

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

Dimensional Specifications

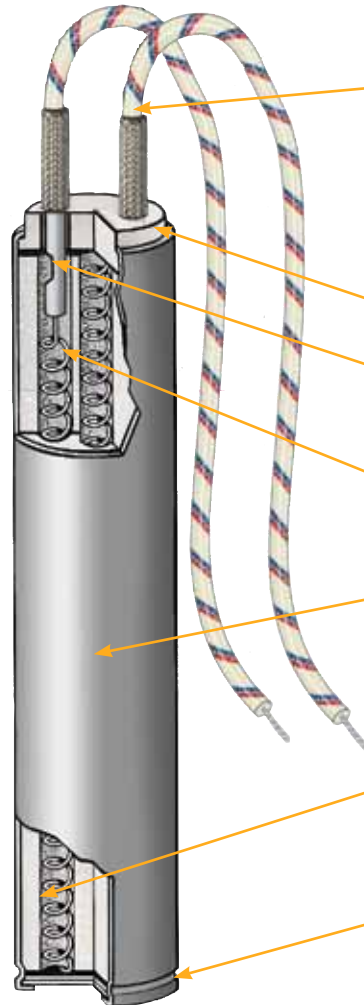
Nominal Diameter	3/16	1/4	3/8	1/2	5/8	3/4	7/8	15/16	1	1 1/4
Actual Diameter inch	0.185	0.247	0.372	0.496	0.621	0.745	0.870	0.933	0.995	1.250
Actual Diameter mm	4.70	6.27	9.45	12.60	15.77	18.92	22.10	23.70	25.27	31.75
Diameter Tolerance	0.051 mm (±0.002")									0.127 mm (±0.005")
Length Tolerance	1.59 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

½" Diameter, Actual 12.60 mm (0.496")

To Order Visit omega.com/ldc4 for Pricing and Details

Model No.		Sheath Length		Watts	Watt Density	
120V	240V	mm	inch		Watt/cm ²	Watt/in ²
LDC00093	—	38.1	1½	60	5.9	38
LDC00094	—	50.8	2	75	4.9	32
LDC00095	—	63.5	2½	40	2.0	13
LDC00096	—	63.5	2½	125	6.2	40
LDC00097	LDC00098	76.2	3	150	5.9	38
LDC00099	LDC00100	88.9	3½	150	4.9	32
LDC00101	LDC00102	98.4	3⅞	90	2.6	17
LDC00103	LDC00104	101.6	4	180	5.1	33
LDC00105	—	114.3	4½	200	4.9	32
LDC00106	LDC00107	127.0	5	200	4.4	28
LDC00108	LDC00109	139.7	5½	300	5.9	38
LDC00110	LDC00111	152.4	6	150	2.7	17
LDC00112	LDC00113	152.4	6	250	4.5	29
LDC00114	LDC00115	152.4	6	300	5.4	35
LDC00116	LDC00117	165.1	6½	300	4.9	32
LDC00118	LDC00119	177.8	7	275	4.2	27
LDC00120	LDC00121	177.8	7	350	5.3	34
LDC00122	LDC00123	190.5	7½	350	4.9	32
LDC00124	LDC00125	203.2	8	400	5.3	34
LDC00126	LDC00127	203.2	8	425	5.6	36
LDC00128	LDC00129	215.9	8½	400	4.9	32
LDC00130	LDC00131	228.6	9	450	5.2	34
LDC00132	LDC00133	254.0	10	500	5.2	34
LDC00134	LDC00135	266.7	10½	500	4.9	32
LDC00136	LDC00137	279.4	11	550	5.2	33
LDC00138	LDC00139	304.8	12	500	4.3	28
LDC00140	LDC00141	304.8	12	600	5.1	33
LDC00142	LDC00143	355.6	14	600	4.4	28
LDC00144	LDC00145	381.0	15	650	4.4	29
LDC00146	LDC00147	381.0	15	750	5.1	33
LDC00148	LDC00149	406.4	16	500	3.2	21
LDC00150	LDC00151	406.4	16	675	4.3	28
LDC00152	LDC00153	457.2	18	725	4.1	26
—	LDC00154	457.2	18	800	4.5	29
LDC00155	LDC00156	508.0	20	750	3.8	24
LDC00157	LDC00158	533.4	21	750	3.6	23
LDC00159	LDC00160	609.6	24	500	2.1	14
—	LDC00161	609.6	24	1000	4.2	27
—	LDC00162	635.0	25	1100	4.4	29

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

Ordering Example: LDC00146, 750 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