

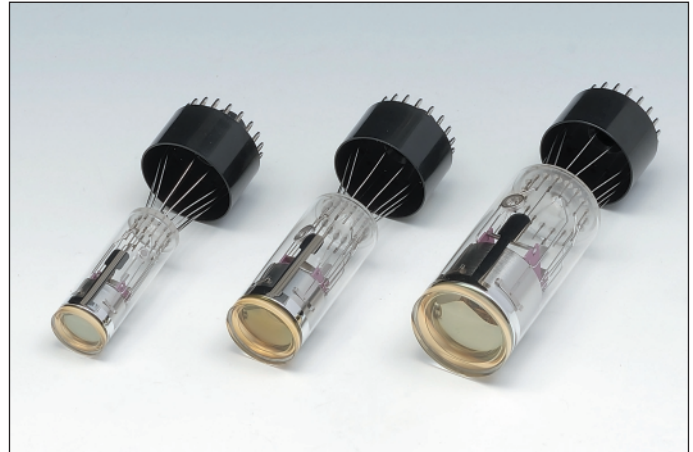
For Scintillation Counting, Fast Time Response
Bialkali Photocathode, 8-stage, Head-on Type

FEATURES

- Fast Time Response
- Excellent Time Response
- Suitable for Mass Production

APPLICATIONS

- TOF-PET in Nuclear Medicine
- TOF Counter in HEP Experiment
- Radiation Monitor in Security Instrument



Left: R12844, Center: R12845, Right: R13089

Figure 1: Typical Spectral Response

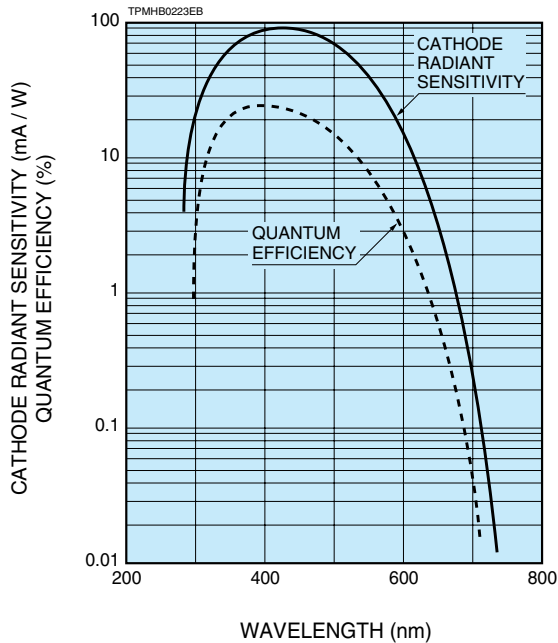
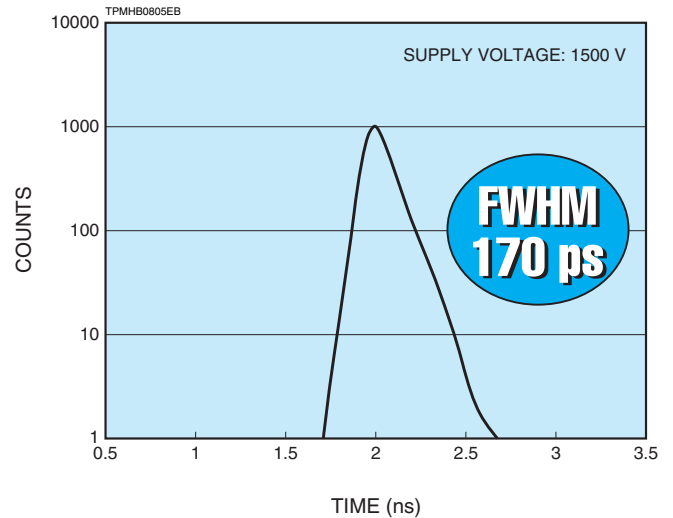


Figure 2: T.T.S. (R12844)



PHOTOMULTIPLIER TUBES R12844, R12845, R13089

Type No.	Spectral Response		Photo-cathode Material ^(A)	Window Material ^(B)	Dynode Structure / Stages ^(C)	Maximum Ratings		Anode to Cathode Supply Voltage (V)
	Range (nm)	Peak Wavelength (nm)				Supply Voltage Between Anode and Cathode (V)	Average Anode Current (mA)	
R12844	300 to 650	420	BA	K	L/8	1750	0.1	1500
R12845	300 to 650	420	BA	K	L/8	1750	0.1	1500
R13089	300 to 650	420	BA	K	L/8	1750	0.1	1500

