



**CORNELL  
DUBILIER**

ENERGIZING IDEAS

## Lighting Capacitors

FILM CAPACITORS FOR HIGH  
INTENSITY DISCHARGE (HID)  
AND SIGN BALLAST LIGHTING

RoHS COMPLIANT



## Intelligent Capacitor Solutions



High quality and long life characterize CD-Aero film capacitors for HID and sign ballast lighting applications. Like all CD-Aero products, our rugged, reliable capacitors are constructed using high quality materials and Lean Six Sigma manufacturing practices. These capacitors undergo 100% outgoing electrical and visual testing, and representative UL fault current, environmental and accelerated life testing (ALT)\* as part of our quality assurance process.

CD-Aero maintains manufacturing facilities in China and India to enable quick turn-around for shipping and delivery worldwide. If you have specialized needs, our flexible manufacturing processes allow us to quickly provide custom configurations. For emergency lighting applications, please see our axial wrap and fill capacitor line.



\*Accelerated life testing (ALT) is performed for 2000 hours at 125% voltage rating and temperature at 105°C.

**CD-Aero provides intelligent capacitor solutions.**



## Lighting Capacitors

### FILM CAPACITORS FOR HIGH INTENSITY DISCHARGE (HID) AND SIGN BALLAST LIGHTING



#### Applications

- Area Lighting
- HID Magnetic Ballast Kits for Greenhouses or Hydroponics
- High / Low Bay / Warehousing
- Horticultural Lighting
- Parking Lot Installations
- Sign Ballast Kits
- Sports Lighting
- Street Lamp Fixtures
- Street Lighting

CD-Aero produces both oil-filled and dry capacitors for the HID and sign ballast lighting markets. Constructed with film designed to withstand the rigors of the application, these units are built to operate up to 105°C.

HID lighting capacitors are built with a  $\pm 3\%$  tolerance on capacitance, and are designed to operate for a minimum of 60,000 hours. Sign ballast capacitors are constructed with film/foil technology and have tolerances based on application requirements.

#### Highlights

- Made to EIA-456-A standards
- Metal or plastic case
- Wet or dry construction
- Life test temperature to 105°C
- 18 AWG wire lead termination
- RoHS compliant
- Dual rated HID
- Dual or triple value caps for sign ballasts
- UL-810 fault current protection

#### Specifications

<b>Capacitance Range:</b>	1 to 75 $\mu\text{F}$ for HID; 1.4 to 2.6 $\mu\text{F}$ with dual or triple rating for sign ballasts
<b>HID Capacitance Tolerance:</b>	$\pm 3\%$
<b>AC Voltage Range:</b>	120 VAC to 660 VAC for HID; 550 VAC to 1,200 VAC for sign ballasts
<b>Temperature Range:</b>	-40°C to +105°C for HID; 0°C to +85°C for sign ballasts
<b>Approval Certification:</b>	UL, cUL UL construction only for dry HID

