

LHU Series

- Lineup of high-capacity products for server power supplies and solar power generation applications.
- Endurance with ripple current : 5,000 hours at 105°C.
- Rated voltage range : 400 to 500V, Capacitance range : 120 to 2,180μF
- Non solvent resistant type
- RoHS2 Compliant

Long case (85 to 100L)
LineUP!

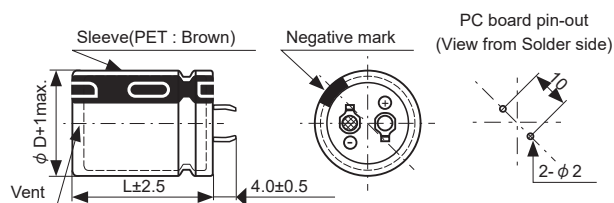
SPECIFICATION

Items	Characteristics	
Category	-40 to +105°C	
Temperature Range		
Rated Voltage Range	400 to 500V _{dc}	
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)	
Leakage Current	$I \leq 3\sqrt{CV}$ Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 5 minutes)	
Dissipation Factor (tan δ)	Rated voltage (V _{dc})	400 to 500V
	tan δ (Max.)	0.20 (at 20°C, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V _{dc})	400 to 500V
	Z(-25°C)/Z(+20°C)	8 (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 5,000 hours at 105°C.	
	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	≤ ±15% of the initial value
	D.F. (tan δ)	≤ 150% of the initial specified value
	Leakage current	≤ The initial specified value

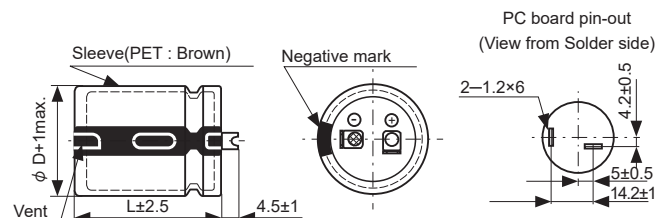
DIMENSIONS[mm]

● Terminal Code : VS (φ 25.4 to φ 35) : Standard

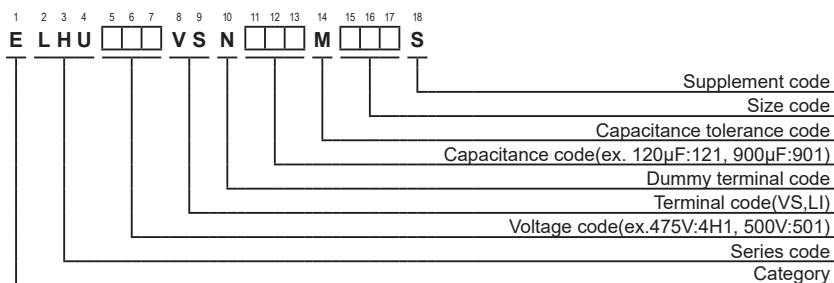
● Terminal Code : LI (φ 30、φ 35)



The standard design has no plastic disc.