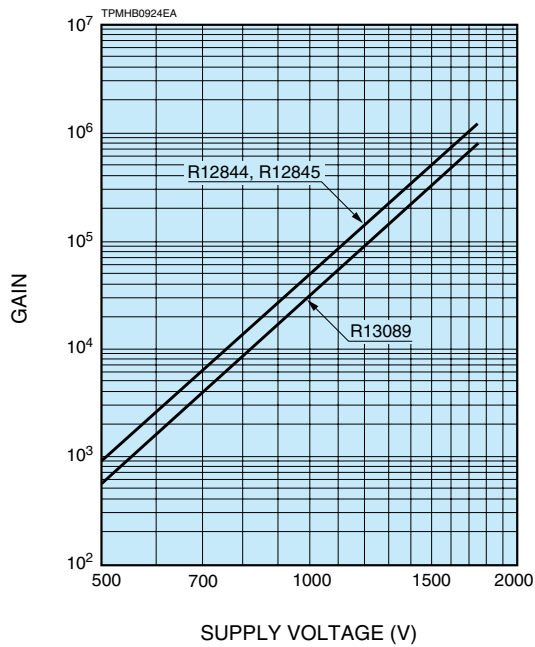
NOTE: (A) BA: Bialkali (B) K: Borosilicate glass (C) L: Linear-focused
 (D) Measured at the peak sensitivity wavelength.

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	G	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8(Acc)	P
Ratio	1.3	4.8	1.5	1.5	1	1	1	1	1	1	1

Supply Voltage: 1500 V, K: Cathode, Dy: Dynode, P: Anode, G: Grid
 Acc to be connected Dy8 with a protection resistor in series.

