

## LXY Series

- Adoption of innovative electrolyte and new technologies
- Endurance with ripple current : 2,000 to 8,000 hours at 105°C
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS Compliant

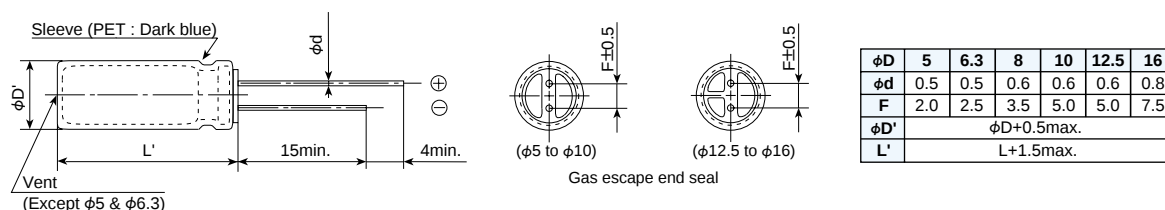


## ◆ SPECIFICATIONS

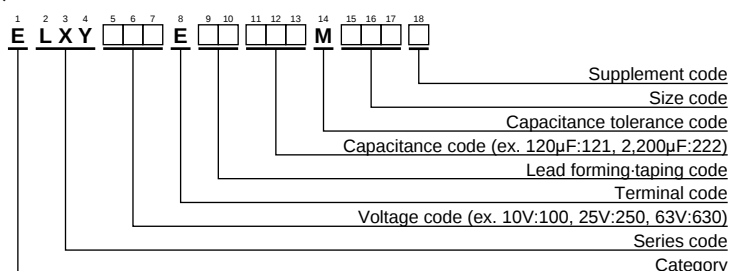
| Items                                                  | Characteristics                                                                                                                                                                                                                                                                         |                                                                                                         |      |      |      |      |      |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------|------|------|------|------|
| Category Temperature Range                             | -55 to +105°C                                                                                                                                                                                                                                                                           |                                                                                                         |      |      |      |      |      |
| Rated Voltage Range                                    | 10 to 63V <sub>dc</sub>                                                                                                                                                                                                                                                                 |                                                                                                         |      |      |      |      |      |
| Capacitance Tolerance                                  | ±20% (M) (at 20°C, 120Hz)                                                                                                                                                                                                                                                               |                                                                                                         |      |      |      |      |      |
| Leakage Current                                        | I=0.01CV or 3μA, whichever is greater.<br>Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)                                                                                                                           |                                                                                                         |      |      |      |      |      |
| Dissipation Factor (tanδ)                              | Rated voltage (V <sub>dc</sub> )                                                                                                                                                                                                                                                        | 10V                                                                                                     | 16V  | 25V  | 35V  | 50V  | 63V  |
|                                                        | tanδ (Max.)                                                                                                                                                                                                                                                                             | 0.19                                                                                                    | 0.16 | 0.14 | 0.12 | 0.10 | 0.10 |
|                                                        | When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20°C, 120Hz)                                                                                                                                                                       |                                                                                                         |      |      |      |      |      |
| Low Temperature Characteristics (Max. Impedance Ratio) | Z(-55°C)/Z(+20°C)                                                                                                                                                                                                                                                                       | 10V <sub>dc</sub> to 50V <sub>dc</sub> : 3max.                                                          |      |      |      |      |      |
|                                                        |                                                                                                                                                                                                                                                                                         | 63V <sub>dc</sub> : 6max.                                                                               |      |      |      |      |      |
|                                                        | (at 120Hz)                                                                                                                                                                                                                                                                              |                                                                                                         |      |      |      |      |      |
| 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 for the specified period of time at 105°C.                                                                              |                                                                                                         |      |      |      |      |      |
|                                                        | Time                                                                                                                                                                                                                                                                                    | φ5 & 6.3 : 2,000hours   φ8 : 3,000hours   φ10 : 5,000hours   φ12.5 : 7,000hours   φ16 & 18 : 8,000hours |      |      |      |      |      |
|                                                        | 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                                                                                                                                                                                                                                                                         | ≤The initial specified value                                                                            |      |      |      |      |      |

### ◆ DIMENSIONS [mm]

- Terminal Code : E



## ◆PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"

### ◆ RATED RIPPLE CURRENT MULTIPLIERS

- ### ●Frequency Multipliers

| Frequency (Hz)   | 120  | 1k   | 10k  | 100k |
|------------------|------|------|------|------|
| Capacitance (uF) |      |      |      |      |
| 10 to 180        | 0.40 | 0.75 | 0.90 | 1.00 |
| 220 to 560       | 0.50 | 0.85 | 0.94 | 1.00 |
| 680 to 1,800     | 0.60 | 0.87 | 0.95 | 1.00 |
| 2,200 to 3,900   | 0.75 | 0.90 | 0.95 | 1.00 |
| 4,700 to 8,200   | 0.85 | 0.95 | 0.98 | 1.00 |

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.

