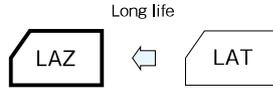


High-Reliability, High-Ripple, Long Life Capacitors

GREEN CAP 105°C 3000hours

- High-reliability, high-ripple, long life capacitors.
- Guarantees 3000 hours at 105°C.



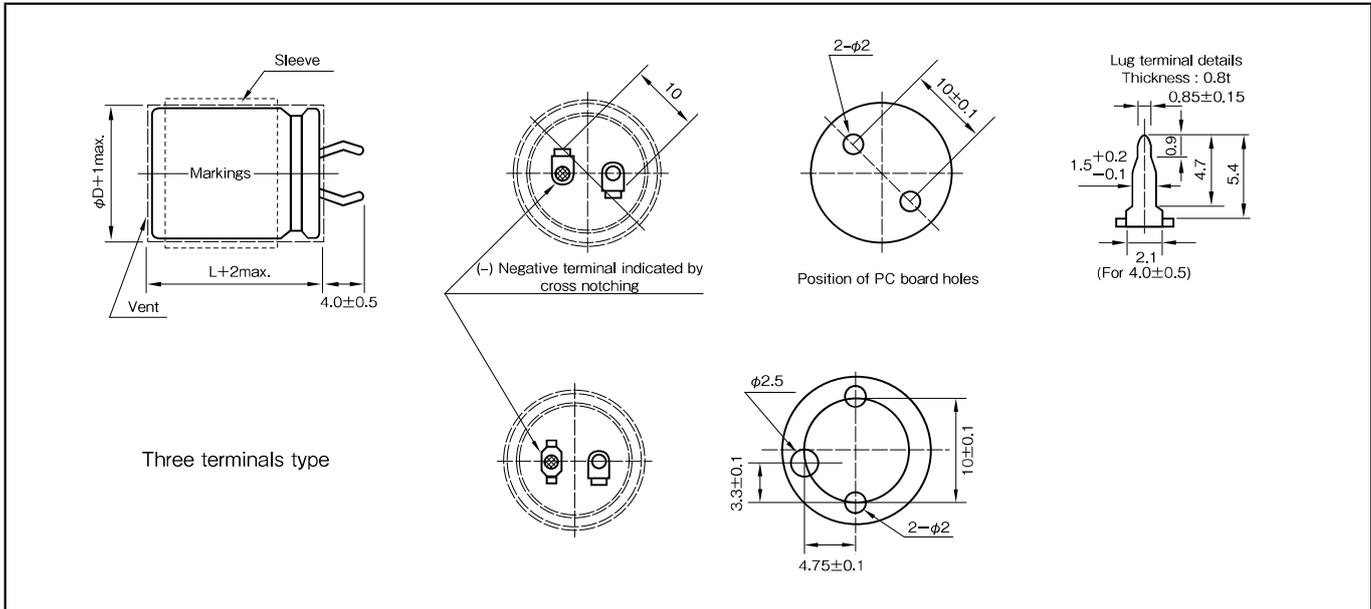
Marking color : White print on a black sleeve

Specifications

Item	Performance								
Category temperature range (°C)	-40 to +105 (-25 to +105 at 160V or more)								
Tolerance at rated capacitance (%)	±20 (20°C, 120Hz)								
Leakage current (µA)	Less than $3\sqrt{CV}$ (after 5 minutes) C : Rated capacitance (µF) ; V : Rated voltage (V) (20°C)								
Tangent of loss angle (tanδ)	Rated voltage (V)	16	25	35	50	63 to 100	160 to 250	350 to 500	
	tanδ (max.)	0.50	0.40	0.35	0.30	0.20	0.15	0.20	
Characteristics at high and low temperature	Impedance ratio (max.)	Rated voltage (V)		16 to 100		160 to 250		350 to 500	
		Z-25°C/Z+20°C	4		4		4		
Endurance (105°C) (Applied ripple current)	Test time	3000 hours							
	Leakage current	The initial specified value or less							
	Percentage of capacitance change	Within ±20% of initial value							
	Tangent of the loss angle	200% or less of the initial specified value							
Shelf life (105°C)	Test time	1000 hours							
	Leakage current	The initial specified value or less							
	Percentage of capacitance change	Within ±15% of initial value							
	Tangent of the loss angle	150% or less of the initial specified value							
Applicable standards	Voltage application treatment JIS C5101-1, -4 1998 (IEC 60384-1 1992, -4 1985)								

