

78 mm (3") photomultiplier

9265B series data sheet

1 description

The 9265B is a 78mm (3") diameter, end window photomultiplier with blue-green sensitive bialkali photocathode and 9 high gain, high stability, SbCs dynodes of linear focused design for good linearity and timing.

2 applications

- x-ray and gamma-ray spectroscopy

3 features

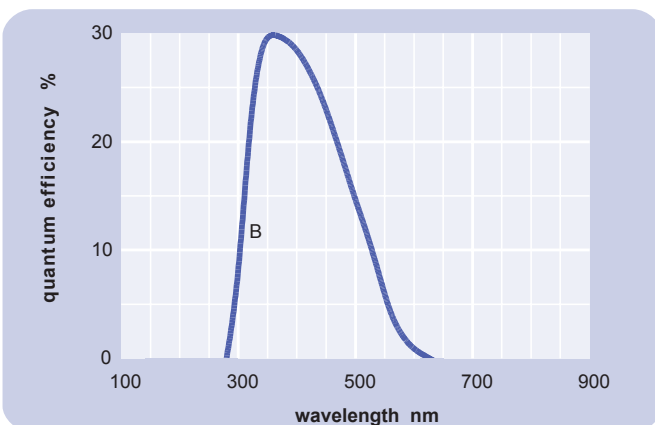
- low operating voltage
- good pulse height resolution

4 window characteristics

	9265B borosilicate
spectral range *(nm)	295 - 630
refractive index (n _v)	1.49
K (ppm)	300
Th (ppb)	250
U (ppb)	100

* wavelength range over which quantum efficiency exceeds 1 % of peak

5 typical spectral response curves

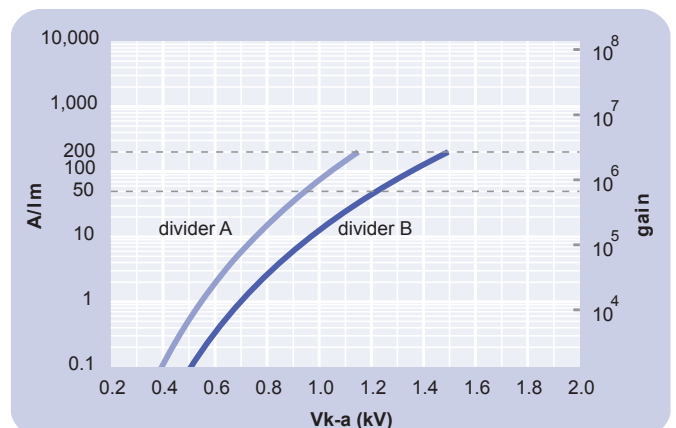


6 characteristics

	unit	min	typ	max
photocathode: bialkali				
active diameter	mm		70	
quantum efficiency at peak	%		30	
luminous sensitivity	μA/lm		75	
with CB filter		8	12	
with CR filter			2	
dynodes: 9LFSbCs				
anode sensitivity in divider A:				
nominal anode sensitivity	A/lm		50	
max. rated anode sensitivity	A/lm		200	
overall V for nominal A/lm	V		950	1300
overall V for max. rated A/lm	V		1150	
gain at nominal A/lm	x 10 ⁶		0.7	
dark current at 20 °C:				
dc at nominal A/lm	nA		0.5	5
dc at max. rated A/lm	nA		2	
pulsed linearity (-5% deviation):				
divider A	mA		30	
divider B	mA		100	
rate effect (I_a for Δg/g=1%):	μA		20	
magnetic field sensitivity:				
the field for which the output decreases by 50 %				
most sensitive direction	T x 10 ⁻⁴		1.7	
temperature coefficient:	% °C ⁻¹		± 0.5	
timing:				
single electron rise time	ns		7.5	
single electron fwhm	ns		15	
transit time	ns		40	
weight:	g		125	
maximum ratings:				
anode current	μA			100
cathode current	nA			200
gain	x 10 ⁶			3
sensitivity	A/lm			200
temperature	°C	-30		60
V (k-a) ⁽¹⁾	V			2100
V (k-d1)	V			450
V (d-d) ⁽²⁾	V			300
ambient pressure (absolute)	kPa			202

⁽¹⁾ subject to not exceeding max. rated sensitivity ⁽²⁾ subject to not exceeding max rated V(k-a)

