

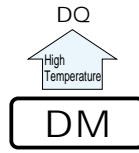
# ALUMINUM ELECTROLYTIC CAPACITORS

**DM** Horizontal Mounting Type  
series



Smaller

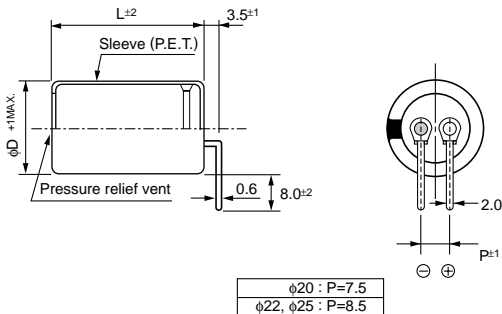
- For  $\phi 20$ ,  $\phi 22$  and  $\phi 25$ , but suited for horizontal mounting to assure flat and low-profile design.
- Adapted to the RoHS directive (2002/95/EC).



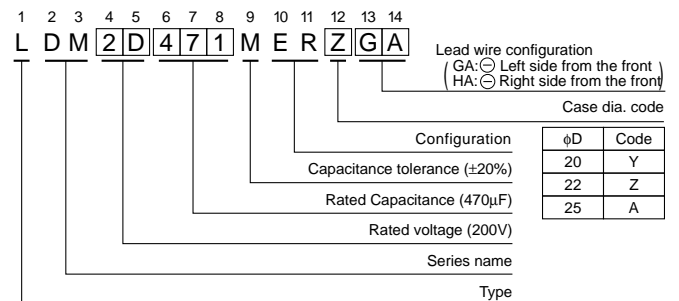
## Specifications

Item	Performance Characteristics	
Category Temperature Range	- 40 ~ + 85°C (200V), - 25 ~ + 85°C (400V)	
Rated Voltage Range	200 · 400V	
Rated Capacitance Range	82 ~ 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)	200      400
	tan $\delta$ (MAX.)	0.15      0.15
Stability at Low Temperature	Measurement frequency : 120Hz	
	Rated voltage (V)	200      400
	Impedance ratio ZT/Z20(MAX.)	Z - 25°C/Z+20°C      3      8 Z - 40°C/Z+20°C      12      —
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 85°C, capacitors meet the characteristic requirements listed at right.	
	Capacitance change	Within $\pm 20\%$ of initial value
	tan $\delta$	200% or less of initial specified value
Shelf Life	After storing the capacitors under no load at 85°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 characteristic requirements at right.	
	Capacitance change	Within $\pm 15\%$ of initial value
	tan $\delta$	150% or less of initial specified value
Marking	Printed with white color letter on black sleeve.	

## Drawing



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



## Dimensions

Cap. ( $\mu$ F)	V(Code)	200V (2D)						400V (2G)					
		20		22		25		20		22		25	
82	820							20 × 30	0.78				
100	101							20 × 30	0.90				
120	121							20 × 35	1.02				
150	151							20 × 40	1.17	22 × 35	1.20		
180	181							20 × 50	1.30	22 × 40	1.38	25 × 35	1.25
220	221									22 × 45	1.55	25 × 40	1.56
270	271	20 × 30	1.32							22 × 60	1.70	25 × 45	1.70
330	331	20 × 30	1.49									25 × 50	1.90
390	391	20 × 35	1.66									25 × 60	2.15
470	471	20 × 40	1.93	22 × 35	1.88								
560	561	20 × 45	2.00	22 × 40	1.96								
680	681	20 × 50	2.30	22 × 45	2.43	25 × 35	2.68						
820	821			22 × 50	2.80	25 × 40	2.80						
1000	102			22 × 60	3.00	25 × 45	3.12						
1200	122					25 × 60	3.44					Case size $\phi D \times L$ (mm)	Rated ripple

\* Other ratings also available on request.

Rated Ripple (Arms) at 85°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.