

LLA Series

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

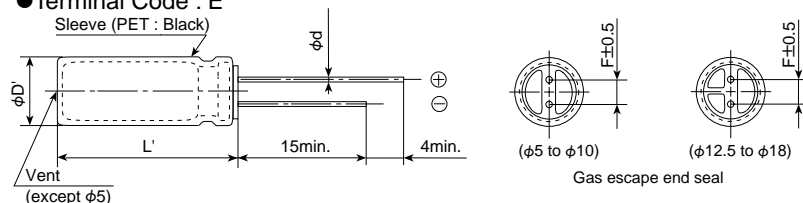


◆SPECIFICATIONS

Items	Characteristics						
Category	-40 to +85°C						
Temperature Range	-40 to +85°C						
Rated Voltage Range	6.3 to 50V _{dc}						
Capacitance Tolerance	±20% (M) (at 20°C, 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°C after 1 minute)						
Dissipation Factor (tanδ)	Rated voltage (V _{dc})	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°C, 120Hz)						
Low Temperature Characteristics	○ Leakage current Leakage current at 85°C : ≤10 times of the 20°C specified value ○ Max. Impedance Ratio (at 120Hz) $Z(-25°C)/Z(+20°C) \leq 4$, $Z(-40°C)/Z(+20°C) \leq 8$						
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 1,000 hours at 85°C.						
	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°C after exposing them for 500 hours at 85°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.						
Shelf Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after leaving them for 6 months at a nominal temperature (-10 to +40°C) 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					

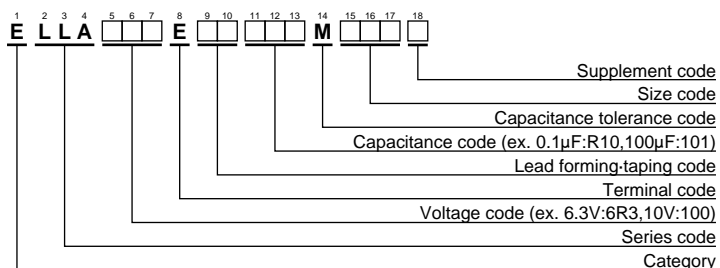
◆DIMENSIONS [mm]

- 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



Specifications in this bulletin are subject to change without notice.

