

# The Electron Source EQ 22/35 & Power Supply PU-EQ22/35

## Technical Note

### Electronic Specification PU-EQ 22/35

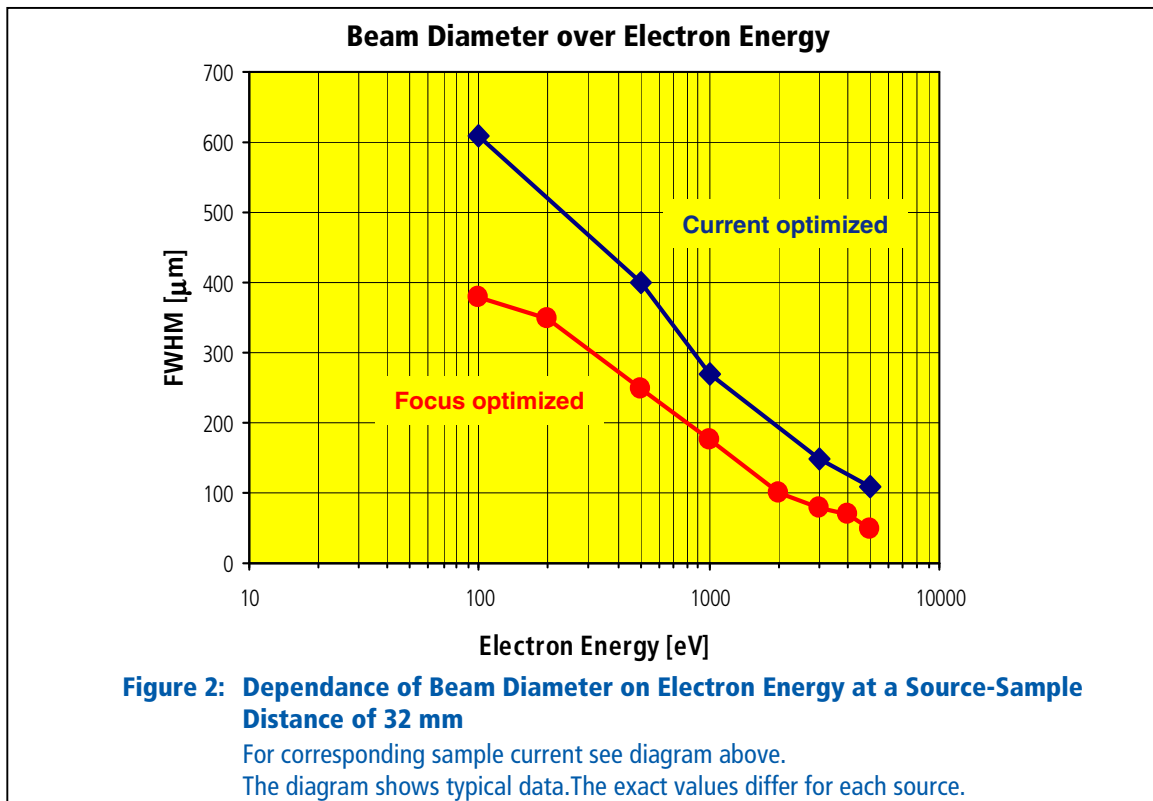
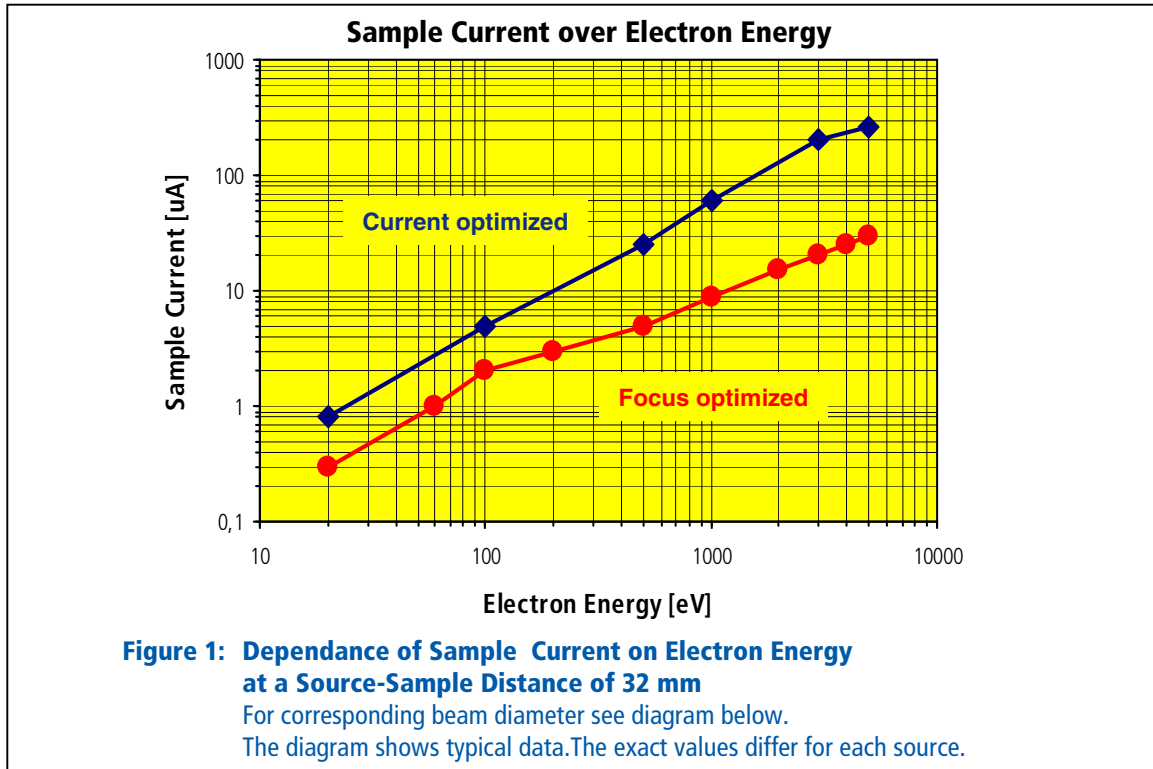
Variable	Range	Step	Stability	Ripple
<b>Energy</b>	0 to -5 kV	1 V	50 ppm/K	0.2 V
<b>Wehnelt</b>	0 to -250 V	0.1 V	50 ppm/K	50 mV
<b>Focus</b>	0 to -5kV	1 V	50 ppm/K	0.2 V
<b>Filament</b>	0 to 10 V 0 to 3 A	No access 1 mA	50 ppm/K	50 mV
<b>Emission</b>	0.01 to 250 mA	10 nA	50 ppm/K	1% @ 1nA 0.6% @ 1mA 0.25% @ 0.1mA
<b>x,y-Deflection</b>	0 to +/-650 V	0.3 V	50 ppm/K	0.2 V

