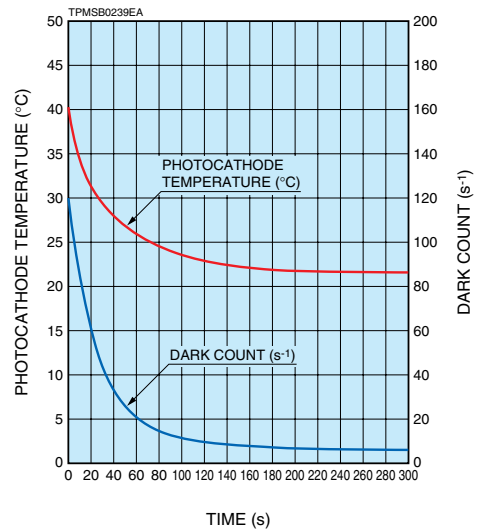
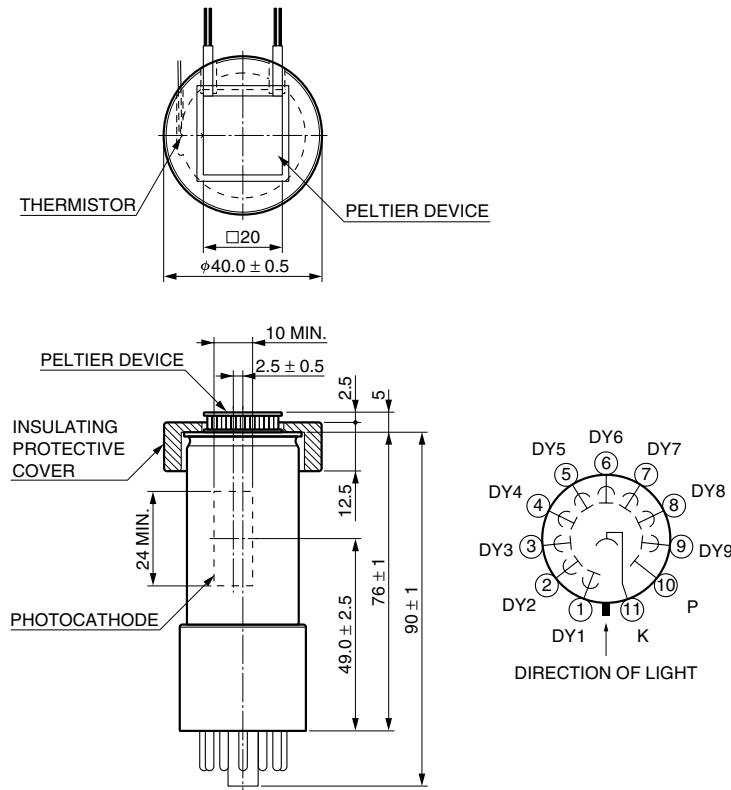


Figure 3: Cooling Characteristics Example (at ambient temperature 40 °C)



* Measured by R11715-01 with heatsink.
(heatsink is not on sale)

Figure 4: Dimensional Outlines and Basing Diagram (Unit: mm)



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