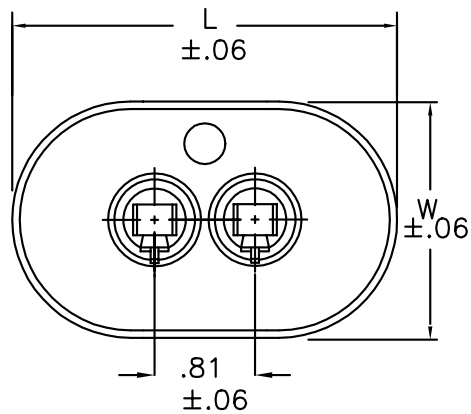
## Lighting Capacitors

### FILM CAPACITORS FOR HIGH INTENSITY DISCHARGE (HID) AND SIGN BALLAST LIGHTING

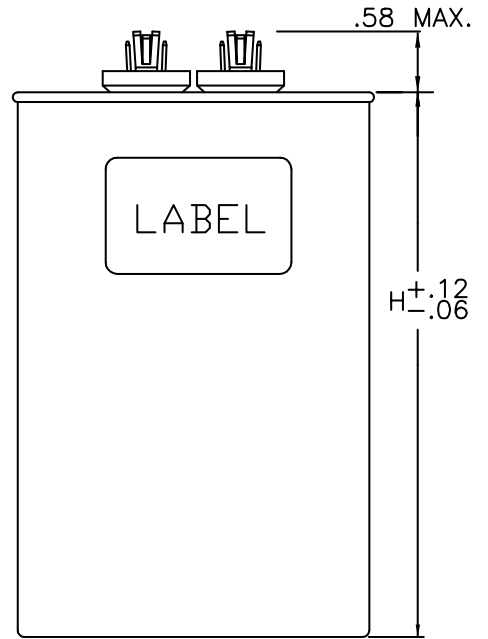
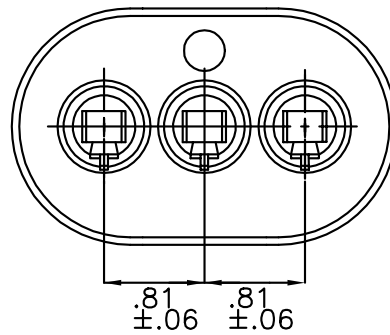
#### Oval Oil-Filled Case Sizes

Base Size	Description	L Inches	W Inches
A	1¼" Oval	2.16	1.31
B	1½" Oval	2.69	1.56
C	1¾" Oval	2.91	1.91
D	2" Oval	3.66	1.97

Oval Single Cover Configuration



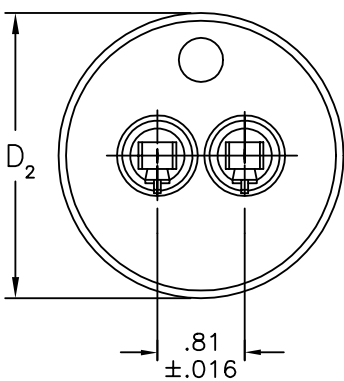
Oval Dual Cover Configuration



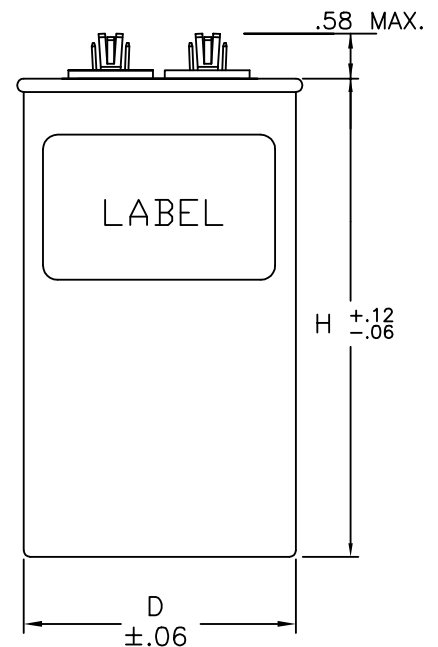
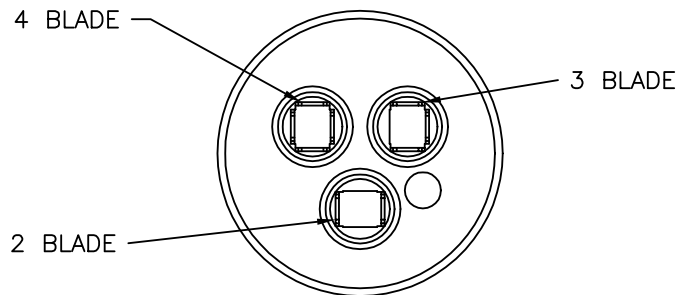
#### Round Oil-Filled Case Sizes

Base Size	Description	D Inches	D <sub>2</sub> Inches
P	1¾" Round	1.75	1.87
S	2" Round	2.00	2.12
T	2½" Round	2.50	2.62

