

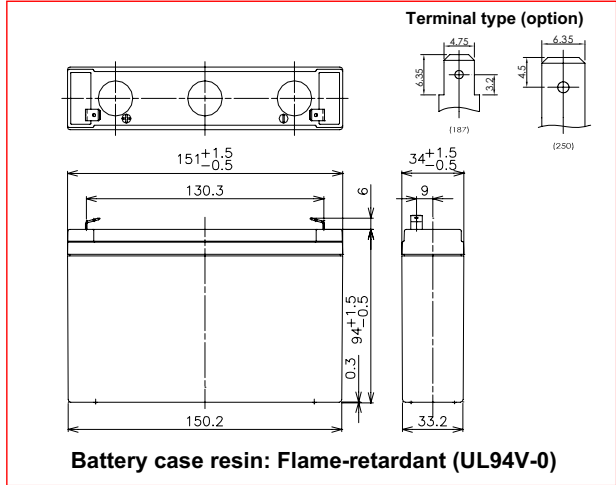
LC-P067R2

For standby power supplies
Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



Contents indicated (including the recycle marking, etc) are subject to change without notice.

Dimensions(mm)



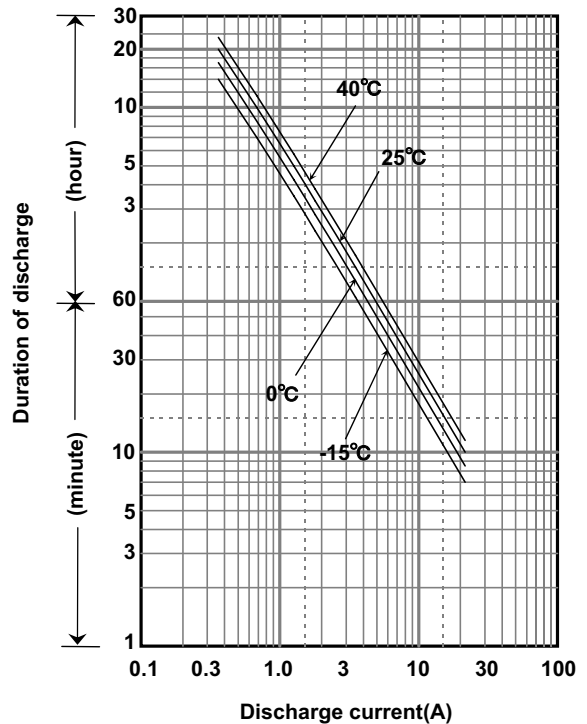
Specification

Nominal Voltage	6V	
Nominal Capacity(20HR)	7.2Ah	
Dimensions	Length	151 mm
	Width	34 mm
	Height	94 mm
	Total height	100 mm
Approx. Mass	1.30 kg	
Terminal	Faston 187 & 250	

Characteristics

Capacity (25 °C)	20 hour rate	7.2Ah
	10 hour rate	6.8Ah
	5 hour rate	6.3Ah
	1 hour rate	4.9Ah
Internal Resistance	Fully charged battery (25 °C)	11 mΩ
	Temperature Dependency of Capacity (20 hour rate)	
	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

Duration of discharge vs. discharge current



Watt Table(25°C)

Cut-off V	(Wattage/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
4.8V	216	171	111	85.1	71.3	53.2	37.6	30.0	20.7	16.0	11.9	9.14	7.55	6.07	4.02	2.18	1.82
4.95V	201	160	109	84.5	70.2	52.7	37.3	30.0	20.3	15.9	11.8	9.08	7.49	6.04	4.00	2.17	1.81
5.1V	185	150	106	82.8	69.0	52.1	37.0	29.5	19.8	15.5	11.7	9.02	7.43	6.00	3.96	2.17	1.81
5.25V	165	134	98.6	77.1	65.5	50.9	36.4	28.9	19.4	14.9	11.5	8.96	7.37	5.92	3.94	2.16	1.80
5.4V	139	119	87.9	71.9	63.8	49.1	35.8	28.3	18.9	14.2	11.3	8.84	7.19	5.83	3.90	2.15	1.79

Ampere Table(25°C)

Cut-off V	(Ampere/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
4.8V	38.9	30.6	19.9	14.8	12.3	9.10	6.40	5.10	3.50	2.70	2.00	1.50	1.26	1.00	0.670	0.360	0.300
4.95V	36.1	28.7	18.5	14.8	12.1	9.00	6.40	5.10	3.40	2.60	2.00	1.50	1.25	1.00	0.670	0.360	0.300
5.1V	33.3	26.9	19.0	14.4	11.9	8.90	6.30	5.00	3.30	2.50	1.95	1.50	1.24	1.00	0.660	0.360	0.300
5.25V	29.6	24.1	17.6	13.4	11.3	8.70	6.20	4.90	3.30	2.50	1.95	1.50	1.23	1.00	0.660	0.360	0.300
5.4V	25.0	21.3	15.7	12.5	11.0	8.40	6.10	4.80	3.20	2.40	1.90	1.50	1.20	1.00	0.650	0.350	0.300

Charging Method

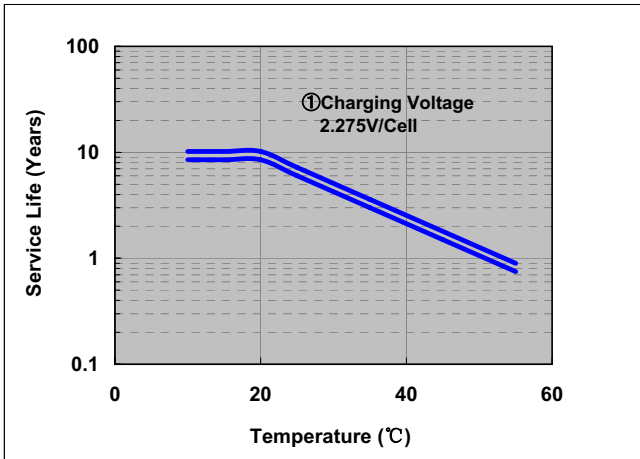
(25°C)

Trickle use	Control voltage 6.8-6.9V; Initial current 1.08A or smaller
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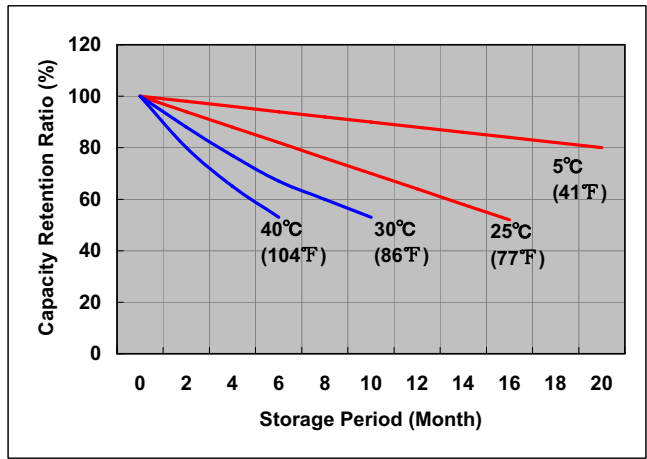
Cut off voltage

Discharge current	0.36A-1.44A	1.44A-3.6A	3.6A-7.2A	7.2A-14.4A	14.4A-21.6A
Cut off voltage (V)	5.25	5.1	4.95	4.65	4.35

Influence of Temperature on Trickle life

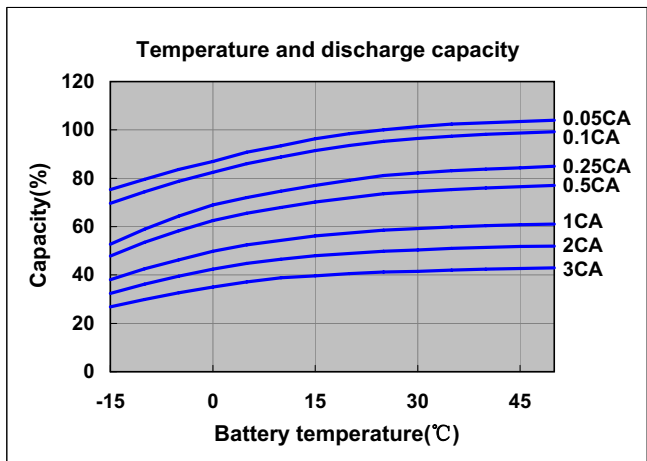
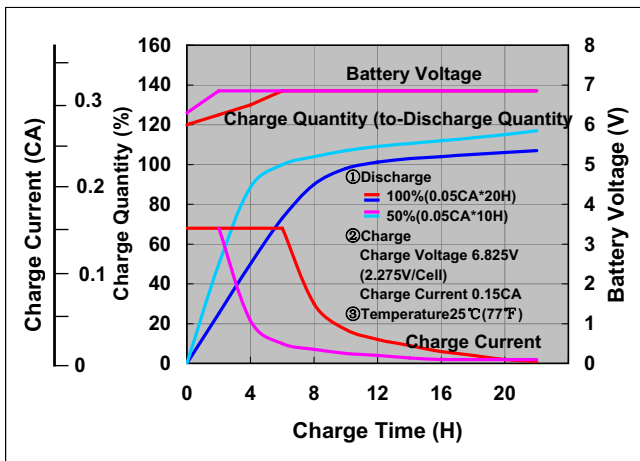


Residual capacity test result

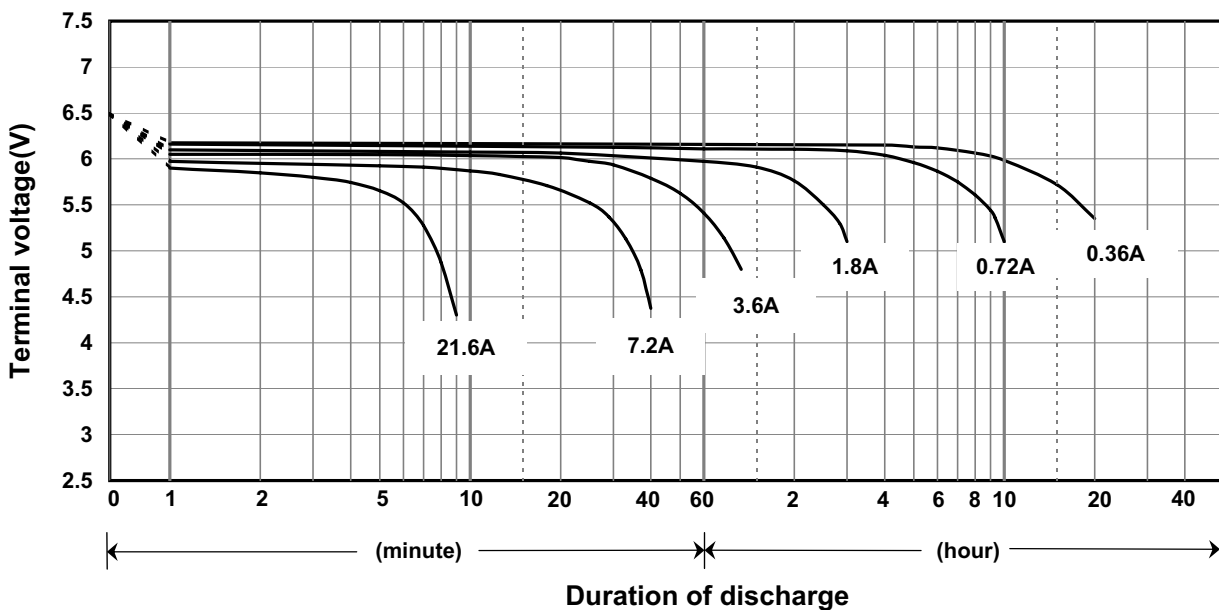


Constant-voltage and constant-current charge characteristics

Discharge capacity by temperature and by discharge current



Discharge characteristics (25°C)

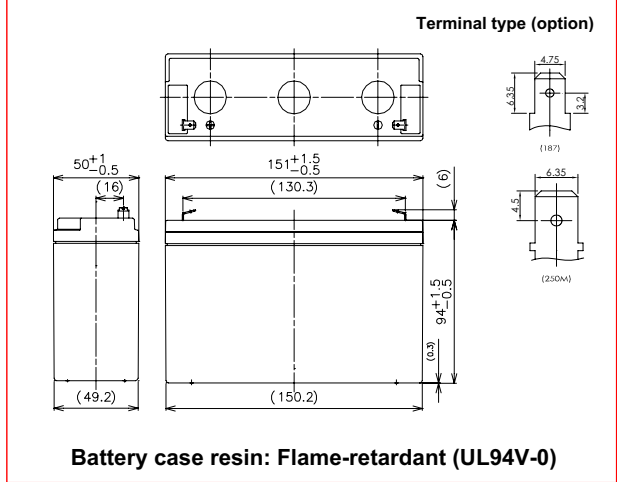


LC-P0612

For standby power supplies
Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



■ Dimensions(mm)



