LLA Series

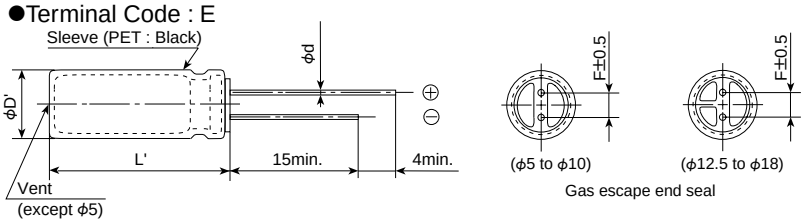
- Endurance : 1,000 hours at 85℃
- Low leakage current type
- Solvent resistant type
- **RoHS Compliant**

◆SPECIFICATIONS

Items	Characteristics
Category Temperature Range	−40 to +85℃
Rated Voltage Range	6.3 to 50Vdc
Capacitance Tolerance	±20% (M) (at 20℃, 120Hz)
Leakage Current	I=0.002CV or 0.2μA, whichever is greater. Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20℃ after 1 minute)
Dissipation Factor (tanδ)	Rated voltage (Vdc) 6.3V 10V 16V 25V 35V 50V tanδ (Max.) 0.24 0.20 0.16 0.14 0.12 0.10 When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20℃, 120Hz)
Low Temperature Characteristics	○Leakage current Leakage current at 85℃ : ≦10 times of the 20℃ specified value ○Max. Impedance Ratio (at 120Hz) Z(−25℃)/Z(+20℃)≦4, Z(−40℃)/Z(+20℃)≦8
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 1,000 hours at 85℃. Capacitance change: ≦±20% of the initial value D.F. (tanδ): ≦150% of the initial specified value Leakage current: ≦The initial specified value
Shelf Life	The same specifications as "Endurance" shall be satisfied when the capacitors are restored to 20℃ after exposing them for 500 hours at 85℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.
Shelf Test	The following specifications shall be satisfied when the capacitors are restored to 20℃ after leaving them for 6 months at a nominal temperature (-10 to +40℃) without voltage applied. Capacitance change: ≦±20% of the initial value D.F. (tanδ): ≦150% of the initial specified value Leakage current: ≦The initial specified value

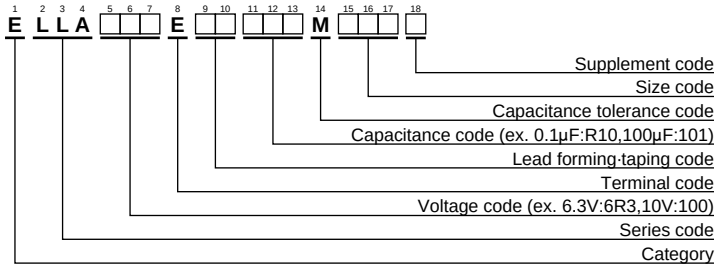
◆DIMENSIONS [mm]

- Terminal Code : E



ϕD	5	6.3	8	10	12.5	16	18
ϕd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
ϕD'	ϕD+0.5max.						
L'	L+1.5max.						

◆PART NUMBERING SYSTEM



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LLA Series

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tanδ	Rated ripple current (mArms/ 85℃,120Hz)	Part No.
6.3	33	5×11	0.24	55	ELLA6R3E□□330ME11D
	47	5×11	0.24	79	ELLA6R3E□□470ME11D
	100	5×11	0.24	130	ELLA6R3E□□101ME11D
	220	6.3×11	0.24	230	ELLA6R3E□□221MF11D
	330	6.3×11	0.24	280	ELLA6R3E□□331MF11D
	470	8×11.5	0.24	380	ELLA6R3E□□471MHB5D
	1,000	10×12.5	0.24	650	ELLA6R3E□□102MJC5S
	2,200	12.5×20	0.26	1,150	ELLA6R3E□□222MK20S
	3,300	12.5×20	0.28	1,380	ELLA6R3E□□332MK20S
	4,700	16×25	0.30	1,880	ELLA6R3E□□472ML25S
	6,800	16×25	0.34	2,120	ELLA6R3E□□682ML25S
	10,000	16×31.5	0.42	2,500	ELLA6R3E□□103MLN3S
	15,000	18×35.5	0.52	2,990	ELLA6R3E□□153MMP1S
10	22	5×11	0.20	59	ELLA100E□□220ME11D
	33	5×11	0.20	84	ELLA100E□□330ME11D
	47	5×11	0.20	100	ELLA100E□□470ME11D
	100	5×11	0.20	145	ELLA100E□□101ME11D
	220	6.3×11	0.20	250	ELLA100E□□221MF11D
	330	8×11.5	0.20	350	ELLA100E□□331MHB5D
	470	8×11.5	0.20	415	ELLA100E□□471MHB5D
	1,000	10×16	0.20	790	ELLA100E□□102MJ16S
	2,200	12.5×20	0.22	1,240	ELLA100E□□222MK20S
	3,300	12.5×25	0.24	1,590	ELLA100E□□332MK25S
	4,700	16×25	0.26	1,980	ELLA100E□□472ML25S
	6,800	16×31.5	0.30	2,390	ELLA100E□□682MLN3S
	10,000	18×35.5	0.38	2,840	ELLA100E□□103MMP1S
16	10	5×11	0.16	44	ELLA160E□□100ME11D
	22	5×11	0.16	75	ELLA160E□□220ME11D
	33	5×11	0.16	90	ELLA160E□□330ME11D
	47	5×11	0.16	110	ELLA160E□□470ME11D
	100	6.3×11	0.16	180	ELLA160E□□101MF11D
	220	8×11.5	0.16	300	ELLA160E□□221MHB5D
	330	8×11.5	0.16	370	ELLA160E□□331MHB5D
	470	10×12.5	0.16	520	ELLA160E□□471MJC5S
	1,000	10×20	0.16	910	ELLA160E□□102MJ20S
	2,200	12.5×25	0.18	1,420	ELLA160E□□222MK25S
	3,300	16×25	0.20	1,840	ELLA160E□□332ML25S
	4,700	16×31.5	0.22	2,260	ELLA160E□□472MLN3S
	6,800	18×35.5	0.26	2,690	ELLA160E□□682MMP1S
	10,000	18×40	0.34	2,920	ELLA160E□□103MM40S
25	4.7	5×11	0.14	31	ELLA250E□□4R7ME11D
	10	5×11	0.14	54	ELLA250E□□100ME11D
	22	5×11	0.14	80	ELLA250E□□220ME11D