### ◆STANDARD RATINGS

| WV<br>(Vdc) | Cap<br>(μF) | Case size<br>φD×L(mm) | Impedance<br>(Ωmax/100kHz) |       | Rated<br>ripple<br>current<br>(mA rms/<br>105°C,<br>100kHz) | Part No.           |
|-------------|-------------|-----------------------|----------------------------|-------|-------------------------------------------------------------|--------------------|
|             |             |                       | 20°C                       | -10°C |                                                             |                    |
| 10          | 82          | 5 × 11.5              | 0.75                       | 1.5   | 163                                                         | ELXY100E□□820MEB5D |
|             | 180         | 6.3 × 11.5            | 0.35                       | 0.70  | 273                                                         | ELXY100E□□181MFB5D |
|             | 220         | 6.3 × 15              | 0.25                       | 0.50  | 390                                                         | ELXY100E□□221MF15D |
|             | 330         | 8 × 12                | 0.17                       | 0.34  | 445                                                         | ELXY100E□□331MH12D |
|             | 390         | 10 × 12.5             | 0.12                       | 0.24  | 625                                                         | ELXY100E□□391MJC5S |
|             | 470         | 8 × 15                | 0.13                       | 0.26  | 555                                                         | ELXY100E□□471MH15D |
|             | 680         | 8 × 20                | 0.095                      | 0.19  | 740                                                         | ELXY100E□□681MH20D |
|             | 680         | 10 × 16               | 0.084                      | 0.17  | 825                                                         | ELXY100E□□681MJ16S |
|             | 1,000       | 10 × 20               | 0.062                      | 0.13  | 1,040                                                       | ELXY100E□□102MJ20S |
|             | 1,200       | 10 × 25               | 0.052                      | 0.11  | 1,260                                                       | ELXY100E□□122MJ25S |
|             | 1,500       | 10 × 30               | 0.044                      | 0.088 | 1,440                                                       | ELXY100E□□152MJ30S |
|             | 1,800       | 12.5 × 20             | 0.046                      | 0.092 | 1,340                                                       | ELXY100E□□182MK20S |
|             | 2,200       | 12.5 × 25             | 0.034                      | 0.068 | 1,690                                                       | ELXY100E□□221MK25S |
|             | 2,700       | 12.5 × 30             | 0.030                      | 0.060 | 1,950                                                       | ELXY100E□□272MK30S |
|             | 3,300       | 12.5 × 35             | 0.024                      | 0.048 | 2,220                                                       | ELXY100E□□332MK35S |
|             | 3,300       | 16 × 20               | 0.038                      | 0.076 | 1,630                                                       | ELXY100E□□332ML20S |
|             | 3,900       | 12.5 × 40             | 0.022                      | 0.044 | 2,390                                                       | ELXY100E□□392MK40S |
|             | 3,900       | 16 × 25               | 0.028                      | 0.056 | 2,070                                                       | ELXY100E□□392ML25S |
|             | 5,600       | 16 × 30               | 0.025                      | 0.050 | 2,350                                                       | ELXY100E□□562ML30S |
|             | 6,800       | 16 × 35               | 0.022                      | 0.044 | 2,550                                                       | ELXY100E□□682ML35S |
|             | 8,200       | 16 × 40               | 0.018                      | 0.036 | 2,900                                                       | ELXY100E□□822ML40S |
| 16          | 56          | 5 × 11.5              | 0.75                       | 1.5   | 163                                                         | ELXY160E□□560MEB5D |
|             | 120         | 6.3 × 11.5            | 0.35                       | 0.70  | 273                                                         | ELXY160E□□121MFB5D |
|             | 180         | 6.3 × 15              | 0.25                       | 0.50  | 390                                                         | ELXY160E□□181MF15D |
|             | 270         | 8 × 12                | 0.17                       | 0.34  | 445                                                         | ELXY160E□□271MH12D |
|             | 270         | 10 × 12.5             | 0.12                       | 0.24  | 625                                                         | ELXY160E□□271MJC5S |
|             | 330         | 8 × 15                | 0.13                       | 0.26  | 555                                                         | ELXY160E□□331MH15D |
|             | 470         | 8 × 20                | 0.095                      | 0.19  | 740                                                         | ELXY160E□□471MH20D |
|             | 470         | 10 × 16               | 0.084                      | 0.17  | 825                                                         | ELXY160E□□471MJ16S |