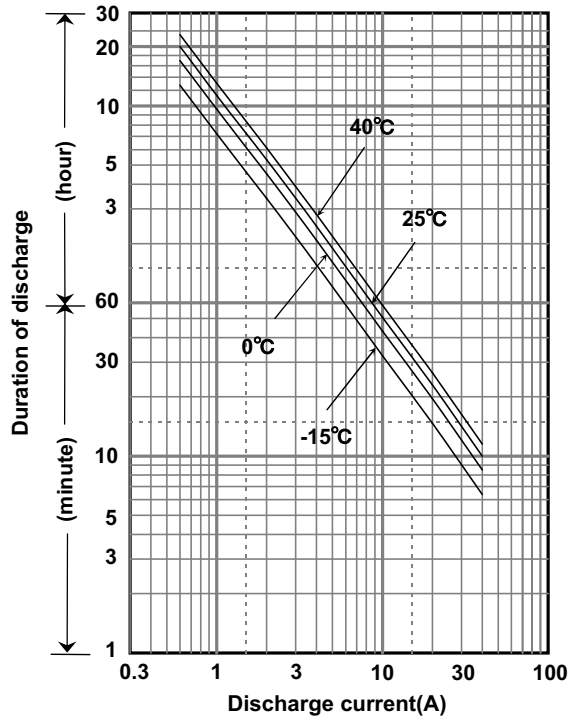
■ Specification

Nominal Voltage	6V	
Nominal Capacity(20HR)	12Ah	
Dimensions	Length	151 mm
	Width	50 mm
	Height	94 mm
	Total height	100 mm
Approx. Mass	2.00 kg	
Terminal	Faston 187 & 250M	

■ Characteristics

Capacity (25 °C)	20 hour rate	12Ah
	10 hour rate	11.3Ah
	5 hour rate	10.4Ah
	1 hour rate	8.1Ah
Internal Resistance	Fully charged battery (25 °C)	8 mΩ
	Temperature Dependency of Capacity (20 hour rate)	
	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

■ Duration of discharge vs. discharge current



■ Watt Table(25°C)

Cut-off V	(Wattage/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
4.8V	340	279	192	149	124	91.3	68.7	52.4	35.1	27.2	19.0	14.4	12.0	10.9	6.66	3.61	3.01
4.95V	325	269	186	144	121	88.3	67.5	51.8	35.0	27.1	18.9	14.4	12.0	10.9	6.66	3.61	3.01
5.1V	304	253	181	141	118	88.3	66.9	51.2	34.5	26.9	18.7	14.4	12.0	10.8	6.60	3.61	3.01
5.25V	278	237	171	136	115	86.0	66.3	50.1	34.2	26.6	18.4	14.3	12.0	10.8	6.60	3.60	3.00
5.4V	247	217	161	131	113	83.1	61.6	48.9	33.1	26.0	18.1	14.2	11.9	10.7	6.54	3.59	2.99

■ Ampere Table(25°C)

Cut-off V	(Ampere/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
4.8V	61.1	50.1	34.3	25.9	21.3	15.6	11.7	8.90	5.95	4.60	3.20	2.41	2.01	1.81	1.11	0.602	0.502
4.95V	58.4	48.2	33.3	25.0	20.8	15.1	11.5	8.80	5.92	4.58	3.18	2.41	2.01	1.81	1.11	0.602	0.502
5.1V	54.6	45.4	32.4	24.5	20.3	15.1	11.4	8.70	5.85	4.55	3.15	2.41	2.00	1.80	1.10	0.601	0.501
5.25V	50.0	42.6	30.6	23.6	19.9	14.7	11.3	8.50	5.80	4.50	3.10	2.40	2.00	1.80	1.10	0.600	0.500
5.4V	44.5	38.9	28.7	22.7	19.4	14.2	10.5	8.30	5.60	4.40	3.05	2.38	1.99	1.79	1.09	0.598	0.498

Charging Method

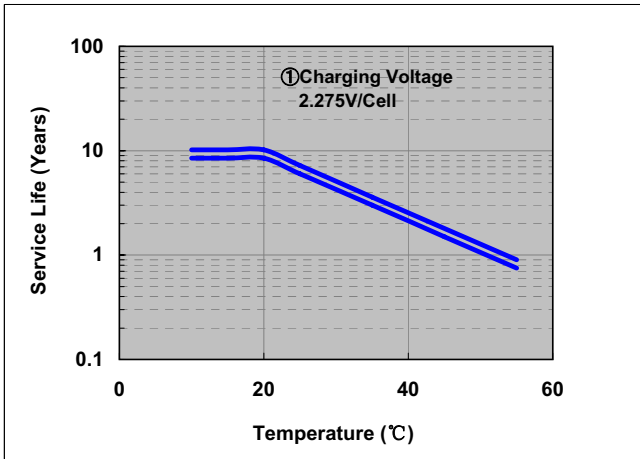
(25°C)

Trickle use	Control voltage:6.8-6.9V;Initial current:1.8A or smaller
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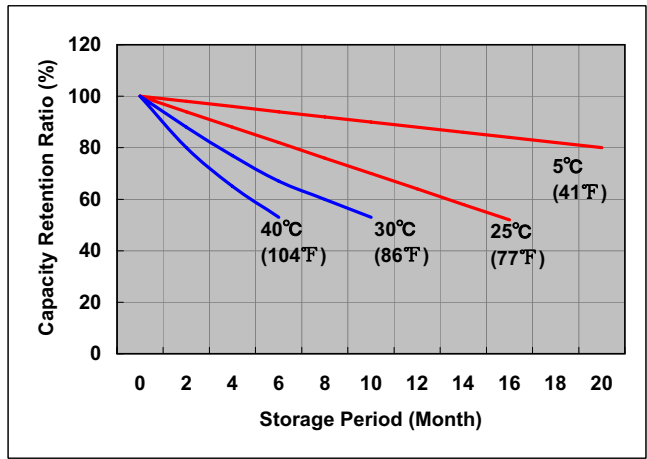
Cut off voltage

Discharge current	0.6A-2.4A	2.4A-6.0A	6.0A-12A	12A-24A	24A-36A
Cut off voltage (V)	5.25	5.1	4.95	4.65	4.35

Influence of Temperature on Trickle life

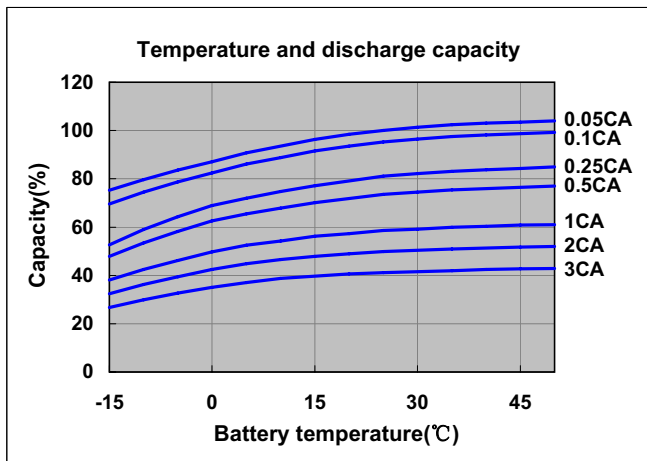
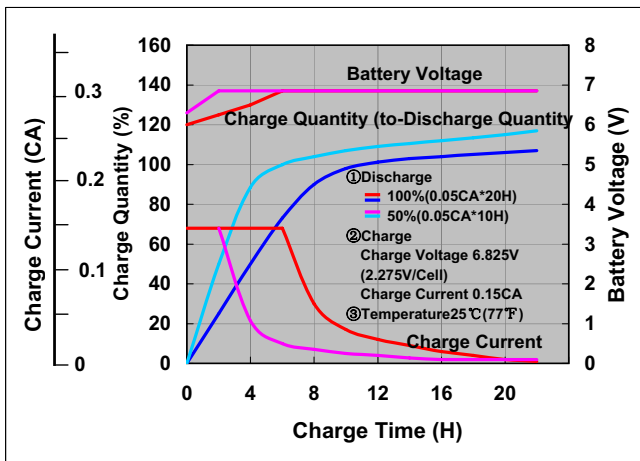


Residual capacity test result

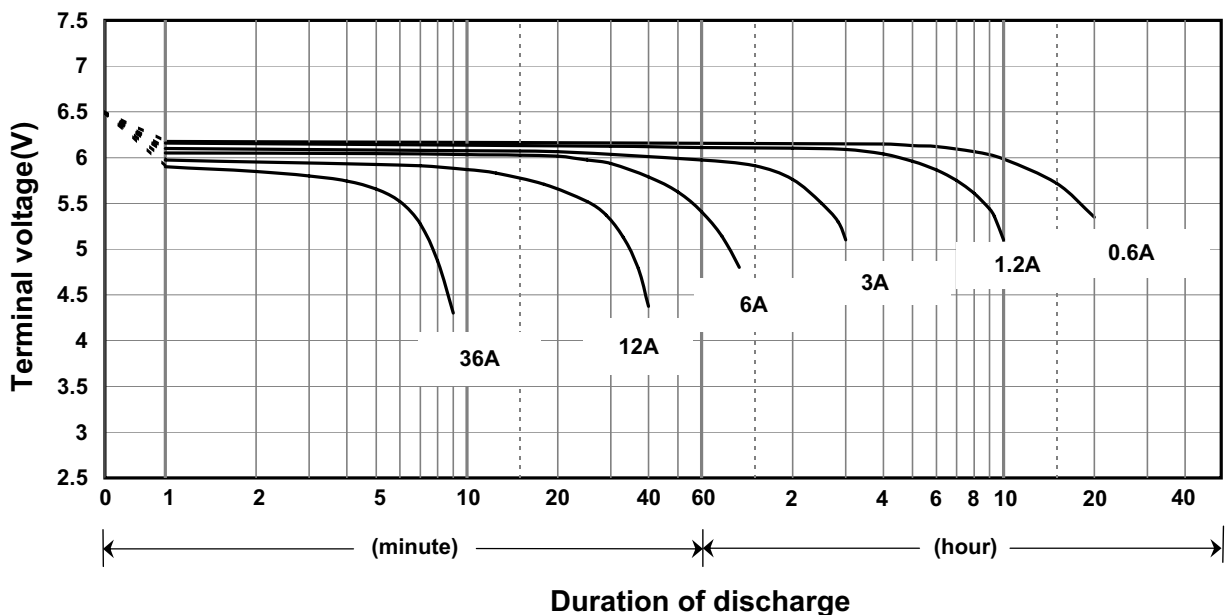


Constant-voltage and constant-current charge characteristics

Discharge capacity by temperature and by discharge current



Discharge characteristics (25°C)

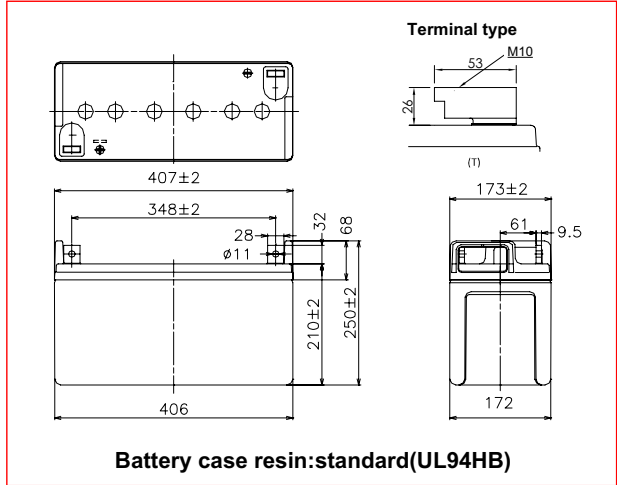


LC-X06200

For standby power supplies
Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



■ Dimensions(mm)



