

# ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

**GW**

Snap-in Terminal Type, 105°C High Ripple Current

series

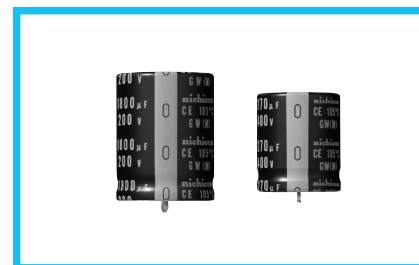


High Ripple Current

- High Ripple current.
- Withstanding 3000 hours application of rated ripple current at 105°C.
- Compliant to the RoHS directive (2011/65/EU).

**GW**

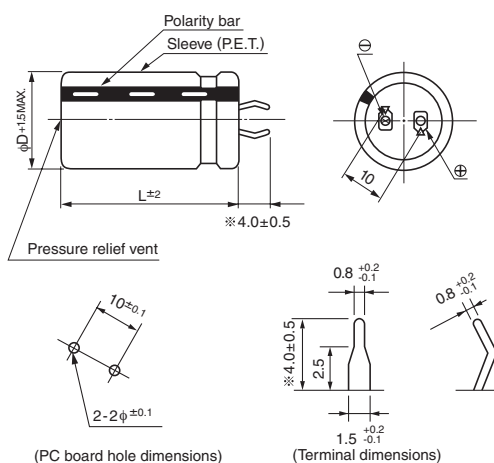
High Ripple Current **GU**



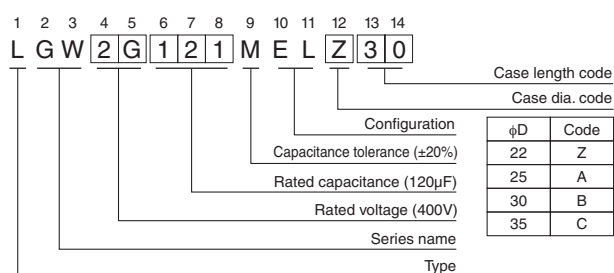
## Specifications

| Item                          | Performance Characteristics                                                                                                                                                                                               |             |         |                                      |                                                   |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|--------------------------------------|---------------------------------------------------|
| Category Temperature Range    | － 40 to +105℃ (200・250V) ,   － 25 to +105℃ (400・450V)                                                                                                                                                                     |             |         |                                      |                                                   |
| Rated Voltage Range           | 200 to 450V                                                                                                                                                                                                               |             |         |                                      |                                                   |
| Rated Capacitance Range       | 82 to 2200μF                                                                                                                                                                                                              |             |         |                                      |                                                   |
| Capacitance Tolerance         | ± 20% at 120Hz, 20℃                                                                                                                                                                                                       |             |         |                                      |                                                   |
| 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) | Rated voltage(V)                                                                                                                                                                                                          | 200 to 400  | 450     | Measurement frequency : 120Hz at 20℃ |                                                   |
|                               | tan δ (MAX.)                                                                                                                                                                                                              | 0.15        | 0.20    |                                      |                                                   |
| Stability at Low Temperature  | Measurement frequency : 120Hz                                                                                                                                                                                             |             |         |                                      |                                                   |
|                               | Rated voltage(V)                                                                                                                                                                                                          |             | 200・250 | 400・450                              |                                                   |
|                               | Impedance ratio                                                                                                                                                                                                           | Z-25℃/Z+20℃ | 3       | 8                                    |                                                   |
|                               | ZT/Z20 (MAX.)                                                                                                                                                                                                             | Z-40℃/Z+20℃ | 12      | —                                    |                                                   |
| Endurance                     | The specifications listed at right shall be met when the capacitors are restored to 20℃ after D.C. bias plus rated ripple current is applied for 3000 hours at 105℃, the peak voltage shall not exceed the rated voltage. |             |         | Capacitance change                   | Within ±20% of the initial capacitance value      |
|                               |                                                                                                                                                                                                                           |             |         | tan δ                                | 200% or less than the initial specified value     |
|                               |                                                                                                                                                                                                                           |             |         | Leakage current                      | Less than or equal to the initial specified value |
| Shelf Life                    | After storng the capacitors under no load at 105℃ for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20℃, 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



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



※ The other terminal is also available upon request.  
Please refer page 326 for schematic of dimensions.

## Frequency coefficient of rated ripple current

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

Minimum order quantity : 50pcs.