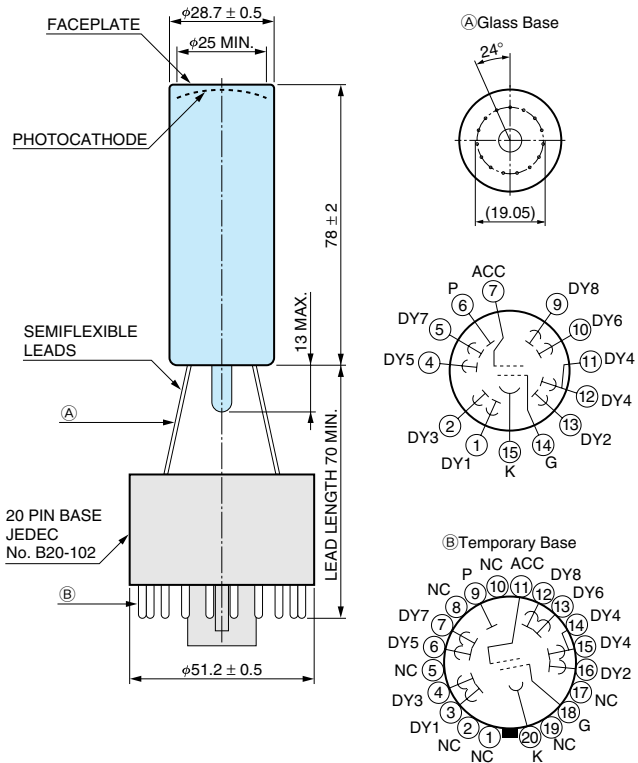
Figure 3: Typical Gain Characteristics



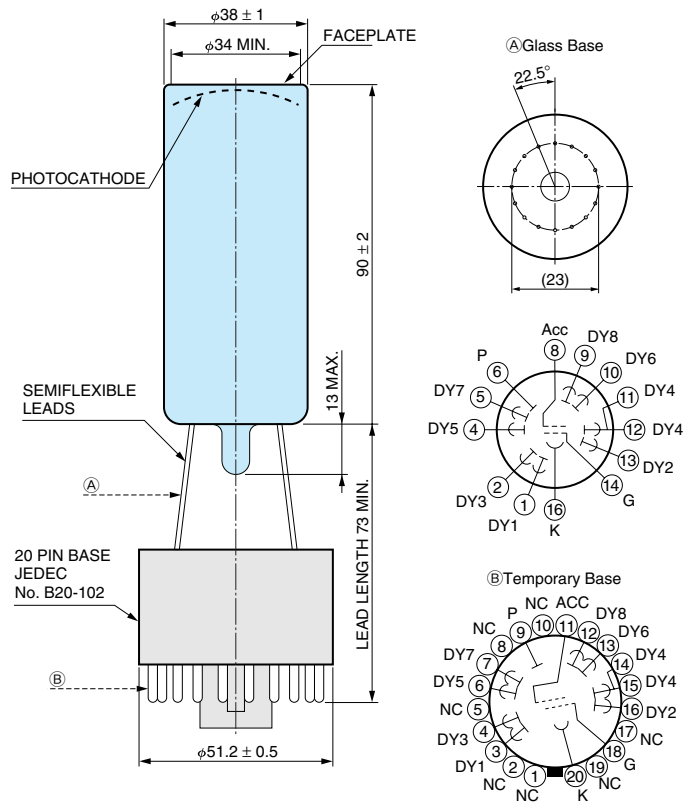
Cathode Characteristics				Anode Characteristics								Type No.
Luminous		Blue Sensitivity Index (CS 5-58) Typ.	Radiant [Ⓓ] Typ. (mA/W)	Luminous Typ. (A/lm)	Radiant Typ. (A/W)	Gain Typ.	Dark Current (After 30 min)		Time Response			
Min. (μA/lm)	Typ. (μA/lm)						Typ. (nA)	Max. (nA)	Rise Time Typ. (ns)	Transit Time Typ. (ns)	T.T.S. (Transit Time Spread) (FWHM) (ps)	
70	95	10.0	80	48	4.0×10^4	5.0×10^5	3	30	0.9	10	170	R12844
70	95	10.0	80	48	4.0×10^4	5.0×10^5	3	30	1.2	13	190	R12845
70	95	9.5	88	30	2.8×10^4	3.2×10^5	10	50	2.0	20	270	R13089

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

● R12844

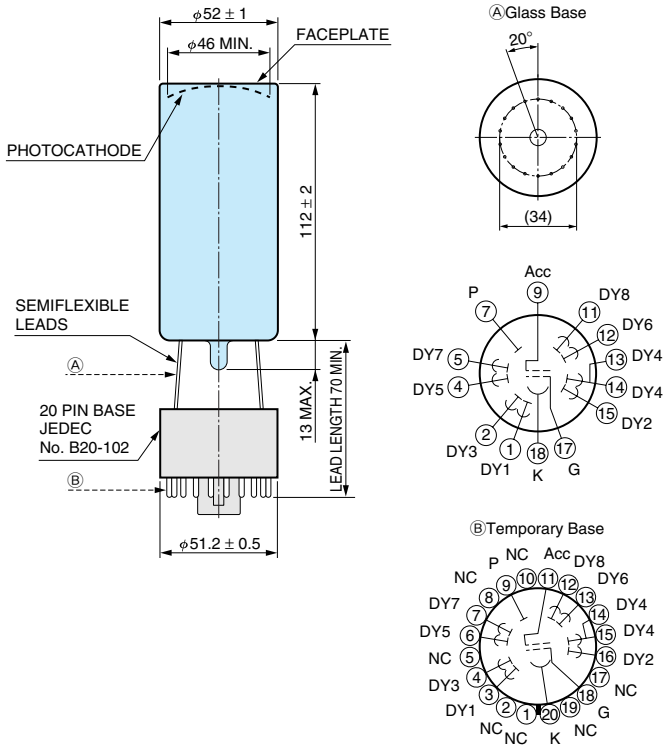


● R12845



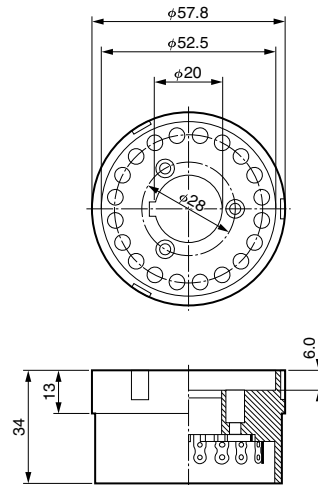
PHOTOMULTIPLIER TUBES R12844, R12845, R13089

● R13089



TPMHA0606EA

● Socket E678-20B (Supplied)



TACCA0309EA

NOTES

The material in the R12844/R12845/R13089 contains Copper-Beryllium (CuBe) Alloy. Please follow the applicable regulations regarding disposal of hazardous materials and industrial wastes in your country, state, region or province.

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