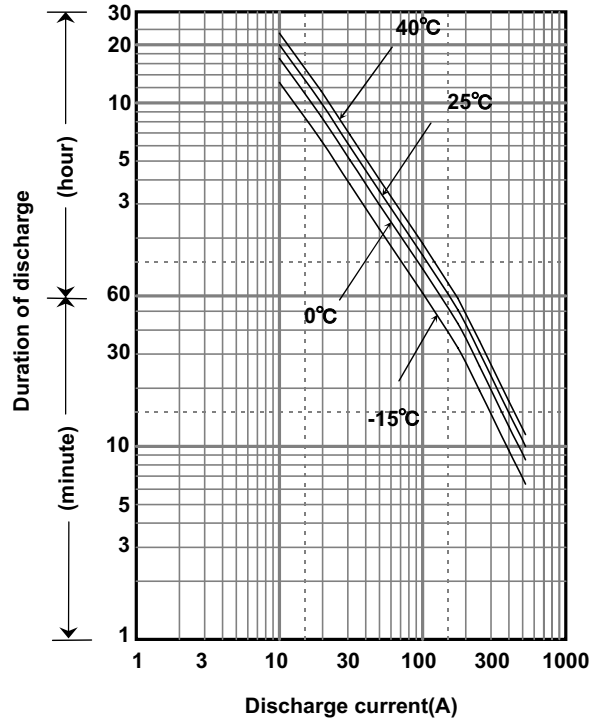
■ Specification

Nominal Voltage		6V
Rated Capacity(20HR)		200Ah
Dimensions	Length	407mm
	Width	173 mm
	Height	210 mm
	Total height	250mm
Approx. Mass		38.0kg
Terminal		M10 Bolt and Nut type

■ Characteristics

Capacity (25 °C)	20 hour rate	200Ah
	10 hour rate	194Ah
	5 hour rate	184Ah
	1 hour rate	120Ah
Internal Resistance	Fully charged battery (25 °C)	2 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

■ Duration of discharge vs. discharge current



■ Watt Table(25°C)

Cut-off V	(Wattage/Battery)														
	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
4.8V	2306	1834	1592	1206	892	733	582	430	281	226	170	154	88.3	47.0	38.5
4.95V	2254	1790	1554	1177	869	714	567	419	276	221	165	149	85.3	47.0	38.5
5.1V	2204	1726	1498	1139	877	694	551	413	272	216	160	145	84.3	46.5	38.0
5.25V	2134	1705	1487	1130	852	675	536	405	267	213	160	145	83.3	46.5	38.0
5.4V	1947	1624	1479	1094	840	666	528	395	262	208	155	150	82.3	45.5	37.2

■ Ampere Table(25°C)

Cut-off V	(Ampere/Battery)														
	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
4.8V	530	402	348	260	184	153	104	82.6	55.4	42.8	37.2	31.2	19.8	10.0	8.40
4.95V	524	400	346	258	179	152	102	82.0	54.4	42.4	36.6	31.2	19.8	10.0	8.40
5.1V	522	398	342	254	178	151	101	81.0	54.0	42.0	36.0	31.0	19.6	10.0	8.40
5.25V	476	376	326	250	176	150	100	80.0	54.0	42.0	36.0	31.0	19.6	10.0	8.40
5.4V	452	364	318	246	152	130	90.0	76.0	51.6	41.0	35.6	30.0	19.4	9.80	8.40

Charging Method

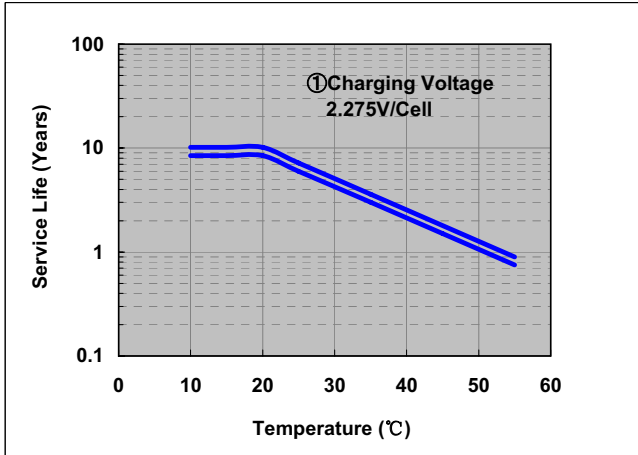
(25°C)

Trickle use	Control voltage 6.80-6.90V; Initial current 30A or smaller
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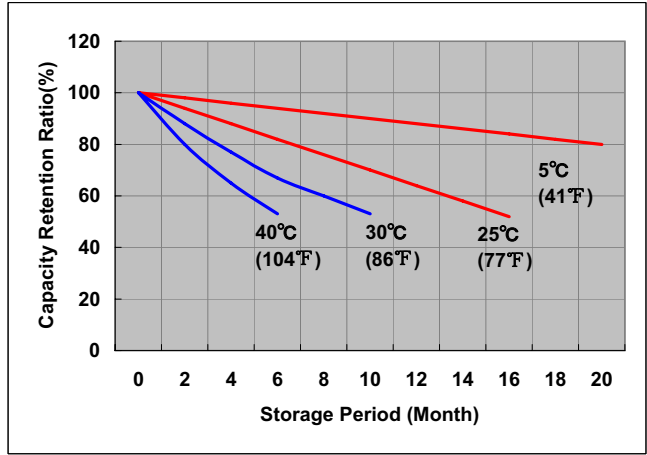
Cut off voltage

Discharge current	10A-40A	40A-100A	100A-200A	200A-400A	400A-600A
Cut off voltage(V)	5.25	5.1	4.95	4.65	4.35

Influence of Temperature on Trickle life

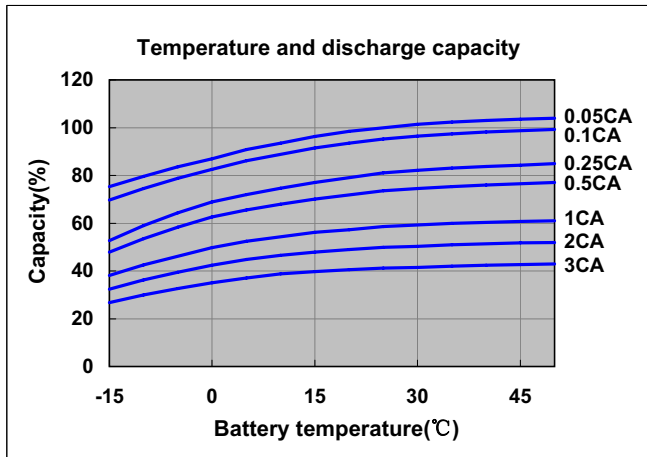
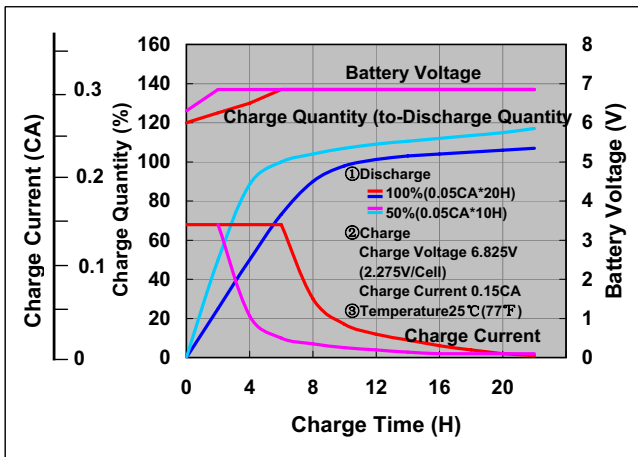


Residual capacity test result

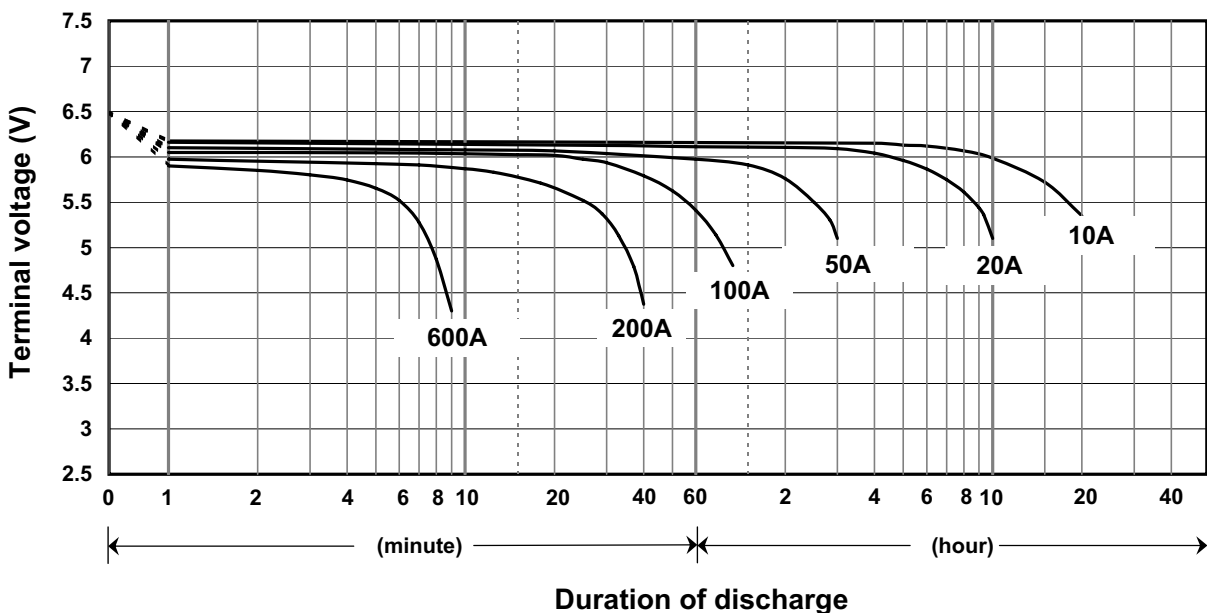


Constant-voltage and constant-current charge characteristics

Discharge capacity by temperature and by discharge current



Discharge characteristics(25°C)

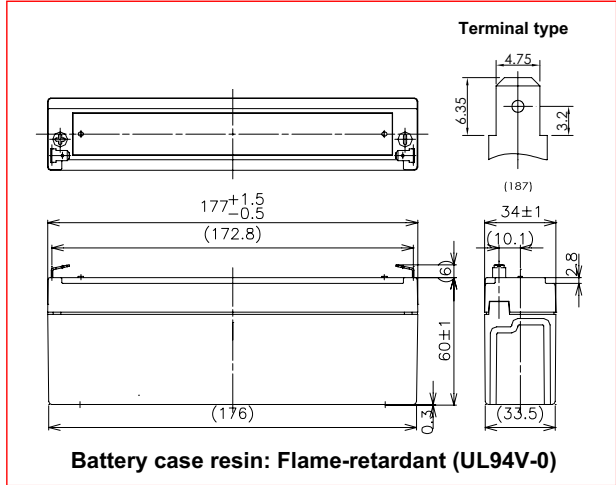


LC-P122R2

For standby power supplies
Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



■ Dimensions(mm)



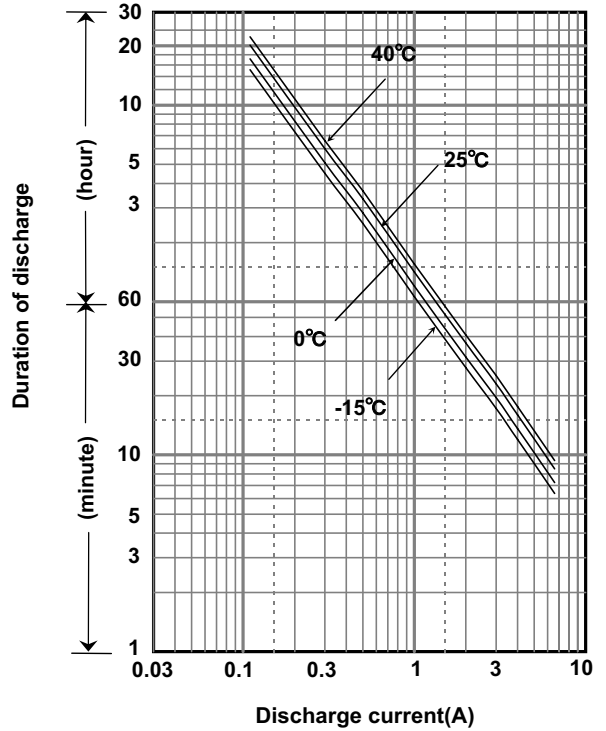
■ Specification

Nominal Voltage	12V	
Rated Capacity(20HR)	2.2Ah	
Dimensions	Length	177 mm
	Width	34 mm
	Height	60 mm
	Total height	66 mm
Approx. Mass	0.80 kg	
Terminal	Faston 187	

■ Characteristics

Capacity (25 °C)	20 hour rate	2.2Ah
	10 hour rate	2.0Ah
	5 hour rate	1.8Ah
	1 hour rate	1.3Ah
Internal Resistance	Fully charged battery (25 °C)	70 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