Round Single Cover Configuration



Round Dual Cover Configuration



# Lighting Capacitors

## FILM CAPACITORS FOR HIGH INTENSITY DISCHARGE (HID) AND SIGN BALLAST LIGHTING

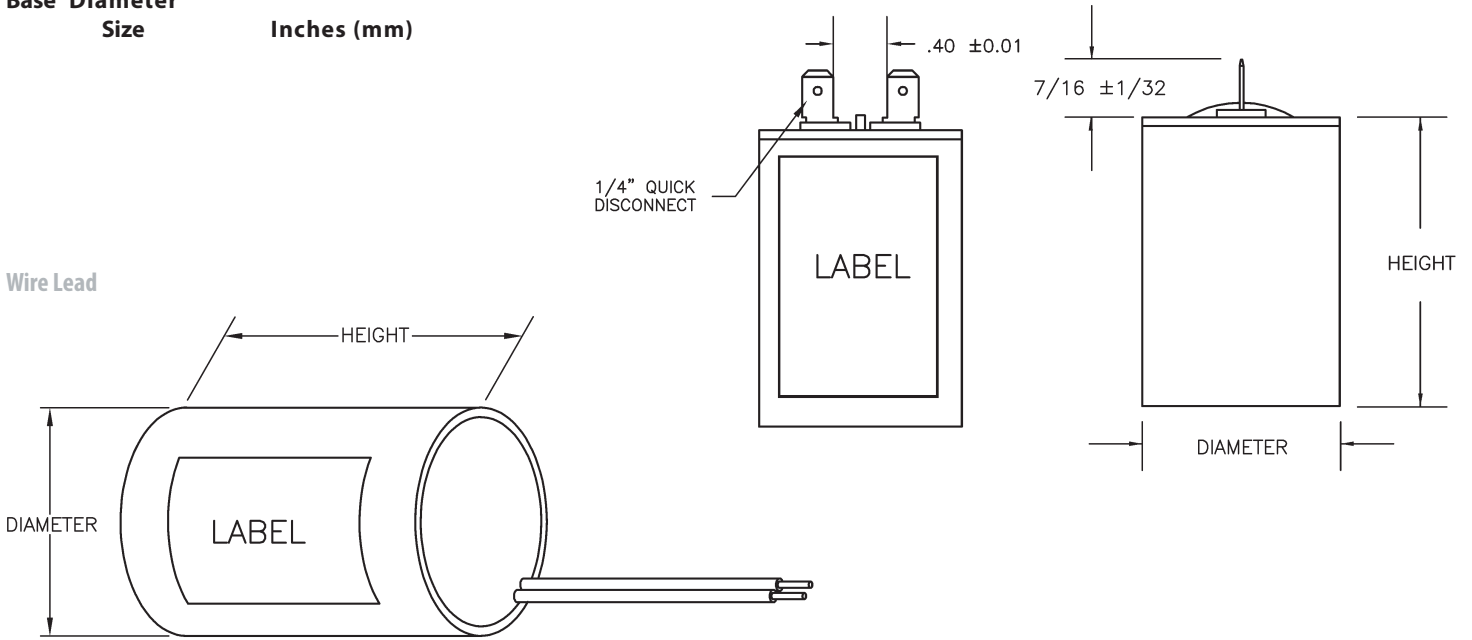
### Dry Plastic Case Sizes

Base Diameter  
Size

Inches (mm)

