

Rubycon

引线型铝电解电容器 RADIAL LEAD ALUMINUM ELECTROLYTIC CAPACITORS

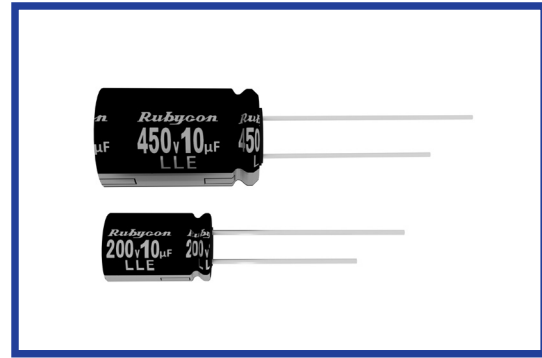
LLE

LLE 系列
SERIES

105°C 12000~20000小时品
Load Life: 105°C 12000~20000 hours

·最适合LED照明用电源电路
For LED Lighting.

RoHS
compliance



◆规格表 / SPECIFICATIONS

| 项目 Items | 特性 Characteristics | | | | | | | | | | | | | | | | | | | |
|--|--|-------------------------|-------------------------------|--|--|---|---|---|------------------------------|--|-----------------|-------|------------------------|---|-------------------------|-------|---|---|----|---|
| 工作温度范围 Category Temperature Range | -40~+105°C | -25~+105°C | | | | | | | | | | | | | | | | | | |
| 额定电压范围 Rated Voltage Range | 160~400Vdc | 450Vdc | | | | | | | | | | | | | | | | | | |
| 静电容量允许差 Capacitance Tolerance | ±20% (20°C, 120Hz) | | | | | | | | | | | | | | | | | | | |
| 漏电流 Leakage Current(MAX) | <table border="1"> <thead> <tr> <th>CV ≤ 1000</th> <th>CV > 1000</th> </tr> </thead> <tbody> <tr> <td>I=0.1CV + 40µA以下(1分钟值) I=0.1CV+40µA (1minute)</td> <td>I=0.04CV + 100µA以下(1分钟值) I=0.04CV+100µA (1minute)</td> </tr> <tr> <td>I=0.03CV + 15µA以下(5分钟值) I=0.03CV+15µA (5minutes)</td> <td>I=0.02CV + 25µA以下(5分钟值) I=0.02CV+25µA (5minutes)</td> </tr> </tbody> </table> | CV ≤ 1000 | CV > 1000 | I=0.1CV + 40µA以下(1分钟值) I=0.1CV+40µA (1minute) | I=0.04CV + 100µA以下(1分钟值) I=0.04CV+100µA (1minute) | I=0.03CV + 15µA以下(5分钟值) I=0.03CV+15µA (5minutes) | I=0.02CV + 25µA以下(5分钟值) I=0.02CV+25µA (5minutes) | I=漏电流(µA) Leakage Current C=静电容量(µF) Capacitance V=额定电压(Vdc) Rated Voltage | | | | | | | | | | | | |
| CV ≤ 1000 | CV > 1000 | | | | | | | | | | | | | | | | | | | |
| I=0.1CV + 40µA以下(1分钟值) I=0.1CV+40µA (1minute) | I=0.04CV + 100µA以下(1分钟值) I=0.04CV+100µA (1minute) | | | | | | | | | | | | | | | | | | | |
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| 损失角正切值(tanδ) Dissipation Factor(MAX) | <table border="1"> <thead> <tr> <th>额定电压(Vdc) Rated Voltage</th> <th>160</th> <th>200</th> <th>250</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>tanδ</td> <td>0.24</td> <td>0.24</td> <td>0.24</td> <td>0.24</td> <td>0.24</td> </tr> </tbody> </table> (20°C, 120Hz) | | 额定电压(Vdc) Rated Voltage | 160 | 200 | 250 | 400 | 450 | tanδ | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | | | | | | |
| 额定电压(Vdc) Rated Voltage | 160 | 200 | 250 | 400 | 450 | | | | | | | | | | | | | | | |
| tanδ | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | | | | | | | | | | | | | | | |
| 耐久性 Endurance | 在105°C环境中, 不超过额定电压的范围内叠加额定纹波电流, 连续加载右表时间后, 满足以下各项要求。 After applying rated voltage with rated ripple current for specified time at 105°C, the capacitors shall meet the following requirements. <table border="1"> <thead> <tr> <th>静电容量变化率 Capacitance Change</th> <td>初期值的±30%以内 Within ±30% of the initial value.</td> <th>铝壳尺寸 Case Size</th> <td>6.3×11, 8×9, 10×9</td> <th>时间(hrs) Life Time</th> <td>12000</td> </tr> <tr> <th>损失角正切值 Dissipation Factor</th> <td>规格值的300%以下 Not more than 300% of the specified value.</td> <td>8×11.5, 10×12.5</td> <td>15000</td> </tr> <tr> <th>漏电流 Leakage Current</th> <td>规格值以下 Not more than the specified value.</td> <td>10×16, 10×20 φD≥12.5</td> <td>20000</td> </tr> </thead> </table> | | 静电容量变化率 Capacitance Change | 初期值的±30%以内 Within ±30% of the initial value. | 铝壳尺寸 Case Size | 6.3×11, 8×9, 10×9 | 时间(hrs) Life Time | 12000 | 损失角正切值 Dissipation Factor | 规格值的300%以下 Not more than 300% of the specified value. | 8×11.5, 10×12.5 | 15000 | 漏电流 Leakage Current | 规格值以下 Not more than the specified value. | 10×16, 10×20 φD≥12.5 | 20000 | | | | |
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| 漏电流 Leakage Current | 规格值以下 Not more than the specified value. | 10×16, 10×20 φD≥12.5 | 20000 | | | | | | | | | | | | | | | | | |
| 低温特性 Low Temperature Stability (阻抗比) Impedance Ratio(MAX) | <table border="1"> <thead> <tr> <th>额定电压(Vdc) Rated Voltage</th> <th>160</th> <th>200</th> <th>250</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>3</td> <td>3</td> <td>3</td> <td>6</td> <td>6</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>8</td> <td>8</td> <td>8</td> <td>10</td> <td>-</td> </tr> </tbody> </table> (120Hz) | | 额定电压(Vdc) Rated Voltage | 160 | 200 | 250 | 400 | 450 | Z(-25°C)/Z(20°C) | 3 | 3 | 3 | 6 | 6 | Z(-40°C)/Z(20°C) | 8 | 8 | 8 | 10 | - |
| 额定电压(Vdc) Rated Voltage | 160 | 200 | 250 | 400 | 450 | | | | | | | | | | | | | | | |
| Z(-25°C)/Z(20°C) | 3 | 3 | 3 | 6 | 6 | | | | | | | | | | | | | | | |
| Z(-40°C)/Z(20°C) | 8 | 8 | 8 | 10 | - | | | | | | | | | | | | | | | |