Outline Drawing

Unit: mm



Part numbering system					
series LAZ, standard terminal type :400V470µF					
LAZ	—	400 V	471	M	S54 # B
Series code	Rated voltage symbol	Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol	Optional symbol
series LTZ, three terminals type :400V470µF					
LTZ	—	400 V	471	M	S54 # B
Series code	Rated voltage symbol	Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol	Optional symbol

Coefficient of Frequency for Rated Ripple Current

Rated voltage (V)	Frequency (Hz)				
	50	120	1k	10k	30k
100 or less	0.95	1	1.10	1.15	1.15
160 to 250	0.81	1	1.32	1.45	1.50
315 or more	0.77	1	1.30	1.41	1.43

NOTE : Design, Specifications are subject to change without notice. It is recommended that you shall obtain technical specifications from ELNA to ensure that the component is suitable for your use.

Standard Ratings

Case φD×L (mm)	Casing Symbol	Item	Rated voltage (V)		16		25		35		50		63		80		100			
			Rated capacitance (μF)	Rated ripple current (Arms)	Rated capacitance (μF)	Rated ripple current (Arms)	Rated capacitance (μF)	Rated ripple current (Arms)	Rated capacitance (μF)	Rated ripple current (Arms)	Rated capacitance (μF)	Rated ripple current (Arms)	Rated capacitance (μF)	Rated ripple current (Arms)	Rated capacitance (μF)	Rated ripple current (Arms)	Rated capacitance (μF)	Rated ripple current (Arms)		
22×20	S21		4700	1.23	3300	1.21	2200	1.08	1200	0.99	820	0.96	560	0.85	390	0.83				
			5600	1.35	3900	1.31	2700	1.20	1500	1.11	1000	1.06	680	0.94	470	0.91				
			6800	1.48	4700	1.44	3300	1.33	1800	1.22	1200	1.16	820	1.03	560	0.99				
22×25	S22		6800	1.60	4700	1.55	3300	1.43	1800	1.31	1200	1.25	820	1.11	560	1.07				
			8200	1.76	5600	1.69	3900	1.55	2200	1.45	1500	1.40	1000	1.23	680	1.18				
			10000	1.94	6800	1.86	4700	1.71	2700	1.60	1800	1.53	1200	1.34	820	1.29				
22×30	S23		10000	1.99	6800	1.91	3900	1.65	2700	1.70	1800	1.60	1200	1.39	820	1.35				
			12000	2.18	8200	2.10	4700	1.81	3300	1.88	2200	1.68	1500	1.55	1000	1.49				
			15000	2.44	10000	2.32	5600	1.98	3900	2.04	2700	1.86	1800	1.70	1200	1.63				
22×35	S24		12000	2.28	8200	2.14	5600	2.02	3300	1.98	2200	1.73	1500	1.61	1000	1.54				
			15000	2.55	10000	2.36	6800	2.23	3900	2.15	2700	1.92	1800	1.76	1200	1.69				
			18000	2.79	12000	2.59	8200	2.44	4700	2.36	3300	2.12	2200	1.95	1500	1.89				
22×40	S25		18000	2.89	12000	2.63	6800	2.28	4700	2.47	3300	2.18	2200	2.02	1500	1.95				
