

# ALUMINUM ELECTROLYTIC CAPACITORS



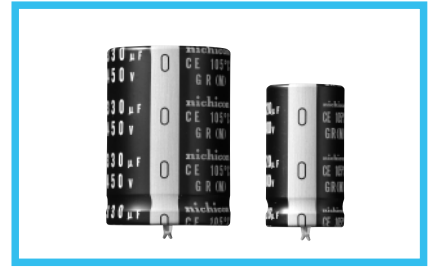
**GR** series Snap-in Terminal Type, 105°C Long Life Assurance



Long Life

- Long life assurance series withstanding 10000 hours application of ripple current at 105°C.
- Compliant of the RoHS directive (2002/95/EC).

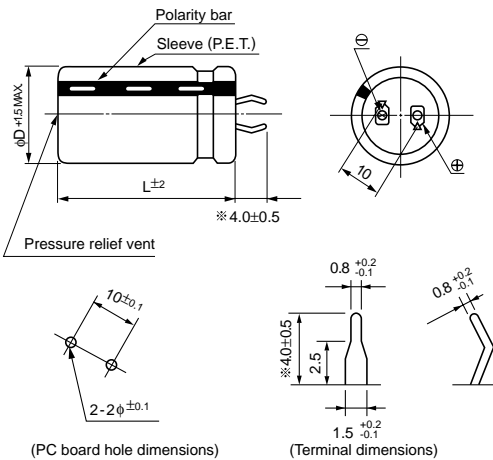
GR ← Long Life GY



## Specifications

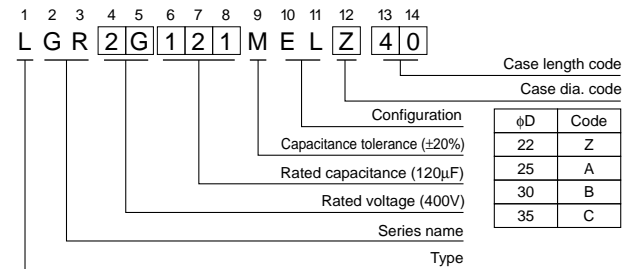
Item	Performance Characteristics	
Category Temperature Range	- 40 to +105°C (200 · 250V) , - 25 to +105°C (400 · 450V)	
Rated Voltage Range	200 to 450V	
Rated Capacitance Range	39 to 1500μF	
Capacitance Tolerance	±20% at 120Hz, 20°C	
Leakage Current	$I \leq 3\sqrt{CV}$ (μA) (After 5 minutes' application of rated voltage) [C : Rated Capacitance (μF) V : Voltage (V)]	
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz, Temperature : 20°C	
	Rated voltage(V)	200 to 400      450
	tan δ (MAX.)	0.15      0.20
Stability at Low Temperature	Measurement frequency : 120Hz	
	Rated voltage (V)	
	Impedance ratio	Z-25°C/Z+20°C      200 · 250      400 · 450
	ZT/Z20 (MAX.)	Z-40°C/Z+20°C      3      8
		12      —
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied for 10000 hours at 105°C, the peak voltage shall not exceed the rated voltage.	
	Capacitance change	Within ±25% of the initial capacitance value
	tan δ	250% or less than the initial specified value
	Leakage current	Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the requirements listed at right.	
	Capacitance change	Within ±15% of the initial capacitance value
	tan δ	150% or less than the initial specified value
	Leakage current	Less than or equal to the initial specified value
Marking	Printed with white color letter on black sleeve.	

## Drawing



\* The other terminal is also available upon request.  
Please refer page 272 for schematic of dimensions.

## Type numbering system (Example : 400V 120μF)



## Frequency coefficient of rated ripple current

Frequency (Hz)	50	60	120	300	1k	10k	50k or more	
Coeff.	200 · 250V	0.81	0.85	1.00	1.17	1.32	1.45	1.50
	400 · 450V	0.77	0.82	1.00	1.16	1.30	1.41	1.43

Minimum order quantity : 50pcs.

● Dimension table in next page.

## ■Dimensions

200V (2D)				
Cap. (μF)	Size φD × L(mm)	Rated ripple (mA)	Leakage Current (mA)	Code
220	22 × 25	1000	0.62	LGR2D221MELZ25
270	22 × 30	1100	0.69	LGR2D271MELZ30
	25 × 25	1100	0.69	LGR2D271MELA25
330	22 × 30	1200	0.77	LGR2D331MELZ30
	25 × 25	1200	0.77	LGR2D331MELA25
390	22 × 35	1300	0.83	LGR2D391MELZ35
	25 × 30	1300	0.83	LGR2D391MELA30
	30 × 25	1300	0.83	LGR2D391MELB25
470	22 × 40	1400	0.91	LGR2D471MELZ40
	25 × 35	1400	0.91	LGR2D471MELA35
	30 × 30	1400	0.91	LGR2D471MELB30
560	22 × 45	1500	1.00	LGR2D561MELZ45
	25 × 35	1500	1.00	LGR2D561MELA35
	30 × 30	1500	1.00	LGR2D561MELB30
680	25 × 40	1700	1.10	LGR2D681MELA40
	30 × 35	1700	1.10	LGR2D681MELB35
820	25 × 50	2000	1.21	LGR2D821MELA50
	30 × 40	2000	1.21	LGR2D821MELB40
	35 × 30	2000	1.21	LGR2D821MELC30
1000	30 × 45	2200	1.34	LGR2D102MELB45
	35 × 35	2200	1.34	LGR2D102MELC35
1200	30 × 50	2300	1.46	LGR2D122MELB50
	35 × 40	2300	1.46	LGR2D122MELC40
1500	35 × 50	2500	1.64	LGR2D152MELC50

