HAMAMATSU

PHOTOMULTIPLIER TUBE
R6504

For an Operation in Magnetic Fields over 1Tesla
64 mm (2.5 Inch) Head-On, Fast Time Response, High Pulse Linearity
19-stage Fine Mesh Dynodes, Bialkali Photocathode

GENERAL

Parameter		Description/Value	Unit
Spectral Response		300 to 650	nm
Wavelength of Maximum Response		420 ± 50	nm
Photocathode	Material	Bialkali	—
	Minimum Effective Area	51	mm dia.
Window	Material	Borosilicate glass	—
	Shape	Plano-plano	—
Dynode	Secondary Emitting Surface	Bialkali	—
	Structure	Fine mesh	—
	Number of Stages	19	—

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	2300	Vdc
	Between Anode and Last Dynode	200	Vdc
Average Anode Current		0.1	mA

CHARACTERISTICS (at 25°C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856K)	—	70	—	μA/lm
	Blue (CS-5-58 filter)	—	9.0	—	μA/lm-b
	Quantum Efficiency at 390nm	—	22	—	%
Anode Sensitivity	Luminous (2856K)	—	700	—	A/lm
Gain	At 0 tesla	—	1.0×10^7	—	—
	At 1 tesla	—	2.0×10^5	—	—
Anode Dark Current (after 30min. storage in darkness)		—	50	300	nA
Time Response	Anode Pulse Rise Time	—	2.7	—	ns
	Transit Time	—	11	—	ns
	Transit Time Spread (FWHM)	—	0.47	—	ns
Pulse Linearity (at 2% Deviation)		—	700	—	mA

NOTE: Anode characteristics are measured with the voltage distribution ratio shown below.

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	• • • • • • • • • • • • • • •	Dy19	P
Ratio	2	1	1	1	1	1		• • • • • • • • • • • • • • •	1	1

Supply Voltage: 2000Vdc, K: Cathode, Dy: Dynode, P: Anode

∗ PC board breeder assembly type is also available.

Subject to local technical requirements and regulations, availability of products included in this promotional material may vary. Please consult with our sales office.
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Figure 1: Typical Spectral Response

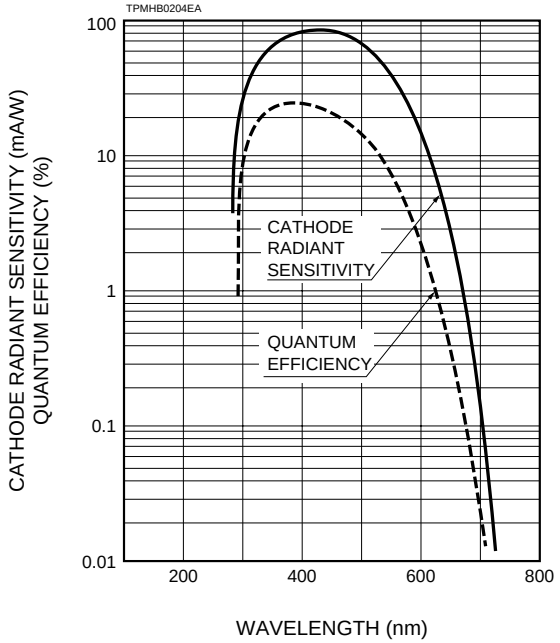


Figure 2: Typical Gain in Magnetic Fields (Parallel to Tube Axis)

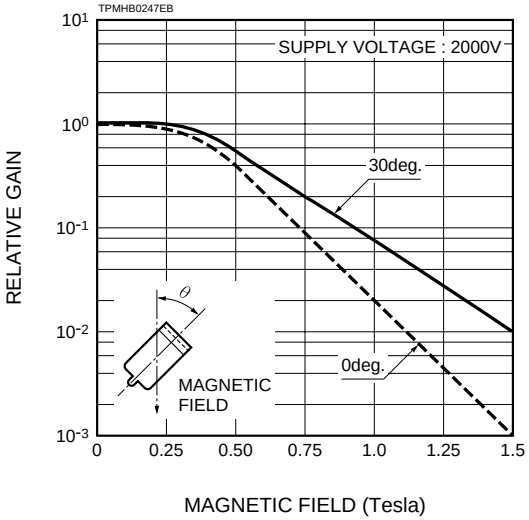
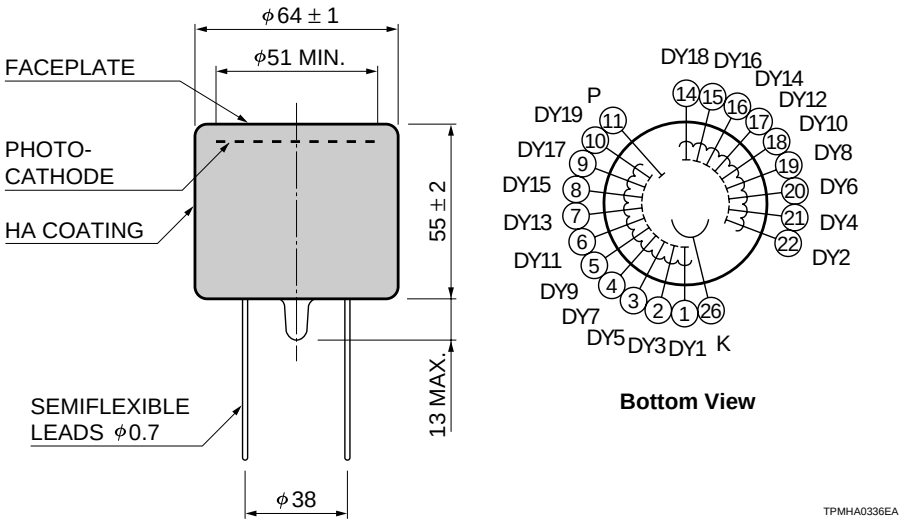


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



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