◆纹波电流修正系数 / MULTIPLIER FOR RIPPLE CURRENT

160~400Vdc

| 频率(Hz) Frequency | 120 | 1k | 10k | 100k≤ |
|---------------------|-----|-----|-----|-------|
| 1~5.6µF | 1.0 | 1.6 | 1.8 | 2.0 |
| 6.8~18µF | 1.0 | 1.5 | 1.7 | 1.9 |
| 22~33µF | 1.0 | 1.4 | 1.6 | 1.8 |

450Vdc

| 频率(Hz) Frequency | 120 | 1k | 10k | 100k≤ |
|---------------------|-----|-----|-----|-------|
| 4.7~15µF | 0.3 | 0.6 | 0.9 | 1.0 |
| 22~68µF | 0.4 | 0.7 | 0.9 | 1.0 |

◆副记号 / OPTION

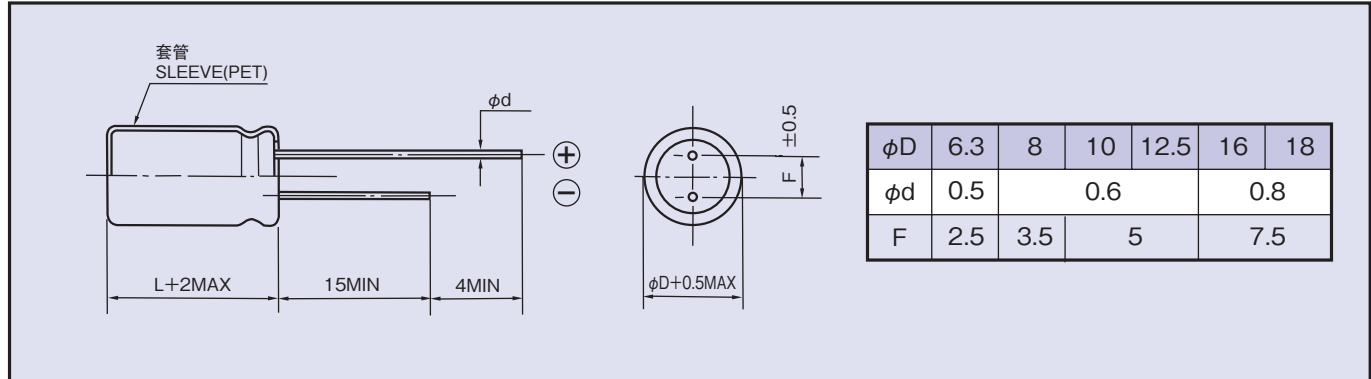
| 副记号 | 记号Code |
|------------------|--------|
| PET套管 PET Sleeve | EFC |