250V (2E)				
Cap. (μF)	Size φD × L(mm)	Rated ripple (mA)	Leakage Current (mA)	Code
180	22 × 30	900	0.63	LGR2E181MELZ30
	25 × 25	900	0.63	LGR2E181MELA25
220	22 × 30	1000	0.70	LGR2E221MELZ30
	25 × 25	1000	0.70	LGR2E221MELA25
270	22 × 35	1100	0.77	LGR2E271MELZ35
	25 × 30	1100	0.77	LGR2E271MELA30
	30 × 25	1100	0.77	LGR2E271MELB25
330	22 × 40	1200	0.86	LGR2E331MELZ40
	25 × 35	1200	0.86	LGR2E331MELA35
	30 × 25	1200	0.86	LGR2E331MELB25
390	22 × 45	1300	0.93	LGR2E391MELZ45
	25 × 35	1300	0.93	LGR2E391MELA35
	30 × 30	1300	0.93	LGR2E391MELB30
470	25 × 45	1400	1.02	LGR2E471MELA45
	30 × 35	1400	1.02	LGR2E471MELB35
	35 × 30	1400	1.02	LGR2E471MELC30
560	25 × 50	1500	1.12	LGR2E561MELA50
	30 × 35	1500	1.12	LGR2E561MELB35
	35 × 30	1500	1.12	LGR2E561MELC30
680	30 × 45	1700	1.23	LGR2E681MELB45
	35 × 35	1700	1.23	LGR2E681MELC35
820	30 × 50	2000	1.35	LGR2E821MELB50
	35 × 40	2000	1.35	LGR2E821MELC40
1000	35 × 45	2200	1.50	LGR2E102MELC45
1200	35 × 50	2300	1.64	LGR2E122MELC50

400V (2G)				
Cap. (μF)	Size φD × L(mm)	Rated ripple (mA)	Leakage Current (mA)	Code
56	22 × 25	510	0.44	LGR2G560MELZ25
68	22 × 30	560	0.49	LGR2G680MELZ30
	25 × 25	560	0.49	LGR2G680MELA25
82	22 × 35	640	0.54	LGR2G820MELZ35
	25 × 25	640	0.54	LGR2G820MELA25
100	22 × 35	690	0.60	LGR2G101MELZ35
	25 × 30	690	0.60	LGR2G101MELA30
120	22 × 40	750	0.65	LGR2G121MELZ40
	25 × 35	750	0.65	LGR2G121MELA35
	30 × 25	750	0.65	LGR2G121MELB25
150	22 × 50	820	0.73	LGR2G151MELZ50
	25 × 40	820	0.73	LGR2G151MELA40
	30 × 30	820	0.73	LGR2G151MELB30
180	25 × 45	900	0.80	LGR2G181MELA45
	30 × 35	900	0.80	LGR2G181MELB35
	35 × 25	900	0.80	LGR2G181MELC25
220	25 × 50	1000	0.88	LGR2G221MELA50
	30 × 40	1000	0.88	LGR2G221MELB40
	35 × 30	1000	0.88	LGR2G221MELC30
270	30 × 45	1100	0.98	LGR2G271MELB45
	35 × 35	1100	0.98	LGR2G271MELC35
330	30 × 50	1200	1.08	LGR2G331MELB50
	35 × 40	1200	1.08	LGR2G331MELC40
390	35 × 45	1300	1.18	LGR2G391MELC45
470	35 × 50	1400	1.30	LGR2G471MELC50

450V (2W)				
Cap. (μF)	Size φD × L(mm)	Rated ripple (mA)	Leakage Current (mA)	Code
39	22 × 25	370	0.39	LGR2W390MELZ25
47	22 × 30	400	0.43	LGR2W470MELZ30
56	22 × 35	470	0.47	LGR2W560MELZ35
	25 × 25	470	0.47	LGR2W560MELA25
68	22 × 40	530	0.52	LGR2W680MELZ40
	25 × 30	530	0.52	LGR2W680MELA30
82	22 × 45	560	0.57	LGR2W820MELZ45
	25 × 35	560	0.57	LGR2W820MELA35
	30 × 25	560	0.57	LGR2W820MELB25
100	22 × 50	640	0.63	LGR2W101MELZ50
	25 × 40	640	0.63	LGR2W101MELA40
	30 × 30	640	0.63	LGR2W101MELB30
120	25 × 45	720	0.69	LGR2W121MELA45
	30 × 30	720	0.69	LGR2W121MELB30
150	25 × 50	790	0.77	LGR2W151MELA50
	30 × 40	790	0.77	LGR2W151MELB40
	35 × 30	790	0.77	LGR2W151MELC30
180	30 × 45	870	0.85	LGR2W181MELB45
	35 × 35	870	0.85	LGR2W181MELC35
220	30 × 50	1000	0.94	LGR2W221MELB50
	35 × 40	1000	0.94	LGR2W221MELC40
270	35 × 45	1190	1.04	LGR2W271MELC45
330	35 × 50	1380	1.15	LGR2W331MELC50

Rated ripple current (mA) at 105°C 120Hz