

## 7505M Series

# CERAMIC CHANNEL ELECTRON MULTIPLIER FOR FINNIGAN MAT ION TRAP DETECTOR (ITD 700,800), ITS-40, AND VARIAN SATURN MASS SPECTROMETERS



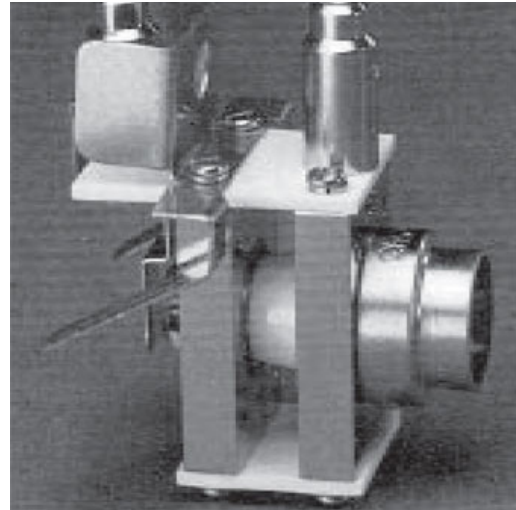
## 7505M, 7505MH1

### Features

- Snap-out/snap-in mounting hardware permits fast replacement
- Background signal less than instrument baseline noise means microphonics are virtually eliminated
- Capable of high output current - greater than 10uA
- Vacuum bakeable at 350°C
- Operable to  $7 \times 10^{-4}$  torr (He) and 200°C

### Benefits

- Extended multiplier life
- Increased sensitivity
- Gain tailored for use in Finnigan MAT Ion Detector (ITD 700,800), ITS-40, and Varian Saturn mass spectrometers
- Capable of absorbing high thermal and physical shock



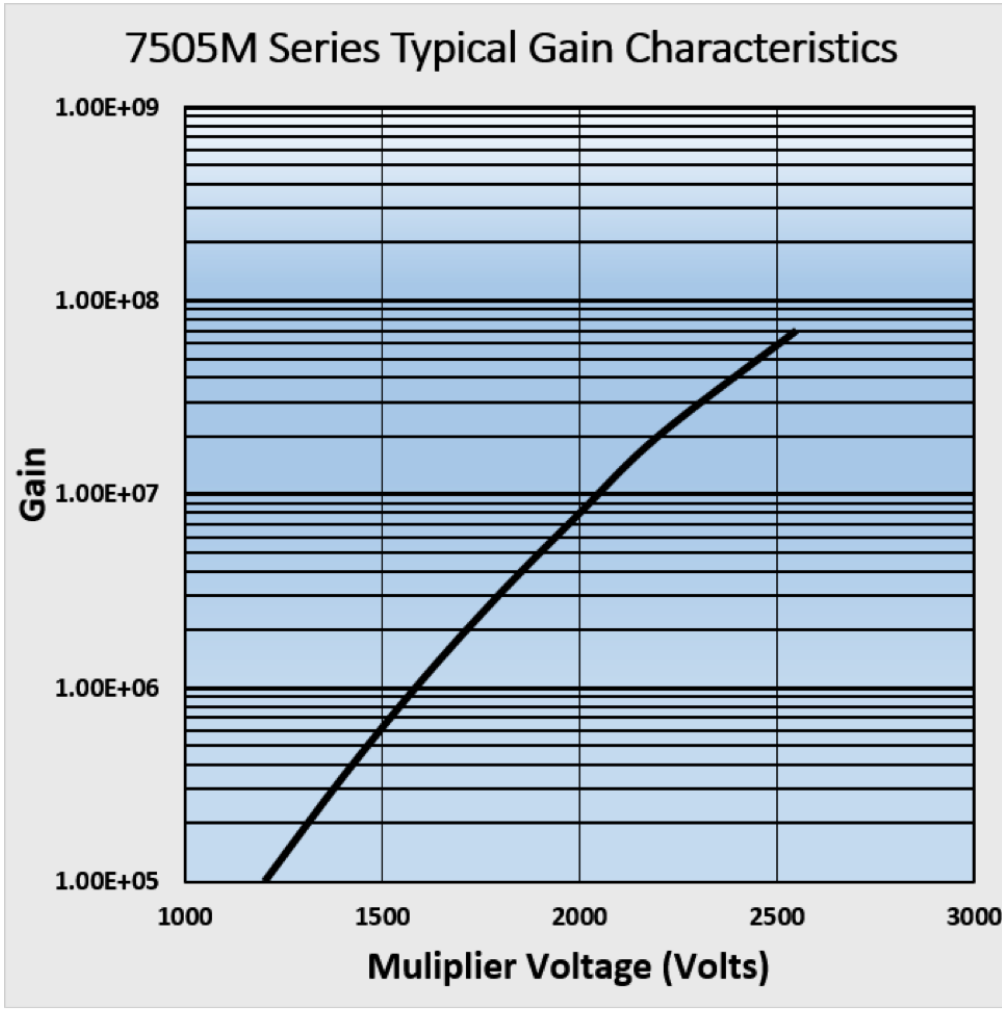
The Model 7505MH1 is Exelis' channel electron multiplier assembly (CEM) used in Finnigan MAT's Ion Trap Detector (ITD 700,800), ITS-40, and Varian Saturn mass spectrometers. The monolithic ceramic construction and advanced ion-optical design significantly extend multiplier life and enhance sensitivity. Its exclusive snap-out/snap-in mounting both speeds multiplier replacement and assures perfect alignment.

### SPECIFICATIONS: 7505M SERIES

OPERATING PARAMETERS				
Supply Voltage	Max. 3000 Vdc			
Vacuum	Max. $7 \times 10^{-4}$ torr (He)			
Dynode Power Dissipation	Max 150 mW			
Average Anode Current	Max 15uA			
Resistance @ 10Vdc:				
Total ( $R_T$ )	Min. 60, Max 150 M $\Omega$			
Anode Bias ( $R_A$ )	Min. 3, Max 7 %RT			
Thermal Coefficient of Resistance: ( $TCR_{RT}$ , $TCR_{RA}$ )	Max -0.6%/°C			
Gain <sup>(2)</sup> (typ; see fig. 1)	1200 Vdc $1 \times 10^5$	1500 Vdc $6 \times 10^5$	1800 Vdc $5 \times 10^6$	
Background Signal:				
Output Dark Pulses (max)	.05	.05	.05	counts/sec
Output Dark Current (typ)	$8 \times 10^{-16}$	$3 \times 10^{-15}$	$4 \times 10^{-14}$	amps

Notes: (1) For operation at elevated ambient temperatures, Harris can provide derating information. (2) Values specified for electron gain are those existing at the time of shipment. Gain typically decreases with use. Periodic supply voltage increases are required to maintain the gain above a specific level. Multipliers are shipped in sealed bags containing dry nitrogen. It is recommended that the seal not be broken until use.

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