◆产品型号体系 / PART NUMBER

| | | | | | | |
|-----------------------|----------------|---------------------|----------------------------------|---------------|------------------------|-------------------|
| □□□ | LLE | □□□□□ | M | □□□ | □□ | D×L |
| 额定电压 Rated Voltage | 系列名称 Series | 静电容量 Capacitance | 静电容量允许差 Capacitance Tolerance | 副记号 Option | 引线加工记号 Lead Forming | 铝壳尺寸 Case Size |

◆尺寸图 / DIMENSIONS

(mm)



◆标准品一览表 / STANDARD SIZE

| 额定电压 Rated Voltage (Vdc) | 静电容量 Capacitance (μF) | 外形尺寸 Size φD×L (mm) | 额定纹波电流 Rated Ripple Current (mA r.m.s., 105°C) | | |
|--------------------------------|-----------------------------|------------------------------|--|--------|-----|
| | | | 120Hz | 100kHz | |
| 160 | 5.6 | 6.3×11 | 52 | 104 | |
| | 10 | 8×9 | 70 | 133 | |
| | 15 | 8×11.5 | 92 | 174 | |
| | | 10×9 | 95 | 180 | |
| | 22 | 10×12.5 | 121 | 217 | |
| | 33 | 10×16 | 158 | 284 | |
| 200 | 2.2 | 6.3×11 | 36 | 72 | |
| | 3.3 | 6.3×11 | 42 | 84 | |
| | 4.7 | 6.3×11 | 49 | 98 | |
| | 5.6 | 8×9 | 56 | 112 | |
| | 6.8 | 8×9 | 62 | 117 | |
| | 8.2 | 8×9 | 66 | 125 | |
| | 10 | 8×11.5 | 80 | 152 | |
| | 12 | 10×9 | 88 | 167 | |
| | 18 | 10×12.5 | 113 | 214 | |
| | 27 | 10×16 | 149 | 268 | |
| 250 | 1.8 | 6.3×11 | 33 | 66 | |
| | 2.2 | 6.3×11 | 36 | 72 | |
| | 3.3 | 6.3×11 | 42 | 84 | |
| | 4.7 | 8×9 | 53 | 106 | |
| | 5.6 | 8×11.5 | 62 | 124 | |
| | 6.8 | 8×11.5 | 68 | 129 | |
| | 8.2 | 10×9 | 76 | 144 | |
| | 10 | 10×12.5 | 90 | 171 | |
| | 12 | 10×12.5 | 97 | 184 | |
| | 18 | 10×16 | 127 | 241 | |
| 400 | 1 | 6.3×11 | 24 | 48 | |
| | 1.2 | 8×9 | 28 | 56 | |
| | 1.5 | 8×9 | 30 | 60 | |
| | 1.8 | 8×9 | 33 | 66 | |
| | 2.2 | 8×9 | 36 | 72 | |
| | | 8×11.5 | 40 | 80 | |
| | 2.7 | 8×11.5 | 43 | 86 | |
| | 3.3 | 8×11.5 | 47 | 94 | |
| | | 10×9 | 48 | 96 | |
| | 3.9 | 10×12.5 | 57 | 114 | |
| | 4.7 | 10×12.5 | 61 | 122 | |
| | 6.8 | 10×16 | 85 | 161 | |
| | 450 | 4.7 | 10×16 | 54 | 180 |
| | | | 10×20 | 66 | 220 |
| 6.8 | | 10×20 | 84 | 280 | |
| 8.2 | | 10×20 | 84 | 280 | |
| 10 | | 12.5×20 | 135 | 450 | |
| 15 | | 12.5×25 | 180 | 600 | |
| 22 | | 12.5×25 | 240 | 600 | |
| | | 16×20 | 292 | 730 | |
| 33 | 16×25 | 392 | 980 | | |
| | 18×20 | 312 | 780 | | |
| 47 | 18×25 | 480 | 1200 | | |
| 68 | 18×31.5 | 520 | 1300 | | |

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[EKXG351ETD6R8MJ16S](#) [EKZM160ETD471MHB5D](#) [EPA-201ELL151MM25S](#) [NCD681K10KVY5PF](#) [NRLF103M25V35X20F](#)
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[40D506F050DF5A](#) [TE1202E](#) [36DA273F050BB2A](#) [KME25VB100M-6.3X11](#) [511D336M250EK5D](#) [511D337M035CG4D](#)
[515D477M035CG8PE3](#) [052687X](#) [EKMA500ELL4R7ME07D](#) [EKRG100ETC221MF09D](#) [NRE-S560M16V6.3X7TBSTF](#)
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