● Dimension table in next page.

CAT.8100D

## ■ Dimensions

| 200V (2D)          |                                 |                         |                         |                |
|--------------------|---------------------------------|-------------------------|-------------------------|----------------|
| Cap.<br>( $\mu$ F) | Size<br>$\phi$ D $\times$ L(mm) | Rated<br>ripple<br>(mA) | Leakage Current<br>(mA) | Code           |
| 330                | 22 $\times$ 25                  | 1970                    | 0.77                    | LGW2D331MELZ25 |
| 470                | 22 $\times$ 30                  | 2170                    | 0.91                    | LGW2D471MELZ30 |
|                    | 25 $\times$ 25                  | 2170                    | 0.91                    | LGW2D471MELA25 |
| 560                | 22 $\times$ 35                  | 2220                    | 1.00                    | LGW2D561MELZ35 |
|                    | 25 $\times$ 30                  | 2300                    | 1.00                    | LGW2D561MELA30 |
| 680                | 22 $\times$ 40                  | 2300                    | 1.10                    | LGW2D681MELZ40 |
|                    | 25 $\times$ 35                  | 2650                    | 1.10                    | LGW2D681MELA35 |
|                    | 30 $\times$ 25                  | 3080                    | 1.10                    | LGW2D681MELB25 |
| 820                | 22 $\times$ 45                  | 2650                    | 1.21                    | LGW2D821MELZ45 |
|                    | 25 $\times$ 40                  | 3080                    | 1.21                    | LGW2D821MELA40 |
|                    | 30 $\times$ 30                  | 3480                    | 1.21                    | LGW2D821MELB30 |
|                    | 35 $\times$ 25                  | 3480                    | 1.21                    | LGW2D821MELC25 |
| 1000               | 25 $\times$ 45                  | 3450                    | 1.34                    | LGW2D102MELA45 |
|                    | 30 $\times$ 35                  | 3980                    | 1.34                    | LGW2D102MELB35 |
| 1200               | 25 $\times$ 50                  | 3980                    | 1.46                    | LGW2D122MELA50 |
|                    | 30 $\times$ 40                  | 4200                    | 1.46                    | LGW2D122MELB40 |
|                    | 35 $\times$ 30                  | 4200                    | 1.46                    | LGW2D122MELC30 |
| 1500               | 30 $\times$ 45                  | 4620                    | 1.64                    | LGW2D152MELB45 |
|                    | 35 $\times$ 35                  | 4200                    | 1.64                    | LGW2D152MELC35 |
| 1800               | 30 $\times$ 50                  | 5220                    | 1.80                    | LGW2D182MELB50 |
|                    | 35 $\times$ 40                  | 4620                    | 1.80                    | LGW2D182MELC40 |
| 2200               | 35 $\times$ 45                  | 5220                    | 1.98                    | LGW2D222MELC45 |

| 250V (2E)          |                                 |                         |                         |                |
|--------------------|---------------------------------|-------------------------|-------------------------|----------------|
| Cap.<br>( $\mu$ F) | Size<br>$\phi$ D $\times$ L(mm) | Rated<br>ripple<br>(mA) | Leakage Current<br>(mA) | Code           |
| 270                | 22 $\times$ 25                  | 1650                    | 0.77                    | LGW2E271MELZ25 |
| 330                | 22 $\times$ 30                  | 1800                    | 0.86                    | LGW2E331MELZ30 |
|                    | 25 $\times$ 25                  | 1800                    | 0.86                    | LGW2E331MELA25 |
| 390                | 22 $\times$ 35                  | 1950                    | 0.93                    | LGW2E391MELZ35 |
|                    | 25 $\times$ 30                  | 1950                    | 0.93                    | LGW2E391MELA30 |
| 470                | 22 $\times$ 40                  | 2100                    | 1.02                    | LGW2E471MELZ40 |
|                    | 30 $\times$ 25                  | 2200                    | 1.02                    | LGW2E471MELB25 |
| 560                | 22 $\times$ 45                  | 2250                    | 1.12                    | LGW2E561MELZ45 |
|                    | 25 $\times$ 35                  | 2250                    | 1.12                    | LGW2E561MELA35 |
| 680                | 22 $\times$ 50                  | 2550                    | 1.23                    | LGW2E681MELZ50 |
|                    | 25 $\times$ 40                  | 2550                    | 1.23                    | LGW2E681MELA40 |
|                    | 30 $\times$ 30                  | 2550                    | 1.23                    | LGW2E681MELB30 |
|                    | 35 $\times$ 25                  | 2550                    | 1.23                    | LGW2E681MELC25 |
| 820                | 25 $\times$ 50                  | 3000                    | 1.35                    | LGW2E821MELA50 |
|                    | 30 $\times$ 35                  | 3000                    | 1.35                    | LGW2E821MELB35 |
|                    | 35 $\times$ 30                  | 3000                    | 1.35                    | LGW2E821MELC30 |
| 1000               | 30 $\times$ 40                  | 3300                    | 1.50                    | LGW2E102MELB40 |
|                    | 35 $\times$ 35                  | 3300                    | 1.50                    | LGW2E102MELC35 |
| 1200               | 30 $\times$ 50                  | 3450                    | 1.64                    | LGW2E122MELB50 |
|                    | 35 $\times$ 40                  | 3450                    | 1.64                    | LGW2E122MELC40 |
| 1500               | 35 $\times$ 45                  | 3750                    | 1.83                    | LGW2E152MELC45 |
| 1800               | 35 $\times$ 50                  | 4050                    | 2.01                    | LGW2E182MELC50 |