|             | 680         | 10 × 20               | 0.062                      | 0.13  | 1,040                                                       | ELXY160E□□681MJ20S |
|             | 820         | 10 × 25               | 0.052                      | 0.11  | 1,260                                                       | ELXY160E□□821MJ25S |
|             | 1,200       | 10 × 30               | 0.044                      | 0.088 | 1,440                                                       | ELXY160E□□122MJ30S |
|             | 1,200       | 12.5 × 20             | 0.046                      | 0.092 | 1,340                                                       | ELXY160E□□122MK20S |
|             | 1,500       | 12.5 × 25             | 0.034                      | 0.068 | 1,690                                                       | ELXY160E□□152MK25S |
|             | 2,200       | 12.5 × 30             | 0.030                      | 0.060 | 1,950                                                       | ELXY160E□□222MK30S |
|             | 2,200       | 16 × 20               | 0.038                      | 0.076 | 1,630                                                       | ELXY160E□□222ML20S |
|             | 2,700       | 12.5 × 35             | 0.024                      | 0.048 | 2,220                                                       | ELXY160E□□272MK35S |
|             | 2,700       | 16 × 25               | 0.028                      | 0.056 | 2,070                                                       | ELXY160E□□272ML25S |
|             | 3,300       | 12.5 × 40             | 0.022                      | 0.044 | 2,390                                                       | ELXY160E□□332MK40S |
|             | 3,900       | 16 × 30               | 0.025                      | 0.050 | 2,350                                                       | ELXY160E□□392ML30S |
|             | 4,700       | 16 × 35               | 0.022                      | 0.044 | 2,550                                                       | ELXY160E□□472ML35S |
|             | 5,600       | 16 × 40               | 0.018                      | 0.036 | 2,900                                                       | ELXY160E□□562ML40S |
| 25          | 39          | 5 × 11.5              | 0.75                       | 1.5   | 163                                                         | ELXY250E□□390MEB5D |
|             | 82          | 6.3 × 11.5            | 0.35                       | 0.70  | 273                                                         | ELXY250E□□820MFB5D |
|             | 120         | 6.3 × 15              | 0.25                       | 0.50  | 390                                                         | ELXY250E□□121MF15D |
|             | 150         | 8 × 12                | 0.17                       | 0.34  | 445                                                         | ELXY250E□□151MH12D |
|             | 180         | 10 × 12.5             | 0.12                       | 0.24  | 625                                                         | ELXY250E□□181MJC5S |
|             | 220         | 8 × 15                | 0.13                       | 0.26  | 555                                                         | ELXY250E□□221MH15D |
|             | 330         | 8 × 20                | 0.095                      | 0.19  | 740                                                         | ELXY250E□□331MH20D |
|             | 330         | 10 × 16               | 0.084                      | 0.17  | 825                                                         | ELXY250E□□331MJ16S |
|             | 470         | 10 × 20               | 0.062                      | 0.13  | 1,040                                                       | ELXY250E□□471MJ20S |
|             | 560         | 10 × 25               | 0.052                      | 0.11  | 1,260                                                       | ELXY250E□□561MJ25S |
|             | 820         | 10 × 30               | 0.044                      | 0.088 | 1,440                                                       | ELXY250E□□821MJ30S |
|             | 820         | 12.5 × 20             | 0.046                      | 0.092 | 1,340                                                       | ELXY250E□□821MK20S |
|             | 1,000       | 12.5 × 25             | 0.034                      | 0.068 | 1,690                                                       | ELXY250E□□102MK25S |
|             | 1,500       | 12.5 × 30             | 0.030                      | 0.060 | 1,950                                                       | ELXY250E□□152MK30S |
|             | 1,500       | 16 × 20               | 0.038                      | 0.076 | 1,630                                                       | ELXY250E□□152ML20S |
|             | 1,800       | 12.5 × 35             | 0.024                      | 0.048 | 2,220                                                       | ELXY250E□□182MK35S |
|             | 1,800       | 16 × 25               | 0.028                      | 0.056 | 2,070                                                       | ELXY250E□□182ML25S |
|             | 2,200       | 12.5 × 40             | 0.022                      | 0.044 | 2,390                                                       | ELXY250E□□222MK40S |
|             | 2,700       | 16 × 30               | 0.025                      | 0.050 | 2,350                                                       | ELXY250E□□272ML30S |
|             | 3,300       | 16 × 35               | 0.022                      | 0.044 | 2,550                                                       | ELXY250E□□332ML35S |