■ Duration of discharge vs. discharge current



■ Watt Table(25°C)

(Wattage/Battery)

Cut-off V	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	132	104	68.1	52.0	43.6	32.5	23.0	18.4	12.6	9.77	7.27	5.59	4.61	3.71	2.46	1.33	1.11
9.9V	123	97.8	66.7	51.7	42.9	32.2	22.8	18.4	12.4	9.70	7.24	5.55	4.58	3.69	2.45	1.33	1.11
10.2V	113	91.6	65.0	50.6	42.2	31.8	22.6	18.0	12.1	9.44	7.16	5.51	4.54	3.66	2.42	1.32	1.10
10.5V	101	82.1	60.2	47.1	40.1	31.1	22.2	17.6	11.9	9.12	7.05	5.48	4.50	3.62	2.41	1.32	1.10
10.8V	84.9	72.6	53.7	43.9	39.0	30.0	21.9	17.3	11.5	8.68	6.91	5.40	4.39	3.56	2.38	1.31	1.09

■ Ampere Table(25°C)

(Ampere/Battery)

Cut-off V	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	11.9	9.35	6.08	4.52	3.76	2.78	1.96	1.56	1.07	0.825	0.611	0.468	0.385	0.309	0.205	0.111	0.0926
9.9V	11.0	8.77	5.96	4.49	3.70	2.75	1.94	1.56	1.05	0.819	0.608	0.464	0.382	0.308	0.204	0.111	0.0923
10.2V	10.2	8.22	5.81	4.40	3.64	2.72	1.93	1.53	1.03	0.798	0.602	0.461	0.379	0.306	0.202	0.110	0.0920
10.5V	9.04	7.36	5.38	4.09	3.45	2.66	1.89	1.50	1.01	0.770	0.593	0.458	0.376	0.302	0.201	0.110	0.0917
10.8V	7.64	6.51	4.80	3.82	3.36	2.57	1.86	1.47	0.98	0.733	0.581	0.452	0.367	0.297	0.199	0.109	0.0911

Charging Method

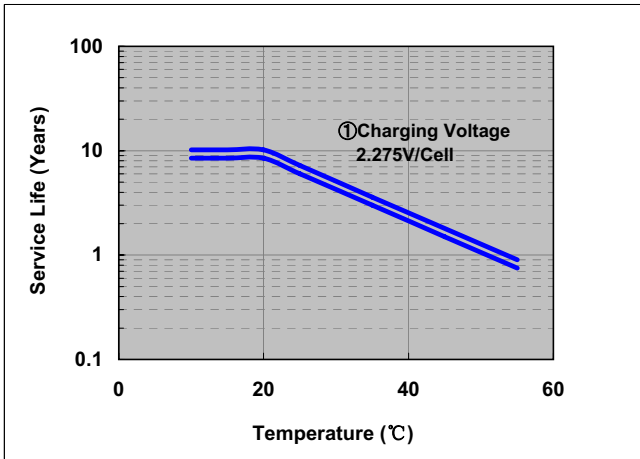
(25°C)

Trickle use	Control voltage:13.6-13.8V;Initial current:0.33A or smaller
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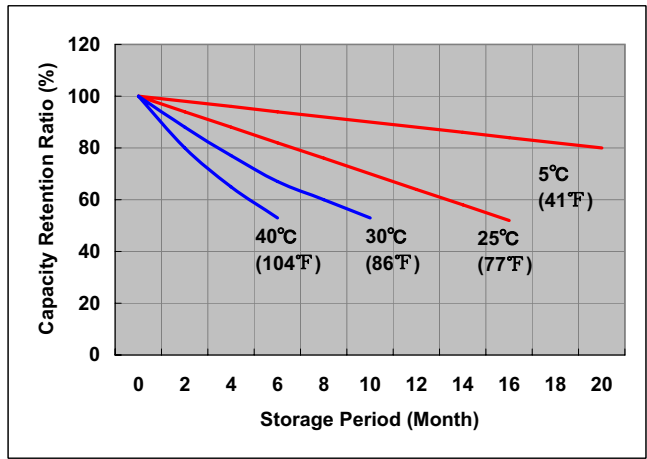
Cut off voltage

Discharge current	0.011A-0.44A	0.44A-1.1A	1.1A-2.2A	2.2A-4.4A	4.4A-6.6A
Cut off voltage (V)	10.5	10.2	9.9	9.3	8.7

Influence of Temperature on Trickle life

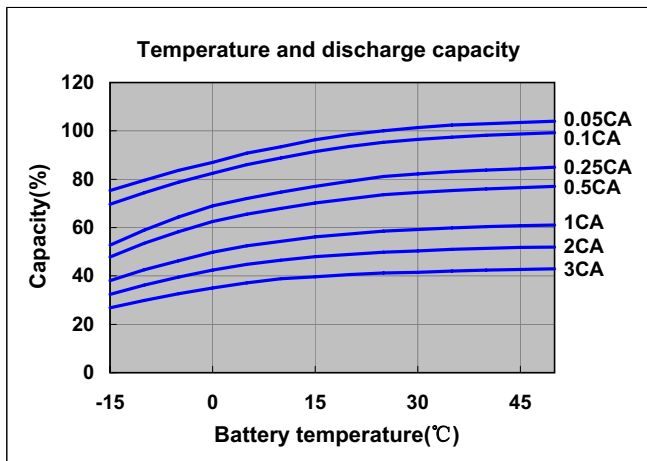
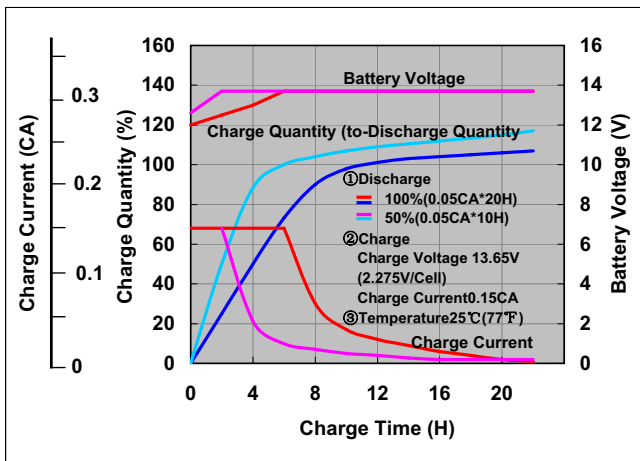


Residual capacity test result

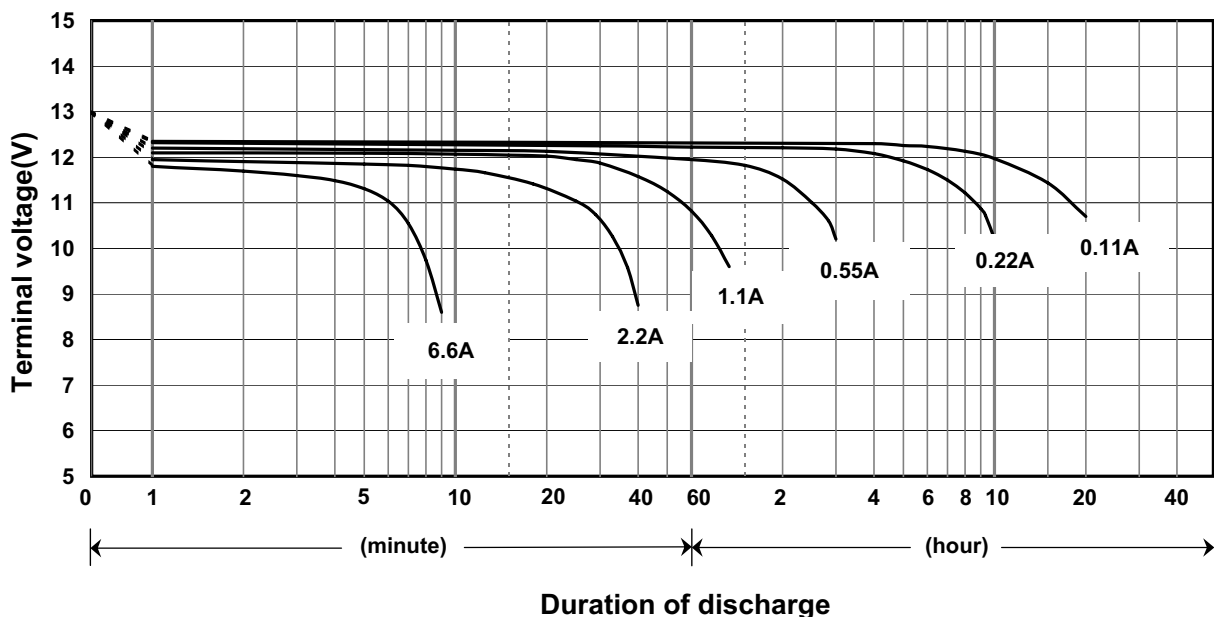


Constant-voltage and constant-current charge characteristics

Discharge capacity by temperature and by discharge current



Discharge characteristics (25°C)

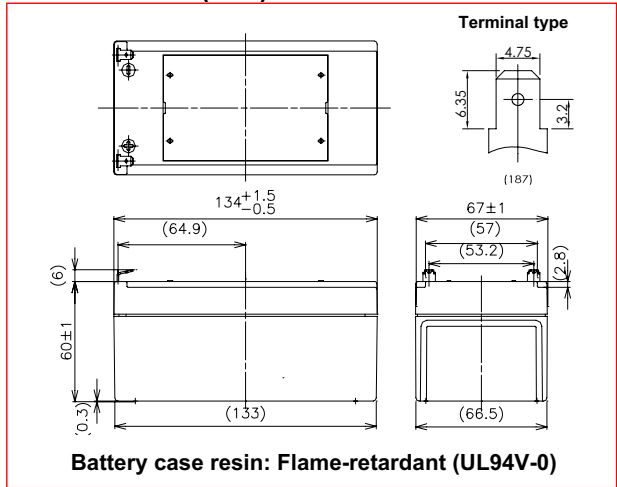


LC-P123R4

For standby power supplies
 Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



■ Dimensions(mm)



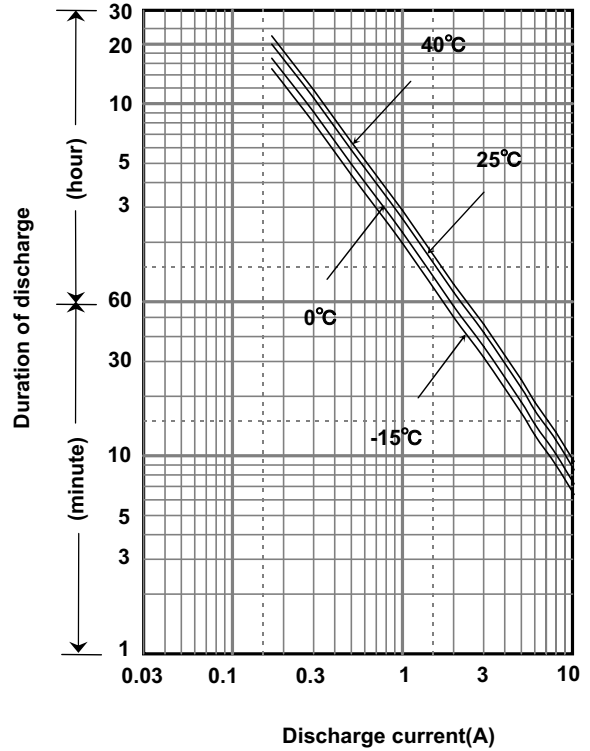
■ Specification

Nominal Voltage	12V	
Rated Capacity(20HR)	3.4Ah	
Dimensions	Length	134 mm
	Width	67 mm
	Height	60 mm
	Total height	66 mm
Approx. Mass	1.20 kg	
Terminal	Faston 187	

■ Characteristics

Capacity (25 °C)	20 hour rate	3.4Ah
	10 hour rate	3.0Ah
	5 hour rate	2.7Ah
	1 hour rate	2.1Ah
Internal Resistance	Fully charged battery (25 °C)	50 mΩ
	Temperature Dependency of Capacity (20 hour rate)	
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

■ Duration of discharge vs. discharge current



■ Watt Table(25°C)

