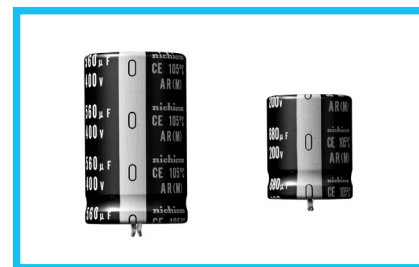


## AR series

Snap-in Terminal Type, 105°C Permissible Overvoltage

- Withstanding 2000 hours application of rated ripple current at 105°C.
- Reduction of short incidence when overvoltage (rated voltage x 1.5) is applied to a capacitor.
- Compliant to the RoHS directive (2011/65/EU).

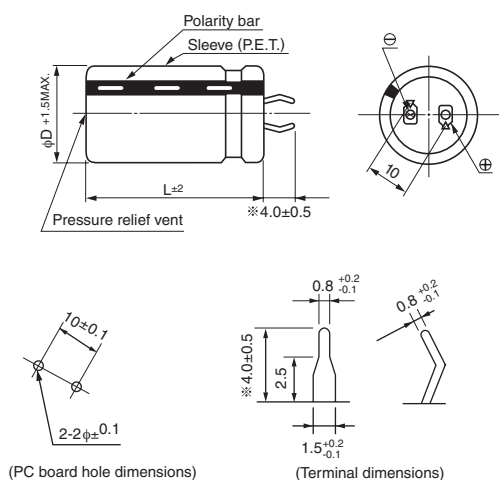
**AR** ← Permissible Overvoltage **GU**



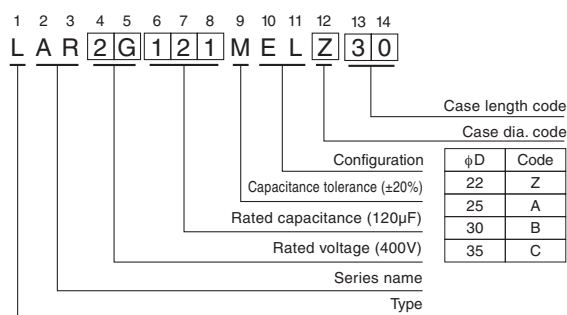
### Specifications

| 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               | 82 to 2200μF                                                                                                                                                                                                                |                    |                    |
| Capacitance Tolerance                 | ±20% at 120Hz, 20°C                                                                                                                                                                                                         |                    |                    |
| Leakage Current                       | $I \leq 3\sqrt{C}$ (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                |
|                                       | tan δ (MAX.)                                                                                                                                                                                                                | 0.15               | 0.20               |
| Measurement frequency : 120Hz at 20°C |                                                                                                                                                                                                                             |                    |                    |
| Stability at Low Temperature          | Measurement frequency : 120Hz                                                                                                                                                                                               |                    |                    |
|                                       | Rated voltage(V)                                                                                                                                                                                                            |                    | 200 · 250          |
|                                       |                                                                                                                                                                                                                             |                    | 400 · 450          |
|                                       | Impedance ratio                                                                                                                                                                                                             | Z - 25°C / Z +20°C | 3                  |
| 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 2000 hours at 105°C, the peak voltage shall not exceed the rated voltage. |                    | Capacitance change |
|                                       |                                                                                                                                                                                                                             |                    | tan δ              |
| 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.                        |                    | Leakage current    |
|                                       |                                                                                                                                                                                                                             |                    | Capacitance change |
| Safety Performance                    | When overvoltage (rated voltage x 1.5, limited current = 1A) is applied to a capacitor, the pressure relief vent will operate normally more than 60% of the time without short and flame.                                   |                    | tan δ              |
|                                       |                                                                                                                                                                                                                             |                    | Leakage current    |
| 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 · 250V | 0.81 | 0.85 | 1.00 | 1.17 | 1.32 | 1.45        |
|               | 400 · 450V | 0.77 | 0.82 | 1.00 | 1.16 | 1.30 | 1.41        |

Minimum order quantity : 50pcs.

●Dimension table in next page.