### Typical operational parameters EQ 22/35

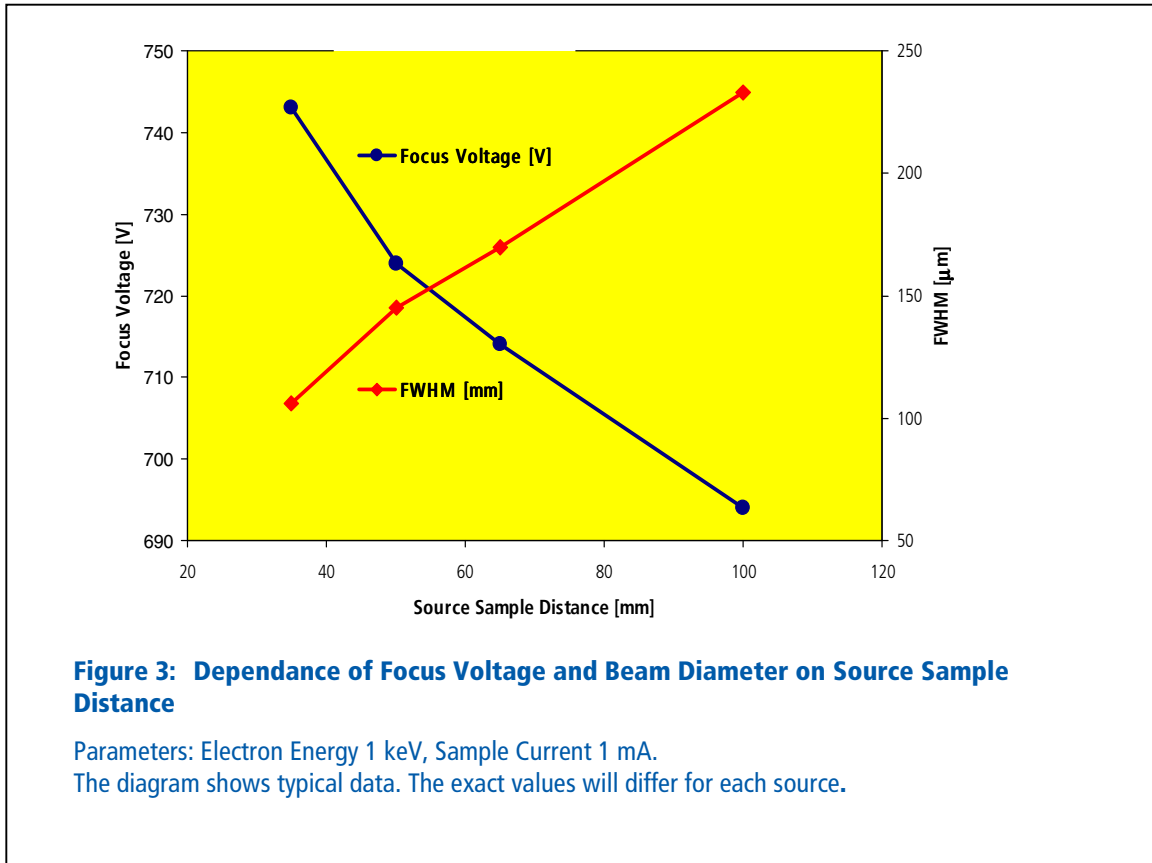
<b>Wehnelt</b>	-30 to -100 V
<b>Focus</b>	0.7 to 0.8 x Energy Voltage
<b>Filament</b>	2 to 3 V, 2.2 A
<b>Emission</b>	0.01 to 250 mA, typical 1-20 mA
<b>x,y-Deflection</b>	+/- 650 V -> +/- 5 mm deflection at a source sample distance of 32 mm and an electron energy of 5 keV -> 50 to 60 V/degree deflection

## Current versus Focus optimized Performance

(Current and beam diameter datapoints of both diagrams correspond to each other)



## Dependance of Focus Voltage and Beam Diameter on Source Sample Distance at low sample current



### Option:

Low current version with smaller aperture for high precision below 10 nA.

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