

# 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)
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.



## SPECIFICATIONS

| Items  | Characteristics   |   |
|--|---|---|
| Category   | -55 to +105°C   |   |
| 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 (tan δ)   | Rated voltage (V <sub>dc</sub> )  | 10V 16V 25V 35V 50V 63V   |
|  | tan δ (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)   | 10 to 50V <sub>dc</sub> : 3max.<br>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 (the peak voltage shall not exceed the rated voltage) for the specified period of time at 105°C. |   |   |
| Time   | φ 5 & 6.3 : 2,000hours φ 8 : 3,000hours φ 10 : 5,000hours φ 12.5 : 7,000hours φ 16 & 18 : 8,000hours  |   |
| Capacitance change   | ≤ ±20% of the initial value   |   |
| D.F. (tan δ)   | ≤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. (tan δ)  | ≤200% of the initial specified value                                    |
|  | Leakage current   | ≤The initial specified value  |

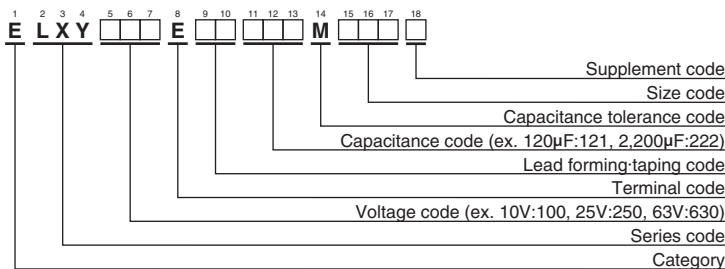
## DIMENSIONS [mm]

- Terminal Code : E



| φD  | 5          | 6.3 | 8   | 10  | 12.5 | 16  |
|-----|------------|-----|-----|-----|------|-----|
| φd  | 0.5        | 0.5 | 0.6 | 0.6 | 0.6  | 0.8 |
| F   | 2.0        | 2.5 | 3.5 | 5.0 | 5.0  | 7.5 |
| φD' | φD+0.5max. |     |     |     |      |     |
| L'  | L+1.5max.  |     |     |     |      |     |