|             | 3,900       | 16 × 40               | 0.018                      | 0.036 | 2,900                                                       | ELXY250E□□392ML40S |
| 35          | 27          | 5 × 11.5              | 0.75                       | 1.5   | 163                                                         | ELXY350E□□270MEB5D |
|             | 56          | 6.3 × 11.5            | 0.35                       | 0.70  | 273                                                         | ELXY350E□□560MFB5D |
|             | 82          | 6.3 × 15              | 0.25                       | 0.50  | 390                                                         | ELXY350E□□820MF15D |
|             | 120         | 8 × 12                | 0.17                       | 0.34  | 445                                                         | ELXY350E□□121MH12D |
|             | 120         | 10 × 12.5             | 0.12                       | 0.24  | 625                                                         | ELXY350E□□121MJC5S |
|             | 180         | 8 × 15                | 0.13                       | 0.26  | 555                                                         | ELXY350E□□181MH15D |
|             | 220         | 8 × 20                | 0.095                      | 0.19  | 740                                                         | ELXY350E□□221MH20D |
|             | 220         | 10 × 16               | 0.084                      | 0.17  | 825                                                         | ELXY350E□□221MJ16S |
|             | 330         | 10 × 20               | 0.062                      | 0.13  | 1,040                                                       | ELXY350E□□331MJ20S |
|             | 390         | 10 × 25               | 0.052                      | 0.11  | 1,260                                                       | ELXY350E□□391MJ25S |
|             | 560         | 10 × 30               | 0.044                      | 0.088 | 1,440                                                       | ELXY350E□□561MJ30S |
|             | 560         | 12.5 × 20             | 0.046                      | 0.092 | 1,340                                                       | ELXY350E□□561MK20S |
|             | 680         | 12.5 × 25             | 0.034                      | 0.068 | 1,690                                                       | ELXY350E□□681MK25S |
|             | 1,000       | 12.5 × 30             | 0.030                      | 0.060 | 1,950                                                       | ELXY350E□□102MK30S |
|             | 1,000       | 16 × 20               | 0.038                      | 0.076 | 1,630                                                       | ELXY350E□□102ML20S |
|             | 1,200       | 12.5 × 35             | 0.024                      | 0.048 | 2,220                                                       | ELXY350E□□122MK35S |
|             | 1,200       | 16 × 25               | 0.028                      | 0.056 | 2,070                                                       | ELXY350E□□122ML25S |
|             | 1,500       | 12.5 × 40             | 0.022                      | 0.044 | 2,390                                                       | ELXY350E□□152MK40S |
|             | 1,800       | 16 × 30               | 0.025                      | 0.050 | 2,350                                                       | ELXY350E□□182ML30S |
|             | 2,200       | 16 × 35               | 0.022                      | 0.044 | 2,550                                                       | ELXY350E□□222ML35S |
|             | 2,700       | 16 × 40               | 0.018                      | 0.036 | 2,900                                                       | ELXY350E□□272ML40S |
| 50          | 18          | 5 × 11.5              | 1.2                        | 2.4   | 129                                                         | ELXY500E□□180MEB5D |
|             | 39          | 6.3 × 11.5            | 0.54                       | 1.1   | 219                                                         | ELXY500E□□390MFB5D |
|             | 56          | 6.3 × 15              | 0.34                       | 0.68  | 310                                                         | ELXY500E□□560MF15D |
|             | 68          | 8 × 12                | 0.30                       | 0.60  | 340                                                         | ELXY500E□□680MH12D |
|             | 82          | 8 × 15                | 0.20                       | 0.40  | 470                                                         | ELXY500E□□820MH15D |
|             | 82          | 10 × 12.5             | 0.20                       | 0.40  | 480                                                         | ELXY500E□□820MJC5S |
|             | 120         | 8 × 20                | 0.14                       | 0.28  | 610                                                         | ELXY500E□□121MH20D |
|             | 120         | 10 × 16               | 0.13                       | 0.26  | 755                                                         | ELXY500E□□121MJ16S |
|             | 180         | 10 × 20               | 0.088                      | 0.18  | 945                                                         | ELXY500E□□181MJ20S |
|             | 220         | 10 × 25               | 0.073                      | 0.15  | 1,150                                                       | ELXY500E□□221MJ25S |