7 typical voltage gain characteristics



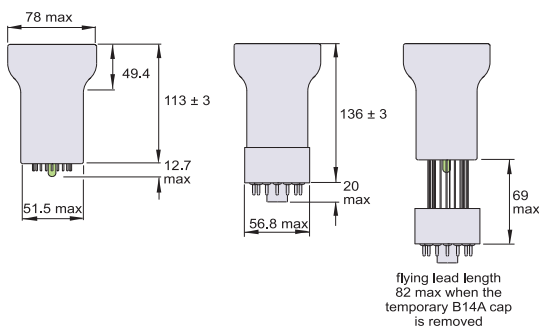
8 voltage divider distribution

	k	d ₁	d ₂	.....	d ₆	d ₇	d ₈	d ₉	a	
A	3R	R	.....		R	R	R	2R	R	Standard
B	3R	R	.....		R	2R	3R	4R	3R	High Pulsed linearity

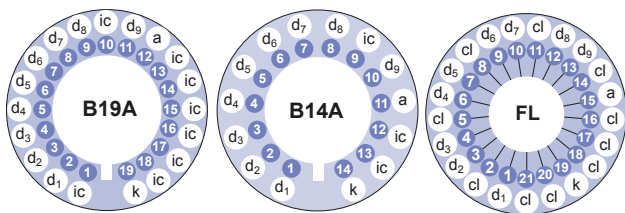
Characteristics contained in this data sheet refer to divider A unless stated otherwise.

9 external dimensions mm

The drawings below show the 9265B in hardpin format, the 9265KB with the B14A cap fitted and the 9265FLB in flying lead format with the temporary B14A cap fitted. The cap is attached as agreed with the customer.



10 base configuration (viewed from below)



B19A hardpin base
(for 9265B)
'ic' indicates an
internal connection

B14A cap
(for 9265KB)

flying lead base
(for 9265FLB)
after removal of
temporary cap
'cl' indicates cut lead

Our range of B19A sockets is available to suit the B19B hardpin base. Our range of B14A sockets is available to suit the temporary B14A cap when the flying lead base variant is selected. Both socket ranges include versions with our without a mounting flange, and with contacts for mounting directly onto printed circuit boards.

11 ordering information

The 9265B meets the specification given in this data sheet. You may order **variants** by adding a suffix to the type number. You may also order **options** by adding a suffix to the type number. You may order product with **specification options** by discussing your requirements with us. If your selection option is for one-off order, then the product will be referred to as 9265A. For a repeat order, ET Enterprises will give the product a two digit suffix after the letter B, for example B21. This identifies your specific requirement.

9265

base options

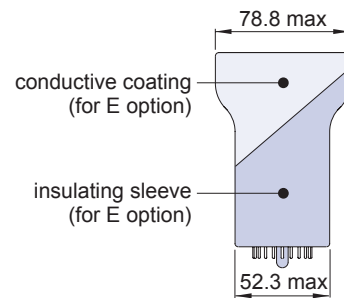
- K** capped
- KFL** flying lead base with temporary B14A cap

options

- E** electrostatic shielding see drawing below
- M** supplied with spectral response calibration

specification options

- B** as given in data sheet
- A** single order to selected specification
- Bnn** repeat order to selected specification



12 voltage dividers

The standard voltage dividers available for these pmts are tabulated below:

9265			k	d ₁	d ₂	.....	d ₅	d ₆	d ₇	d ₈	d ₉	a
B/XXXB	KB	FLB										
C648A	C634A	C656A	3R	R	.....		R	R	R	R	R	R
C648B	C634B	C656B	3R	R	.....		R	2R	3R	4R	3R	R
C648C	C634C	C656C	450 V	R	.....		R	R	R	R	R	R
C648D	C634D	C656D	450 V	R	.....		R	2R	3R	4R	3R	R

R = 330 kΩ

*mumetal is a registered trademark of Magnetic Shield Corporation

ET Enterprises Limited
45 Riverside Way
Uxbridge UB8 2YF
United Kingdom
tel: +44 (0) 1895 200880
fax: +44 (0) 1895 270873
e-mail: sales@et-enterprises.com
web site: www.et-enterprises.com

ADIT Electron Tubes
300 Crane Street
Sweetwater TX 79556 USA
tel: (325) 235 1418
toll free: (800) 399 4557
fax: (325) 235 2872
e-mail: sales@electron tubes.com
web site: www.electrontubes.com

choose accessories for this pmt on our website

an ISO 9001 registered company

The company reserves the right to modify these designs and specifications without notice. Developmental devices are intended for evaluation and no obligation is assumed for future manufacture. While every effort is made to ensure accuracy of published information the company cannot be held responsible for errors or consequences arising therefrom.

