

Dry Metalized Film Capacitors

for Mercury, Metal Halide, and High and Low Pressure Sodium Lamp Ballasts



Advance Dry Capacitors now rated at 105°C!



Product Overview

Advance Dry Metalized Film Capacitors provide superior versatility and performance over oil-filled equivalents. Pioneered in HID lighting by Advance, this technology has now been advanced to include 105°C rating - an innovative breakthrough!

Availability/Ordering

- Advance Dry Metalized Capacitors are standard with all HID ballasts requiring capacitors rated 400 volts or less.
- To order, add one of the following suffixes to the appropriate ballast model number.
 - 001D denotes ballast retrofit/replacement kit including dry film-capacitor
 - 500D includes core & coil with dry-film capacitor
 - 510D includes core & coil with welded bracket and dry-film capacitor

Features / Benefits

- 105°C case temperature
 - Longer life at given ambient temperature than 90°C rated oil filled equivalents
 - Higher ambient fixture ratings possible; location relative to heat source not as critical
- No exposed live parts
 - Exempt from UL and CSA clearance requirements, which allows more flexibility in new fixture design
 - Mounts with inexpensive clips
- Compact size
 - Easier to fit into existing fixtures
 - Facilitates new fixture design possibilities
- Thermoplastic housing
 - Electrically safe, requires no grounding
 - Non-corrosive, less susceptible to damage
- UL/CSA approved
 - Eliminates need to resubmit fixtures
 - Internal bleed resistor included where required
- Metalized film technology
 - Inherent “self-clearing” characteristic prevents failing in a “shorted” mode
 - Environmentally safe - no oil, no PCB's, no DEHP
- 100% encapsulated
 - Preludes moisture
 - Enhances reliability

Dry Metalized Film Capacitor Reference

Mfd.	Voltage Rating	Catalog Number	Case Size	MERCURY			METAL HALIDE			HIGH PRESSURE SODIUM			LOW PRESSURE SODIUM		
				Lamp Watts	ANSI Code	Ballast Family	Lamp Watts	ANSI Code	Ballast Family	Lamp Watts	ANSI Code	Ballast Family	Lamp Watts	ANSI Code	Ballast Family
5.0	330	7C050L33	L	-	-	-	35/39W 35/39W 50W	M130 M130 M110	71A5037 71A5081 71A5137	50W	S68	71A78x1 [†]	18W	L69	71A02x0
6.0	330	7C060L33	L	-	-	-	50W	M110	71A5181	50W	S68	71A78R1	-	-	-
7.0	330	7C070L33-R	L	50W	H46	71A1580	35/39W 70W	M130 M143	71A50S7 71A5283	70W	S62	71A79x1 [†]	-	-	-
