HAMAMATSU

PHOTOMULTIPLIER TUBES
R5611, R5611–01

For Scintillation Counting, Ruggedized, Compact, 19mm (3/4 Inch) Diameter, Bialkali Photocathode, 10–stage, Head–On Type

GENERAL

Parameter		R5611	R5611–01	Unit
Spectral Response		300 to 650		nm
Wavelength of Maximum Response		420		nm
Photocathode	Material	Bialkali		–
	Minimum Effective Area	15		mm dia.
Window Material		Borosilicate glass		–
Dynode	Structure	Circular–cage		–
	Number of Stages	10		–
Suitable Socket		E678–12L (supplied)	E678–12A (supplied)	–

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1250	Vdc
	Between Anode and Last Dynode	250	Vdc
Average Anode Current		0.1	mA
Ambient Temperature		–80 to +50	℃

CHARACTERISTICS (at 25℃)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856K)	60	90	–	μA/lm
	Blue (CS–5–58 filter)	–	10.5	–	μA/lm–b
	Quantum Efficiency at 390nm	–	26	–	%
Anode Sensitivity	Luminous (2856K)	10	50	–	A/lm
Gain		–	5.5×10^5	–	–
Anode Dark Current (after 30min. storage in darkness)		–	3	20	nA
Time Response	Anode Pulse Rise Time	–	1.5	–	ns
	Electron Transit Time	–	17	–	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	Dy7	Dy8	Dy9	Dy10	P
Ratio	3	1	1	1	1	1	1	1	1	1	1	1

Supply Voltage : 1000Vdc, K : Cathode, Dy : Dynode, P : Anode

ENVIRONMENTAL TESTING

Shoch ····· 100g's, 11 ±1ms, 3 impact shocks per direction (6 directions)

Vibration ····· 20g's, 50 to 2000Hz, 1 oct per minute, 3 sweeps per axis (3 axes)