			22000	3.20	15000	2.94	8200	2.50	5600	2.70	3900	2.37	2700	2.24	1800	2.13				
			—	—	—	—	10000	2.76	—	—	—	—	—	—	—	—	—	—	—	—
22×45	S26		22000	3.29	15000	3.01	10000	2.83	5600	2.79	3900	2.42	2700	2.32	1800	2.18				
			27000	3.65	18000	3.29	12000	3.09	6800	3.08	4700	2.65	3300	2.56	2200	2.41				
22×50	S27		27000	3.81	18000	3.44	12000	3.23	6800	3.18	4700	2.77	3300	2.67	2200	2.52				
			33000	4.21	22000	3.80	—	—	8200	3.50	—	—	3900	2.90	—	—	—	—	—	—
25×20	S31		6800	1.53	4700	1.48	3300	1.39	1800	1.29	1200	1.16	820	1.07	560	1.04				
			8200	1.68	5600	1.61	3900	1.51	2200	1.43	1500	1.29	1000	1.18	680	1.14				
			10000	1.85	6800	1.78	4700	1.66	2700	1.58	1800	1.42	1200	1.29	820	1.26				
25×25	S32		10000	1.99	6800	1.91	4700	1.78	2700	1.70	1800	1.52	1200	1.39	820	1.35				
			12000	2.18	8200	2.10	5600	1.94	3300	1.88	2200	1.68	1500	1.55	1000	1.49				
			15000	2.44	10000	2.32	6800	2.14	3900	2.04	2700	1.86	1800	1.70	1200	1.63				
25×30	S33		12000	2.30	8200	2.16	5600	2.04	3300	2.00	2200	1.75	1500	1.62	1000	1.56				
			15000	2.57	10000	2.39	6800	2.25	3900	2.17	2700	1.94	1800	1.77	1200	1.71				
			18000	2.82	12000	2.61	8200	2.47	4700	2.39	3300	2.14	2200	1.96	1500	1.91				
25×35	S34		18000	2.94	12000	2.67	8200	2.54	4700	2.50	3300	2.20	2200	2.01	1500	1.97				
			22000	3.25	15000	2.99	10000	2.80	5600	2.73	3900	2.39	2700	2.23	1800	2.16				
			—	—	—	—	—	—	—	—	—	—	3300	2.46	—	—	—	—	—	—
25×40	S35		22000	3.36	15000	3.06	10000	2.87	5600	2.81	3900	2.47	2700	2.32	1800	2.22				
			27000	3.72	18000	3.36	12000	3.15	6800	3.10	4700	2.71	3300	2.57	2200	2.46				
25×45	S36		—	—	—	—	—	—	8200	3.40	—	—	3900	2.79	—	—	—	—		
			27000	3.77	18000	3.45	12000	3.20	6800	3.24	4700	2.79	3900	2.92	2200	2.52				
			33000	4.16	22000	3.81	15000	3.58	8200	3.56	5600	3.04	—	—	2700	2.79				
25×50	S37		—	—	—	—	—	—	10000	3.93	—	—	—	—	—	—	—	—		
			33000	4.21	22000	3.91	15000	3.64	10000	4.09	5600	3.14	4700	3.29	2700	2.85				
			39000	4.58	27000	4.34	18000	3.99	—	—	6800	3.46	—	—	3300	3.15				
30×20	S41		8200	1.84	5600	1.74	3900	1.65	2700	1.73	1800	1.47	1200	1.38	820	1.32				
			10000	2.03	6800	1.92	4700	1.82	3300	1.91	2200	1.63	1500	1.55	1000	1.46				
			12000	2.23	8200	2.10	5600	1.98	3900	2.08	2700	1.81	1800	1.69	1200	1.60				
30×25	S42		12000	2.38	8200	2.25	5600	2.12	3900	2.22	2700	1.93	1800	1.81	1200	1.71				
			15000	2.66	10000	2.48	6800	2.34	4700	2.44	3300	2.13	2200	2.00	1500	1.91				
