

Spectral Response for Red to Near Infrared Detection 28mm (1-1/8 Inch) Diameter, Ag-O-Cs Photocathode, 11-stage, Head-On Type

GENERAL

Parameter		Description/Value	Unit
Spectral Response		400 to 1200	nm
Wavelength of Maximum Response		800	nm
Photocathode	Material	Ag-O-Cs	—
	Minimum Effective Area	25	mm dia.
Window Material		Borosilicate glass	—
Dynode	Structure	Box-and-grid	—
	Number of Stages	11	—
Direct Interelectrode Capacitances	Anode to Last Dynode	3.0	pF
	Anode to All Other Electrodes	3.5	pF
Base		14-pin glass base	—
Suitable Socket		E678-14C (supplied)	—

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1500	Vdc
	Between Anode and Last Dynode	250	Vdc
Average Anode Current		0.01	mA
Ambient Temperature		-80 to +50	°C

CHARACTERISTICS (at 25°C)

Parameter		Min.	Typ.	Max.	Unit	
Cathode Sensitivity	Luminous (2856K)	10	20	—	μA/lm	
	Radiant at 800nm (peak)	—	1.9	—	mA/W	
	Red/White Ratio (IR-D80A filter)	R316	—	0.1	—	—
		R316-02	—	0.14	—	—
	Quantum Efficiency at 1.06μm	R316	—	0.02	—	%
R316-02		0.04	0.06	—	%	
Anode Sensitivity	Luminous (2856K)	5	10	—	A/lm	
	Radiant at 800nm (peak)	—	950	—	A/W	
Gain		—	5.0 × 10 ⁵	—	—	
Anode Dark Current at 4A/lm (after 30min. storage in darkness)	R316	—	1000	3000	nA	
	R316-02	—	2000	5000	nA	
Time Response	Anode Pulse Rise Time	—	10	—	ns	
	Electron Transit Time	—	50	—	ns	

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	Dy11	P
Ratio	1	1	1	1	1	1	1	1	1	1	1	1	1

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

PHOTOMULTIPLIER TUBES R316, R316-02

Figure 1: Typical Spectral Response

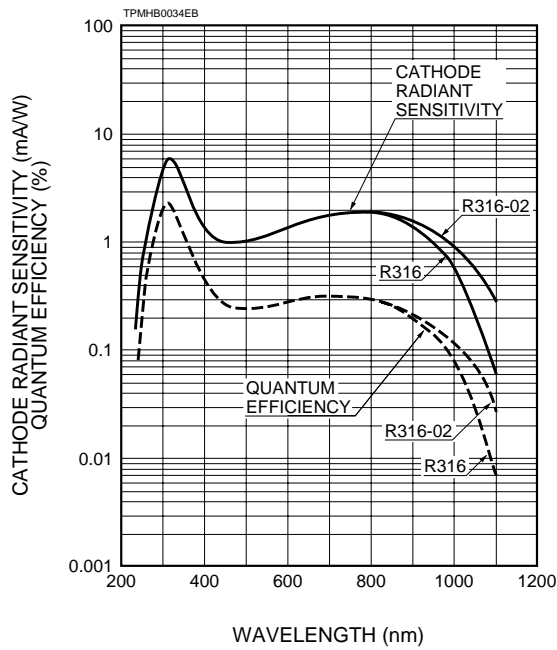


Figure 2: Typical Gain Characteristics

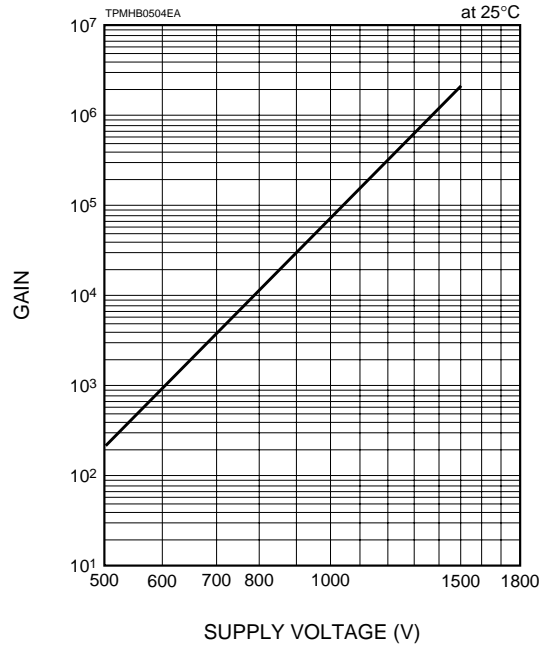
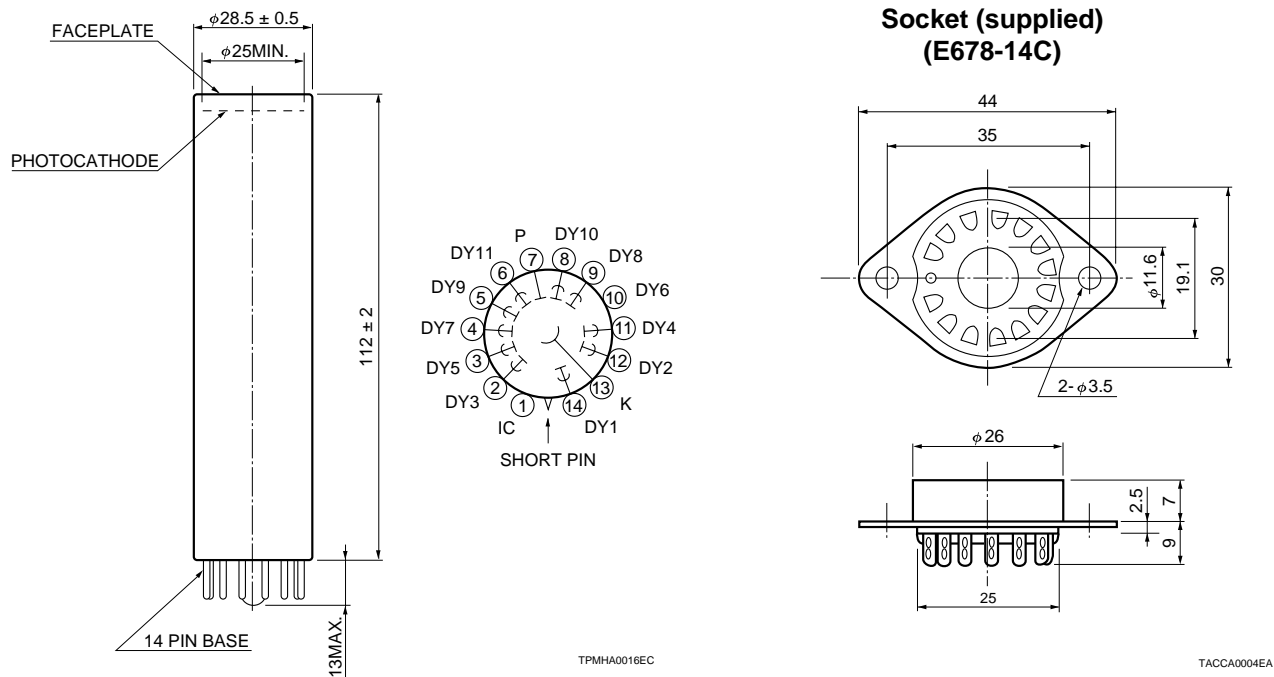


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



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