Cut-off V	(Wattage/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	204	161	105	80.4	67.4	50.3	35.5	28.4	19.6	15.0	11.3	8.63	7.13	5.80	3.81	2.06	1.72
9.9V	190	151	103	79.8	66.3	49.7	35.3	28.4	19.2	14.9	11.2	8.58	7.07	5.78	3.80	2.05	1.71
10.2V	175	142	100	78.2	65.2	49.2	34.9	27.8	18.8	14.5	11.1	8.52	7.01	5.73	3.76	2.05	1.71
10.5V	155	127	93	72.8	61.9	48.1	34.4	27.3	18.4	14.0	11.0	8.46	6.96	5.66	3.74	2.04	1.70
10.8V	131	112	83	67.9	60.3	46.4	33.8	26.7	17.8	13.4	10.7	8.46	6.79	5.66	3.68	1.98	1.70

■ Ampere Table(25°C)

Cut-off V	(Ampere/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	18.4	14.4	9.40	6.99	5.81	4.30	3.02	2.41	1.66	1.26	0.949	0.722	0.595	0.484	0.318	0.171	0.143
9.9V	17.0	13.6	9.21	6.94	5.71	4.25	3.00	2.41	1.62	1.26	0.945	0.718	0.590	0.482	0.316	0.171	0.143
10.2V	15.7	12.7	8.97	6.80	5.62	4.20	2.97	2.36	1.59	1.22	0.935	0.713	0.586	0.478	0.313	0.170	0.142
10.5V	14.0	11.4	8.31	6.33	5.34	4.11	2.93	2.31	1.56	1.18	0.921	0.708	0.581	0.472	0.312	0.170	0.142
10.8V	11.8	10.1	7.41	5.90	5.19	3.97	2.88	2.27	1.51	1.13	0.897	0.708	0.567	0.472	0.307	0.165	0.142

■ Charging Method

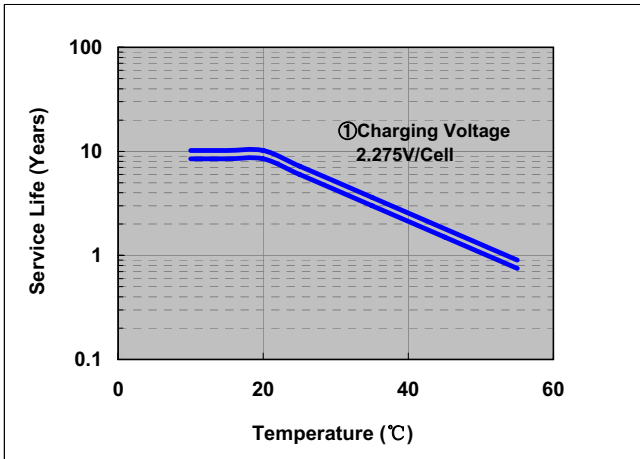
(25°C)

Trickle use	Control voltage:13.6-13.8V;Initial current:0.51A or smaller
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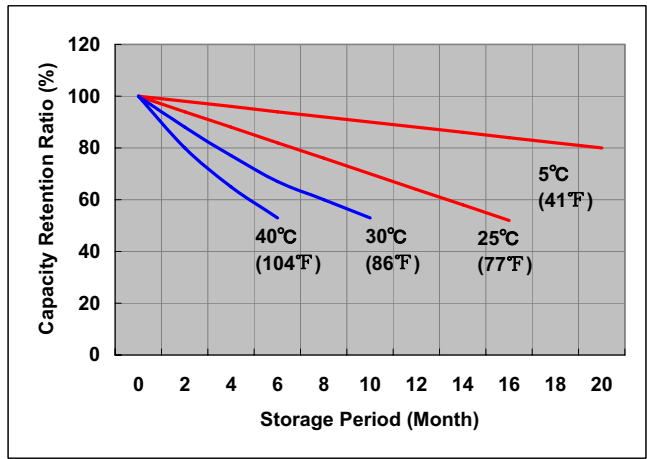
■ Cut off voltage

Discharge current	0.17A-0.68A	0.68A-1.7A	1.7A-3.4A	3.4A-6.8A	6.8A-10.2A
Cut off voltage (V)	10.5	10.2	9.9	9.3	8.7

■ Influence of Temperature on Trickle life

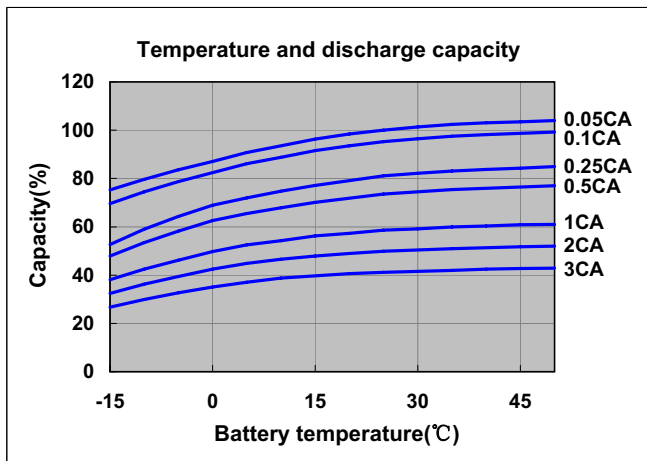
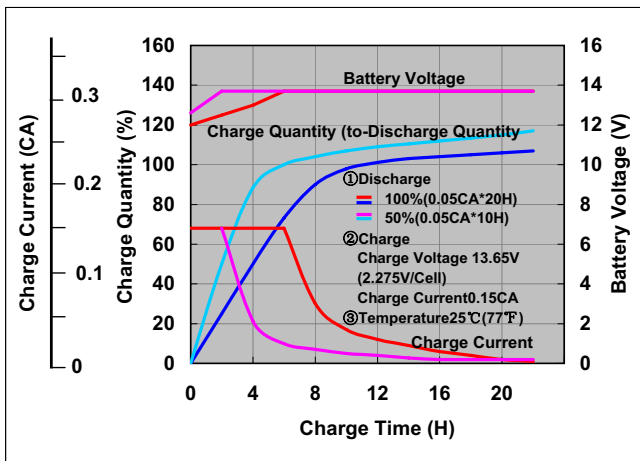


■ Residual capacity test result

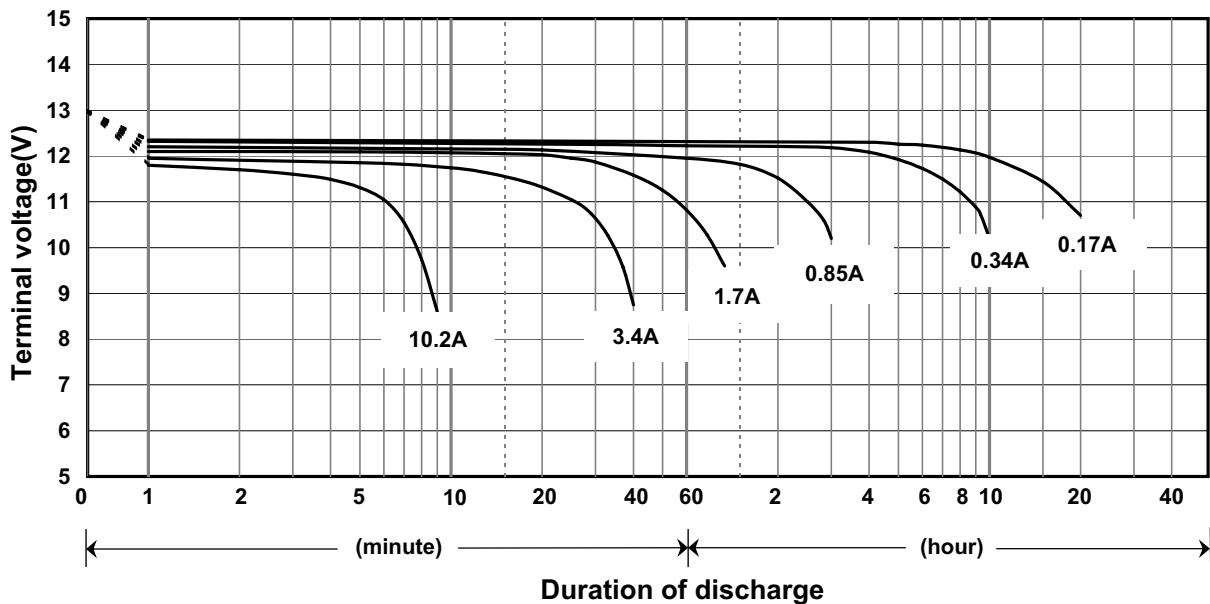


■ Constant-voltage and constant-current charge characteristics

■ Discharge capacity by temperature and by discharge current



■ Discharge characteristics (25°C)

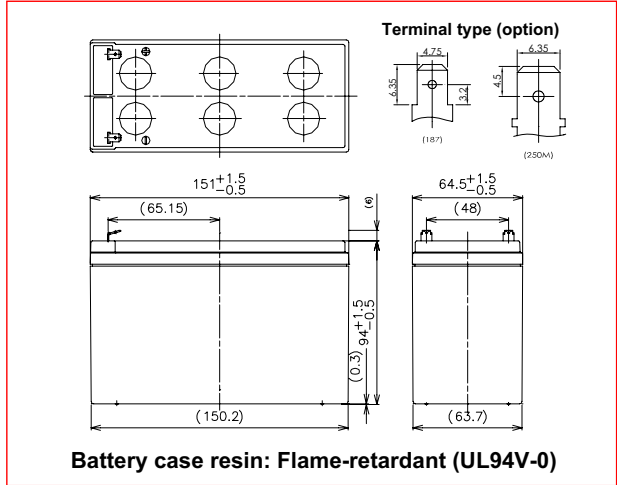


LC-P127R2

For standby power supplies
Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



■ Dimensions(mm)



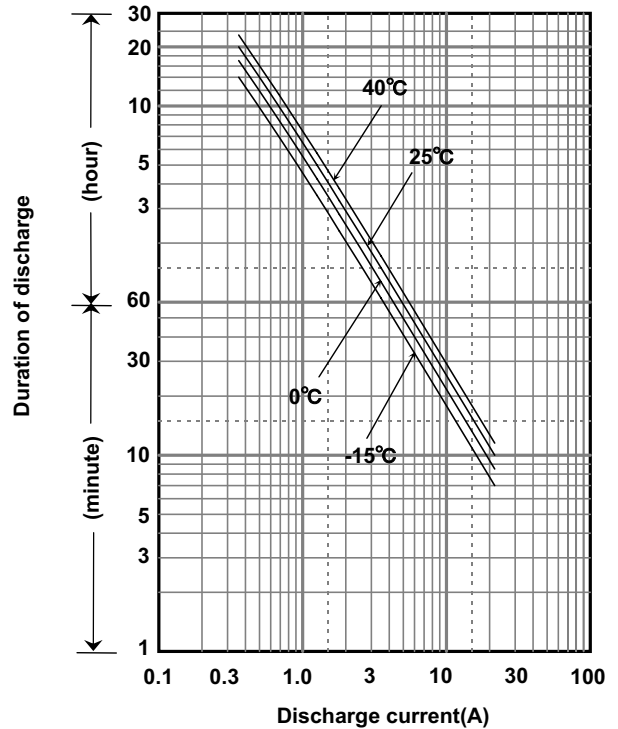
■ Specification

Nominal Voltage	12V	
Rated Capacity(20HR)	7.2Ah	
Dimensions	Length	151 mm
	Width	64.5 mm
	Height	94 mm
	Total height	100 mm
Approx. Mass	2.50 kg	
Terminal	Faston 187 & 250M	

■ Characteristics

Capacity (25 °C)	20 hour rate	7.2Ah
	10 hour rate	6.8Ah
	5 hour rate	6.3Ah
	1 hour rate	4.9Ah
Internal Resistance	Fully charged battery (25 °C)	21 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

■ Duration of discharge vs. discharge current



■ Watt Table(25°C)

Cut-off V	(Wattage/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	433	341	223	170	143	106	75.1	60.1	41.3	32.0	23.8	18.3	15.1	12.1	8.04	4.36	3.64
9.9V	401	320	218	169	140	105	74.7	60.1	40.5	31.7	23.7	18.2	15.0	12.1	8.00	4.34	3.62
10.2V	370	300	213	166	138	104	74.0	58.9	39.7	30.9	23.4	18.0	14.9	12.0	7.92	4.33	3.61
10.5V	329	269	197	154	131	102	72.8	57.7	38.9	29.8	23.1	17.9	14.7	11.8	7.88	4.32	3.60
10.8V	278	237	176	144	128	98.3	71.6	56.5	37.8	28.4	22.6	17.7	14.4	11.7	7.80	4.30	3.58

■ Ampere Table(25°C)