			18000	2.91	12000	2.72	8200	2.57	5600	2.66	3900	2.32	2700	2.22	1800	2.09				
30×30	S43		18000	3.00	12000	2.70	8200	2.56	4700	2.58	3300	2.24	2200	2.10	1500	2.00				
			22000	3.32	15000	3.02	10000	2.83	5600	2.82	3900	2.44	2700	2.33	1800	2.19				
			27000	3.67	18000	3.31	12000	3.10	6800	3.10	4700	2.67	3300	2.57	2200	2.42				
30×35	S44		22000	3.39	15000	3.13	10000	2.92	6800	3.25	4700	2.80	3300	2.69	2200	2.51				
			27000	3.76	18000	3.43	12000	3.20	8200	3.57	5600	3.06	3900	2.92	2700	2.78				
			33000	4.15	22000	3.79	15000	3.58	—	—	—	—	—	—	—	—	—	—	—	—
30×40	S45		33000	4.23	22000	3.91	15000	3.67	8200	3.72	5600	3.17	3900	3.02	2700	2.87				
			39000	4.60	27000	4.34	18000	4.02	10000	4.11	6800	3.49	4700	3.32	3300	3.17				
30×45	S46		39000	4.67	27000	4.70	18000	4.10	10000	4.30	6800	3.61	4700	3.43	3300	3.25				
			47000	5.13	33000	5.19	22000	4.53	12000	4.71	8200	3.97	5600	3.74	3900	3.53				
30×50	S47		47000	5.20	33000	5.40	22000	4.71	12000	4.68	8200	4.10	5600	3.89	3900	3.61				
			56000	5.68	39000	5.88	27000	5.22	15000	5.23	10000	4.52	6800	4.28	4700	3.96				
35×20	S51		12000	2.38	8200	2.17	5600	2.16	3300	2.10	2200	1.85	1500	1.68	1000	1.59				
			15000	2.66	10000	2.40	6800	2.38	3900	2.28	2700	2.05	1800	1.84	1200	1.74				
			18000	2.91	12000	2.63	8200	2.61	4700	2.51	3300	2.26	2200	2.04	1500	1.94				
35×25	S52		18000	3.10	12000	2.80	8200	2.78	4700	2.67	3300	2.41	2200	2.17	1500	2.07				
			22000	3.43	15000	3.13	10000	3.07	5600	2.91	3900	2.62	2700	2.40	1800	2.27				
			27000	3.80	18000	3.43	12000	3.36	6800	3.21	4700	2.88	3300	2.66	2200	2.51				
35×30	S53		27000	3.82	15000	3.22	12000	3.20	6800	3.31	4700	2.83	3300	2.71	2200	2.56				
			33000	4.22	18000	3.53	15000	3.58	8200	3.63	5600	3.09	3900	2.95	2700	2.79				
			39000	4.59	22000	3.90	18000	3.92	10000	4.01	6800	3.40	4700	3.23	3300	3.09				
35×35	S54		33000	4.24	22000	3.96	15000	3.69	8200	3.66	5600	3.24	3900	3.07	2700	2.90				
			39000	4.61	27000	4.39	18000	4.04	10000	4.05	6800	3.57	4700	3.37	3300	3.21				
			47000	5.06	33000	4.85	22000	4.47	12000	4.43	8200	3.92	5600	3.68	3900	3.49				
35×40	S55		47000	5.18	27000	4.56	22000	4.60	12000	4.46	8200	4.07	5600	3.82	3900	3.60				
			56000	5.66	33000	5.04	27000	5.09	15000	4.98	10000	4.50	6800	4.21	4700	3.95				
			—	—	39000	5.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—
35×45	S56		56000	5.75	39000	5.71	27000	5.24	15000	5.										