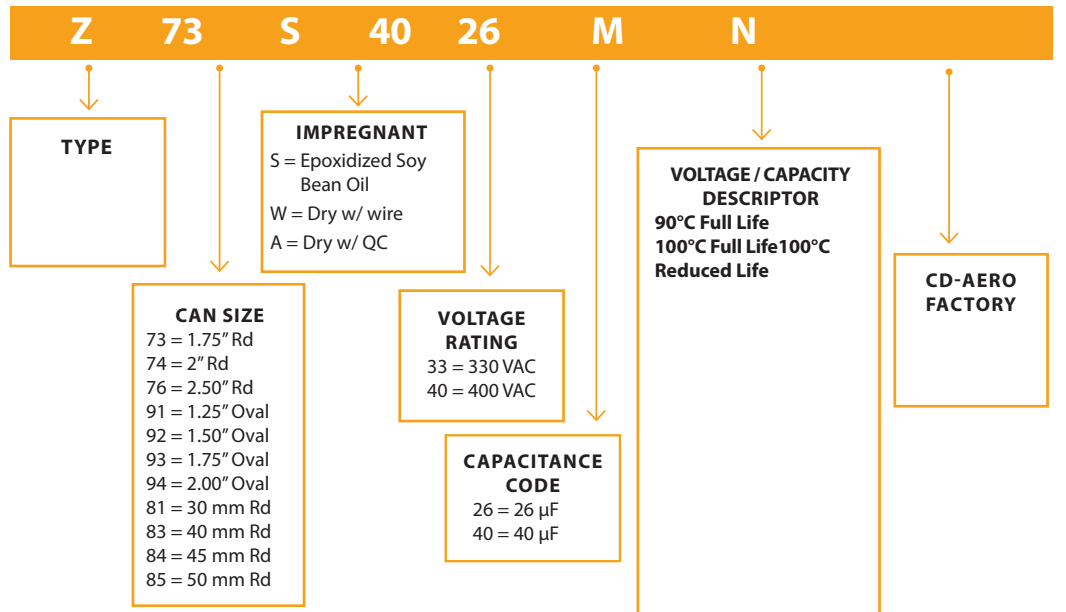
Quick Connect

Wire Lead



### Part Numbering System

CD-Aero's part numbering system is a descriptive part number made of several different components such as can size, voltage rating, etc. The descriptors are explained below using Z73S4026MN as a representative part number:



## Lighting Capacitors

### FILM CAPACITORS FOR HIGH INTENSITY DISCHARGE (HID) AND SIGN BALLAST LIGHTING

#### Oil-Filled, Oval Metal Case

Rated for 60,000 hours

CAP (µF)	CD-AERO P/N	BASE SIZE	CAN HEIGHT Inches (mm)
<b>240 VAC, 90°C Case Temperature</b>			
35	Z92S2435MN	B	3.75 (95.3)
40	Z92S2440MN	B	3.75 (95.3)
45	Z92S2445MN	B	3.75 (95.3)
52	Z92S2452MN	B	3.75 (95.3)
55	Z92S2455MN	B	3.75 (95.3)

#### 300 VAC, 90°C Case Temperature

5	Z91S3005MN	A	2.19 (55.6)
6	Z91S3006MN	A	2.19 (55.6)
12	Z91S3012MN	A	2.88 (73.2)
14	Z92S3014MN	B	2.75 (69.9)
28	Z93S3028MN	C	3.13 (79.5)
40	Z93S3040MN	C	3.25 (82.6)
55	Z93S3055MN	C	3.88 (98.6)
64	Z93S3064MN	C	4.25 (108)

#### 330 VAC, 90°C Case Temperature

7	Z91S3307MN	A	2.19 (55.6)
8	Z91S3308MN	A	2.19 (55.6)
10	Z91S3310MN	A	2.69 (68.3)
12	Z91S3312MN	A	2.88 (73.2)
14	Z91S3314MN	A	2.88 (73.2)
16	Z91S3316MN	A	3.75 (95.3)
17.5	Z92S3317NN	B	3.13 (79.5)
24	Z93S3324MN	C	2.75 (69.9)
26	Z93S3326MN	C	3.13 (79.5)
29	Z93S3329MN	C	3.13 (79.5)
30	Z93S3330MN	C	3.13 (79.5)
34	Z93S3334MN	C	3.13 (79.5)
35	Z93S3335MN	C	3.13 (79.5)
48	Z93S3348MN	C	3.88 (98.6)