Cut-off V	(Ampere/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	38.9	30.6	19.9	14.8	12.3	9.10	6.40	5.10	3.50	2.70	2.00	1.53	1.26	1.012	0.670	0.363	0.303
9.9V	36.1	28.7	19.5	14.7	12.1	9.00	6.36	5.10	3.43	2.68	1.99	1.52	1.25	1.008	0.667	0.362	0.302
10.2V	33.3	26.9	19.0	14.4	11.9	8.90	6.30	5.00	3.36	2.61	1.97	1.51	1.24	1.000	0.660	0.361	0.301
10.5V	29.6	24.1	17.6	13.4	11.3	8.70	6.20	4.90	3.29	2.52	1.94	1.50	1.23	0.988	0.657	0.360	0.300
10.8V	25.0	21.3	15.7	12.5	11.0	8.40	6.10	4.80	3.20	2.40	1.90	1.48	1.20	0.972	0.650	0.358	0.298

Charging Method

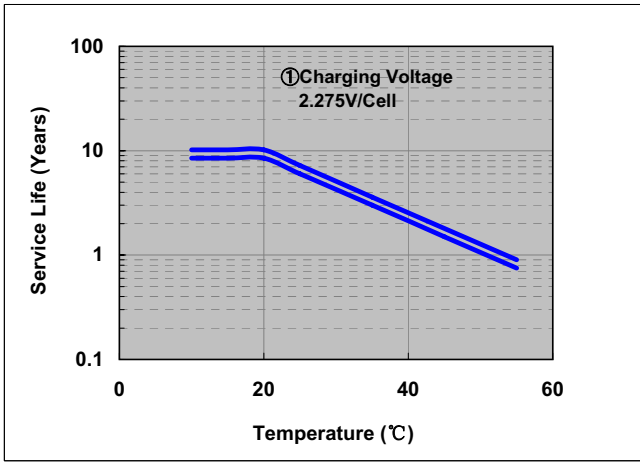
(25°C)

Trickle use	Control voltage:13.6-13.8V;Initial current:1.08A or smaller
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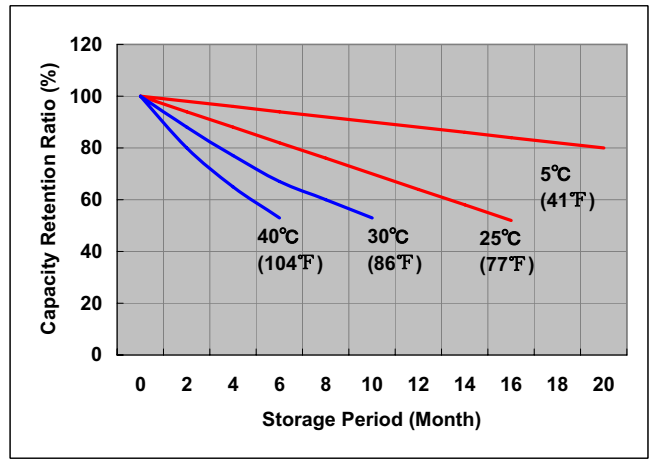
Cut off voltage

Discharge current	0.36A-1.44A	1.44A-3.6A	3.6A-7.2A	7.2A-14.4A	14.4A-21.6A
Cut off voltage (V)	10.5	10.2	9.9	9.3	8.7

Influence of Temperature on Trickle life

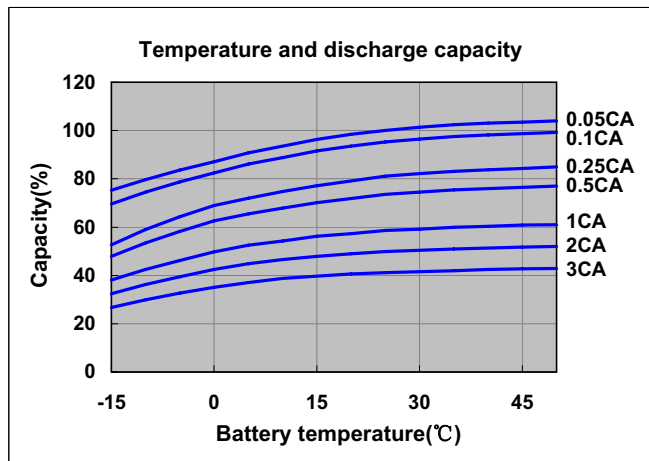
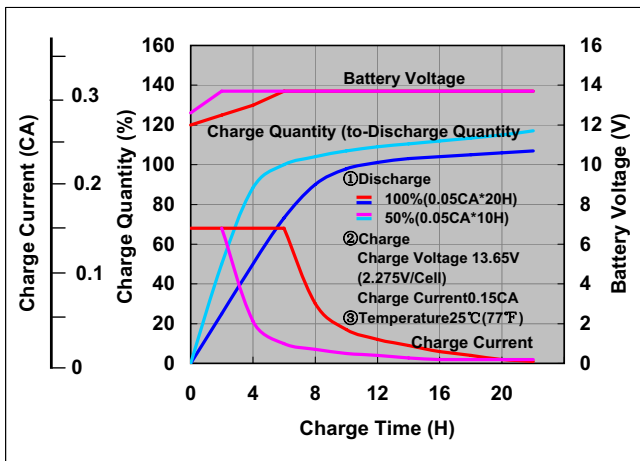


Residual capacity test result

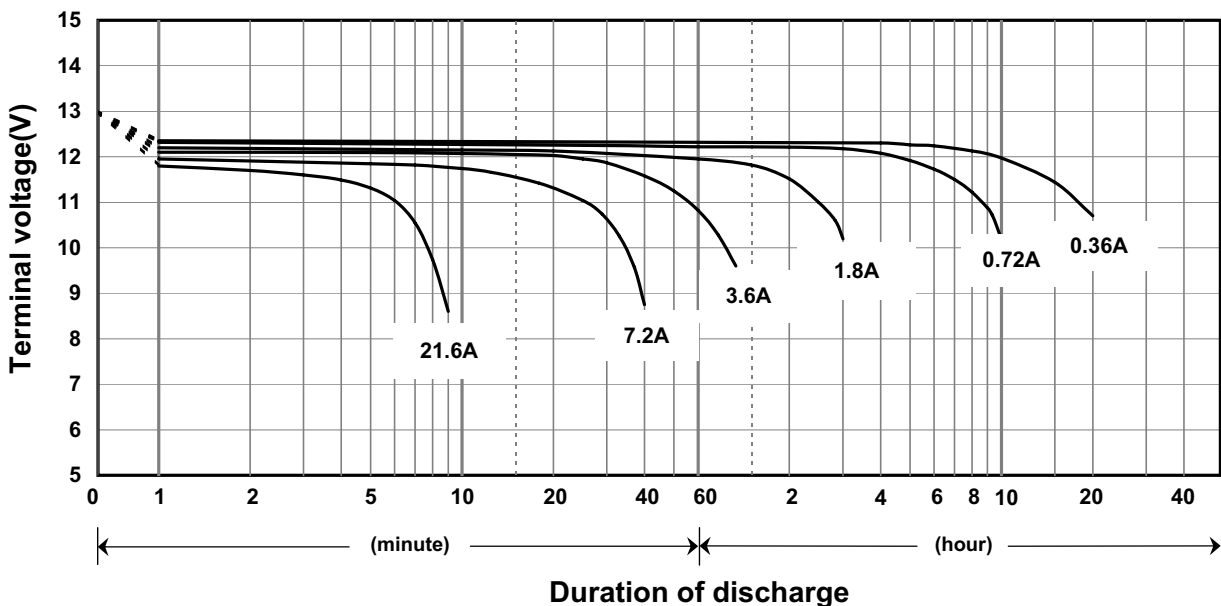


Constant-voltage and constant-current charge characteristics

Discharge capacity by temperature and by discharge current



Discharge characteristics (25°C)

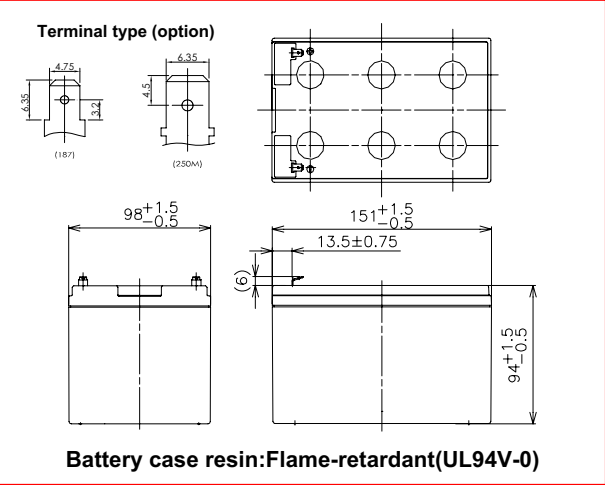


LC-PA1212

For standby power supplies
Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



Dimensions(mm)



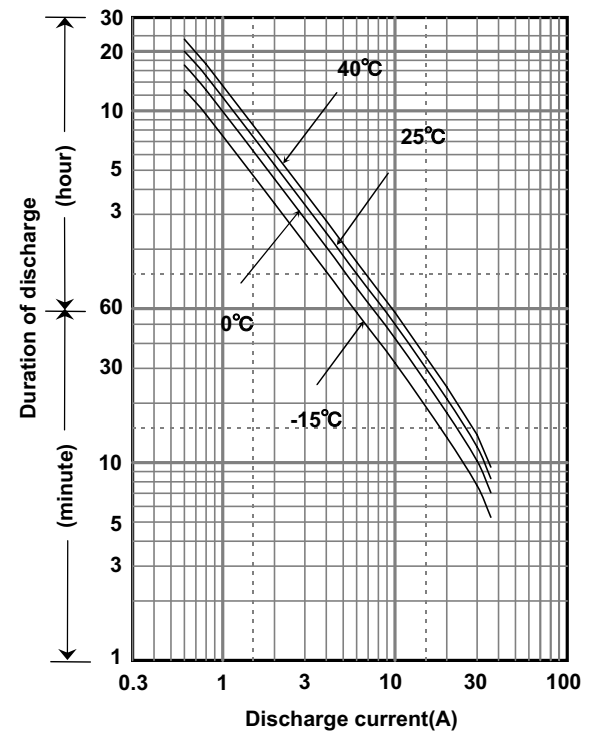
Specification

Nominal Voltage	12V	
Rated Capacity(20HR)	12Ah	
Dimensions	Length	151 mm
	Width	98 mm
	Height	94 mm
	Total height	100 mm
Approx. Mass	3.85 kg	
Terminal	Faston 187 & 250M	

Characteristics

Capacity (25 °C)	20 hour rate	12Ah
	10 hour rate	11.3Ah
	5 hour rate	10.4Ah
	1 hour rate	8.1Ah
Internal Resistance	Fully charged battery (25 °C)	15 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

Duration of discharge vs. discharge current



Watt Table(25°C)

Cut-off V	(Wattage/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	679	559	384	298	247	183	137	105	70.3	54.5	38.1	28.8	24.1	21.7	13.3	7.22	6.02
9.9V	649	537	373	288	241	177	135	104	69.9	54.2	37.8	28.8	24.1	21.7	13.3	7.22	6.02
10.2V	607	506	363	282	235	177	134	102	69.1	53.9	37.5	28.8	24.0	21.6	13.2	7.21	6.01
10.5V	556	475	343	271	231	172	133	100	68.5	53.3	36.9	28.7	24.0	21.6	13.2	7.20	6.00
10.8V	495	434	321	261	225	166	123	98	66.1	52.1	36.3	28.4	23.8	21.5	13.1	7.18	5.98

Ampere Table(25°C)

Cut-off V	(Ampere/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	61.1	50.1	34.3	25.9	21.3	15.6	11.7	8.90	5.95	4.60	3.20	2.41	2.01	1.81	1.11	0.602	0.502
9.9V	58.4	48.2	33.3	25.0	20.8	15.1	11.5	8.80	5.92	4.58	3.18	2.41	2.01	1.81	1.11	0.602	0.502
10.2V	54.6	45.4	32.4	24.5	20.3	15.1	11.4	8.70	5.85	4.55	3.15	2.41	2.00	1.80	1.10	0.601	0.501
10.5V	50.0	42.6	30.6	23.6	19.9	14.7	11.3	8.50	5.80	4.50	3.10	2.40	2.00	1.80	1.10	0.600	0.500
10.8V	44.5	38.9	28.7	22.7	19.4	14.2	10.5	8.30	5.60	4.40	3.05	2.38	1.99	1.79	1.09	0.598	0.498