Standard Ratings

Case φDXL (mm)	Item Casing Symbol	160		180		200		250		350		400		450		500	
		Rated capacitance (μF)	Rated ripple current (Arms)														
22×20	S21	220	0.90	220	0.91	180	0.82	120	0.67	82	0.55	56	0.53	56	0.53	39	0.44
		270	1.00	270	1.00	220	0.91	150	0.75	100	0.61	68	0.58	68	0.58	47	0.48
		330	1.10	330	1.11	270	1.00	180	0.82	120	0.67	82	0.64	—	—	56	0.53
22×25	S22	330	1.24	330	1.25	270	1.17	180	1.00	100	0.69	82	0.71	68	0.65	56	0.59
		390	1.35	390	1.35	330	1.29	220	1.11	120	0.75	100	0.79	82	0.71	68	0.65
		470	1.48	470	1.49	390	1.35	270	1.13	150	0.84	120	0.86	100	0.79	82	0.71
22×30	S23	470	1.56	390	1.41	390	1.57	270	1.33	150	0.88	120	0.90	100	0.82	68	0.68
		560	1.68	470	1.55	470	1.67	330	1.47	180	0.96	150	1.01	120	0.90	82	0.74
		680	1.85	560	1.69	560	1.69	390	1.49	220	1.06	180	1.10	150	1.01	100	0.82
22×35	S24	560	1.75	560	1.73	470	1.70	330	1.50	180	0.98	150	1.03	120	0.92	100	0.84
		680	1.93	680	1.90	560	1.73	390	1.52	220	1.08	180	1.13	150	1.03	120	0.92
		820	2.08	—	—	680	1.90	470	1.58	270	1.20	220	1.25	180	1.13	—	—
22×40	S25	820	2.17	680	1.97	680	1.97	470	1.64	270	1.24	220	1.29	180	1.17	120	0.95
		1000	2.38	820	2.17	820	2.17	560	1.79	330	1.37	270	1.43	220	1.29	150	1.07
22×45	S26	1000	2.42	820	2.21	820	2.21	560	1.82	330	1.40	270	1.46	220	1.32	150	1.09
		1200	2.66	1000	2.44	—	—	680	2.01	390	1.52	—	—	—	—	180	1.19
22×50	S27	1200	2.84	1000	2.50	1000	2.50	680	2.06	390	1.56	330	1.65	270	1.50	180	1.22
		—	—	1200	2.74	—	—	—	—	—	—	—	—	—	—	—	—
25×20	S31	330	1.25	270	1.14	220	1.03	150	0.92	100	0.69	82	0.72	68	0.66	47	0.55
		390	1.36	330	1.26	270	1.14	180	1.01	120	0.76	100	0.80	82	0.72	56	0.60
		470	1.49	390	1.37	330	1.26	220	1.12	150	0.85	120	0.87	100	0.80	68	0.66
25×25	S32	470	1.59	390	1.42	330	1.40	270	1.33	150	0.88	120	0.91	100	0.84	68	0.68
		560	1.74	470	1.56	390	1.52	330	1.47	180	0.97	150	1.01	120	0.91	82	0.75
		680	1.86	560	1.70	470	1.67	390	1.50	220	1.07	180	1.11	150	1.01	100	0.83
25×30	S33	560	1.73	560	1.74	470	1.56	330	1.51	180	0.99	150	1.01	120	0.93	82	0.77
		680	1.91	680	1.91	560	1.70	390	1.55	220	1.09	180	1.11	150	1.03	100	0.85
		820	2.09	820	2.10	680	1.87	470	1.61	270	1.18	220	1.23	180	1.13	120	0.93
25×35	S34	820	2.17	680	1.95	560	1.77	470	1.68	270	1.23	220	1.28	180	1.16	120	0.95
		1000	2.40	820	2.14	680	1.95	560	1.77	330	1.36	270	1.42	220	1.28	150	1.05
		—	—	1000	2.37	820	2.14	—	—	—	—	—	—	—	—	—	—
25×40	S35	1000	2.60	1000	2.43	820	2.20	560	1.82	330	1.40	270	1.45	220	1.31	150	1.08
		1200	2.84	1200	2.67	1000	2.43	680	2.01	390	1.52	330	1.61	270	1.45	180	1.19
25×45	S36	1200	2.90	1200	2.73	1000	2.49	680	2.06	390	1.56	330	1.65	270	1.49	180	1.22
		1500	3.25	—	—	1200	2.73	820	2.26	470	1.71	390	1.79	330	1.65	220	1.35
25×50	S37	1500	3.38	1500	3.26	1200	2.92	820	2.42	470	1.83	390	1.91	330	1.76	220	1.44