CAP (µF)	CD-AERO P/N	BASE SIZE	CAN HEIGHT Inches (mm)
<b>400 VAC, 90°C Case Temperature</b>			
10	Z92S4010MN	B	2.75 (69.9)
15	Z93S4015MN	C	2.75 (69.9)
21	Z93S4021MN	C	3.13 (79.5)
22.5	Z93S4022NN	C	3.13 (79.5)
24	Z93S4024MN	C	3.13 (79.5)

#### 480 VAC, 90°C Case Temperature

3	Z91S4803MN	A	2.25 (57.2)
4	Z91S4804MN	A	2.69 (68.3)
5	Z91S4805MN	A	2.88 (73.2)
6	Z92S4806MN	B	2.75 (69.9)
10	Z92S4810MN	B	2.75 (69.9)
12	Z93S4812MN	C	3.13 (79.5)
15	Z92S4815MN	B	3.75 (95.3)
20	Z93S4820MN	C	3.75 (95.3)
21	Z93S4821MN	C	3.75 (95.3)
22	Z93S4822MN	C	3.88 (98.6)
24	Z93S4824PN	C	3.88 (98.6)
26	Z93S4826MN	C	3.88 (98.6)
28	Z93S4828PN	C	3.88 (98.6)

#### 525 VAC, 90°C Case Temperature

16	Z93S5216NN	C	3.13 (79.5)
24	Z93S5224NN	C	4.25 (108.0)
26	Z93S5226NN	C	4.25 (108.0)
26	Z94S5226NN	D	2.88 (73.2)
32	Z93S5232NN	C	4.75 (120.7)
32	Z94S5232NN	D	3.75 (95.3)

CAP (µF)	CD-AERO P/N	BASE SIZE	CAN HEIGHT Inches (mm)	VAC
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#### 400-525 VAC, 100°C Case Temperature

24	Z94S4024BN	D	3.25 (82.6)	400
24	Z94S4824BN	D	3.75 (95.3)	480
21	Z94S5221JN	D	3.75 (95.3)	525
26	Z94S5226JN	D	3.75 (95.3)	525

## Lighting Capacitors

### FILM CAPACITORS FOR HIGH INTENSITY DISCHARGE (HID) AND SIGN BALLAST LIGHTING

#### Oil-Filled, Round Metal Case

Rated for 60,000 hours

CAP (μF)	CD-AERO P/N	BASE SIZE	CAN HEIGHT Inches (mm)
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#### 300 VAC, 90°C Case Temperature

8	Z73S3008MN	P	2.17 (55.1)
14	Z73S3014MN	P	2.38 (60.5)
22.5	Z73S3022NN	P	2.88 (73.2)

#### 330 VAC, 90°C Case Temperature

5	Z73S3305MN	P	2.25 (57.2)
7	Z73S3307MN	P	2.88 (73.2)
12	Z73S3312MN	P	2.38 (60.5)
14	Z73S3314MN	P	2.88 (73.2)
28	Z73S3328MN	P	3.15 (80.0)

#### 400 VAC, 90°C Case Temperature VAC

10	Z73S4010MN	P	2.38 (60.5)
15	Z73S4015MN	P	2.88 (73.2)
22.5	Z73S4022NN	P	3.75 (95.3)
24	Z73S4024MN	P	3.75 (95.3)

#### 480 VAC, 90°C Case Temperature

10	Z73S4810MN	P	2.88 (73.2)
24	Z74S4824MN	S	3.25 (82.6)
24	Z76S4824MN	T	3.15 (80.0)

#### 525 VAC, 90°C Case Temperature

26	Z74S5226NN	S	4.75 (120.7)
32	Z74S5232NN	S	4.92 (125.0)
32	Z76S5232NN	T	3.55 (90.2)

CAP (μF)	CD-AERO P/N	BASE SIZE	CAN HEIGHT Inches (mm)	VAC
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#### 400-480 VAC, 100°C Case Temperature

10	Z73S4010BN	P	2.38 (60.5)	400
15	Z73S4015BN	P	3.25 (82.6)	400
24	Z74S4024BN	S	3.75 (95.3)	400
24	Z74S4824BN	S	4.25 (108.0)	480