## ■ Dimensions

| 200V (2D)    |                    |                         |                         |                |
|--------------|--------------------|-------------------------|-------------------------|----------------|
| Cap.<br>(μF) | Size<br>φD × L(mm) | Rated<br>ripple<br>(mA) | Leakage Current<br>(mA) | Code           |
| 390          | 22 × 25            | 1310                    | 0.83                    | LAR2D391MELZ25 |
| 470          | 22 × 30            | 1480                    | 0.91                    | LAR2D471MELZ30 |
|              | 25 × 25            | 1480                    | 0.91                    | LAR2D471MELA25 |
| 560          | 22 × 35            | 1600                    | 1.00                    | LAR2D561MELZ35 |
| 680          | 22 × 40            | 1750                    | 1.10                    | LAR2D681MELZ40 |
|              | 25 × 30            | 1750                    | 1.10                    | LAR2D681MELA30 |
|              | 30 × 25            | 1750                    | 1.10                    | LAR2D681MELB25 |
| 820          | 22 × 45            | 2040                    | 1.21                    | LAR2D821MELZ45 |
|              | 25 × 35            | 2040                    | 1.21                    | LAR2D821MELA35 |
| 1000         | 22 × 50            | 2300                    | 1.34                    | LAR2D102MELZ50 |
|              | 25 × 45            | 2300                    | 1.34                    | LAR2D102MELA45 |
|              | 30 × 30            | 2300                    | 1.34                    | LAR2D102MELB30 |
|              | 35 × 25            | 2300                    | 1.34                    | LAR2D102MELC25 |
| 1200         | 25 × 50            | 2650                    | 1.46                    | LAR2D122MELA50 |
|              | 30 × 35            | 2650                    | 1.46                    | LAR2D122MELB35 |
|              | 35 × 30            | 2650                    | 1.46                    | LAR2D122MELC30 |
| 1500         | 30 × 40            | 2800                    | 1.64                    | LAR2D152MELB40 |
|              | 35 × 35            | 2800                    | 1.64                    | LAR2D152MELC35 |
| 1800         | 30 × 50            | 3080                    | 1.80                    | LAR2D182MELB50 |
|              | 35 × 40            | 3080                    | 1.80                    | LAR2D182MELC40 |
| 2200         | 35 × 45            | 3480                    | 1.98                    | LAR2D222MELC45 |

| 250V (2E)    |                    |                         |                         |                |
|--------------|--------------------|-------------------------|-------------------------|----------------|
| Cap.<br>(μF) | Size<br>φD × L(mm) | Rated<br>ripple<br>(mA) | Leakage Current<br>(mA) | Code           |
| 270          | 22 × 25            | 1100                    | 0.77                    | LAR2E271MELZ25 |
| 330          | 22 × 30            | 1200                    | 0.86                    | LAR2E331MELZ30 |
|              | 25 × 25            | 1200                    | 0.86                    | LAR2E331MELA25 |
| 390          | 22 × 35            | 1300                    | 0.93                    | LAR2E391MELZ35 |
|              | 25 × 30            | 1300                    | 0.93                    | LAR2E391MELA30 |
| 470          | 22 × 40            | 1400                    | 1.02                    | LAR2E471MELZ40 |
|              | 25 × 35            | 1400                    | 1.02                    | LAR2E471MELA35 |
|              | 30 × 25            | 1400                    | 1.02                    | LAR2E471MELB25 |
| 560          | 22 × 45            | 1500                    | 1.12                    | LAR2E561MELZ45 |
|              | 25 × 35            | 1500                    | 1.12                    | LAR2E561MELA35 |
|              | 30 × 30            | 1500                    | 1.12                    | LAR2E561MELB30 |
| 680          | 22 × 50            | 1700                    | 1.23                    | LAR2E681MELZ50 |
|              | 25 × 40            | 1700                    | 1.23                    | LAR2E681MELA40 |
|              | 30 × 30            | 1700                    | 1.23                    | LAR2E681MELB30 |
|              | 35 × 25            | 1700                    | 1.23                    | LAR2E681MELC25 |
| 820          | 25 × 45            | 2000                    | 1.35                    | LAR2E821MELA45 |
|              | 30 × 35            | 2000                    | 1.35                    | LAR2E821MELB35 |
|              | 35 × 30            | 2000                    | 1.35                    | LAR2E821MELC30 |
| 1000         | 30 × 40            | 2200                    | 1.50                    | LAR2E102MELB40 |
|              | 35 × 35            | 2200                    | 1.50                    | LAR2E102MELC35 |
| 1200         | 30 × 45            | 2300                    | 1.64                    | LAR2E122MELB45 |
|              | 35 × 40            | 2300                    | 1.64                    | LAR2E122MELC40 |
| 1500         | 35 × 45            | 2500                    | 1.83                    | LAR2E152MELC45 |
| 1800         | 35 × 50            | 2700                    | 2.01                    | LAR2E182MELC50 |