PART NUMBERING SYSTEM



LHU Series

◆ STANDARD RATINGS

WV (V _{dc})	Cap (μF)	Case size φ D×L(mm)	tan δ	Rated ripple current (Arms/ 105°C, 120Hz)	Part No.	WV (V _{dc})	Cap (μF)	Case size φ D×L(mm)	tan δ	Rated ripple current (Arms/ 105°C, 120Hz)	Part No.
400	380	25.4 × 35	0.20	1.58	ELHU401VSN381MQ35S	420	1,040	30 × 60	0.20	2.90	ELHU421VSN1A2MR60S
	450	25.4 × 40	0.20	1.75	ELHU401VSN451MQ40S		1,100	30 × 65	0.20	3.04	ELHU421VSN112MR65S
	460	35 × 25	0.20	1.53	ELHU401VSN461MA25S		1,120	35 × 50	0.20	2.68	ELHU421VSN112MA50S
	470	30 × 30	0.20	1.71	ELHU401VSN471MR30S		1,180	30 × 70	0.20	3.20	ELHU421VSN122MR70S
	520	25.4 × 45	0.20	1.92	ELHU401VSN521MQ45S		1,250	30 × 75	0.20	3.35	ELHU421VSN1C2MR75S
	580	30 × 35	0.20	1.94	ELHU401VSN581MR35S		1,260	35 × 55	0.20	2.86	ELHU421VSN1C2MA55S
	590	25.4 × 50	0.20	2.08	ELHU401VSN591MQ50S		1,340	30 × 80	0.20	3.52	ELHU421VSN1D2MR80S
	600	35 × 30	0.20	1.78	ELHU401VSN601MA30S		1,400	35 × 60	0.20	3.04	ELHU421VSN142MA60S
	660	25.4 × 55	0.20	2.24	ELHU401VSN661MQ55S		1,420	35 × 65	0.20	3.12	ELHU421VSN142MA65S
	680	30 × 40	0.20	2.16	ELHU401VSN681MR40S		1,440	30 × 85	0.20	3.71	ELHU421VSN1E2MR85S
	720	25.4 × 60	0.20	2.38	ELHU401VSN721MQ60S		1,540	30 × 90	0.20	3.90	ELHU421VSN1F2MR90S
	750	35 × 35	0.20	2.02	ELHU401VSN751MA35S		1,550	35 × 70	0.20	3.32	ELHU421VSN1F2MA70S
	790	30 × 45	0.20	2.39	ELHU401VSN791MR45S		1,610	30 × 95	0.20	4.04	ELHU421VSN162MR95S
	890	35 × 40	0.20	2.28	ELHU401VSN891MA40S		1,680	35 × 75	0.20	3.51	ELHU421VSN172MA75S
	900	30 × 50	0.20	2.60	ELHU401VSN901MR50S		1,700	30 × 100	0.20	4.21	ELHU421VSN172MRA0S
	1,010	30 × 55	0.20	2.80	ELHU401VSN102MR55S		1,810	35 × 80	0.20	3.71	ELHU421VSN182MA80S
	1,040	35 × 45	0.20	2.53	ELHU401VSN1A2MA45S		1,940	35 × 85	0.20	3.90	ELHU421VSN1K2MA85S
	1,090	30 × 60	0.20	2.97	ELHU401VSN112MR60S		2,070	35 × 90	0.20	4.09	ELHU421VSN2A2MA90S
	1,160	30 × 65	0.20	3.12	ELHU401VSN132MR65S	450	320	25.4 × 35	0.20	1.45	ELHU451VSN321MQ35S
	1,180	35 × 50	0.20	2.75	ELHU401VSN122MA50S		390	25.4 × 40	0.20	1.63	ELHU451VSN391MQ40S
	1,240	30 × 70	0.20	3.28	ELHU401VSN1C2MR70S		390	35 × 25	0.20	1.41	ELHU451VSN391MA25S
	1,310	30 × 75	0.20	3.43	ELHU401VSN132MR75S		400	30 × 30	0.20	1.57	ELHU451VSN401MR30S
	1,320	35 × 55	0.20	2.93	ELHU401VSN132MA55S		450	25.4 × 45	0.20	1.79	ELHU451VSN451MQ45S
	1,410	30 × 80	0.20	3.61	ELHU401VSN142MR80S		490	30 × 35	0.20	1.78	ELHU451VSN491MR35S
	1,470	35 × 60	0.20	3.11	ELHU401VSN1E2MA60S		510	25.4 × 50	0.20	1.94	ELHU451VSN511MQ50S