| 400V (2G)          |                                 |                         |                         |                |
|--------------------|---------------------------------|-------------------------|-------------------------|----------------|
| Cap.<br>( $\mu$ F) | Size<br>$\phi$ D $\times$ L(mm) | Rated<br>ripple<br>(mA) | Leakage Current<br>(mA) | Code           |
| 100                | 22 $\times$ 25                  | 1020                    | 0.60                    | LGW2G101MELZ25 |
| 120                | 22 $\times$ 30                  | 1220                    | 0.65                    | LGW2G121MELZ30 |
|                    | 25 $\times$ 25                  | 1220                    | 0.65                    | LGW2G121MELA25 |
| 150                | 22 $\times$ 35                  | 1330                    | 0.73                    | LGW2G151MELZ35 |
| 180                | 22 $\times$ 40                  | 1430                    | 0.80                    | LGW2G181MELZ40 |
|                    | 25 $\times$ 30                  | 1430                    | 0.80                    | LGW2G181MELA30 |
|                    | 30 $\times$ 25                  | 1680                    | 0.80                    | LGW2G181MELB25 |
| 220                | 22 $\times$ 45                  | 1550                    | 0.88                    | LGW2G221MELZ45 |
|                    | 25 $\times$ 35                  | 1650                    | 0.88                    | LGW2G221MELA35 |
|                    | 30 $\times$ 30                  | 1790                    | 0.88                    | LGW2G221MELB30 |
| 270                | 22 $\times$ 50                  | 1680                    | 0.98                    | LGW2G271MELZ50 |
|                    | 25 $\times$ 40                  | 1830                    | 0.98                    | LGW2G271MELA40 |
|                    | 30 $\times$ 35                  | 2120                    | 0.98                    | LGW2G271MELB35 |
|                    | 35 $\times$ 25                  | 2120                    | 0.98                    | LGW2G271MELC25 |
| 330                | 25 $\times$ 50                  | 2120                    | 1.08                    | LGW2G331MELA50 |
|                    | 30 $\times$ 40                  | 2330                    | 1.08                    | LGW2G331MELB40 |
|                    | 35 $\times$ 30                  | 2330                    | 1.08                    | LGW2G331MELC30 |
| 390                | 30 $\times$ 45                  | 2520                    | 1.18                    | LGW2G391MELB45 |
|                    | 35 $\times$ 35                  | 2520                    | 1.18                    | LGW2G391MELC35 |
| 470                | 30 $\times$ 50                  | 2850                    | 1.30                    | LGW2G471MELB50 |
|                    | 35 $\times$ 40                  | 2850                    | 1.30                    | LGW2G471MELC40 |
| 560                | 35 $\times$ 45                  | 3180                    | 1.41                    | LGW2G561MELC45 |
| 680                | 35 $\times$ 50                  | 3210                    | 1.56                    | LGW2G681MELC50 |

