

Cartridge Heater Technical Data

High Watt Density

Medium Watt Density

1/8" Heater

Dimensional

Length Tolerance	±1.5% (min ± 1mm)	±1.5% (min ± 1mm)	Plus or minus 3%
Premium Length Tolerance	upon request	upon request	--
Minimum Heater Length	1" (25.4mm)*	8" (203.2mm)**	1.25" (31.75mm)
Maximum Length	Please see chart opposite page by diameter	Please see chart opposite page by diameter	Please see chart opposite page by diameter

* Shorter lengths may be possible, dependent on required wattage.

**Depending on application requirements

Material

Sheath Material	SS304 (rated 842 °F / 450 °C) SS316L (rated 1292 °F / 700 °C) Incoloy 800 (rated 1500 °F / 700 °C)	SS304 (rated 842 °F / 450 °C) SS316L (rated 1292 °F / 700 °C) Incoloy 800 (rated 1500 °F / 700 °C)	SS304 (rated 842 °F / 450 °C)
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Electrical

Maximum Recommended/ Warranted Sheath Load	160 Watts per square inch	65 Watts per square inch	120 Watts per square inch
Standard Wattage Tolerance	+5% / -10%	±10%	+10% -15%
Premium Wattage Tolerance	±5%, lower possible with specific designs	±5%	±10%, ±5%
Standard High Voltage Stability (cold) ≤24V	500V-AC @ 100 mA	500V-AC @ 100 mA	Not available
Standard High Voltage Stability (cold) >24V	1500V-AC @ 100 mA	1500V-AC @ 100 mA	800V @ 100 mA
Premium High Voltage Stability (cold) >250V	Upon Request	Upon Request	Not available
Insulation Resistance	Min 5 Meg ohms at 500V-DC	Min 5 Meg ohms at 500V-DC	Min 5 Meg ohms at 500V-DC
Premium Insulation Resistance	Upon Request	Upon Request	Not available
Discharge Current (cold)/Leakage Current	Max 0.5 mA at 253 V-AC	Max 0.5 mA at 253 V-AC	Max 0.5 mA at 253 V-AC
Maximum Connection Voltage UL Rated	250V	250V	N/A
Maximum Connection Voltage	600V	600V	250V

Cold Section by Heat Length

Heater OAL (mm)	Cold Length at Cap End (mm) (reference)	Cold Length at Lead End (mm) (reference)	Total Cold Length (mm)
≤35	4	5	9
≥36 & ≤79	5	5	10
≥80 & ≤99	7	5	12
≥100 & ≤120	10	8	15
≥121 & ≤200	12	8	17
≥201 & ≤299	12	8	17
≥300 & ≤399	14	8	19
≥400 & ≤549	16	8	21
≥500	20	8	25