



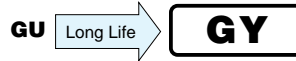
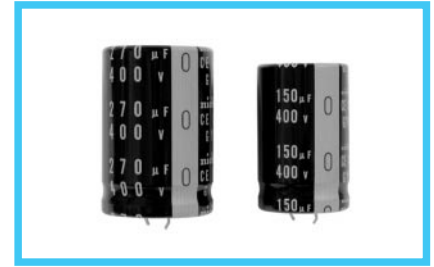
Snap-in Terminal Type, Long Life, Wide Temperature Range

series



Long Life

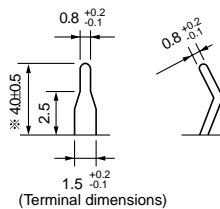
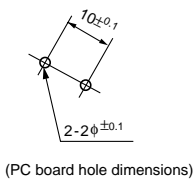
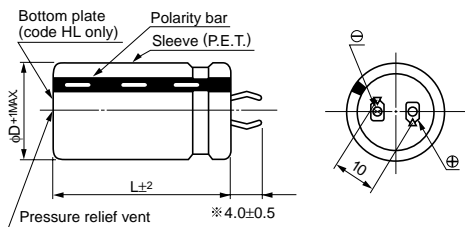
- Long life assurance series withstanding 7000 hours application of ripple current at 105°C.
- Suited for use in industrial power supplies applications where high reliability and dependable performance are the most important.
- Suited for ballast application.



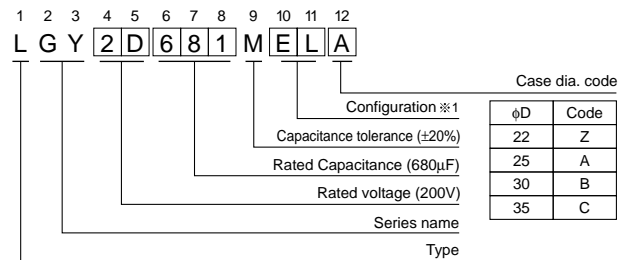
## Specifications

Item	Performance Characteristics								
Category Temperature Range	- 40 ~ +105°C (160~250V) , - 25 ~ +105°C (315 ~ 450V)								
Rated Voltage Range	160 ~ 450V								
Rated Capacitance Range	39 ~ 2200μF								
Capacitance Tolerance	±20% at 120Hz, 20°C								
Leakage Current	$I \leq 3\sqrt{CV}$ (μA) (After 5 minutes' application of rated voltage) [C : Rated Capacitance (μF), V : Voltage(V)]								
tan δ	Measurement frequency : 120Hz, Temperature : 20°C								
	Rated voltage(V)	160	180	200	250	315	350	400	450
	tan δ (MAX.)	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.20
Stability at Low Temperature	Measurement frequency : 120Hz								
	Rated voltage(V)		160 ~ 250		315 ~ 450				
	Impedance ratio	Z-25°C/Z+20°C		3		8			
	ZT/Z20 (MAX.)	Z-40°C/Z+20°C		12		—			
Endurance	After an application of DC voltage (in the range of rated DC voltage even after over-lapping the specified ripple current) for 7000 hours at 105°C, capacitors meet the characteristic requirements listed at right.								
	Capacitance change	Within ±25% of initial value							
	tan δ	250% or less of initial specified value							
Shelf Life	After leaving capacitors under no load at 105°C for 1000 hours, they meet the requirements listed at right.								
	Capacitance change	Within ±15% of initial value							
	tan δ	150% or less of initial specified value							
Marking	Printed with white color letter on black sleeve.								

## Drawing



## Type numbering system (Example : 200V 680μF)



### ※ 1 Configuration

Pb free lead finishing	Sn-Pb lead finishing
Pb free PET sleeve	PVC sleeve contain Pb
Without bottom plate	With bottom plate
EL	HL

※ Please contact to us if other configurations are required.

※ The other terminal is also available upon request.  
Please refer page 197 for schematic of dimensions.

Minimum order quantity : 50pcs.

● Dimension table in next page.