| 450V (2W)          |                                 |                         |                         |                |
|--------------------|---------------------------------|-------------------------|-------------------------|----------------|
| Cap.<br>( $\mu$ F) | Size<br>$\phi$ D $\times$ L(mm) | Rated<br>ripple<br>(mA) | Leakage Current<br>(mA) | Code           |
| 82                 | 22 $\times$ 25                  | 960                     | 0.57                    | LGW2W820MELZ25 |
| 100                | 22 $\times$ 30                  | 1040                    | 0.63                    | LGW2W101MELZ30 |
|                    | 25 $\times$ 25                  | 1040                    | 0.63                    | LGW2W101MELA25 |
| 120                | 22 $\times$ 35                  | 1150                    | 0.69                    | LGW2W121MELZ35 |
|                    | 25 $\times$ 30                  | 1220                    | 0.69                    | LGW2W121MELA30 |
| 150                | 22 $\times$ 40                  | 1220                    | 0.77                    | LGW2W151MELZ40 |
|                    | 25 $\times$ 35                  | 1310                    | 0.77                    | LGW2W151MELA35 |
|                    | 30 $\times$ 25                  | 1310                    | 0.77                    | LGW2W151MELB25 |
| 180                | 22 $\times$ 45                  | 1350                    | 0.85                    | LGW2W181MELZ45 |
|                    | 25 $\times$ 40                  | 1350                    | 0.85                    | LGW2W181MELA40 |
|                    | 30 $\times$ 30                  | 1600                    | 0.85                    | LGW2W181MELB30 |
|                    | 35 $\times$ 25                  | 1600                    | 0.85                    | LGW2W181MELC25 |
| 220                | 25 $\times$ 45                  | 1550                    | 0.94                    | LGW2W221MELA45 |
|                    | 30 $\times$ 35                  | 1710                    | 0.94                    | LGW2W221MELB35 |
| 270                | 25 $\times$ 50                  | 1740                    | 1.04                    | LGW2W271MELA50 |
|                    | 30 $\times$ 40                  | 1900                    | 1.04                    | LGW2W271MELB40 |
|                    | 35 $\times$ 30                  | 1900                    | 1.04                    | LGW2W271MELC30 |
| 330                | 30 $\times$ 45                  | 2200                    | 1.15                    | LGW2W331MELB45 |
|                    | 35 $\times$ 35                  | 2200                    | 1.15                    | LGW2W331MELC35 |
| 390                | 30 $\times$ 50                  | 2400                    | 1.25                    | LGW2W391MELB50 |
|                    | 35 $\times$ 40                  | 2420                    | 1.25                    | LGW2W391MELC40 |
| 470                | 35 $\times$ 45                  | 2670                    | 1.37                    | LGW2W471MELC45 |
| 560                | 35 $\times$ 50                  | 2850                    | 1.50                    | LGW2W561MELC50 |

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

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| <a href="#"><u>LGW2G271MELZ50</u></a> | <a href="#"><u>LGW2G221MELA35</u></a> | <a href="#"><u>LGW2G681MELC50</u></a> | <a href="#"><u>LGW2D102MELB35</u></a> | <a href="#"><u>LGW2D561MELA30</u></a> |
| <a href="#"><u>LGW2E561MELA35</u></a> | <a href="#"><u>LGW2E331MELZ30</u></a> | <a href="#"><u>LGW2D102MELA45</u></a> | <a href="#"><u>LGW2G331MELC30</u></a> | <a href="#"><u>LGW2D122MELA50</u></a> |
| <a href="#"><u>LGW2G471MELC40</u></a> | <a href="#"><u>LGW2W391MELB50</u></a> | <a href="#"><u>LGW2G561MELC45</u></a> | <a href="#"><u>LGW2D182MELB50</u></a> | <a href="#"><u>LGW2D471MELZ30</u></a> |
| <a href="#"><u>LGW2D122MELB40</u></a> | <a href="#"><u>LGW2W331MELB45</u></a> | <a href="#"><u>LGW2G331MELB40</u></a> | <a href="#"><u>LGW2W221MELA45</u></a> | <a href="#"><u>LGW2D222MELC45</u></a> |
| <a href="#"><u>LGW2W820MELZ25</u></a> | <a href="#"><u>LGW2G181MELB25</u></a> | <a href="#"><u>LGW2G271MELB35</u></a> | <a href="#"><u>LGW2E391MELZ35</u></a> | <a href="#"><u>LGW2E561MELZ45</u></a> |
| <a href="#"><u>LGW2D681MELA35</u></a> | <a href="#"><u>LGW2E122MELC40</u></a> | <a href="#"><u>LGW2G331MELA50</u></a> | <a href="#"><u>LGW2D152MELC35</u></a> | <a href="#"><u>LGW2D821MELA40</u></a> |
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