| 400V (2G)    |                    |                         |                         |                |
|--------------|--------------------|-------------------------|-------------------------|----------------|
| Cap.<br>(μF) | Size<br>φD × L(mm) | Rated<br>ripple<br>(mA) | Leakage Current<br>(mA) | Code           |
| 100          | 22 × 25            | 680                     | 0.60                    | LAR2G101MELZ25 |
| 120          | 22 × 30            | 730                     | 0.65                    | LAR2G121MELZ30 |
| 180          | 22 × 35            | 950                     | 0.80                    | LAR2G181MELZ35 |
|              | 25 × 30            | 950                     | 0.80                    | LAR2G181MELA30 |
|              | 30 × 25            | 950                     | 0.80                    | LAR2G181MELB25 |
| 220          | 22 × 45            | 1100                    | 0.88                    | LAR2G221MELZ45 |
|              | 25 × 35            | 1100                    | 0.88                    | LAR2G221MELA35 |
|              | 30 × 25            | 1100                    | 0.88                    | LAR2G221MELB25 |
| 270          | 22 × 50            | 1220                    | 0.98                    | LAR2G271MELZ50 |
|              | 25 × 40            | 1220                    | 0.98                    | LAR2G271MELA40 |
|              | 30 × 30            | 1220                    | 0.98                    | LAR2G271MELB30 |
|              | 35 × 25            | 1220                    | 0.98                    | LAR2G271MELC25 |
| 330          | 25 × 45            | 1440                    | 1.08                    | LAR2G331MELA45 |
|              | 30 × 35            | 1440                    | 1.08                    | LAR2G331MELB35 |
| 390          | 25 × 50            | 1550                    | 1.18                    | LAR2G391MELA50 |
|              | 30 × 40            | 1550                    | 1.18                    | LAR2G391MELB40 |
|              | 35 × 30            | 1550                    | 1.18                    | LAR2G391MELC30 |
| 470          | 30 × 45            | 1680                    | 1.30                    | LAR2G471MELB45 |
|              | 35 × 35            | 1680                    | 1.30                    | LAR2G471MELC35 |
| 560          | 30 × 50            | 1900                    | 1.41                    | LAR2G561MELB50 |
|              | 35 × 40            | 1900                    | 1.41                    | LAR2G561MELC40 |
| 680          | 35 × 45            | 2120                    | 1.56                    | LAR2G681MELC45 |

| 450V (2W)    |                    |                         |                         |                |
|--------------|--------------------|-------------------------|-------------------------|----------------|
| Cap.<br>(μF) | Size<br>φD × L(mm) | Rated<br>ripple<br>(mA) | Leakage Current<br>(mA) | Code           |
| 82           | 22 × 25            | 340                     | 0.57                    | LAR2W820MELZ25 |
| 100          | 22 × 30            | 690                     | 0.63                    | LAR2W101MELZ30 |
|              | 25 × 25            | 690                     | 0.63                    | LAR2W101MELA25 |
| 120          | 22 × 35            | 720                     | 0.69                    | LAR2W121MELZ35 |
|              | 25 × 30            | 720                     | 0.69                    | LAR2W121MELA30 |
| 150          | 22 × 40            | 790                     | 0.77                    | LAR2W151MELZ40 |
|              | 25 × 30            | 790                     | 0.77                    | LAR2W151MELA30 |
|              | 30 × 25            | 790                     | 0.77                    | LAR2W151MELB25 |
|              | 22 × 45            | 870                     | 0.85                    | LAR2W181MELZ45 |
| 180          | 25 × 35            | 870                     | 0.85                    | LAR2W181MELA35 |
|              | 30 × 30            | 870                     | 0.85                    | LAR2W181MELB30 |
| 220          | 25 × 40            | 1050                    | 0.94                    | LAR2W221MELA40 |
|              | 30 × 30            | 1050                    | 0.94                    | LAR2W221MELB30 |
|              | 35 × 25            | 1050                    | 0.94                    | LAR2W221MELC25 |
| 270          | 25 × 50            | 1230                    | 1.04                    | LAR2W271MELA50 |
|              | 30 × 35            | 1230                    | 1.04                    | LAR2W271MELB35 |
|              | 35 × 30            | 1230                    | 1.04                    | LAR2W271MELC30 |
| 330          | 30 × 40            | 1380                    | 1.15                    | LAR2W331MELB40 |
|              | 35 × 35            | 1380                    | 1.15                    | LAR2W331MELC35 |
| 390          | 30 × 50            | 1610                    | 1.25                    | LAR2W391MELB50 |
|              | 35 × 40            | 1610                    | 1.25                    | LAR2W391MELC40 |
| 470          | 35 × 45            | 1780                    | 1.37                    | LAR2W471MELC45 |
| 560          | 35 × 50            | 1990                    | 1.50                    | LAR2W561MELC50 |

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