Figure 1: Typical Spectral Response

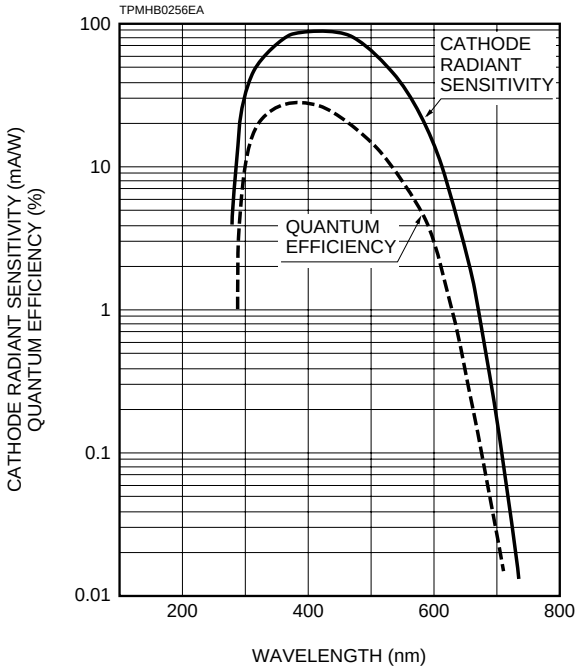


Figure 2: Typical Gain and Dark Current

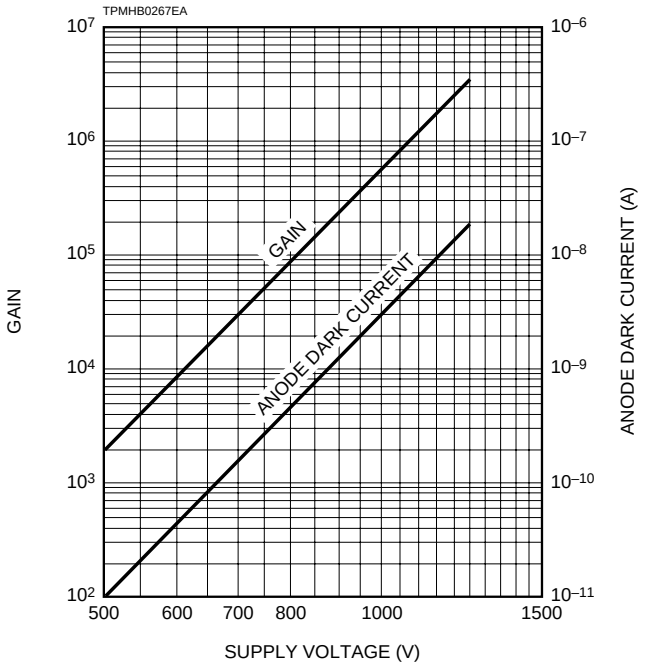


Figure 3: Single Photoelectron Pulse Height Distribution

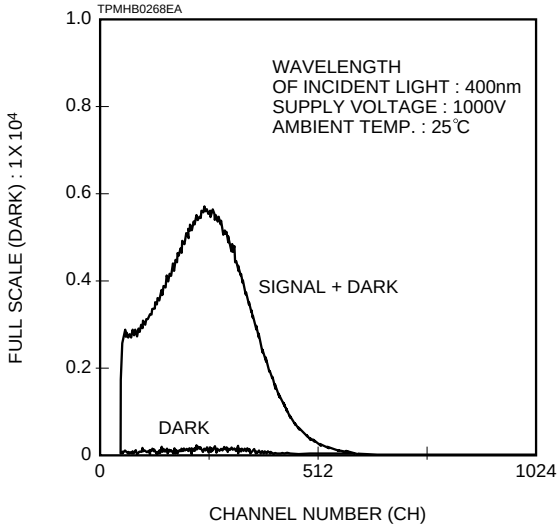


Figure 4: Temperature Coefficient of Anode Sensitivity

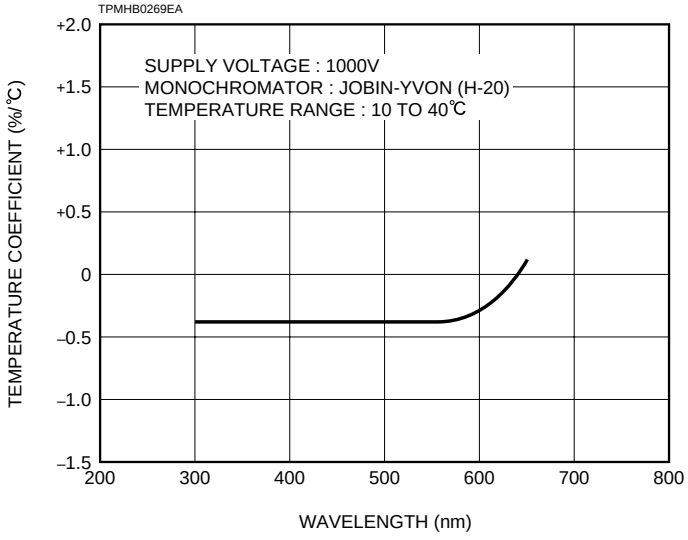
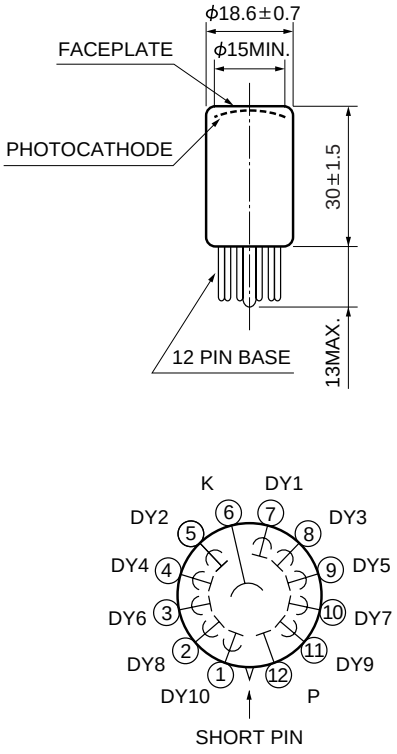