## PART NUMBERING SYSTEM



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

## RATED RIPPLE CURRENT MULTIPLIERS

- Frequency Multipliers

| Capacitance(μF) | Frequency(Hz) |      |      |      |
|-----------------|---------------|------|------|------|
|                 | 120           | 1k   | 10k  | 100k |
| 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>(V <sub>dc</sub> ) | Cap<br>(μF) | Case size<br>φD×L(mm) | Impedance<br>(Ω max./100kHz) |       | Rated<br>ripple<br>current<br>(mA rms/<br>105°C,<br>100kHz) | Part No.           | WV<br>(V <sub>dc</sub> ) | Cap<br>(μF) | Case size<br>φD×L(mm) | Impedance<br>(Ω max./100kHz) |                    | Rated<br>ripple<br>current<br>(mA rms/<br>105°C,<br>100kHz) | Part No.           |
|--------------------------|-------------|-----------------------|------------------------------|-------|---|--------------------|--------------------------|-------------|-----------------------|------------------------------|--------------------|---|--------------------|
|                          |             |                       | 20°C                         | -10°C |   |                    |                          |             |                       | 20°C                         | -10°C              |   |                    |
| 10                       | 82          | 5×11.5                | 0.75                         | 1.5   | 163   | ELXY100E□□820MEB5D | 35                       | 27          | 5×11.5                | 0.75                         | 1.5                | 163   | ELXY350E□□270MEB5D |
|                          | 180         | 6.3×11.5              | 0.35                         | 0.70  | 273   | ELXY100E□□181MFB5D |                          | 56          | 6.3×11.5              | 0.35                         | 0.70               | 273   | ELXY350E□□560MFB5D |
|                          | 220         | 6.3×15                | 0.25                         | 0.50  | 390   | ELXY100E□□221MF15D |                          | 82          | 6.3×15                | 0.25                         | 0.50               | 390   | ELXY350E□□820MF15D |
|                          | 330         | 8×12                  | 0.17                         | 0.34  | 445   | ELXY100E□□331MH12D |                          | 120         | 8×12                  | 0.17                         | 0.34               | 445   | ELXY350E□□121MH12D |
|                          | 390         | 10×12.5               | 0.12                         | 0.24  | 625   | ELXY100E□□391MJC5S |                          | 120         | 10×12.5               | 0.12                         | 0.24               | 625   | ELXY350E□□121MJC5S |
|                          | 470         | 8×15                  | 0.13                         | 0.26  | 555   | ELXY100E□□471MH15D |                          | 180         | 8×15                  | 0.13                         | 0.26               | 555   | ELXY350E□□181MH15D |
|                          | 680         | 8×20                  | 0.095                        | 0.19  | 740   | ELXY100E□□681MH20D |                          | 220         | 8×20                  | 0.095                        | 0.19               | 740   | ELXY350E□□221MH20D |
|                          | 680         | 10×16                 | 0.084                        | 0.17  | 825   | ELXY100E□□681MJ16S |                          | 220         | 10×16                 | 0.084                        | 0.17               | 825   | ELXY350E□□221MJ16S |
|                          | 1,000       | 10×20                 | 0.062                        | 0.13  | 1,040   | ELXY100E□□102MJ20S |                          | 330         | 10×20                 | 0.062                        | 0.13               | 1,040   | ELXY350E□□331MJ20S |
|                          | 1,200       | 10×25                 | 0.052                        | 0.11  | 1,260   | ELXY100E□□122MJ25S |                          | 390         | 10×25                 | 0.052                        | 0.11               | 1,260   | ELXY350E□□391MJ25S |
|                          | 1,500       | 10×30                 | 0.044                        | 0.088 | 1,440   | ELXY100E□□152MJ30S |                          | 560         | 10×30                 | 0.044                        | 0.088              | 1,440   | ELXY350E□□561MJ30S |
|                          | 1,800       | 12.5×20               | 0.046                        | 0.092 | 1,340   | ELXY100E□□181MK20S |                          | 560         | 12.5×20               | 0.046                        | 0.092              | 1,340   | ELXY350E□□561MK20S |
|                          | 2,200       | 12.5×25               | 0.034                        | 0.068 | 1,690   | ELXY100E□□222MK25S |                          | 680         | 12.5×25               | 0.034                        | 0.068              | 1,690   | ELXY350E□□681MK25S |
|                          | 2,700       | 12.5×30               | 0.030                        | 0.060 | 1,950   | ELXY100E□□272MK30S |                          | 1,000       | 12.5×30               | 0.030                        | 0.060              | 1,950   | ELXY350E□□102MK30S |
|                          | 3,300       | 12.5×35               | 0.024                        | 0.048 | 2,220   | ELXY100E□□332MK35S |                          | 1,000       | 16×20                 | 0.038                        | 0.076              | 1,630   | ELXY350E□□102ML20S |
|                          | 3,300       | 16×20                 | 0.038                        | 0.076 | 1,630   | ELXY100E□□332ML20S |                          | 1,200       | 12.5×35               | 0.024                        | 0.048              | 2,220   | ELXY350E□□122ML35S |
|                          | 3,900       | 12.5×40               | 0.022                        | 0.044 | 2,390   | ELXY100E□□392MK40S |                          | 1,200       | 16×25                 | 0.028                        | 0.056              | 2,070   | ELXY350E□□122ML25S |
| 3,900                    | 16×25       | 0.028                 | 0.056                        | 2,070 | ELXY100E□□392ML25S  | 1,500              | 12.5×40                  | 0.022       | 0.044                 | 2,390                        | ELXY350E□□152MK40S |   |                    |
