

# CLE Series

- For LED light circuit and other long life applications
- Downsize and long life
- Endurance with ripple current : 8,000 to 10,000 hours at 105°C
- Non solvent resistant type
- RoHS Compliant

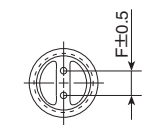
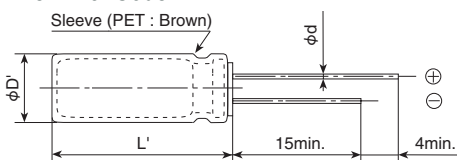


## ◆ SPECIFICATION

Items	Characteristics		
Category			
Temperature Range	-40 to +105°C		
Rated Voltage Range	400V <sub>dc</sub>		
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)		
Leakage Current	CV ≤ 1,000	CV > 1,000	
	I=0.1CV+40	I=0.04CV+100	
	Where, I : Max. leakage current (µA), C : Nominal capacitance (µF), V : Rated voltage (V) (at 20°C)		
Dissipation Factor (tanδ)	0.24 Max. (at 20°C, 120Hz)		
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	400V	
	Z(-25°C)/Z(+20°C)	Φ8	4
		Φ10	4
	Z(-40°C)/Z(+20°C)	Φ8	8
Φ10		6	
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 8,000 hours (10,000 hours for Φ10×16L) at 105°C.		
Capacitance change	≤ ±20% of the initial value		
D.F. (tanδ)	≤ 200% of the initial specified value		
Leakage current	≤ The initial specified value		
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.		
	Capacitance change	≤ ±20% of the initial value	
	D.F. (tanδ)	≤ 200% of the initial specified value	
	Leakage current	≤ 500% of the initial specified value	

## ◆ DIMENSIONS [mm]

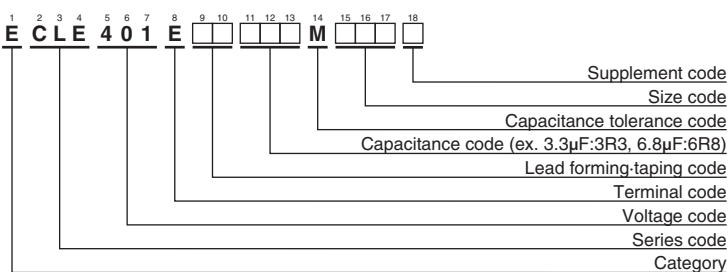
- Terminal Code : E



Gas escape end seal

ΦD	8	10
Φd	0.6	0.6
F	3.5	5.0
D'	ΦD+0.5max.	
L'	L+1.5max.	L+2.0max.

## ◆ PART NUMBERING SYSTEM



Specifications in this bulletin are subject to change without notice.

# CLE Series

## ◆ STANDARD RATINGS

VV (V <sub>dc</sub> )	Cap (μF)	Case size ΦD×L(mm)	tanδ	Rated ripple current(mArms/ 105°C )		Part No.
				120Hz	100kHz	
400	2.2	8 × 11.5	0.24	40	100	ECLE401E□□2R2MHB5D
	2.7	8 × 11.5	0.24	45	110	ECLE401E□□2R7MHB5D
	3.3	8 × 11.5	0.24	50	125	ECLE401E□□3R3MHB5D
	3.3	10 × 12.5	0.24	60	150	ECLE401E□□3R3MJC5S
	3.9	8 × 15	0.24	65	160	ECLE401E□□3R9MH15D
	4.7	10 × 16	0.24	90	225	ECLE401E□□4R7MJ16S
	5.6	10 × 16	0.24	100	250	ECLE401E□□5R6MJ16S
	6.8	10 × 16	0.24	115	285	ECLE401E□□6R8MJ16S

□□ : Enter the appropriate lead forming or taping code.

## ◆ RATED RIPPLE CURRENT MULTIPLIERS

### ● Frequency Multipliers

Capacitance(μF) \ Frequency(Hz)	50	120	300	1k	10k	100k
2.2 to 6.8	0.65	1.00	1.35	1.75	2.30	2.50

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise.

When long life performance is required in actual use, the rms ripple current has to be reduced.

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[450MXK330MA2RFC22X50](#) [63ZLH560MEFCG412.5X30](#) [ELH2DM331O25KT](#) [ELH2DM471P30KT](#)