8.0	330	7C080L33-R	L	75W	H43	71A20x0	70W 70W 70W 70W	M85 M98 M98 M139	71A52x0 71A52x2 [†] 71A5237 71A52x1	-	-	-	-	-	-
8.4	330	7C084L33-R	L	-	-	-	-	-	-	70W	S62	71A79N1,79S1	-	-	-
10.0	330	7C100M33-R	M	100W	H38,H44	71A25x1 [†]	100W 100W 35/39W 50W 70W 100W 70W	M90 M90 M130 M110 M139 M90/M140 M98/M144	71A5337 71A5383 71A50Y1 71A51H1 71A52Y1 71A5340, 53Y3 52Y2	100W	S54	71A80x1 [†] 80W1	-	-	-
10.0	400	7C100M40-R	M1	175W	H39	71A155x0 [†]	150W 175W	M107 M157	71A55x0 [†]	-	-	-	-	-	-
11.0	400	7C110M40	M1	-	-	-	175W	M137,M152	55x3	-	-	-	-	-	-
12.0	330	7C120M33-R	M	100W 125W	H38,H44 H42	71A25N1 71A29D1	100W 200W 35/39W 70W	M90 M136 M130 M98/M143	71A53x0 71A5637 71A50M1 71A52S7	100W 150W	S54 S55	71A80N1 71A81W2	-	-	-
14.0	120	7C140L12	L	-	-	-	-	-	-	35W	S76	71A7707	-	-	-
14.0	330	7C140M33-R	M	125W	H42	71A29R0	70W 150W 70W	M98/M143 M102/M142 M139	71A52N2, 52M2 71A5437 71A52M1	150W 100W 250/400W	S55 S54 S50/S51	71A81x2 [†] 71A80S1 71A8392	35W 55W	L70 L71	71A04X0
15.0	330	7C150M33	M1	-	-	-	200W	M136	71A56x2	-	-	-	-	-	-
15.0	400	7C150P40-R	P1	250W	H37	71A57x0 [†] , 57x1 [†]	250W	M58	71A57x0 [†] , 57x1 [†]	-	-	-	-	-	-
16.0	330	7C160M33	M1	-	-	-	150W	M102/M142 M81	71A54x2 71A54x0	100W	S54	71A80x0	135W 180W 90W	L73 L74 L72	71A07x0 71A07x0 71A05F0
16.0	400	7C160P40	P1	-	-	-	-	-	-	150W	S55	71A81x0	-	-	-
17.0	330	7C170M33	M1	-	-	-	250W	M138/M153	71A57x2	-	-	-	-	-	-
17.0	400	7C170P40	P1	-	-	-	175W 200W	M137/M152 M136	71A55x4 71A5634	-	-	-	-	-	-
17.5	330	7C175M33-R	M1	175W	H39	71A30x2	100W 320W	M90 M132/M154	71A53N0 71A5837	150W	S55	71A81N2	90W	L72	71A0590
18.0	400	7C180P40-R	P1	-	-	-	250W	M58	71A57N0,57M0	200W	S66	71A8964	-	-	-
20.0	120	7C200M12	M	-	-	-	-	-	-	50W	S68	71A7807	18W	L69	71A0201
20.0	330	7C200P33-R	P1	-	-	-	250W 350W 400W 400W 100W 250W	M80 M131 M59 M135/M155 M90 M138/M140	71A5880 71A5937 71A6037 71A6137 71A53M0 71A57N2	70W 150W	S62 S56	71A79x0 71A81R6 71A8146 71A8176 71A8196	-	-	-
21.0	345	7C210P34-R	P1	-	-	-	320W	M132/M154	71A58x2 [†]	-	-	-	-	-	-
22.0	240	7C220M24-R	M1	-	-	-	150W	M102 M142	71A54A3	-	-	-	-	-	-
22.5	300	7C225P30-R	P1	250W	H37	71A35x2	150W 450W	M81 M144	71A5486 71A6337	150W	S55	71A81S2	-	-	-
22.5	345	7C225P34	P1	-	-	-	350W	M131	71A59x3	-	-	-	-	-	-
24.0	300	7C240P30	P1	-	-	-	-	-	-	70W 200W	S62 S66	71A79x6 71A89x1	-	-	-
24.0	400	7C240P40-R	P2	400W	H33	71A60x1 [†] , 63x2 [*]	400W 320W	M59 M132/M154	71A60x1 [†] , 63x2 [*] 71A58N2,58M2	-	-	-	-	-	-