## Lighting Capacitors

### FILM CAPACITORS FOR HIGH INTENSITY DISCHARGE (HID) AND SIGN BALLAST LIGHTING

#### Dry, Unprotected, Round Plastic Case

Rated for 60,000 hours

CAP (µF)	CD-AERO P/N	BASE SIZE	CAN HEIGHT Inches (mm)
<b>240 VAC, 105°C Max Operating Case Temperature</b>			
14	D81W2414M	AA	2.68 (68.1)
15	D81W2415M	AA	2.68 (68.1)
17.5	D83W2417N	BB	2.68 (68.1)
20	D83W2420M	BB	2.68 (68.1)
22.5	D83W2422N	BB	2.68 (68.1)
28	D83W2428M	BB	2.68 (68.1)
30	D83W2430M	BB	2.68 (68.1)
34	D83W2434M	BB	3.62 (92.0)
35	D83W2435M	BB	3.62 (92.0)
36	D83W2436M	BB	3.62 (92.0)
40	D83W2440M	BB	3.62 (92.0)
45	D83W2445M	BB	3.62 (92.0)
48	D84W2448M	CC	3.62 (92.0)
52	D84W2452M	CC	3.62 (92.0)
55	D84W2455M	CC	3.62 (92.0)
56	D84W2456M	CC	3.62 (92.0)
62	D84W2462M	CC	3.62 (92.0)

#### 280 VAC, 105°C Max Operating Case Temperature

5	D81W2805M	AA	2.17 (55.1)
6	D81W2806M	AA	2.17 (55.1)
7	D81W2807M	AA	2.17 (55.1)
8	D81W2808M	AA	2.68 (68.1)
10	D81W2810M	AA	2.68 (68.1)
12	D83W2812M	BB	2.68 (68.1)
13	D83W2813M	BB	2.68 (68.1)
14	D83W2814M	BB	2.68 (68.1)
16	D83W2816M	BB	2.68 (68.1)
17.5	D83W2817N	BB	2.68 (68.1)
18.5	D83W2818N	BB	2.68 (68.1)
20	D83W2820M	BB	2.68 (68.1)
21	D83W2821M	BB	2.68 (68.1)
22	D83W2822M	BB	2.68 (68.1)
22.5	D83W2822N	BB	2.68 (68.1)
24	D83W2824M	BB	3.62 (92.0)
24.5	D83W2824N	BB	3.62 (92.0)
25	D83W2825M	BB	3.62 (92.0)

CAP (µF)	CD-AERO P/N	BASE SIZE	CAN HEIGHT Inches (mm)
<b>280 VAC, 105°C Max Operating Case Temperature</b>			
35	D83W2835M	BB	3.62 (92.0)
48	D84W2848M	CC	3.62 (92.0)
56	D84W2856M	CC	4.61 (117.1)

#### 330 VAC, 105°C Max Operating Case Temperature

5	D81W3305M	AA	2.17 (55.1)
7	D81W3307M	AA	2.68 (68.1)
8	D83W3308M	BB	2.68 (68.1)
10	D83W3310M	BB	2.68 (68.1)
12	D83W3312M	BB	2.68 (68.1)
15	D83W3315M	BB	2.68 (68.1)
16	D83W3316M	BB	2.68 (68.1)
17.5	D83W3317N	BB	3.62 (92.0)
26	D84W3326M	CC	3.62 (92.0)
28	D84W3328M	CC	3.62 (92.0)
45	D84W3345M	CC	4.61 (117.1)
48	D85W3348M	DD	4.61 (117.1)

#### 400 VAC, 105°C Max Operating Case Temperature

10	D83W4010M	BB	3.62 (92.0)
12	D83W4012M	BB	3.62 (92.0)
15	D83W4015M	BB	3.62 (92.0)
18	D84W4018M	CC	3.62 (92.0)
24	D84W4024M	CC	4.61 (117.1)
30	D85W4030M	DD	4.61 (117.1)