		—	—	—	—	—	—	1000	2.66	560	1.99	—	—	—	—	270	1.59
30×20	S41	470	1.50	390	1.37	390	1.37	270	1.14	150	0.85	120	0.87	100	0.80	68	0.66
		560	1.63	470	1.50	470	1.50	330	1.26	180	0.93	150	0.98	120	0.87	82	0.72
		680	1.80	560	1.64	560	1.64	390	1.37	220	1.03	180	1.07	150	0.98	100	0.80
30×25	S42	680	1.85	560	1.69	560	1.75	390	1.47	220	1.06	180	1.10	150	1.00	100	0.82
		820	2.03	680	1.86	680	1.92	470	1.61	270	1.17	220	1.22	180	1.10	120	0.90
		1000	2.24	820	2.04	820	2.04	560	1.69	330	1.29	270	1.35	220	1.22	150	1.00
30×30	S43	820	2.35	820	2.17	680	1.97	470	1.65	270	1.24	220	1.29	180	1.15	120	0.95
		1000	2.60	1000	2.39	820	2.17	560	1.80	330	1.37	270	1.43	220	1.27	150	1.07
		1200	2.84	1200	2.62	1000	2.39	680	1.98	390	1.49	330	1.58	270	1.43	180	1.17
30×35	S44	1200	2.96	1000	2.43	1000	2.43	680	2.04	390	1.52	330	1.61	270	1.45	180	1.19
		1500	3.10	1200	2.66	1200	2.66	820	2.24	470	1.67	390	1.75	330	1.61	220	1.31
30×40	S45	—	—	1500	2.98	—	—	—	—	560	1.82	—	—	—	—	—	—
		1500	3.21	1500	3.01	1200	2.69	820	2.42	470	1.69	390	1.77	330	1.62	220	1.33
30×45	S46	1800	3.52	1800	3.30	1500	3.01	1000	2.60	560	1.84	470	1.94	390	1.77	270	1.47
		2200	4.32	—	—	1500	3.12	1000	2.76	680	2.10	470	2.01	390	1.83	270	1.52
30×50	S47	2200	4.50	2200	3.91	1800	3.54	1200	3.00	—	—	560	2.19	470	2.01	330	1.68
		—	—	—	—	—	—	—	—	820	2.39	680	2.50	560	2.27	390	1.90
35×20	S51	560	1.82	560	1.66	470	1.67	330	1.30	180	0.94	150	0.99	120	0.89	100	0.81
		680	2.01	680	1.83	560	1.82	390	1.41	220	1.04	180	1.08	150	0.99	120	0.89
		820	2.20	820	2.01	680	2.01	470	1.55	270	1.15	220	1.20	180	1.08	150	0.99
35×25	S52	820	2.35	820	2.11	680	2.20	470	1.65	270	1.19	220	1.23	180	1.12	150	1.02
		1000	2.60	1000	2.33	820	2.42	560	1.80	330	1.31	270	1.37	220	1.23	180	1.12
		1200	2.84	1200	2.55	1000	2.67	680	1.98	390	1.43	330	1.51	270	1.37	220	1.23
35×30	S53	1200	2.95	1000	2.42	820	2.40	680	2.04	390	1.51	330	1.56	270	1.50	180	1.15
		1500	3.06	1200	2.65	1000	2.65	820	2.24	470	1.66	390	1.69	330	1.66	220	1.27
		1800	3.35	1500	2.96	1200	2.90	1000	2.47	560	1.81	470	1.86	390	1.69	270	1.41
35×35	S54	1500	3.21	1500	3.02	1200	2.65	820	2.35	470	1.69	390	1.76	330	1.62	270	1.46
		1800	3.52	1800	3.31	1500	2.97	1000	2.60	560	1.85	470	1.93	390	1.76	330	1.62
		2200	3.89	—	—	1800	3.25	1200	2.78	680	2.04	560	2.11	470	1.93	—	—
35×40	S55	2200	4.36	1800	3.37	1500	3.45	1200	2.80	680	2.07	560	2.16	470	2.20	330	1.66
		2700	4.83	2200	3.73	1800	3.78	1500	2.82	820	2.28	680	2.39	560	2.40	390	1.81
35×45	S56	—	—	2200	3.84	2200	4.42	1500	2.88	680	2.14	680	2.53	560	2.48	390	1.86
		—	—	2700	4.25	—	—	—	—	820	2.34	—	—	—	—	470	2.04
35×50	S57	2700	5.15	2700	4.29	2200	4.60	1500	3.30	1000	2.61	820	3.00	680	2.61	470	2.06
		3300	5.69	3300	4.74	2700	5.09	1800	3.44	—	—	—</					