Dry Metalized Film Capacitor Reference

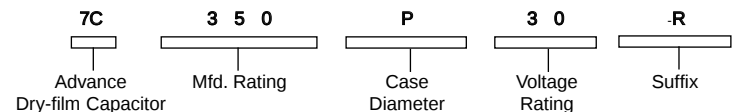
Mfd.	Voltage Rating	Catalog Number	Case Size	MERCURY			METAL HALIDE			HIGH PRESSURE SODIUM			LOW PRESSURE SODIUM		
				Lamp Watts	ANSI Code	Ballast Family	Lamp Watts	ANSI Code	Ballast Family	Lamp Watts	ANSI Code	Ballast Family	Lamp Watts	ANSI Code	Ballast Family
25.5	400	7C255P40R	P2	-	-	-	350W	M131	71A59N3	-	-	-	-	-	-
26.0	330	7C260P33-R	P1	-	-	-	400W	M135/M155	71A60x2 [†] 71A61E6	-	-	-	-	-	-
26.5	400	7C265P40-R	P2	-	-	-	450W	M144	71A63x3	-	-	-	-	-	-
28.0	120	7C280M12	M	-	-	-	35/39W 50W	M130 M110	71A5005 71A5105	50W 70W	S104 S62	71A7805 71A7907	-	-	-
28.0	300	7C280P30-R	P1	-	-	-	150W	M102/M142	71A54N2	70W 200W 250W 400W	S62 S66 S50 S51	71A79x8 71A89x0 71A82x6 71A84W2	-	-	-
28.0	400	7C280S40	S2	-	-	-	750W	M149	71A64x2,64x0	-	-	-	-	-	-
30.0	345	7C300S34	S2	-	-	-	450W	M135,M155	71A60N2	-	-	-	-	-	-
34.0	240	7C340P24	P1	-	-	-	-	-	-	100W	S54	71A80x8	-	-	-
35.0	240	7C350P24	P1	-	-	-	150W	M102/M142	71A54M2	100W 250W	S54 S50	71A80x6 71A82x1 [†]	-	-	-
35.0	300	7C350P30-R	P2	400W	H33	71A40x1	-	-	-	250/400W	S55/S51	71A8392	-	-	-
36.0	120	7C360M12	M1	-	-	-	70W 35/39W	M98 M130	71A5205 71A50Y5	100W	S54	71A8007	-	-	-
40.0	300	7C400P30-R	P2	1000W	H36	71A65E6*	1000W	M47	71A65Y6* 71A65E6*	250W	S50	71A82N1, 82V1,82W1	-	-	-
45.0	120	7C450P12	P1	-	-	-	-	-	-	100W	S105	71A8005	-	-	-
45.0	300	7C450P30-R	P2	-	-	-	-	-	-	310W	S67	71A83x1	-	-	-
48.0	300	7C480P30	P2	-	-	-	-	-	-	400W 430W	S51 S145	71A84x6 71A85x6	-	-	-
48.0	330	7C480S33R	S2	-	-	-	-	-	-	600W	S106	71A85x8	-	-	-
52.0	240	7C520P24	P2	-	-	-	-	-	-	150W	S55	71A8156,81E6	-	-	-
55.0	120	7C550P12	P1	-	-	-	-	-	-	150W	S55	71A8107	-	-	-
55.0	240	7C550P24	P2	-	-	-	-	-	-	150W 400W	S55 S51	71A81x8 71A84x3	-	-	-
64.0	280	7C640S28-R	S2	-	-	-	-	-	-	400W 600W	S51 S106	71A84N3, 84V3 71A85x5	-	-	-
75.0	280	7C750S28-R	S2	-	-	-	-	-	-	750W	S111	71A86E5,86F5	-	-	-

Footnotes:

† - 60hz ballasts only

* - Requires two capacitors of the same mfd rating

Capacitor Catalog Numbering System



KEY

350 = 35.0 mfd

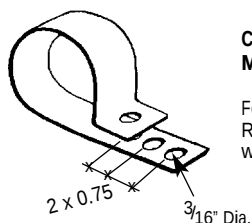
P = Case Diameter

30 = 300V

-R = Suffix indicates capacitor has internal bleed resistor

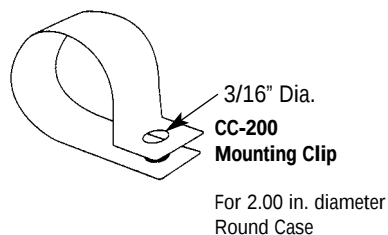
Case Dimensions (Inches)		
Case Size	Diameter	Height
L	1.25	2.90
M	1.50	2.90
M1	1.50	3.75
P1	1.75	3.75
P2	1.75	5.15
S2	2.00	5.15

All capacitors furnished with 8" leads.



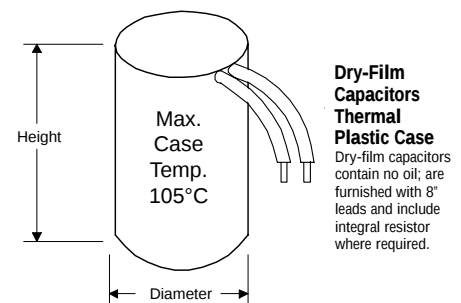
CC-175 Mounting Clip

For 1.25, 1.50, and 1.75 in. diameter Round Case (Furnished as standard with -001 and -001 D suffix ballasts).



CC-200 Mounting Clip

For 2.00 in. diameter Round Case



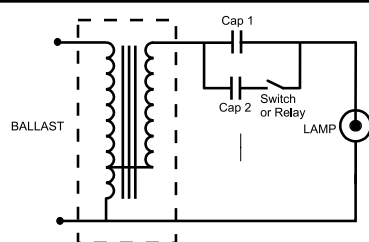
Bi-Level Operation

- Hi-low dimming of many HID lamps is possible when using constant wattage autotransformer (CWA) ballasts by utilizing two different capacitance values: one for full light output and another value for reduced light output. These capacitance values can be obtained using either a series or parallel connection as shown below.
- The HID lamp manufacturers' minimum allowable lamp power level is 50% of nominal lamp watts, in accordance with NEMA Doc. LSD14-2002 ("Guidelines on the application of dimming to High Intensity Discharge lamps")
- Always run lamps at 100% power (full light output) for 15 minutes before dimming.