|             | 330         | 10 × 30               | 0.054                      | 0.11  | 1,260                                                       | ELXY500E□□331MJ30S |
|             | 330         | 12.5 × 20             | 0.059                      | 0.12  | 1,190                                                       | ELXY500E□□331MK20S |
|             | 470         | 12.5 × 25             | 0.044                      | 0.088 | 1,490                                                       | ELXY500E□□471MK25S |
|             | 560         | 12.5 × 30             | 0.039                      | 0.078 | 1,720                                                       | ELXY500E□□561MK30S |
|             | 680         | 12.5 × 35             | 0.033                      | 0.066 | 1,890                                                       | ELXY500E□□681MK35S |
|             | 680         | 16 × 20               | 0.050                      | 0.10  | 1,420                                                       | ELXY500E□□681ML20S |
|             | 820         | 12.5 × 40             | 0.029                      | 0.058 | 2,030                                                       | ELXY500E□□821MK40S |
|             | 820         | 16 × 25               | 0.034                      | 0.068 | 1,880                                                       | ELXY500E□□821ML25S |
|             | 1,000       | 16 × 30               | 0.030                      | 0.060 | 2,150                                                       | ELXY500E□□102ML30S |
|             | 1,200       | 16 × 35               | 0.027                      | 0.054 | 2,320                                                       | ELXY500E□□122ML35S |
|             | 1,500       | 16 × 40               | 0.024                      | 0.048 | 2,540                                                       | ELXY500E□□152ML40S |
| 63          | 10          | 5 × 11.5              | 1.9                        | 4.8   | 103                                                         | ELXY630E□□100MEB5D |
|             | 18          | 6.3 × 11.5            | 1.0                        | 2.5   | 161                                                         | ELXY630E□□180MFB5D |
|             | 33          | 6.3 × 15              | 0.61                       | 1.6   | 233                                                         | ELXY630E□□330MF15D |
|             | 47          | 8 × 12                | 0.47                       | 1.2   | 274                                                         | ELXY630E□□470MH12D |
|             | 56          | 10 × 12.5             | 0.27                       | 0.68  | 418                                                         | ELXY630E□□560MJC5S |
|             | 68          | 8 × 15                | 0.34                       | 0.85  | 360                                                         | ELXY630E□□680MH15D |
|             | 68          | 10 × 16               | 0.21                       | 0.53  | 525                                                         | ELXY630E□□680MJ16S |
|             | 82          | 8 × 20                | 0.21                       | 0.53  | 500                                                         | ELXY630E□□820MH20D |
|             | 120         | 10 × 20               | 0.16                       | 0.40  | 650                                                         | ELXY630E□□121MJ20S |
|             | 150         | 10 × 25               | 0.13                       | 0.33  | 783                                                         | ELXY630E□□151MJ25S |
|             | 180         | 10 × 30               | 0.10                       | 0.25  | 960                                                         | ELXY630E□□181MJ30S |
|             | 220         | 12.5 × 20             | 0.11                       | 0.28  | 870                                                         | ELXY630E□□221MK20S |
|             | 270         | 12.5 × 25             | 0.074                      | 0.19  | 1,150                                                       | ELXY630E□□271MK25S |
|             | 330         | 16 × 20               | 0.085                      | 0.22  | 1,100                                                       | ELXY630E□□331ML20S |
|             | 390         | 12.5 × 30             | 0.068                      | 0.17  | 1,280                                                       | ELXY630E□□391MK30S |
|             | 470         | 12.5 × 35             | 0.063                      | 0.16  | 1,390                                                       | ELXY630E□□471MK35S |
|             | 470         | 16 × 25               | 0.055                      | 0.14  | 1,480                                                       | ELXY630E□□471ML25S |
|             | 560         | 12.5 × 40             | 0.051                      | 0.13  | 1,530                                                       | ELXY630E□□561MK40S |
|             | 680         | 16 × 30               | 0.046                      | 0.12  | 1,720                                                       | ELXY630E□□681ML30S |
|             | 820         | 16 × 35               | 0.040                      | 0.10  | 1,910                                                       | ELXY630E□□821ML35S |
|             | 1,000       | 16 × 40               | 0.036                      | 0.09  | 2,070                                                       | ELXY630E□□102ML40S |

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