Charging Method

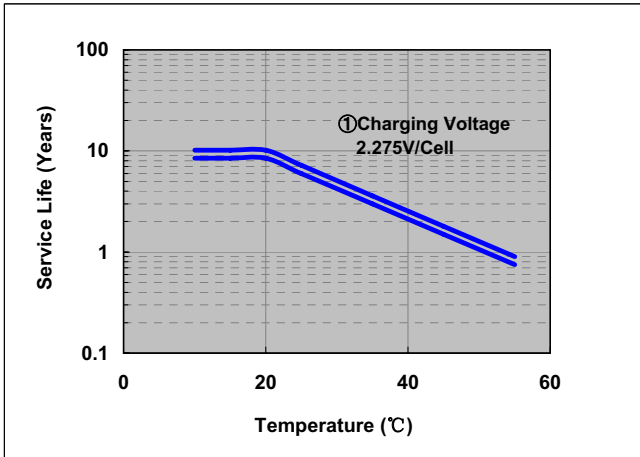
(25°C)

Trickle use	Control voltage 13.6-13.8V; Initial current 1.8A or smaller
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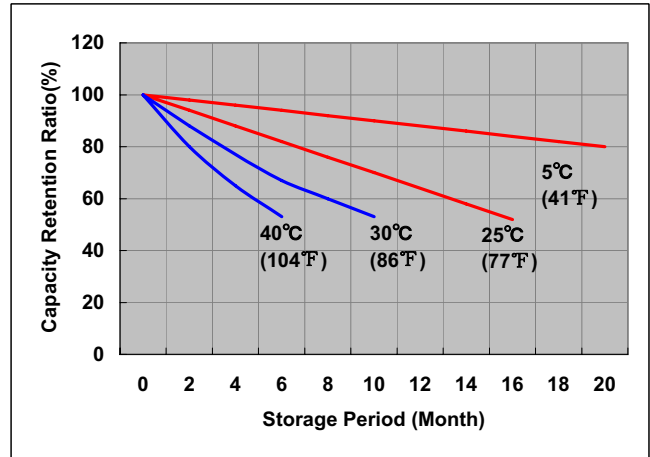
Cut off voltage

Discharge current	0.6A-2.4A	2.4A-6A	6A-12A	12A-24A	24A-36A
Cut off voltage(V)	10.5	10.2	9.9	9.3	8.7

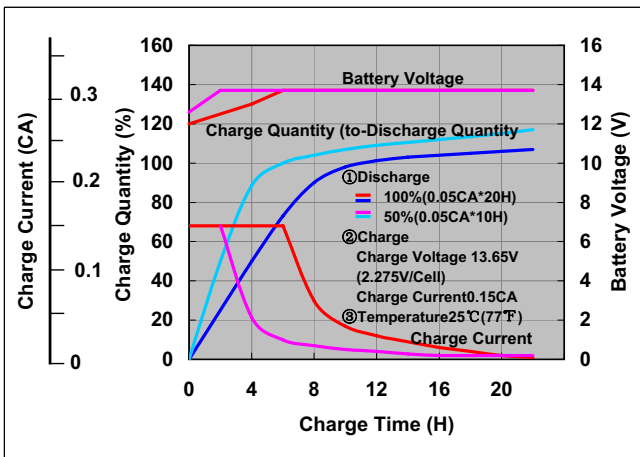
Influence of Temperature on Trickle life



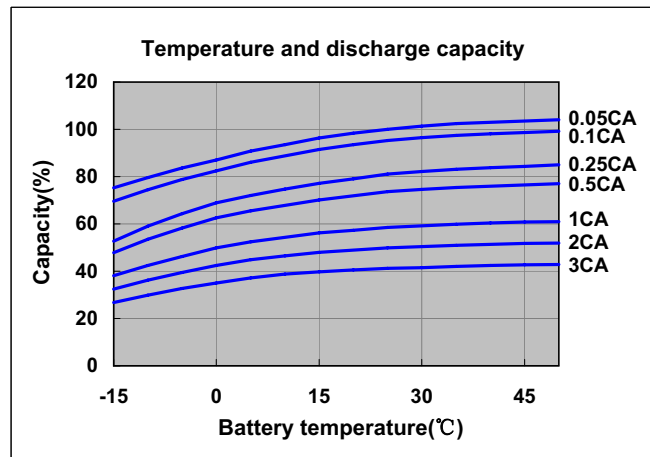
Residual capacity test result



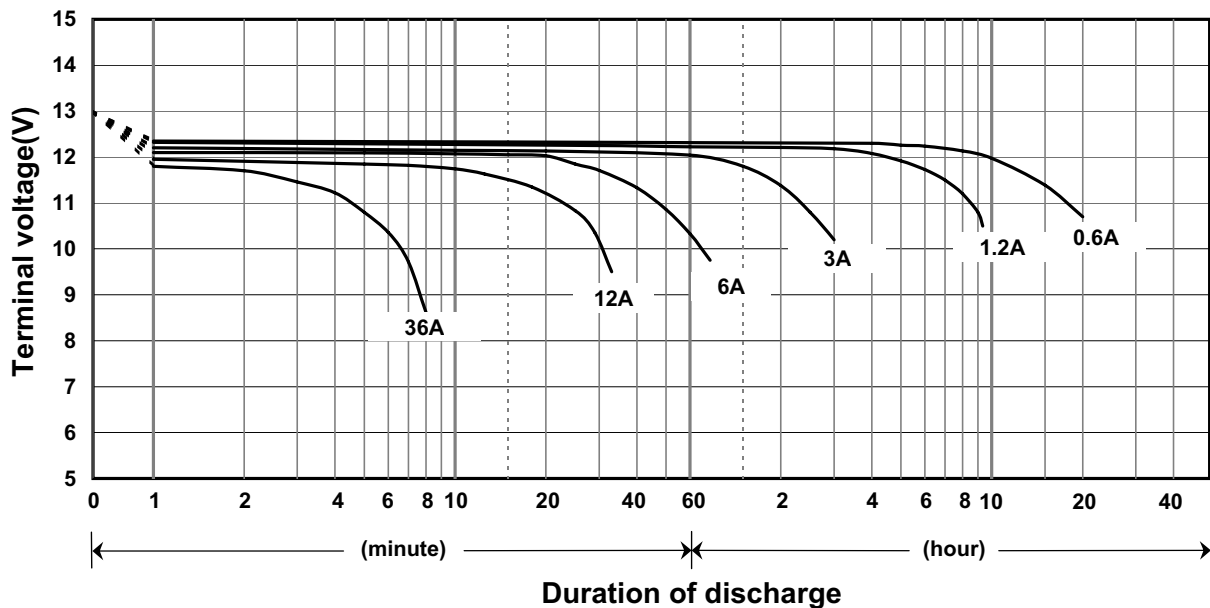
Constant-voltage and constant-current charge characteristics



Discharge capacity by temperature and by discharge current



Discharge characteristics(25°C)

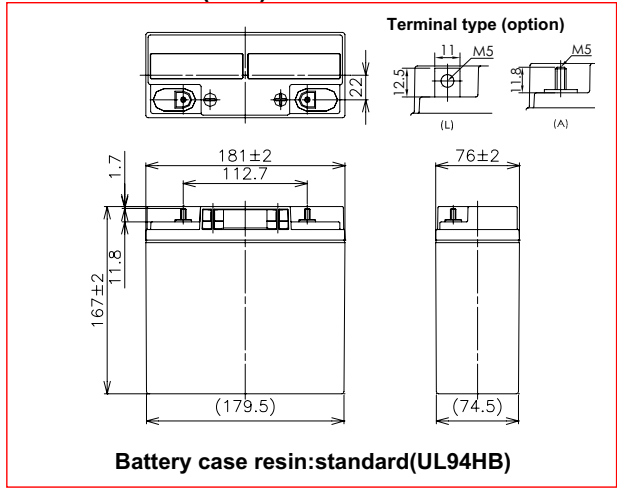


LC-XD1217

For standby power supplies
Expected trickle life: 6 years at 25°C, approx. 10 years at 20°C



Dimensions(mm)



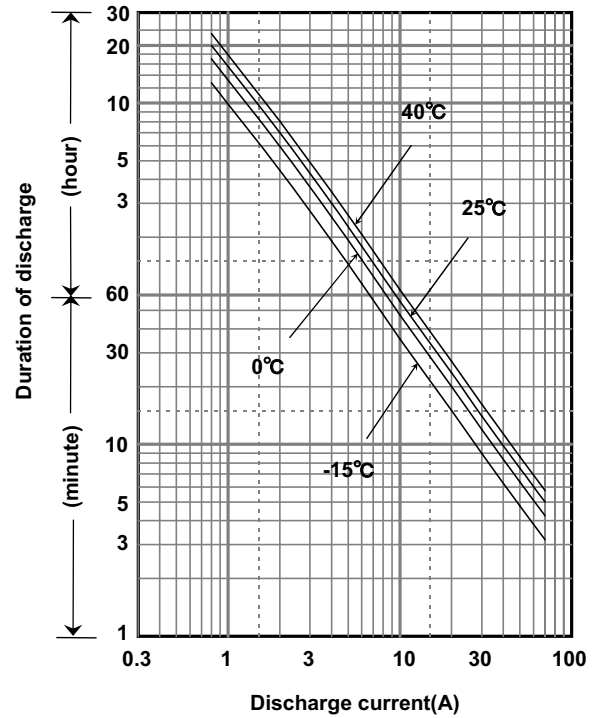
Specification

Nominal Voltage	12V	
Rated Capacity(20HR)	17Ah	
Dimensions	Length	181 mm
	Width	76 mm
	Height	167 mm
	Total height	167 mm
Approx. Mass	5.90 kg	
Terminal	M5 threaded post Bolt and Nut type	

Characteristics

Capacity (25 °C)	20 hour rate	17Ah
	10 hour rate	15Ah
	5 hour rate	13Ah
	1 hour rate	10Ah
Internal Resistance	Fully charged battery (25 °C)	12 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

Duration of discharge vs. discharge current



Watt Table(25°C)

Cut-off V	(Wattage/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	1021	806	526	402	337	251	177	142	97.6	75.5	56.2	43.2	35.6	28.6	19.0	10.3	8.58
9.9V	948	756	516	399	331	249	176	142	95.6	74.9	55.9	42.9	35.4	28.5	18.9	10.3	8.56
10.2V	874	708	502	391	326	246	175	139	93.7	73.0	55.4	42.6	35.1	28.3	18.7	10.2	8.53
10.5V	777	634	465	364	309	240	172	136	91.7	70.4	54.5	42.3	34.8	28.0	18.6	10.2	8.50
10.8V	656	561	415	339	301	232	169	134	89.2	67.1	53.4	41.8	33.9	27.5	18.4	10.1	8.44

Ampere Table(25°C)

Cut-off V	(Ampere/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	91.8	72.2	47.0	34.9	29.0	21.5	15.1	12.0	8.26	6.37	4.72	3.61	2.97	2.39	1.58	0.86	0.72
9.9V	85.2	67.8	46.0	34.7	28.6	21.2	15.0	12.0	8.10	6.33	4.70	3.59	2.95	2.38	1.57	0.85	0.71
10.2V	78.6	63.5	44.9	34.0	28.1	21.0	14.9	11.8	7.93	6.16	4.65	3.57	2.93	2.36	1.56	0.85	0.71
10.5V	69.9	56.9	41.6	31.6	26.7	20.5	14.6	11.6	7.77	5.95	4.58	3.54	2.90	2.33	1.55	0.85	0.71
10.8V	59.0	50.3	37.1	29.5	26.0	19.8	14.4	11.3	7.56	5.67	4.49	3.49	2.83	2.29	1.53	0.85	0.70

Charging Method

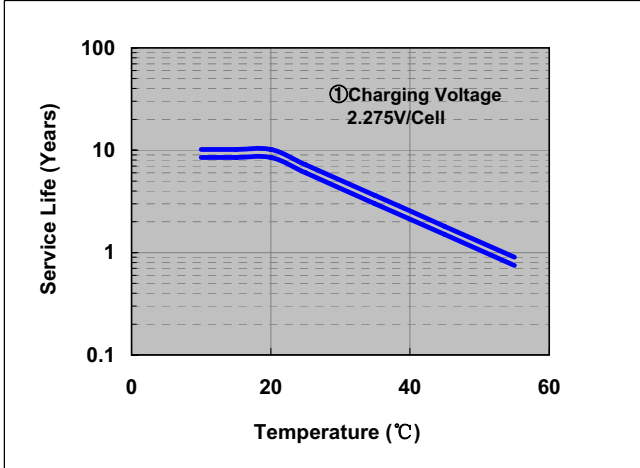
(25°C)