Recommended Capacitors for Bi-level Ballast Operation

Advance Ballast Family	Nominal Lamp Watts	ANSI Code	Lamp Watts at Low Light	Full Light Capacitance Mfd.	Low Light Capacitance Mfd.	Primary Capacitor	Secondary Capacitor	Capacitor Connection
Metal Halide 60 Hz CWA/SuperCWA Ballasts								
71A54_3	150	M102/142	90	22.0	15.0	22.0 mfd, 240V (7C220M24-R)	48.0 mfd, 300V (7C480P30)	Series
71A55_0	175	M57	122	10.0	8.0	10 mfd, 400V (7C100M40-R)	40 mfd, 300V (7C400P30-R)	Series
71A55_3	175 Pulse-Start	M137 or M152	102	11.0	7.7	11 mfd, 400V (7C110M40)	26 mfd, 330V (7C260P33-R)	Series
71A56_2 or 71A56_3	200 Pulse-Start	M136	102	15.0	9.3	15 mfd, 330V (7C150M33)	24 mfd, 300V (7C240P30)	Series
71A57_0 or 71A57_1	250	M58	127	15.0	9.0	15 mfd, 400V (7C150P40-R)	22.5 mfd, 300V (7C225P30-R)	Series
71A57_2	250 Pulse-Start	M138 or M153	133	17.0	10.8	17 mfd, 330V (7C170M33)	30 mfd, 345V (7C300S34)	Series
71A58_2	320 Pulse-Start	M132 or M154	149	21.0	13.1	21 mfd, 345V (7C210P34-R)	35 mfd, 300V (7C350P30-R)	Series
71A59_3	350 Pulse-Start	M131	163	22.5	14.4	22.5 mfd, 345V (7C225P34)	40 mfd, 300V (7C400 P30-R)	Series
71A60_1	400	M59	192	24.0	15.0	24 mfd, 400V (7C240P40-R)	40 mfd, 300V (7C400P30-R)	Series
71A60_2	400 Pulse-Start	M135 or M155	210	26.0	18.5	18.5 mfd, 330V (7C185P33-R)	7.5 mfd, 330V (7C075L33)	Parallel
71A63_3	450 Pulse-Start	M144	212	26.5	16.7	26.5 mfd, 400V (7C265P40-R)	45.0 mfd, 120V (7C450P12)	Series
71A64_2	750 Pulse-Start	M149	380	28.0	18.0	18 mfd, 400V (7C180P40-R)	10 mfd, 400V (7C100M40-R)	Parallel
71A65_0, 71A65_1, 71A65_2, or 71A65_3	1000 Probe or Pulse-Start	M47 or M141	571	24.0	15.0	24 mfd, 480V (MD2409-100)*	40 mfd, 300V (7C400P30-R)	Series
High Pressure Sodium 60 Hz CWA Ballasts								
71A80_8	100	S54	52	34.0	26.0	26.0 mfd, 330V (7C260P33-R)	8.0 mfd, 330V (7C080L33-R)	Parallel
71A81_8	150	S55	66	55.0	40.0	40 mfd, 300V (7C400P30-R)	15 mfd, 330V (7C150M33)	Parallel
71A82_1	250	S50	144	35.0	28.0	28 mfd, 300V (7C280P30-R)	7 mfd, 330V (7C070L33-R)	Parallel
71A84_3	400	S51	189	55.0	40.0	40 mfd, 300V (7C400P30-R)	15 mfd, 330V (7C150M33)	Parallel
71A86_5	750	S111	356	75.0	55.0	35 mfd, 300V (7C350P30-R) in parallel with 20 mfd, 300V (7C200P33-R)	20 mfd, 330V (7C200P33-R)	Parallel
71A87_3	1000	S52	406	26.0	17.7	26 mfd, 525V (MD2602-030)*	55 mfd, 240V (7C550P24)	Series

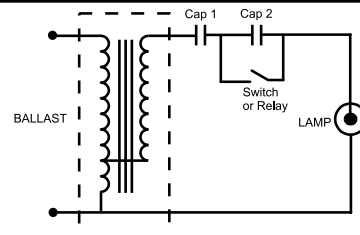
* Designates Oil-Filled Capacitor



Connection in Parallel

Switch open for reduced light output.

Switch closed for full light output.



Connection in Series

Switch open for reduced light output.

Switch closed for full light output.



Specifications subject to change without notice.
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