

TYPE: 9422

SERIAL NUMBER: 1049

DATE : 14-Sep-17

### CATHODE RADIANT SENSITIVITY

16mm diameter circle at the centre of the photo-cathode illuminated.

Wavelength (nm)	Q.E.%	mA/W
121.6	8.7	8.5
140.0	9.6	10.9
160.0	9.5	12.3
180.0	11.5	16.7
200.0	12.3	19.8

### PHOTOMULTIPLIER GAIN AND DARK CURRENT

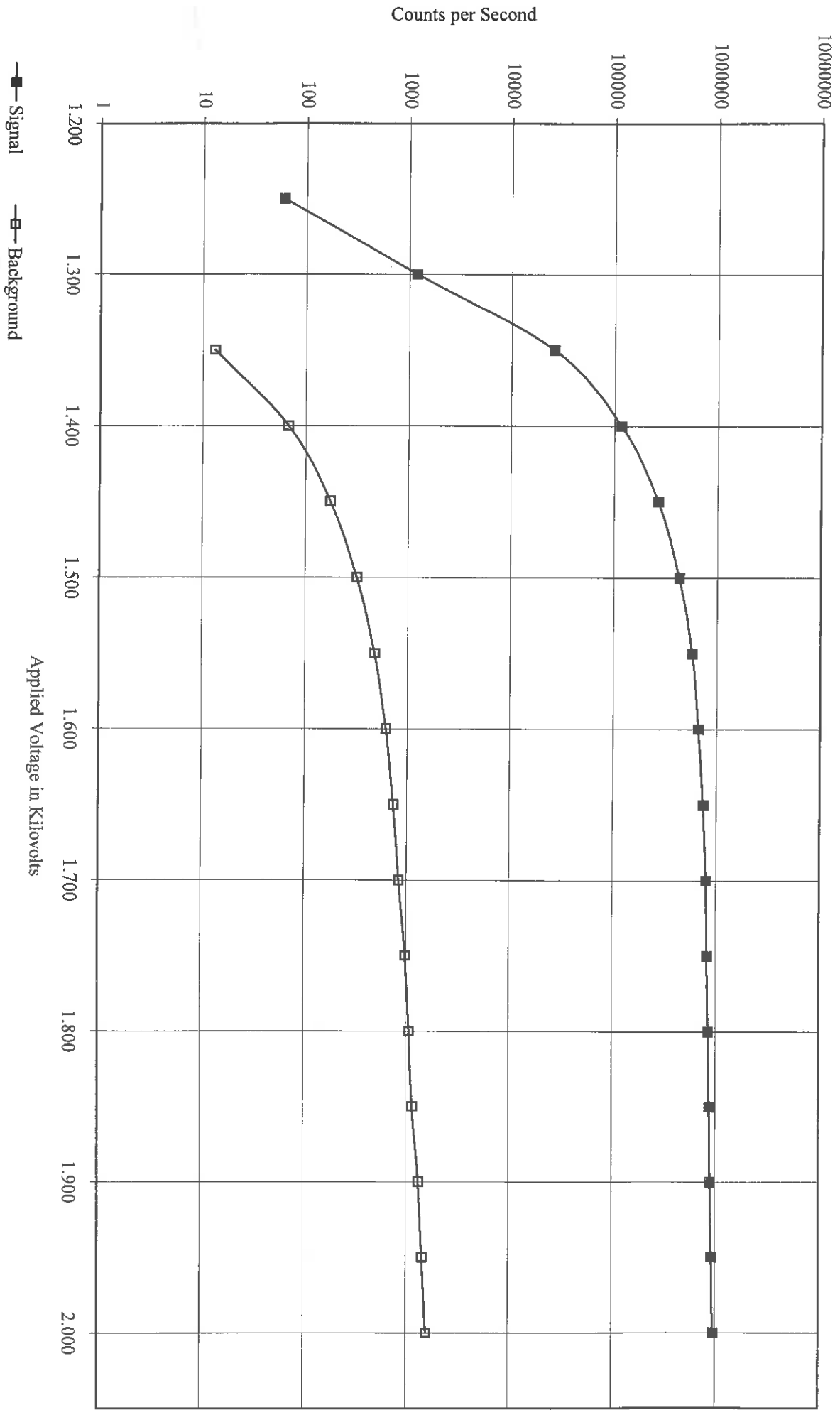
Gain	Volts	Dark current (nA)
$10^6$	1490	0.12
$10^7$	1790	1.1

### PHOTON COUNTING CHARACTERISTICS

The optimum operating voltage depends on the application, the sensitivity of the measuring electronics and the chosen voltage distribution.

For reference we have shown the signal and background counting plateau obtained with the ETL AD1 integral amplifier discriminator with a 1mV threshold (50 Ohms). The photomultiplier is operated with the cathode at negative EHT in a uniform (R) voltage divider network with  $k-d1 = 2R$ . The suggested operating voltage is 1750 volts and the background at this voltage is 968 counts per second. The operating voltage is 100 volts above the point at which the count rate increase first falls below 0.2% / volt.

**PMT TYPE: 9422 S/No: 1049**  
Photon Counting Plateau Characteristic



ET Enterprises Ltd Spectral Response Printout

Tube Type: 9422  
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Data:

Wavelength (nm)	Quantum Efficiency (%)	Responsivity (A/W)
210	14.46	0.024486
220	14.20	0.025196
230	14.12	0.026194
240	13.70	0.026511
250	13.15	0.026505
260	12.28	0.02574
270	11.09	0.024152
280	10.02	0.022635
290	8.60	0.020122
300	6.58	0.015917
310	4.31	0.010781
320	2.29	0.005904
330	0.81	0.002165
340	0.00	0
350	0.00	0
360	0.00	0