Low Density Cartridge Heaters



An Economical and Reliable Cartridge Heater, Used in Applications Requiring Lower Operating Temperatures and Watt Densities



Typical Applications

- Heat Sealing Equipment
- Laminating Equipment
- Packaging Equipment
- Labeling Machines
- Molds and Dies
- Food Processing
- Refrigeration
- Shoe Machinery
- Glue Guns
- Wax Pots
- Heating Liquids
- Heating Gases

Low-density cartridge heaters are an excellent, cost effective choice without compromising quality for Original Equipment Manufacturers (OEMs) consuming large quantities of cartridge heaters for their equipment.

Standard Specifications and Tolerances

Performance Ratings

Maximum Temperature: 650°C (1200°F)

Maximum Watt Density:

3.1 to 7.0 Watt/cm² (20 to 45 Watt/in²) depending on heater size and operating temperature

The standard termination for low-density cartridge heaters is Type F, consisting of 254 mm (10") internally connected flexible lead wires with high temperature insulation, UL approved for 300 or 600V service and temperature rated to 250°C (482°F).

Note: To meet the requirements of your application we offer over 40 standard termination styles to select from that will solve many of the most common application problems.

Ceramic end cap protects the cartridge internally from outside contamination.

Resistance wire and lead wires are mechanically spliced with heavy wall nickel connectors for a positive electrical connection.

Helically wound Nickel-Chrome resistance wire is evenly stretched and strung through ceramic insulators.

Alloy 304 stainless steel is used to provide high temperature strength, good thermal conductivity and resistance to oxidation up to 650°C (1200°F). Alloy 304 is a Nickel-Chromium stainless steel. For immersion heating of corrosive solutions contact OMEGA.

Specially selected grain size high purity Magnesium Oxide (MgO) is used to fill all remaining space inside the ceramic insulator, thus increasing thermal conductivity, dielectric strength and heater life.

Sheath is roll crimped over a 304 stainless steel end disc. A mica spacer electrically insulates the heater core from the end disc. This style end seal is not moisture proof.

Dimensional Specifications

Dimensional Specific	cations										
Nominal Diameter	3/16	1/4	3/8	1/2	5/8	3/4	7/8	15/16	1	11/4	
Actual Diameter inch	0.185	0.247	0.372	0.496	0.621	0.745	0.870	0.933	0.995	1.250	
Actual Diameter mm	4.70	6.27	9.45	12.60	15.77	18.92	22.10	23.70	25.27	31.75	
Diameter Tolerance	0.051 mm (±0.002")									0.127 mm (±0.005")	
Length Tolerance	1.59 mm (±½") up to 152 mm (6") long; 3.18 mm (±½") over 152 mm (6") long										
Camber Tolerance	0.254 mm (0.010") per foot of length										
Electrical Specificati	ons										
Nominal Diameter	3/16	1/4	3/8	1/2	5/8	3/4	7/8	¹⁵ / ₁₆	1	11/4	
Maximum Voltage	240	240	240	240	480**	480**	480**	480**	480**	480**	
Maximum Amperage	1.5	3.5	6	8	10	15	15	15	25	30	
Maximum Wattage	Contact OMEGA										
Wattage Tolerance	Plus 5%, minus 10%										
Resistance Tolerance	Plus 10%, minus 5%										

^{*}Low density cartridge heaters are UL recognized and CSA certified in many design variations under UL File Number E65652 and CSA File Number 043099. If you require UL and/or CSA Agency Approval, please specify when ordering.

^{**480}V when applicable. Contact OMEGA.



Low Density Cartridge Heaters

11/4" Diameter, Actual 31.62 mm (1.245")

To Order Visit omega.com/ldc10 for Pricing and Details											
Model No.		Sheath	Length		Watt Density						
120V	240V	mm	inch	Watts	Watt/cm ²	Watt/in ²					
LDC00403	LDC00404	82.6	31/4	400	5.7	37					
LDC00405	LDC00406	127.0	5	450	3.9	25					
LDC00407	LDC00408	152.4	6	500	3.6	23					
LDC00409	LDC00410	152.4	6	800	5.7	37					
LDC00411	LDC00412	177.8	7	550	3.3	22					
LDC00413	LDC00414	177.8	7	1000	6.1	39					
LDC00415	LDC00416	228.6	9	675	3.1	20					
LDC00417	LDC00418	254.0	10	1000	4.2	27					
LDC00419	LDC00420	304.8	12	1000	3.4	22					
_	LDC00421	355.6	14	2000	5.8	38					
_	LDC00422	381.0	15	1250	3.4	22					
LDC00423	LDC00424	419.1	16½	1000	2.5	16					
_	LDC00425	571.5	22½	2200	3.9	25					
_	LDC00426	609.6	24	2400	4.0	26					

Note: Model numbers above are for low density cartridge heaters terminated with Type F flexible leads, 254 mm (10") long. Ordering Example: LDC00417, 1000 W, 120 Vac cartridge heater.

Order by model number from the standard sizes and ratings list on the preceding pages. Note that model numbers shown are for heaters with Type F Termination [254 mm (10") leads].

Custom Engineered/Manufactured Heaters

Because an electric heater can be very application specific, for sizes and ratings not listed, OMEGA will design and manufacture a low-density cartridge heater to meet your requirements.

Please Specify the Following:

- Diameter
- Termination Types
- Application Type Operating Temperature

- Length Wattage
- Lead Length
- Cable/Braid Length
- Voltage
- Special Features