

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

LDC Series



### 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/cm<sup>2</sup> (20 to 45 Watt/in<sup>2</sup>) depending on heater size and operating temperature

### Dimensional Specifications

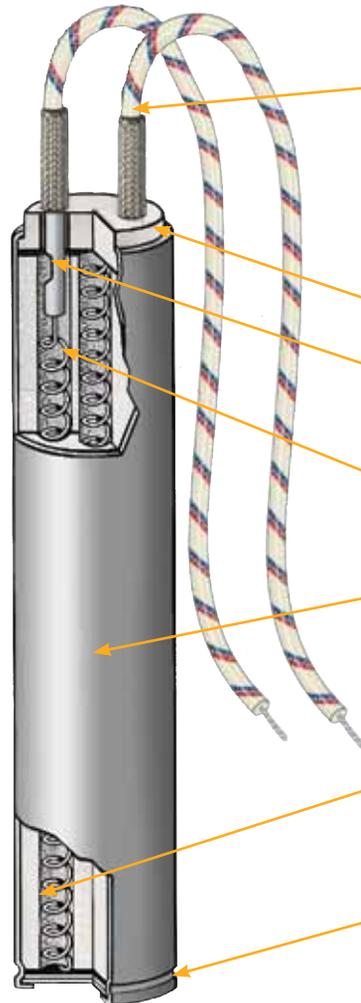
Nominal Diameter	3/16	1/4	3/8	1/2	5/8	3/4	7/8	15/16	1	1 1/4
Actual Diameter inch	0.185	0.247	0.372	0.496	0.621	0.745	0.870	0.933	0.995	1.250
Actual Diameter mm	4.70	6.27	9.45	12.60	15.77	18.92	22.10	23.70	25.27	31.75
Diameter Tolerance	0.051 mm (±0.002")									0.127 mm (±0.005")
Length Tolerance	1.59 mm (±1/16") up to 152 mm (6") long; 3.18 mm (±1/8") over 152 mm (6") long									
Camber Tolerance	0.254 mm (0.010") per foot of length									

### Electrical Specifications

Nominal Diameter	3/16	1/4	3/8	1/2	5/8	3/4	7/8	15/16	1	1 1/4
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.

\*\*480V when applicable. Contact OMEGA.



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.



# Low Density Cartridge Heaters

¼" Diameter, Actual 6.27 mm (0.247")

**To Order Visit [omega.com/ldc2](http://omega.com/ldc2) for Pricing and Details**

Model No.		Sheath Length		Watts	Watt Density	
120V	240V	mm	inch		W/cm <sup>2</sup>	W/in <sup>2</sup>
LDC00012	—	25.4	1	20	5.3	34
LDC00013	—	25.4	1	42	11.1	71
LDC00014	—	38.1	1½	20	3.5	23
LDC00015	—	50.8	2	32	4.2	27
LDC00016	—	50.8	2	40	5.3	34
LDC00017	—	50.8	2	50	6.6	42
LDC00018	—	63.5	2½	30	3.0	19
LDC00019	—	76.2	3	32	2.5	16
LDC00020	—	76.2	3	50	3.9	25
LDC00021	—	88.9	3½	80	5.3	34
LDC00022	LDC00023	101.6	4	100	5.6	36
LDC00024	—	127.0	5	125	5.5	35
LDC00025	LDC00026	152.4	6	150	5.4	35
LDC00027	LDC00028	177.8	7	100	3.0	20
LDC00029	LDC00030	203.2	8	200	5.3	34
LDC00031	LDC00032	254.0	10	250	5.2	34

**Note:** Model numbers above are for low density cartridge heaters terminated with Type F flexible leads, 254 mm (10") long.

**Ordering Example:** LDC00022, 100 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
- Length
- Wattage
- Voltage
- Termination Types
- Lead Length
- Cable/Braid Length
- Special Features
- Application Type
- Operating Temperature