	1,500	35 × 65	0.20	3.21	ELHU401VSN152MA65S		520	35 × 30	0.20	1.66	ELHU451VSN521MA30S
	1,510	30 × 85	0.20	3.80	ELHU401VSN152MR85S		570	25.4 × 55	0.20	2.08	ELHU451VSN571MQ55S
	1,610	30 × 90	0.20	3.98	ELHU401VSN162MR90S		590	30 × 40	0.20	2.02	ELHU451VSN591MR40S
	1,630	35 × 70	0.20	3.40	ELHU401VSN1G2MA70S		620	25.4 × 60	0.20	2.21	ELHU451VSN621MQ60S
	1,690	30 × 95	0.20	4.14	ELHU401VSN172MR95S		640	35 × 35	0.20	1.87	ELHU451VSN641MA35S
	1,770	35 × 75	0.20	3.61	ELHU401VSN1H2MA75S		680	30 × 45	0.20	2.22	ELHU451VSN681MR45S
	1,790	30 × 100	0.20	4.32	ELHU401VSN182MRA0S		770	30 × 50	0.20	2.40	ELHU451VSN771MR50S
	1,910	35 × 80	0.20	3.81	ELHU401VSN192MA80S		770	35 × 40	0.20	2.12	ELHU451VSN771MA40S
	2,040	35 × 85	0.20	4.00	ELHU401VSN2A2MA85S		860	30 × 55	0.20	2.59	ELHU451VSN861MR55S
	2,180	35 × 90	0.20	4.20	ELHU401VSN222MA90S		890	35 × 45	0.20	2.34	ELHU451VSN891MA45S
420	360	25.4 × 35	0.20	1.54	ELHU421VSN361MQ35S		940	30 × 60	0.20	2.76	ELHU451VSN941MR60S
	430	25.4 × 40	0.20	1.72	ELHU421VSN431MQ40S		1,010	30 × 65	0.20	2.91	ELHU451VSN102MR65S
	430	35 × 25	0.20	1.48	ELHU421VSN431MA25S		1,020	35 × 50	0.20	2.56	ELHU451VSN102MA50S
	440	30 × 30	0.20	1.65	ELHU421VSN441MR30S		1,080	30 × 70	0.20	3.06	ELHU451VSN112MR70S
	490	25.4 × 45	0.20	1.87	ELHU421VSN491MQ45S		1,140	30 × 75	0.20	3.20	ELHU451VSN1B2MR75S
	550	30 × 35	0.20	1.89	ELHU421VSN551MR35S		1,140	35 × 55	0.20	2.72	ELHU451VSN1B2MA55S
	560	25.4 × 50	0.20	2.03	ELHU421VSN561MQ50S		1,230	30 × 80	0.20	3.38	ELHU451VSN1C2MR80S
	570	35 × 30	0.20	1.74	ELHU421VSN571MA30S		1,260	35 × 60	0.20	2.88	ELHU451VSN1C2MA60S
	630	25.4 × 55	0.20	2.19	ELHU421VSN631MQ55S		1,300	35 × 65	0.20	2.98	ELHU451VSN132MA65S
	650	30 × 40	0.20	2.12	ELHU421VSN651MR40S		1,310	30 × 85	0.20	3.54	ELHU451VSN132MR85S
	680	25.4 × 60	0.20	2.31	ELHU421VSN681MQ60S		1,400	30 × 90	0.20	3.71	ELHU451VSN142MR90S
	710	35 × 35	0.20	1.97	ELHU421VSN711MA35S		1,410	35 × 70	0.20	3.16	ELHU451VSN142MA70S
	750	30 × 45	0.20	2.33	ELHU421VSN751MR45S		1,450	30 × 95	0.20	3.84	ELHU451VSN1E2MR95S
	850	30 × 50	0.20	2.52	ELHU421VSN851MR50S		1,530	35 × 75	0.20	3.35	ELHU451VSN1F2MA75S
	850	35 × 40	0.20	2.23	ELHU421VSN851MA40S		1,540	30 × 100	0.20	4.01	ELHU451VSN1F2MRA0S
	960	30 × 55	0.20	2.73	ELHU421VSN961MR55S		1,650	35 × 80	0.20	3.54	ELHU451VSN1G2MA80S
	980	35 × 45	0.20	2.45	ELHU421VSN981MA45S		1,770	35 × 85	0.20	3.73	ELHU451VSN1H2MA85S
							1,890	35 × 90	0.20	3.91	ELHU451VSN192MA90S