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tanδ	Rated ripple current (mA _{rms} /85°C,120Hz)	Part No.	WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tanδ	Rated ripple current (mA _{rms} /85°C,120Hz)	Part No.
6.3	33	5×11	0.24	55	ELLA6R3E□□330ME11D	25	33	5×11	0.14	97	ELLA250E□□330ME11D
	47	5×11	0.24	79	ELLA6R3E□□470ME11D		47	5×11	0.14	115	ELLA250E□□470ME11D
	100	5×11	0.24	130	ELLA6R3E□□101ME11D		100	6.3×11	0.14	190	ELLA250E□□101MF11D
	220	6.3×11	0.24	230	ELLA6R3E□□221MF11D		220	8×11.5	0.14	320	ELLA250E□□221MHB5D
	330	6.3×11	0.24	280	ELLA6R3E□□331MF11D		330	10×12.5	0.14	470	ELLA250E□□331MJC5S
	470	8×11.5	0.24	380	ELLA6R3E□□471MHB5D		470	10×16	0.14	620	ELLA250E□□471MJ16S
	1,000	10×12.5	0.24	650	ELLA6R3E□□102MJC5S		1,000	12.5×20	0.14	1,090	ELLA250E□□102MK20S
	2,200	12.5×20	0.26	1,150	ELLA6R3E□□222MK20S		2,200	16×25	0.16	1,660	ELLA250E□□222ML25S
	3,300	12.5×20	0.28	1,380	ELLA6R3E□□332MK20S		3,300	16×31.5	0.18	2,070	ELLA250E□□332MLN3S
	4,700	16×25	0.30	1,880	ELLA6R3E□□472ML25S		4,700	18×35.5	0.20	2,520	ELLA250E□□472MMP1S
	6,800	16×25	0.34	2,120	ELLA6R3E□□682ML25S		6,800	18×40	0.24	2,830	ELLA250E□□682MM40S
	10,000	16×31.5	0.42	2,500	ELLA6R3E□□103MLN3S		35	4.7	5×11	0.12	40
15,000	18×35.5	0.52	2,990	ELLA6R3E□□153MMP1S	10	5×11		0.12	58	ELLA350E□□100ME11D	
10	22	5×11	0.20	59	ELLA100E□□220ME11D	22		5×11	0.12	87	ELLA350E□□220ME11D
	33	5×11	0.20	84	ELLA100E□□330ME11D	33		5×11	0.12	105	ELLA350E□□330ME11D
	47	5×11	0.20	100	ELLA100E□□470ME11D	47		6.3×11	0.12	145	ELLA350E□□470MF11D
	100	5×11	0.20	145	ELLA100E□□101ME11D	100		8×11.5	0.12	240	ELLA350E□□101MHB5D
	220	6.3×11	0.20	250	ELLA100E□□221MF11D	220		10×12.5	0.12	420	ELLA350E□□221MJC5S
	330	8×11.5	0.20	350	ELLA100E□□331MHB5D	330		10×16	0.12	570	ELLA350E□□331MJ16S
	470	8×11.5	0.20	415	ELLA100E□□471MHB5D	470		10×20	0.12	740	ELLA350E□□471MJ20S
	1,000	10×16	0.20	790	ELLA100E□□102MJ16S	1,000		12.5×25	0.12	1,300	ELLA350E□□102MK25S
	2,200	12.5×20	0.22	1,240	ELLA100E□□222MK20S	2,200		16×31.5	0.14	1,890	ELLA350E□□222MLN3S
	3,300	12.5×25	0.24	1,590	ELLA100E□□332MK25S	3,300		18×35.5	0.16	2,340	ELLA350E□□332MMP1S
4,700	16×25	0.26	1,980	ELLA100E□□472ML25S	4,700	18×40		0.18	2,690	ELLA350E□□472MM40S	
6,800	16×31.5	0.30	2,390	ELLA100E□□682MLN3S	50	0.10		5×11	0.10	1.3	ELLA500E□□R10ME11D
10,000	18×35.5	0.38	2,840	ELLA100E□□103MMP1S		0.22		5×11	0.10	2.9	ELLA500E□□R22ME11D
16	10	5×11	0.16	44		ELLA160E□□100ME11D		0.33	5×11	0.10	4.4
	22	5×11	0.16	75		ELLA160E□□220ME11D	0.47	5×11	0.10	11	ELLA500E□□R47ME11D
	33	5×11	0.16	90		ELLA160E□□330ME11D	1.0	5×11	0.10	17	ELLA500E□□R10ME11D
	47	5×11	0.16	110		ELLA160E□□470ME11D	2.2	5×11	0.10	25	ELLA500E□□R22ME11D
	100	6.3×11	0.16	180		ELLA160E□□101MF11D	3.3	5×11	0.10	35	ELLA500E□□R33ME11D
	220	8×11.5	0.16	300		ELLA160E□□221MHB5D	4.7	5×11	0.10	42	ELLA500E□□R47ME11D
	330	8×11.5	0.16	370		ELLA160E□□331MHB5D	10	5×11	0.10	65	ELLA500E□□100ME11D
	470	10×12.5	0.16	520		ELLA160E□□471MJC5S	22	5×11	0.10	95	ELLA500E□□220ME11D
	1,000	10×20	0.16	910		ELLA160E□□102MJ20S	33	6.3×11	0.10	125	ELLA500E□□330MF11D
	2,200	12.5×25	0.18	1,420		ELLA160E□□222MK25S	47	6.3×11	0.10	150	ELLA500E□□470MF11D
	3,300	16×25	0.20	1,840		ELLA160E□□332ML25S	100	8×11.5	0.10	255	ELLA500E□□101MHB5D
	4,700	16×31.5	0.22	2,260		ELLA160E□□472MLN3S	220	10×16	0.10	490	ELLA500E□□221MJ16S
6,800	18×35.5	0.26	2,690	ELLA160E□□682MMP1S		330	10×20	0.10	650	ELLA500E□□331MJ20S	
10,000	18×40	0.34	2,920	ELLA160E□□103MM40S		470	12.5×20	0.10	860	ELLA500E□□471MK20S	
25	4.7	5×11	0.14	31	ELLA250E□□4R7ME11D	1,000	16×25	0.10	1,530	ELLA500E□□102ML25S	
	10	5×11	0.14	54	ELLA250E□□100ME11D	2,200	18×35.5	0.12	2,160	ELLA500E□□222MMP1S	
	22	5×11	0.14	80	ELLA250E□□220ME11D						

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