Figure 5: R5611 Dimensional Outline and Basing Diagram (Unit : mm)



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Socket

(E678–12L)

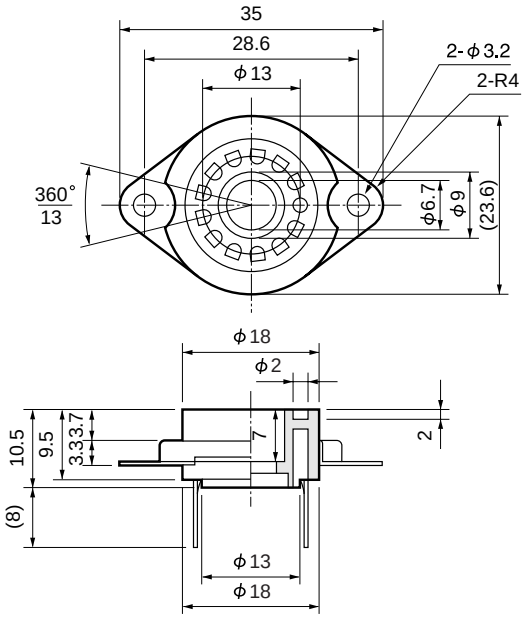

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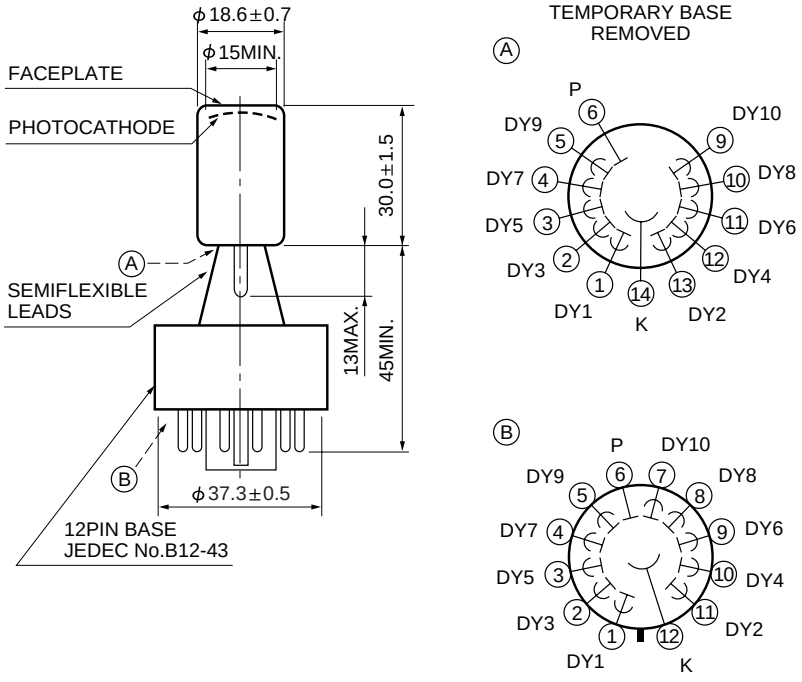
Figure 6: R5611-01 Dimensional Outline and Basing Diagram (Unit : mm)



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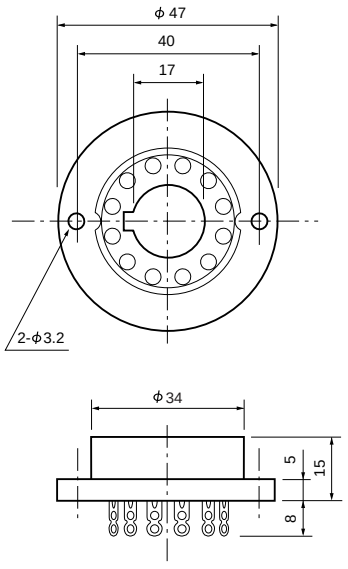
Socket

(E678–12A)



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