LHU Series

◆ STANDARD RATINGS

WV (V _{dc})	Cap (μF)	Case size φ D×L(mm)	tan δ	Rated ripple current (Arms/ 105°C, 120Hz)	Part No.	WV (V _{dc})	Cap (μF)	Case size φ D×L(mm)	tan δ	Rated ripple current (Arms/ 105°C, 120Hz)	Part No.
475	150	25.4×25	0.20	1.03	ELHU4H1VSN151MQ25S	500	120	25.4×25	0.20	0.93	ELHU501VSN121MQ25S
	190	25.4×30	0.20	1.20	ELHU4H1VSN191MQ30S		160	25.4×30	0.20	1.10	ELHU501VSN161MQ30S
	220	30×25	0.20	1.32	ELHU4H1VSN221MR25S		180	30×25	0.20	1.20	ELHU501VSN181MR25S
	240	25.4×35	0.20	1.40	ELHU4H1VSN241MQ35S		200	25.4×35	0.20	1.28	ELHU501VSN201MQ35S
	270	35×25	0.20	1.48	ELHU4H1VSN271MA25S		240	25.4×40	0.20	1.43	ELHU501VSN241MQ40S
	280	25.4×40	0.20	1.54	ELHU4H1VSN281MQ40S		240	30×30	0.20	1.40	ELHU501VSN241MR30S
	290	30×30	0.20	1.54	ELHU4H1VSN291MR30S		240	35×25	0.20	1.37	ELHU501VSN241MA25S
	330	25.4×45	0.20	1.71	ELHU4H1VSN331MQ45S		280	25.4×45	0.20	1.57	ELHU501VSN281MQ45S
	360	30×35	0.20	1.75	ELHU4H1VSN361MR35S		300	30×35	0.20	1.60	ELHU501VSN301MR35S
	360	35×30	0.20	1.71	ELHU4H1VSN361MA30S		320	25.4×50	0.20	1.71	ELHU501VSN321MQ50S
	370	25.4×50	0.20	1.84	ELHU4H1VSN371MQ50S		330	35×30	0.20	1.63	ELHU501VSN331MA30S
	420	25.4×55	0.20	1.99	ELHU4H1VSN421MQ55S		370	25.4×55	0.20	1.87	ELHU501VSN371MQ55S
	420	30×40	0.20	1.95	ELHU4H1VSN421MR40S		370	30×40	0.20	1.83	ELHU501VSN371MR40S
	450	35×35	0.20	1.94	ELHU4H1VSN451MA35S		410	25.4×60	0.20	2.00	ELHU501VSN411MQ60S
	460	25.4×60	0.20	2.12	ELHU4H1VSN461MQ60S		410	35×35	0.20	1.85	ELHU501VSN411MA35S
	490	30×45	0.20	2.16	ELHU4H1VSN491MR45S		430	30×45	0.20	2.02	ELHU501VSN431MR45S
	540	35×40	0.20	2.20	ELHU4H1VSN541MA40S		490	30×50	0.20	2.19	ELHU501VSN491MR50S
	560	30×50	0.20	2.34	ELHU4H1VSN561MR50S		490	35×40	0.20	2.09	ELHU501VSN491MA40S
	620	30×55	0.20	2.51	ELHU4H1VSN621MR55S		550	30×55	0.20	2.37	ELHU501VSN551MR55S
	630	35×45	0.20	2.43	ELHU4H1VSN631MA45S		580	35×45	0.20	2.33	ELHU501VSN581MA45S
	690	30×60	0.20	2.70	ELHU4H1VSN691MR60S		610	30×60	0.20	2.54	ELHU501VSN611MR60S
	710	30×65	0.20	2.79	ELHU4H1VSN711MR65S		650	30×65	0.20	2.67	ELHU501VSN651MR65S
	720	35×50	0.20	2.65	ELHU4H1VSN721MA50S		660	35×50	0.20	2.54	ELHU501VSN661MA50S
	770	30×70	0.20	2.96	ELHU4H1VSN771MR70S		710	30×70	0.20	2.84	ELHU501VSN711MR70S
	810	35×55	0.20	2.87	ELHU4H1VSN811MA55S		740	35×55	0.20	2.74	ELHU501VSN741MA55S
	840	30×75	0.20	3.14	ELHU4H1VSN841MR75S		770	30×75	0.20	3.01	ELHU501VSN771MR75S
	900	30×80	0.20	3.31	ELHU4H1VSN901MR80S		780	30×85	0.20	3.13	ELHU501VSN781MR85S
	900	35×60	0.20	3.08	ELHU4H1VSN901MA60S		830	30×80	0.20	3.18	ELHU501VSN831MR80S
	930	30×85	0.20	3.41	ELHU4H1VSN931MR85S		830	30×90	0.20	3.27	ELHU501VSN831MR90S
	960	35×65	0.20	3.24	ELHU4H1VSN961MA65S		830	35×60	0.20	2.95	ELHU501VSN831MA60S
	1,000	30×90	0.20	3.59	ELHU4H1VSN102MR90S		880	30×95	0.20	3.42	ELHU501VSN881MR95S
	1,040	35×70	0.20	3.43	ELHU4H1VSN1A2MA70S		880	35×65	0.20	3.10	ELHU501VSN881MA65S
	1,060	30×95	0.20	3.76	ELHU4H1VSN1A2MR95S		930	30×100	0.20	3.57	ELHU501VSN931MRA0S
	1,120	30×100	0.20	3.92	ELHU4H1VSN112MRA0S		960	35×70	0.20	3.29	ELHU501VSN961MA70S
	1,130	35×75	0.20	3.64	ELHU4H1VSN1B2MA75S		1,040	35×75	0.20	3.49	ELHU501VSN1A2MA75S
	1,220	35×80	0.20	3.85	ELHU4H1VSN122MA80S		1,050	35×85	0.20	3.63	ELHU501VSN1A2MA85S
	1,250	35×85	0.20	3.96	ELHU4H1VSN1C2MA85S		1,120	35×80	0.20	3.69	ELHU501VSN112MA80S
	1,330	35×90	0.20	4.15	ELHU4H1VSN1D2MA90S		1,120	35×90	0.20	3.81	ELHU501VSN112MA90S
	1,420	35×95	0.20	4.36	ELHU4H1VSN142MA95S		1,190	35×95	0.20	3.99	ELHU501VSN122MA95S
	1,500	35×100	0.20	4.54	ELHU4H1VSN152MAA0S		1,260	35×100	0.20	4.17	ELHU501VSN1C2MAA0S

◆ RATED RIPLE CURRENT MULTIPLIERS

● Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k
400 to 450V _{dc}	0.77	1.00	1.10	1.21	1.32	1.33
475,500V _{dc}	0.77	1.00	1.11	1.20	1.25	1.33

The deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current.