| 5,600                    | 16×30       | 0.025                 | 0.050                        | 2,350 | ELXY100E□□562ML30S  | 1,800              | 16×30                    | 0.025       | 0.050                 | 2,350                        | ELXY350E□□182ML30S |   |                    |
| 6,800                    | 16×35       | 0.022                 | 0.044                        | 2,550 | ELXY100E□□682ML35S  | 2,200              | 16×35                    | 0.022       | 0.044                 | 2,550                        | ELXY350E□□222ML35S |   |                    |
| 8,200                    | 16×40       | 0.018                 | 0.036                        | 2,900 | ELXY100E□□822ML40S  | 2,700              | 16×40                    | 0.018       | 0.036                 | 2,900                        | ELXY350E□□272ML40S |   |                    |
| 16                       | 56          | 5×11.5                | 0.75                         | 1.5   | 163   | ELXY160E□□560MEB5D | 50                       | 18          | 5×11.5                | 1.2                          | 2.4                | 129   | ELXY500E□□180MEB5D |
|                          | 120         | 6.3×11.5              | 0.35                         | 0.70  | 273   | ELXY160E□□121MFB5D |                          | 39          | 6.3×11.5              | 0.54                         | 1.1                | 219   | ELXY500E□□390MFB5D |
|                          | 180         | 6.3×15                | 0.25                         | 0.50  | 390   | ELXY160E□□181MF15D |                          | 56          | 6.3×15                | 0.34                         | 0.68               | 310   | ELXY500E□□560MF15D |
|                          | 270         | 8×12                  | 0.17                         | 0.34  | 445   | ELXY160E□□271MH12D |                          | 68          | 8×12                  | 0.30                         | 0.60               | 340   | ELXY500E□□680MH12D |
|                          | 270         | 10×12.5               | 0.12                         | 0.24  | 625   | ELXY160E□□271MJC5S |                          | 82          | 8×15                  | 0.20                         | 0.40               | 470   | ELXY500E□□820MH15D |
|                          | 330         | 8×15                  | 0.13                         | 0.26  | 555   | ELXY160E□□331MH15D |                          | 82          | 10×12.5               | 0.20                         | 0.40               | 480   | ELXY500E□□820MJC5S |
|                          | 470         | 8×20                  | 0.095                        | 0.19  | 740   | ELXY160E□□471MH20D |                          | 120         | 8×20                  | 0.14                         | 0.28               | 610   | ELXY500E□□121MH20D |
|                          | 470         | 10×16                 | 0.084                        | 0.17  | 825   | ELXY160E□□471MJ16S |                          | 120         | 10×16                 | 0.13                         | 0.26               | 755   | ELXY500E□□121MJ16S |
|                          | 680         | 10×20                 | 0.062                        | 0.13  | 1,040   | ELXY160E□□681MJ20S |                          | 180         | 10×20                 | 0.088                        | 0.18               | 945   | ELXY500E□□181MJ20S |
|                          | 820         | 10×25                 | 0.052                        | 0.11  | 1,260   | ELXY160E□□821MJ25S |                          | 220         | 10×25                 | 0.073                        | 0.15               | 1,150   | ELXY500E□□221MJ25S |
|                          | 1,200       | 10×30                 | 0.044                        | 0.088 | 1,440   | ELXY160E□□122MJ30S |                          | 330         | 10×30                 | 0.054                        | 0.11               | 1,260   | ELXY500E□□331MJ30S |
|                          | 1,200       | 12.5×20               | 0.046                        | 0.092 | 1,340   | ELXY160E□□122MK20S |                          | 330         | 12.5×20               | 0.059                        | 0.12               | 1,190   | ELXY500E□□331MK20S |
|                          | 1,500       | 12.5×25               | 0.034                        | 0.068 | 1,690   | ELXY160E□□152MK25S |                          | 470         | 12.5×25               | 0.044                        | 0.088              | 1,490   | ELXY500E□□471MK25S |
|                          | 2,200       | 12.5×30               | 0.030                        | 0.060 | 1,950   | ELXY160E□□222MK30S |                          | 560         | 12.5×30               | 0.039                        | 0.078              | 1,720   | ELXY500E□□561MK30S |
|                          | 2,200       | 16×20                 | 0.038                        | 0.076 | 1,630   | ELXY160E□□222ML20S |                          | 680         | 12.5×35               | 0.033                        | 0.066              | 1,890   | ELXY500E□□681MK35S |
|                          | 2,700       | 12.5×35               | 0.024                        | 0.048 | 2,220   | ELXY160E□□272MK35S |                          | 680         | 16×20                 | 0.050                        | 0.10               | 1,420   | ELXY500E□□681ML20S |
|                          | 2,700       | 16×25                 | 0.028                        | 0.056 | 2,070   | ELXY160E□□272ML25S |                          | 820         | 12.5×40               | 0.029                        | 0.058              | 2,030   | ELXY500E□□821MK40S |
| 3,300                    | 12.5×40     | 0.022                 | 0.044                        | 2,390 | ELXY160E□□332MK40S  | 820                | 16×25                    | 0.034       | 0.068                 | 1,880                        | ELXY500E□□821ML25S |   |                    |
| 3,900                    | 16×30       | 0.025                 | 0.050                        | 2,350 | ELXY160E□□392ML30S  | 1,000              | 16×30                    | 0.030       | 0.060                 | 2,150                        | ELXY500E□□102ML30S |   |                    |
| 4,700                    | 16×35       | 0.022                 | 0.044                        | 2,550 | ELXY160E□□472ML35S  | 1,200              | 16×35                    | 0.027       | 0.054                 | 2,320                        | ELXY500E□□122ML35S |   |                    |
