

FEATURES

- Fast time response

APPLICATIONS

- For scintillation counting
- High energy physics



SPECIFICATIONS

GENERAL

Parameter		Description	Unit
Spectral response		300 to 650	nm
Wavelength of maximum response		420	nm
Window material		Borosilicate glass	—
Photocathode	Material	Bialkali	—
	Minimum effective area	φ65	mm
Dynode	Structure	Linear focused	—
	Number of stages	12	—
Suitable socket		E678-21C (supplied)	—
Operating ambient temperature		-30 to +50	°C
Storage temperature		-80 to +50	°C

MAXIMUM RATINGS (Absolute maximum values)

Parameter		Value	Unit
Supply voltage	Between anode and cathode	2500	V
Average anode current		0.2	mA

CHARACTERISTICS (at 25 °C)

Parameter		Min.	Typ.	Max.	Unit
Cathode sensitivity	Luminous (2856 K)	60	90	—	μA/lm
	Radiant at 420 nm	—	85	—	mA/W
	Blue sensitivity index (CS 5-58)	9.0	10.5	—	—
Anode sensitivity	Luminous (2856 K)	50	450	—	A/lm
	Radiant at 420 nm	—	4.3 × 10 ⁵	—	A/W
Gain		—	5 × 10 ⁶	—	—
Anode dark current (after 30 min storage in darkness)		—	10	60	nA
Time response	Anode pulse rise time	—	2.6	—	ns
	Electron transit time	—	48	—	ns
	Transit time spread (FWHM)	—	2.0	—	ns
Pulse linearity	at 2 % deviation	—	40 (80)	—	mA
	at 5 % deviation	—	60 (110)	—	mA

NOTE: Anode characteristics are measured with the voltage distribution ratio shown below.
() : Measured with the special voltage distribution ratio (Tapered Divider) shown below.

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	G	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	Dy11	Dy12	P
Ratio	4	0	1	1.4	1	1	1	1	1	1	1	1	1	1	1

Supply voltage: 1500 V, K: Cathode, Dy: Dynode, P: Anode, G: Grid

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE (Tapered Divider)

Electrodes	K	G	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	Dy11	Dy12	P
Ratio	4.3	0	1	1.6	1	1	1	1	1	1	1.6	2	3.3	2	

Supply voltage: 2000 V, K: Cathode, Dy: Dynode, P: Anode, G: Grid

PHOTOMULTIPLIER TUBE R6091

Figure 1: Typical spectral response

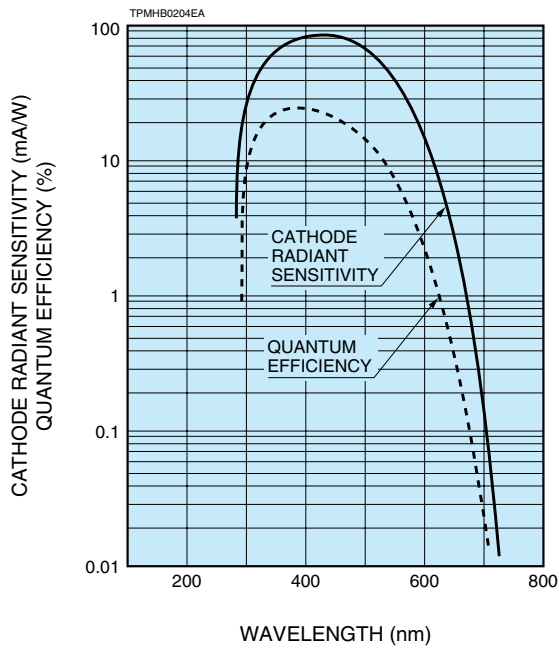
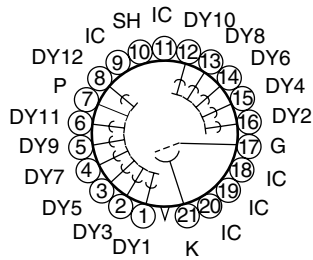
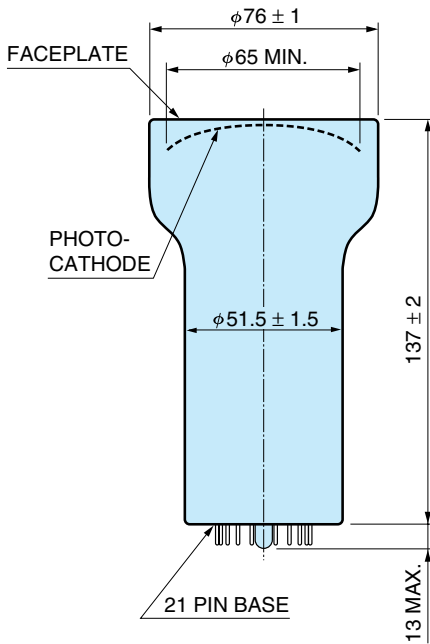
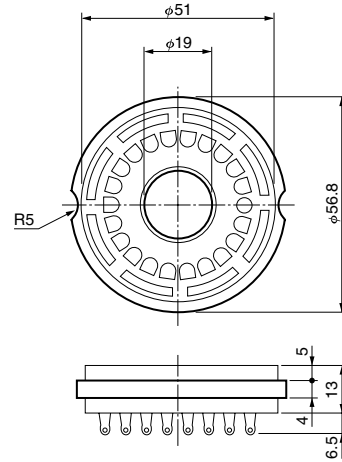


Figure 2: Dimensional outline and basing diagram (Unit: mm)



* CONNECT SH TO DY5

Socket E678-21C (Supplied)



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