## ■ Dimensions

D × L (mm)

Cap.(μF)	V(Code) Code	160V (2C)				180V (2Z)				200V (2D)				250V (2E)			
		22	25	30	35	22	25	30	35	22	25	30	a35	22	25	30	35
180	181													22×30	25×25		
														0.90	0.90		
220	221					22×25				22×25				22×30	25×25		
						1.00				1.00				1.00	1.00		
270	271	22×25				22×25				22×30	25×25			22×35	25×30	30×25	
		1.10				1.10				1.10	1.10			1.10	1.10	1.10	
330	331	22×30				22×30	25×25			22×30	25×25			22×40	25×35	30×25	
		1.20				1.20	1.20			1.20	1.20			1.20	1.20	1.20	
390	391	22×30	25×25			22×30	25×25			22×35	25×30	30×25		22×45	25×35	30×30	
		1.30	1.30			1.30	1.30			1.30	1.30	1.30		1.30	1.30	1.30	
470	471	22×35	25×30			22×35	25×30	30×25		22×40	25×35	30×30			25×45	30×35	35×30
		1.40	1.40			1.40	1.40	1.40		1.40	1.40	1.40			1.40	1.40	1.40
560	561	22×40	25×30	30×25		22×40	25×35	30×25		22×45	25×35	30×30			25×50	30×35	35×30
		1.50	1.50	1.50		1.50	1.50	1.50		1.50	1.50	1.50			1.50	1.50	1.50
680	681	22×45	25×35	30×30		22×50	25×40	30×30			25×40	30×35				30×45	35×35
		1.70	1.70	1.70		1.70	1.70	1.70			1.70	1.70				1.70	1.70
820	821		25×40	30×30			25×45	30×35	35×30		25×50	30×40	35×30			30×50	35×40
			2.00	2.00			2.00	2.00	2.00		2.00	2.00	2.00			2.00	2.00
1000	102		25×45	30×35				30×40	35×30			30×45	35×35				35×45
			2.20	2.20				2.20	2.20			2.20	2.20				2.20
1200	122		25×50	30×40	35×35			30×45	35×35			30×50	35×40				35×50
			2.30	2.30	2.30			2.30	2.30			2.30	2.30				2.30
1500	152			30×45	35×35			30×50	35×40				35×50				
				2.50	2.50			2.50	2.50				2.50				
1800	182			30×50	35×40				35×45								
				2.70	2.70				2.70								
2200	222				35×50				35×50								
					2.90				2.90								
																	Case size
																	Rated ripple

Cap.(μF)	V(Code) Code	315V (2F)				350V (2V)				400V (2G)				450V (2W)			
		22	25	30	35	22	a25	30	a35	22	25	30	35	a22	a25	30	a35
39	390													22×25			
														0.37			
47	470													22×30			
														0.40			
56	560									22×25				22×35	25×25		
										0.51				0.47	0.47		
68	680									22×30	25×25			22×40	25×30		
										0.56	0.56			0.53	0.53		
82	820	22×25				22×25				22×35	25×25			22×45	25×35	30×25	
		0.64				0.64				0.64	0.64			0.56	0.56	0.56	
100	101	22×30				22×30	25×25			22×35	25×30			22×50	25×40	30×30	
		0.69				0.69	0.69			0.69	0.69			0.64	0.64	0.64	
120	121	22×30	25×25			22×35	25×30			22×40	25×35	30×25			25×45	30×30	
		0.75	0.75			0.75	0.75			0.75	0.75	0.75			0.72	0.72	
150	151	22×35	25×30	30×25		22×40	25×30	30×25		22×50	25×40	30×30			25×50	30×40	35×30
		0.82	0.82	0.82		0.82	0.82	0.82		0.82	0.82	0.82			0.79	0.79	0.79
180	181	22×40	25×35	30×25		22×45	25×35	30×30			25×45	30×35	35×25			30×45	35×35
		0.90	0.90	0.90		0.90	0.90	0.90			0.90	0.90	0.90			0.87	0.87
220	221	22×45	25×40	30×30		22×50	25×40	30×30			25×50	30×40	35×30			30×50	35×40
		1.00	1.00	1.00		1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00
270	271		25×45	30×35	35×30		25×50	30×35	35×30			30×45	35×35				35×45
			1.10	1.10	1.10		1.10	1.10	1.10			1.10	1.10				1.19
330	331		25×50	30×40	35×30			30×45	35×35			30×50	35×40				35×50
			1.20	1.20	1.20			1.20	1.20			1.20	1.20				1.38
390	391			30×45	35×35			30×50	35×40				35×45				
				1.30	1.30			1.30	1.30				1.30				
470	471			30×50	35×40				35×40				35×50				
				1.40	1.40				1.40				1.40				
560	561				35×45				35×50								
					1.50				1.50								
680	681				35×50												
					1.70												
																	Case size
																	Rated ripple

### ● Frequency coefficient of rated ripple current

Rated Ripple (A rms) at 105°C 120Hz

Frequency (Hz)	50	60	120	300	1k	10k	50k~
Coeff. 160~250V	0.81	0.85	1.00	1.17	1.32	1.45	1.50
Coeff. 315~450V	0.77	0.82	1.00	1.16	1.30	1.41	1.43