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tanδ	Rated ripple current (mArms/ 85℃,120Hz)	Part No.
25	33	5×11	0.14	97	ELLA250E□□330ME11D
	47	5×11	0.14	115	ELLA250E□□470ME11D
	100	6.3×11	0.14	190	ELLA250E□□101MF11D
	220	8×11.5	0.14	320	ELLA250E□□221MHB5D
	330	10×12.5	0.14	470	ELLA250E□□331MJC5S
	470	10×16	0.14	620	ELLA250E□□471MJ16S
	1,000	12.5×20	0.14	1,090	ELLA250E□□102MK20S
	2,200	16×25	0.16	1,660	ELLA250E□□222ML25S
	3,300	16×31.5	0.18	2,070	ELLA250E□□332MLN3S
	4,700	18×35.5	0.20	2,520	ELLA250E□□472MMP1S
	6,800	18×40	0.24	2,830	ELLA250E□□682MM40S
35	4.7	5×11	0.12	40	ELLA350E□□4R7ME11D
	10	5×11	0.12	58	ELLA350E□□100ME11D
	22	5×11	0.12	87	ELLA350E□□220ME11D
	33	5×11	0.12	105	ELLA350E□□330ME11D
	47	6.3×11	0.12	145	ELLA350E□□470MF11D
	100	8×11.5	0.12	240	ELLA350E□□101MHB5D
	220	10×12.5	0.12	420	ELLA350E□□221MJC5S
	330	10×16	0.12	570	ELLA350E□□331MJ16S
	470	10×20	0.12	740	ELLA350E□□471MJ20S
	1,000	12.5×25	0.12	1,300	ELLA350E□□102MK25S
	2,200	16×31.5	0.14	1,890	ELLA350E□□222MLN3S
	3,300	18×35.5	0.16	2,340	ELLA350E□□332MMP1S
	4,700	18×40	0.18	2,690	ELLA350E□□472MM40S
50	0.10	5×11	0.10	1.3	ELLA500E□□R10ME11D
	0.22	5×11	0.10	2.9	ELLA500E□□R22ME11D
	0.33	5×11	0.10	4.4	ELLA500E□□R33ME11D
	0.47	5×11	0.10	11	ELLA500E□□R47ME11D
	1.0	5×11	0.10	17	ELLA500E□□1R0ME11D
	2.2	5×11	0.10	25	ELLA500E□□2R2ME11D
	3.3	5×11	0.10	35	ELLA500E□□3R3ME11D
	4.7	5×11	0.10	42	ELLA500E□□4R7ME11D
	10	5×11	0.10	65	ELLA500E□□100ME11D
	22	5×11	0.10	95	ELLA500E□□220ME11D
	33	6.3×11	0.10	125	ELLA500E□□330MF11D
	47	6.3×11	0.10	150	ELLA500E□□470MF11D
	100	8×11.5	0.10	255	ELLA500E□□101MHB5D
	220	10×16	0.10	490	ELLA500E□□221MJ16S
	330	10×20	0.10	650	ELLA500E□□331MJ20S
	470	12.5×20	0.10	860	ELLA500E□□471MK20S
	1,000	16×25	0.10	1,530	ELLA500E□□102ML25S
	2,200	18×35.5	0.12	2,160	ELLA500E□□222MMP1S

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

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