| 5,600                    | 16×40       | 0.018                 | 0.036                        | 2,900 | ELXY160E□□562ML40S  | 1,500              | 16×40                    | 0.024       | 0.048                 | 2,540                        | ELXY500E□□152ML40S |   |                    |
| 25                       | 39          | 5×11.5                | 0.75                         | 1.5   | 163   | ELXY250E□□390MEB5D | 63                       | 10          | 5×11.5                | 1.9                          | 4.8                | 103   | ELXY630E□□100MEB5D |
|                          | 82          | 6.3×11.5              | 0.35                         | 0.70  | 273   | ELXY250E□□820MFB5D |                          | 18          | 6.3×11.5              | 1.0                          | 2.5                | 161   | ELXY630E□□180MFB5D |
|                          | 120         | 6.3×15                | 0.25                         | 0.50  | 390   | ELXY250E□□121MF15D |                          | 33          | 6.3×15                | 0.61                         | 1.6                | 233   | ELXY630E□□330MF15D |
|                          | 150         | 8×12                  | 0.17                         | 0.34  | 445   | ELXY250E□□151MH12D |                          | 47          | 8×12                  | 0.47                         | 1.2                | 274   | ELXY630E□□470MH12D |
|                          | 180         | 10×12.5               | 0.12                         | 0.24  | 625   | ELXY250E□□181MJC5S |                          | 56          | 10×12.5               | 0.27                         | 0.68               | 418   | ELXY630E□□560MJC5S |
|                          | 220         | 8×15                  | 0.13                         | 0.26  | 555   | ELXY250E□□221MH15D |                          | 68          | 8×15                  | 0.34                         | 0.85               | 360   | ELXY630E□□680MH15D |
|                          | 330         | 8×20                  | 0.095                        | 0.19  | 740   | ELXY250E□□331MH20D |                          | 68          | 10×16                 | 0.21                         | 0.53               | 525   | ELXY630E□□680MJ16S |
|                          | 330         | 10×16                 | 0.084                        | 0.17  | 825   | ELXY250E□□331MJ16S |                          | 82          | 8×20                  | 0.21                         | 0.53               | 500   | ELXY630E□□820MH20D |
|                          | 470         | 10×20                 | 0.062                        | 0.13  | 1,040   | ELXY250E□□471MJ20S |                          | 120         | 10×20                 | 0.16                         | 0.40               | 650   | ELXY630E□□121MJ20S |
|                          | 560         | 10×25                 | 0.052                        | 0.11  | 1,260   | ELXY250E□□561MJ25S |                          | 150         | 10×25                 | 0.13                         | 0.33               | 783   | ELXY630E□□151MJ25S |
|                          | 820         | 10×30                 | 0.044                        | 0.088 | 1,440   | ELXY250E□□821MJ30S |                          | 180         | 10×30                 | 0.10                         | 0.25               | 960   | ELXY630E□□181MJ30S |
|                          | 820         | 12.5×20               | 0.046                        | 0.092 | 1,340   | ELXY250E□□821MK20S |                          | 220         | 12.5×20               | 0.11                         | 0.28               | 870   | ELXY630E□□221MK20S |
|                          | 1,000       | 12.5×25               | 0.034                        | 0.068 | 1,690   | ELXY250E□□102MK25S |                          | 270         | 12.5×25               | 0.074                        | 0.19               | 1,150   | ELXY630E□□271MK25S |
|                          | 1,500       | 12.5×30               | 0.030                        | 0.060 | 1,950   | ELXY250E□□152MK30S |                          | 330         | 16×20                 | 0.085                        | 0.22               | 1,100   | ELXY630E□□331ML20S |
|                          | 1,500       | 16×20                 | 0.038                        | 0.076 | 1,630   | ELXY250E□□152ML20S |                          | 390         | 12.5×30               | 0.068                        | 0.17               | 1,280   | ELXY630E□□391MK30S |
|                          | 1,800       | 12.5×35               | 0.024                        | 0.048 | 2,220   | ELXY250E□□182MK35S |                          | 470         | 12.5×35               | 0.063                        | 0.16               | 1,390   | ELXY630E□□471MK35S |
|                          | 1,800       | 16×25                 | 0.028                        | 0.056 | 2,070   | ELXY250E□□182ML25S |                          | 470         | 16×25                 | 0.055                        | 0.14               | 1,480   | ELXY630E□□471ML25S |
| 2,200                    | 12.5×40     | 0.022                 | 0.044                        | 2,390 | ELXY250E□□222MK40S  | 560                | 12.5×40                  | 0.051       | 0.13                  | 1,530                        | ELXY630E□□561MK40S |   |                    |
| 2,700                    | 16×30       | 0.025                 | 0.050                        | 2,350 | ELXY250E□□272ML30S  | 680                | 16×30                    | 0.046       | 0.12                  | 1,720                        | ELXY630E□□681ML30S |   |                    |
| 3,300                    | 16×35       | 0.022                 | 0.044                        | 2,550 | ELXY250E□□332ML35S  | 820                | 16×35                    | 0.040       | 0.10                  | 1,910                        | ELXY630E□□821ML35S |   |                    |
| 3,900                    | 16×40       | 0.018                 | 0.036                        | 2,900 | ELXY250E□□392ML40S  | 1,000              | 16×40                    | 0.036       | 0.090                 | 2,070                        | ELXY630E□□102ML40S |   |                    |

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