



CRT Cathode Assemblies

Semicon Associates has been supplying dispenser cathodes for CRT applications for over 20 years. The typical CRT dispenser is constructed from a porous tungsten pellet impregnated with a barium emission enhancing compound. The tungsten pellet may be machined from a billet or pressed and sintered to final dimensional requirements. A support structure and heater may also be included. (See Value Added Assemblies insert.)

Dispenser cathodes are used in CRTs requiring high brightness, high resolution electron beams. Applications include medical monitors, avionics displays, projection tubes, and photo lithography tubes.

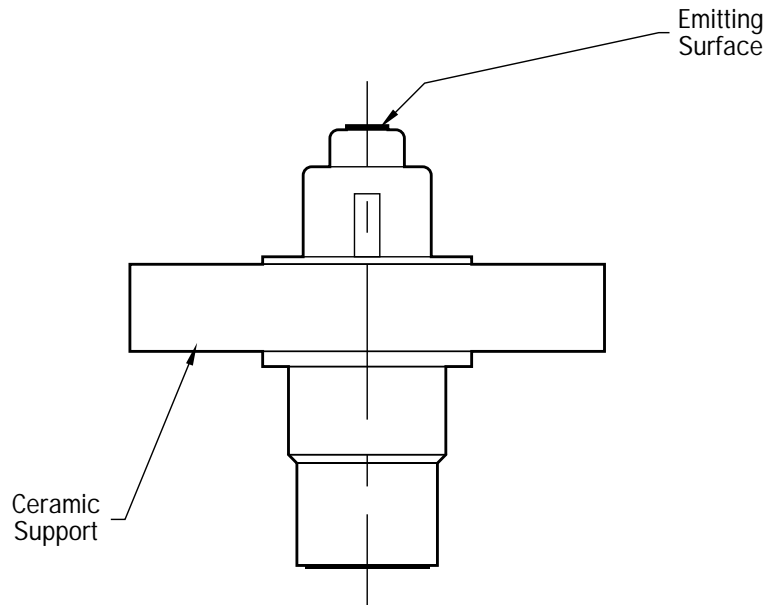
Beyond technical expertise, we offer a market and team driven approach. Semicon Associates will partner with you to develop customized solutions tailored to your needs. Our partnership continues after the sale is completed to ensure you get maximum benefit from your purchase.

### Typical Specifications

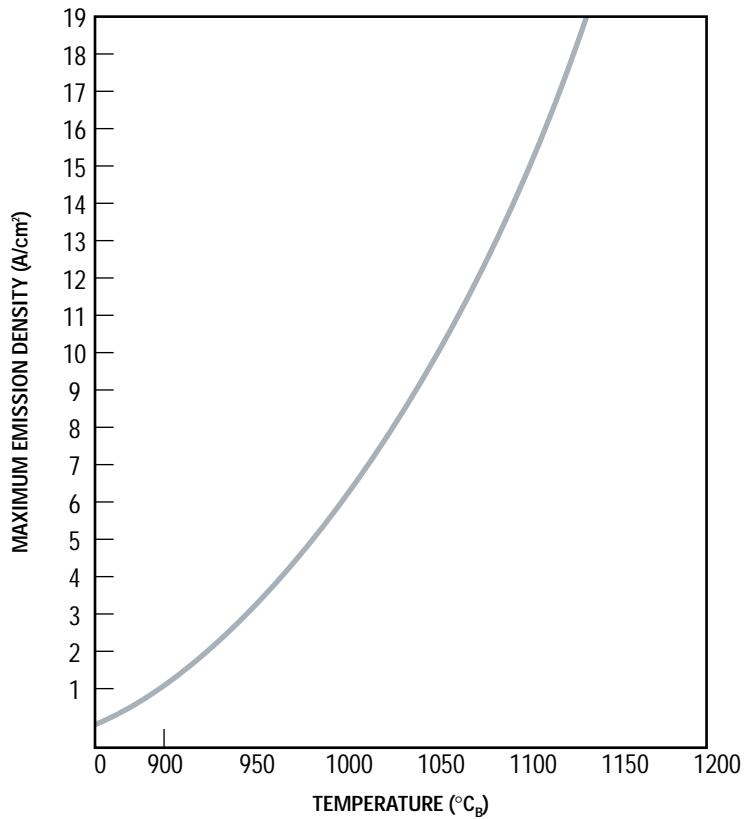
<b>Size - Emitting Surface</b>	Ø.041" (1.04 mm)
<b>Tungsten Density Range</b>	80 ± 1.5%
<b>Impregnated Types</b>	4:1:1 (S), 5:3:2 (B), 6:1:2, others
<b>Sputter Coating</b>	Osmium Ruthenium (M), Iridium, other coatings
<b>Tolerances</b>	To ± .0005" (±0.013 mm)
<b>Operating Temperature</b>	From 900°C <sub>B</sub> to 1050°C <sub>B</sub>
<b>Emission Density</b>	As high as 15 A/cm <sup>2</sup> , typically 5-8 A/cm <sup>2</sup>
<b>Life Expectancy</b>	From 3,000 hours to 20,000 hours



a ceradyne company



**Standard CRT Design**



**Maximum Space-Charge Limited Current Density vs. Cathode Temperature**

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