

# ALUMINUM ELECTROLYTIC CAPACITORS

**DQ** series

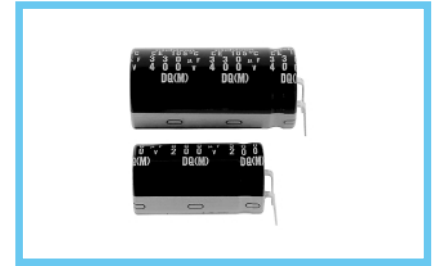
Horizontal Mounting Type, Wide Temperature Range



Smaller



DM

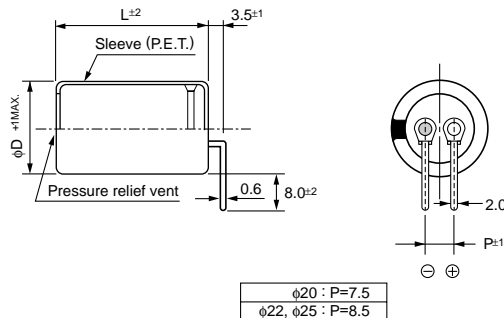


- Horizontal mounting version for  $\phi 20$ ,  $\phi 22$  and  $\phi 25$ .
- Suited for use in flat electronic devices where height space is limited.
- Adapted to the RoHS directive (2002/95/EC).

## Specifications

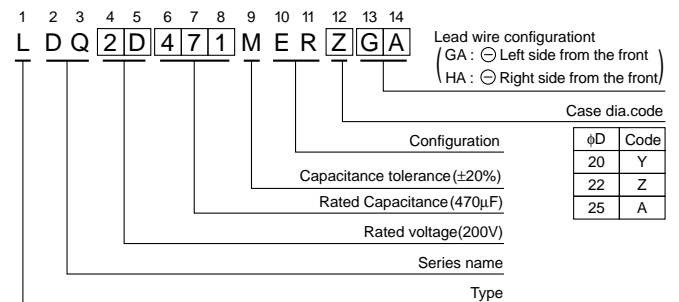
Item	Performance Characteristics	
Category Temperature Range	- 40 ~ +105°C (200V) , - 25~+105°C (400V)	
Rated Voltage Range	200~400V	
Rated Capacitance Range	68 ~ 1200 $\mu$ F	
Capacitance Tolerance	$\pm 20\%$ at 120Hz, 20°C	
Leakage Current	$I \leq 3 \cdot \sqrt{CV}$ ( $\mu$ A) (After 5 minutes' application of rated voltage) [C : Rated Capacitance ( $\mu$ F) V : Voltage (V)]	
tan $\delta$	Measurement frequency : 120Hz, Temperature : 20°C	
	Rated voltage (V)	tan $\delta$ (MAX.)
Stability at Low Temperature	Measurement frequency : 120Hz	
	Rated voltage (V)	Impedance ratio
	Z - 25°C/Z+20°C	ZT/Z20(MAX.)
Endurance	After an application of DC voltage(in the range of rated DC voltage even after over-lapping the specified ripple current) for 2000 hours at 105°C, capacitors meet the characteristic requirements listed at right.	
	Capacitance change	tan $\delta$
	Leakage current	
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the requirements listed at right.	
	Capacitance change	tan $\delta$
	Leakage current	
Marking	Printed with white color letter on black sleeve.	

## Drawing



$\phi 20$  : P=7.5  
 $\phi 22, \phi 25$  : P=8.5

## Type numbering system (Example : 200V 470 $\mu$ F)



## Dimensions

Cap. ( $\mu$ F)	V(Code)	200V (2D)			400V (2G)			Case size $\phi$ D x L (mm)	Rated ripple
		Code	$\phi$ D						
68	680				20 x 30	0.56			
82	820				20 x 30	0.64			
100	101				20 x 35	0.70			
120	121				20 x 40	0.75	22 x 35	0.75	
150	151				20 x 45	0.83	22 x 40	0.88	
180	181				20 x 50	0.95	22 x 45	0.95	
220	221						22 x 50	1.10	
270	271	20 x 30	1.10				22 x 60	1.22	
330	331	20 x 35	1.20						
390	391	20 x 40	1.31						
470	471	20 x 45	1.45	22 x 35	1.45				
560	561	20 x 50	1.58	22 x 40	1.60	25 x 35	1.60		
680	681			22 x 45	1.78	25 x 40	1.78		
820	821			22 x 60	2.04	25 x 45	2.04		
1000	102					25 x 50	2.30		
1200	122					25 x 60	2.65		

※ Other rating also available on request.

Rated Ripple (Arms) at 105°C, 120Hz

## Frequency coefficient of rated ripple current

Frequency (Hz)	50	60	120	300	1k	10k	50k~
200V	0.81	0.85	1.00	1.17	1.32	1.45	1.50
400V	0.77	0.82	1.00	1.16	1.30	1.41	1.43

Minimum order quantity : 50pcs.