

## Stable Operation in High Magnetic Fields beyond 1 Tesla 38mm(1-1/2 Inch) Diameter, Proximity Photocathode and Fine Mesh Dynodes

### GENERAL

Parameter		Description/Value	Unit
Spectral Response		300 to 650	nm
Wavelength of Maximum Response		420 ± 50	nm
Photocathode	Material	Bialkali	–
	Minimum Effective Area	27	mm dia.
Window	Material	Borosilicate glass	–
	Shape	Plano–plano	–
Dynode	Secondary Emitting Surface	Bialkali	–
	Structure	Fine mesh	–
	Number of Stages	16	–
Base		19–pin glass base	–
Suitable Socket		E678–19D (supplied)	–

### 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		0.01	mA

### CHARACTERISTICS (at 25°C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856K)	–	80	–	μ A/lm
	Blue (CS–5–58 filter)	–	9.5	–	μ A/lm–b
	Quantum Efficiency at 390nm	–	23	–	%
Anode Sensitivity	Luminous (2856K)	–	80	–	A/lm
Gain	At 0 tesla	–	1.0 × 10 <sup>6</sup>	–	–
	At 1 tesla	–	2.9 × 10 <sup>4</sup>	–	–
Anode Dark Current (after 30min. storage in darkness)		–	5.0	30	nA
Time Response	Anode Pulse Rise Time	–	1.9	–	ns
	Transit Time	–	7.2	–	ns
	Transit Time Spread (FWHM)	–	0.35	–	ns

**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	.....	Dy16	P
Ratio	2	1	1	1	1	1	1	.....	1	1

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

# PHOTOMULTIPLIER TUBE R5946

Figure 1: Typical Spectral Response

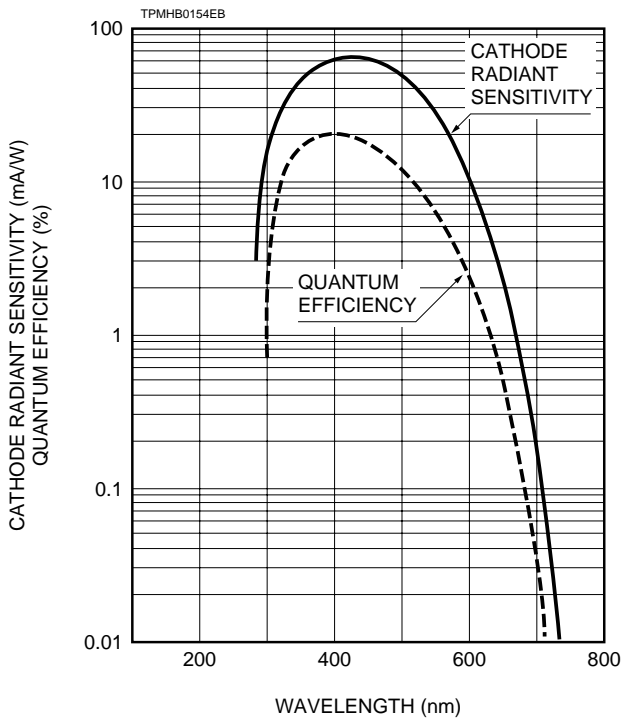


Figure 2: Typical Gain in Magnetic Fields (Parallel to Tube Axis)

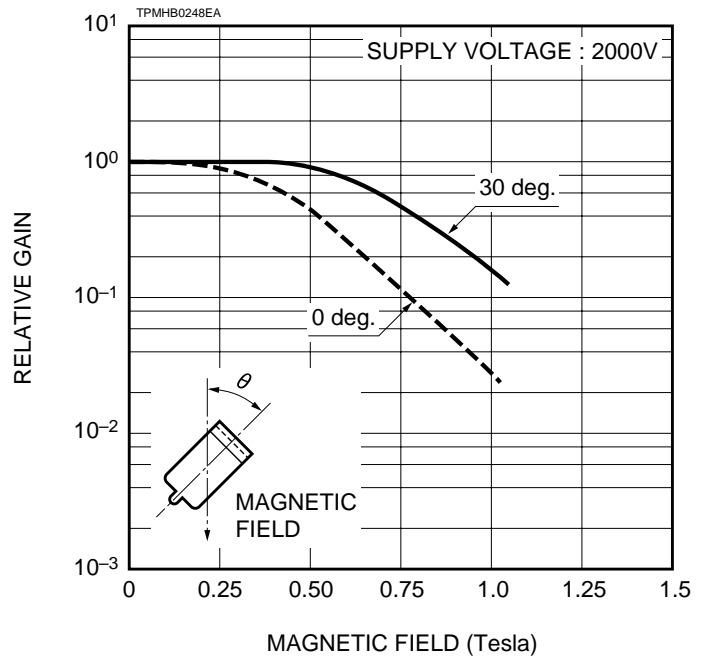
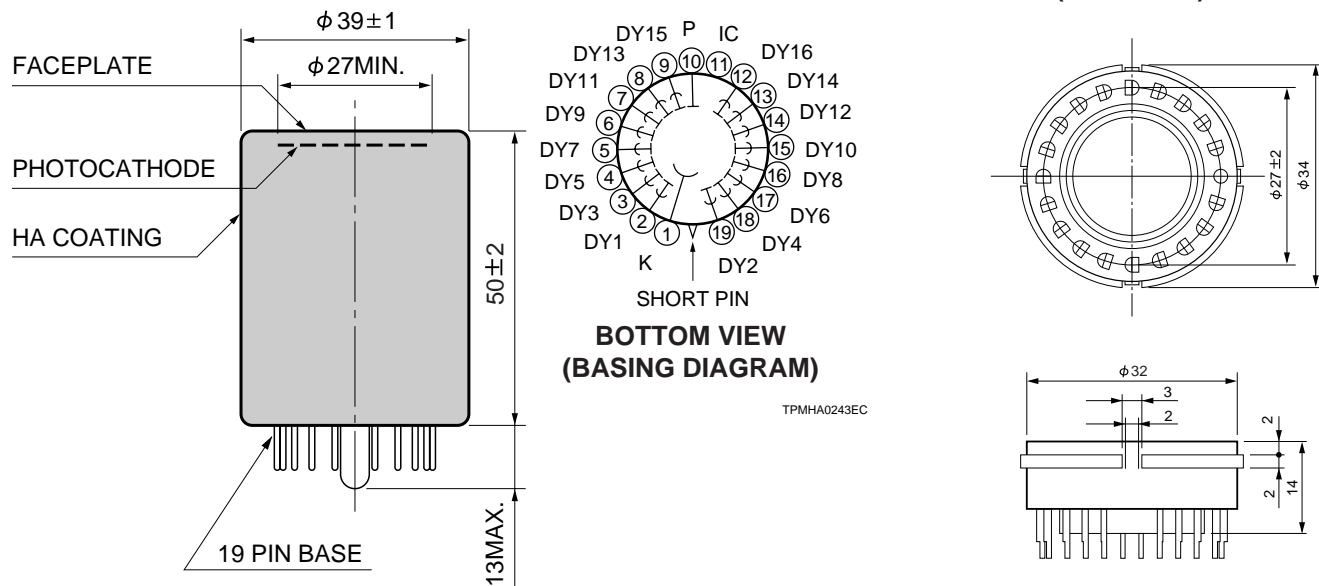


Figure 3: Dimensional Outline and Basing Diagram (Unit : mm)



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