

**For Scintillation Counting and High Energy Physics
51mm(2 Inch) Diameter, Fast Time Response,
Bialkali Photocathode, 10-Stage, Head-On Type**

GENERAL

Parameter		Description/Value	Unit
Spectral Response		300 to 650	nm
Wavelength of Maximum Response		420	nm
Photocathode	Material	Bialkali	—
	Minimum Useful Size	46	mm dia.
Window Material		Borosilicate glass	—
Dynode	Structure	Linear focused	—
	Number of Stages	10	—
Base		14-pin base JEDEC No. B14-38	—
Suitable Socket		E678-14A(supplied)	—

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1600	Vdc
	Between Anode and Last Dynode	350	Vdc
Average Anode Current		0.1	mA
Ambient Temperature		-30 to +50	°C

CHARACTERISTICS (at 25°C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856K)	60	90	—	μA/lm
	Blue (CS 5-58 filter)	—	10.5	—	μA/lm-b
	Radiant at 420nm	—	85	—	mA/W
	Quantum Efficiency at 420nm	—	26	—	%
Anode Sensitivity	Luminous (2856K)	20	90	—	A/lm
	Radiant at 420nm	—	8.5×10^4	—	A/W
Gain		—	1.0×10^6	—	—
Anode Dark Current (after 30min. storage in darkness)		—	5	20	nA
Time Response	Anode Pulse Rise Time	—	3.4	—	ns
	Transit Time Spread (FWHM)	—	3.6	—	ns
Pulse Linearity (at ± 2% Deviation)*		—	150	—	mA

※ Measured with the special voltage distribution ratio "B".

NOTE: Anode characteristics are measured with the voltage distribution ratio "A" except for Pulse Linearity.

VOLTAGE DISTRIBUTION RATIO "A" AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	P
Ratio	2	1	1	1	1	1	1	1	1	1	1	1

Supply Voltage : 1250Vdc, K : Cathode, Dy : Dynode, P : Anode

SPECIAL VOLTAGE DISTRIBUTION RATIO "B" FOR PULSE LINEARITY MEASUREMENT

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	P
Ratio	2	1	1	1	1	1	1.2	1.5	2.2	3.6	3	
Capacitors(μF)							0.01	0.01	0.01	0.01	0.02	

Supply Voltage : 1500Vdc, K : Cathode, Dy : Dynode, P : Anode

PHOTOMULTIPLIER TUBE R2154-02

Figure 1: Typical Spectral Response

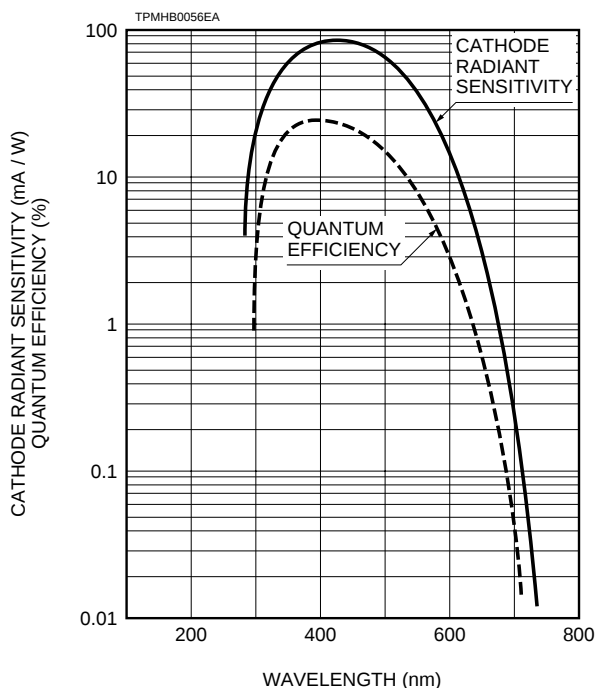


Figure 2: Typical Gain

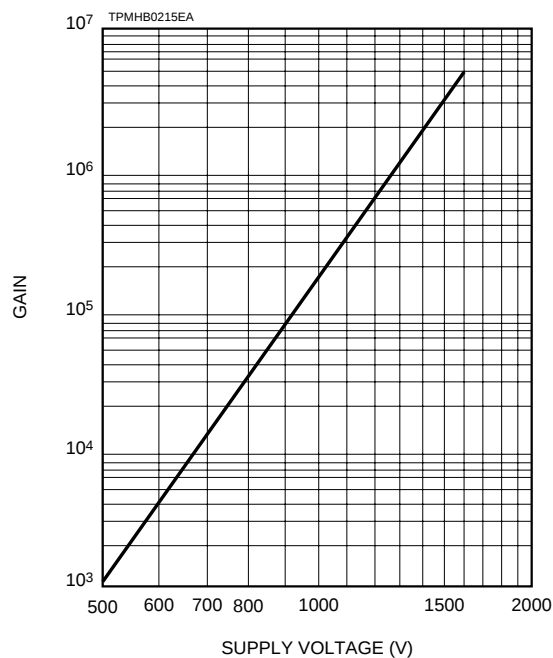
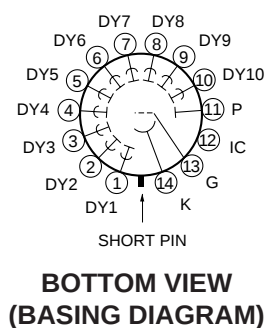
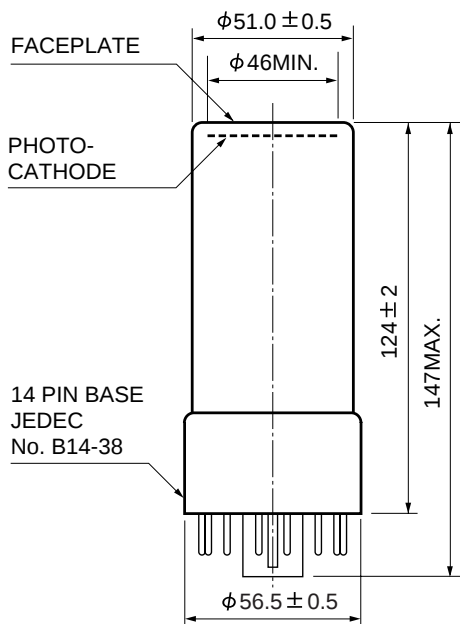
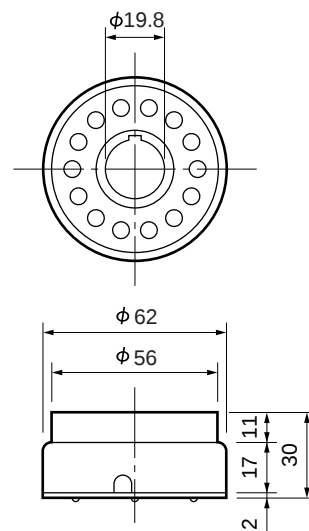


Figure 3: Dimensional Outline and Basing Diagram (Unit : mm)



Socket
(E678 - 14A)



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