

General Description of Tungsten EM Filaments

The tungsten filaments manufactured by Energy Beam Sciences are used in all major brands of scanning and transmission electron microscopes. These high quality, high stability tungsten EM filaments, also called cathodes or electron emitters, are manufactured to exceed the specifications of the original equipment manufacturers. These superior cathodes are made using high quality ceramic discs, exact size contact pins and high grade tungsten filament wire. Special tools are used to produce the correct shape of the tungsten filament. All EBSciences tungsten filaments are precisely aligned and annealed in high vacuum to reduce stress in the filament. This will guarantee optimum stability, maximum brightness, longer lifetime and overall lower running costs.

Exclusive features of the EBS tungsten EM filaments are:

- Minimum tip radius for coherent beam
- Rigid attachment of filament wire to post to increase stability
- Fully stress relieved for enhanced cathode lifetime
- Polished post ends
- Precise dimensions
- Better long term economy

Please consult the following table for the correct type of tungsten filament for your SEM, TEM or Microprobe. The EBS tungsten filaments are available for FEI, Hitachi, ISI, JEOL, Philips, Tescan, Zeiss, LEO, Cambridge Instruments, Leica, AmRay and CamScan Electron Microscopes.

Tungsten Filament Selection Table

Electron Microscope Type or Filament base	Product number	Ceramic Disc mm	Pin Diameter mm	Pin Pitch mm
AEI	14-AE1201	12.0	1.0	6.45
AmRay /AMR (except 1200 series)	14-AE1202	26.0	1.0	5.0
Cambridge Instruments (except S4-10)	14-AE1201	12.0	1.0	6.45
CamScan with AEI conversion	14-AE1201	12.0	1.0	6.45
CamScan with new Tescan Column	14-TN1209	19.8	1.0	5.0
FEI	14-FP1203	26.0	1.0	5.0
Hitachi S-Type	14-HI1204	9.8	1.2	2.7
Hitachi Tabletop with Cartridge	14-HT1205	9.8	1.2	2.7

ISI /ABT / Topcon 2-Pin	14-I21206	23.4	1.2	12.0
JEOL K-Type with metal ring	14-JL1208	28.0	1.2	8.0
Leica	14-AE1201	12.0	1.0	6.45
LEO 400 and 1400 Series SEM	14-AE1201	12.0	1.0	6.45
LEO1450 (except AEI conversions)	14-ZS1210	19.8	1.0	5.0
LEO TEM	14-ZS1210	19.8	1.0	5.0
Philips V-Loop (PSEM500/EM200 and later)	14-FP1203	26.0	1.0	5.0
Tescan	14-TN1209	19.8	1.0	5.0
Zeiss DSM and TEM	14-ZS1210	19.8	1.0	5.0
Zeiss EVO	14-AE1201	12.0	1.0	6.45