Trickle use	Control voltage 13.6-13.8V; Initial current 2.55A or smaller
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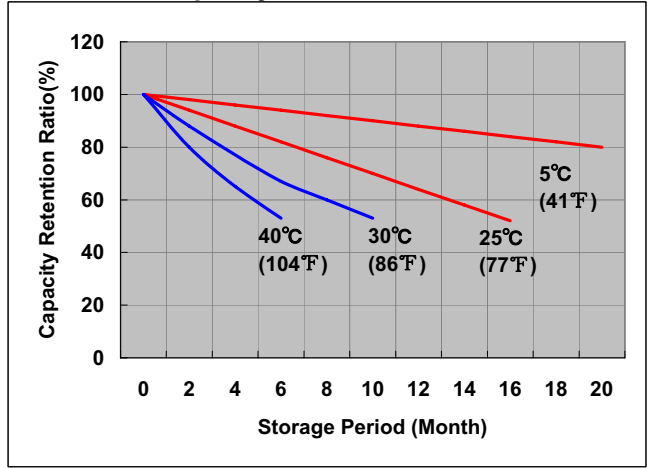
Cut off voltage

Discharge current	0.85A-3.4A	3.4A-8.5A	8.5A-17A	17A-34A	34A-51A
Cut off voltage(V)	10.5	10.2	9.9	9.3	8.7

Influence of Temperature on Trickle life

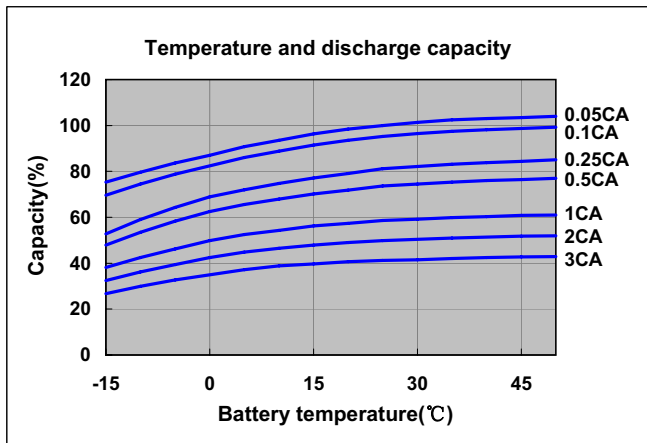
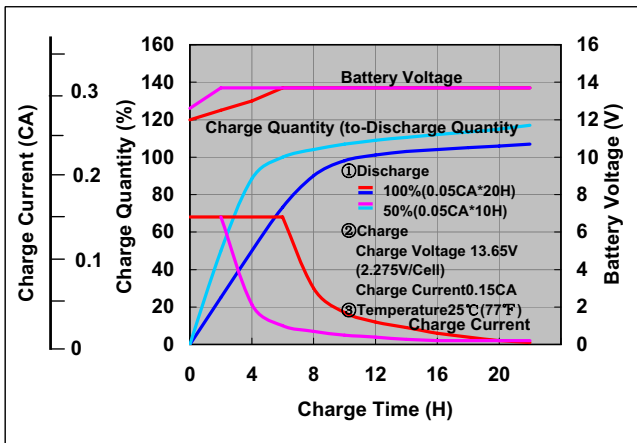


Residual capacity test result

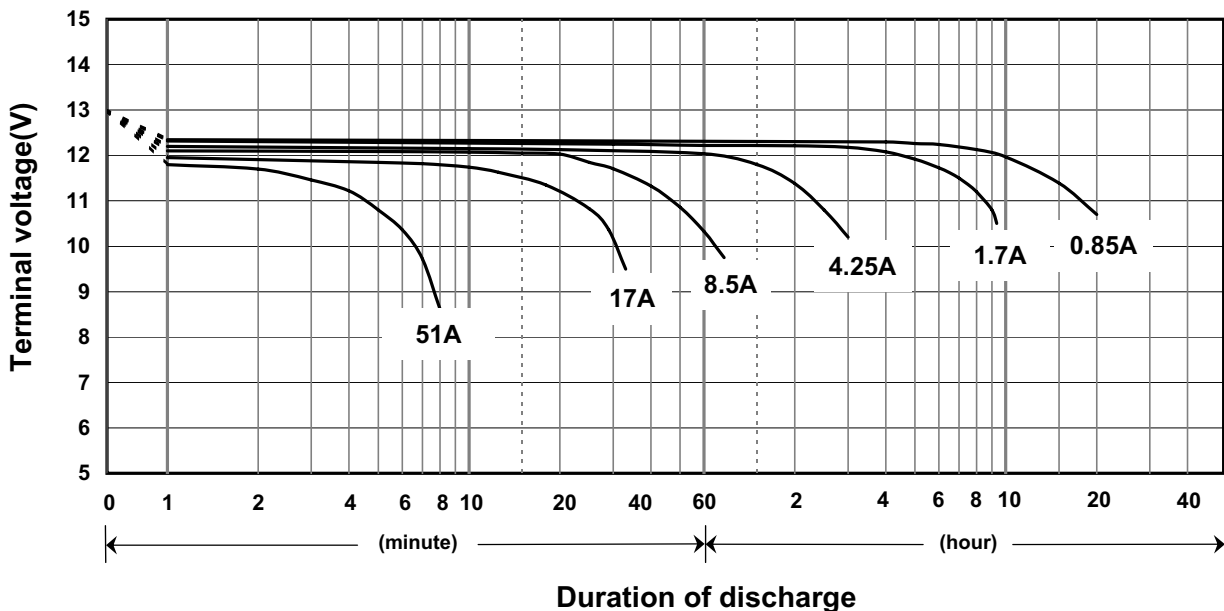


Constant-voltage and constant-current charge characteristics

Discharge capacity by temperature and by discharge current



Discharge characteristics(25°C)

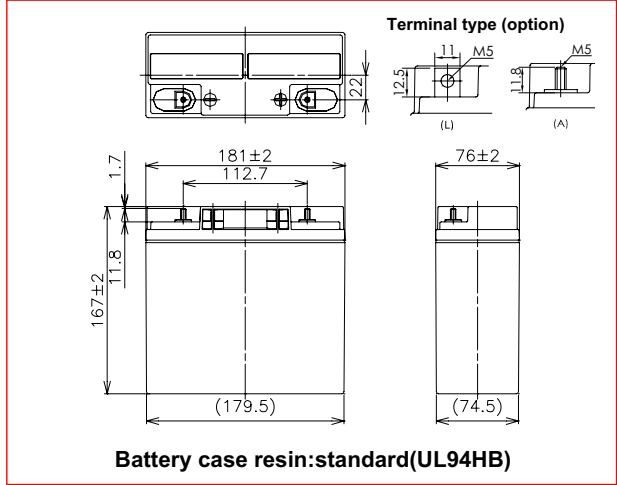


LC-X1220

For standby power supplies
 Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



Dimensions(mm)



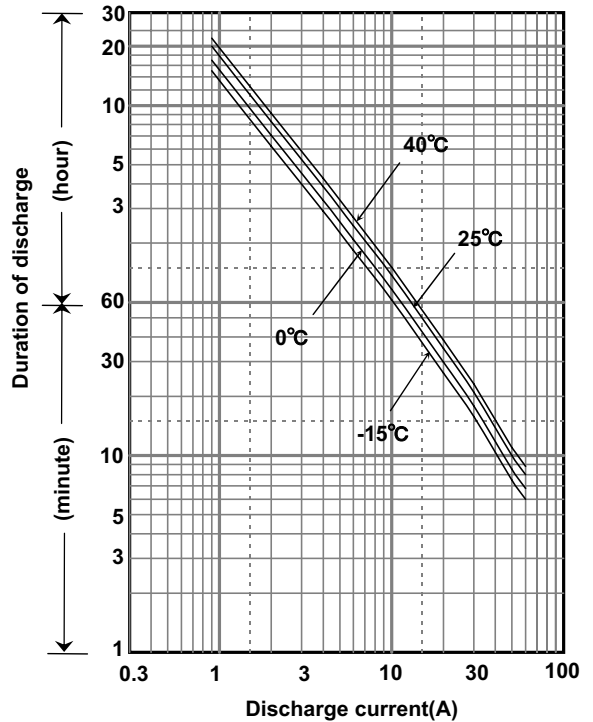
Specification

Nominal Voltage	12V	
Rated Capacity(20HR)	20Ah	
Dimensions	Length	181 mm
	Width	76 mm
	Height	167 mm
	Total height	167 mm
Approx. Mass	6.20kg	
Terminal	M5 threaded post Bolt and Nut type	

Characteristics

Capacity (25 °C)	20 hour rate	20Ah
	10 hour rate	18Ah
	5 hour rate	16Ah
	1 hour rate	12Ah
Internal Resistance	Fully charged battery (25 °C)	11 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

Duration of discharge vs. discharge current



Watt Table(25°C)

Cut-off V	(Wattage/Battery)																	
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h	
9.6V	1081	853	557	425	357	266	188	150	103	83.1	61.9	47.5	39.2	31.5	21.6	11.7	9.77	
9.9V	1003	800	546	423	351	263	186	150	101	82.5	61.5	47.2	38.9	31.4	21.5	11.7	9.74	
10.2V	926	750	532	414	345	260	185	147	99.1	80.3	60.9	46.9	38.6	31.2	21.3	11.6	9.71	
10.5V	823	672	493	385	328	254	182	144	97.0	77.5	60.0	46.6	38.3	30.8	21.2	11.6	9.68	
10.8V	695	594	440	359	319	246	179	141	94.3	73.9	58.8	46.0	37.4	30.3	21.0	11.5	9.61	

Ampere Table(25°C)

Cut-off V	(Ampere/Battery)																	
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h	
9.6V	108	85.0	55.3	40.0	34.2	24.0	16.9	12.7	9.04	6.98	5.17	3.95	3.26	2.61	1.86	1.01	0.842	
9.9V	100	79.7	54.2	39.7	33.6	23.7	16.8	12.7	8.86	6.92	5.14	3.93	3.23	2.60	1.85	1.01	0.839	
10.2V	92.5	74.7	52.8	38.9	33.1	23.5	16.6	12.5	8.68	6.74	5.09	3.90	3.20	2.58	1.83	1.00	0.836	
10.5V	82.2	66.9	48.9	36.2	31.4	22.9	16.4	12.2	8.50	6.51	5.01	3.88	3.18	2.55	1.83	1.00	0.833	
10.8V	69.4	59.2	43.6	33.8	30.6	22.2	16.1	12.0	8.27	6.20	4.91	3.82	3.10	2.51	1.81	0.99	0.828	

Charging Method

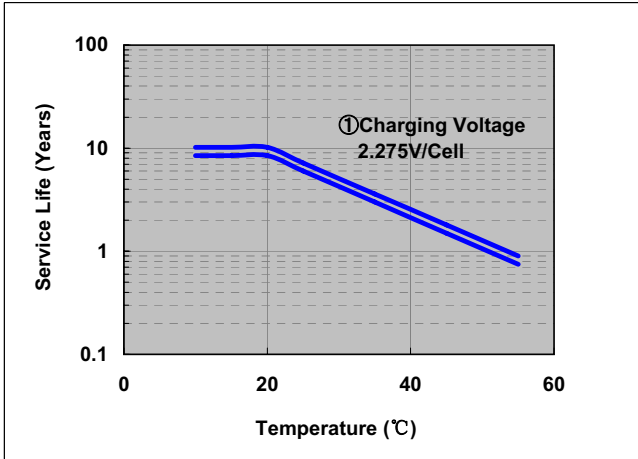
(25°C)

Trickle use	Control voltage 13.6-13.8V; Initial current 3A or smaller
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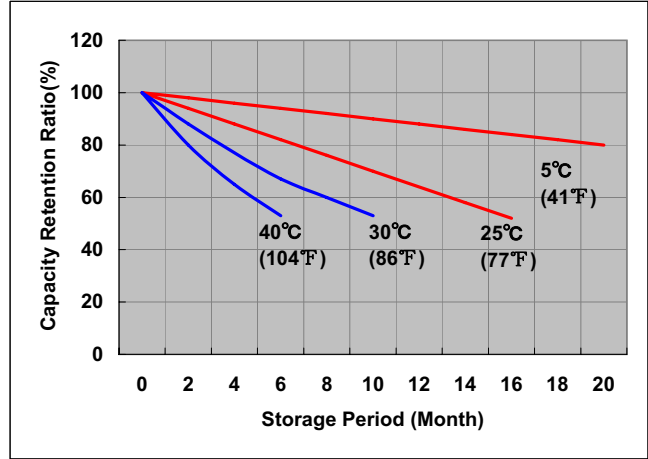
Cut off voltage

Discharge current	1A-4A	4A-10A	10A-20A	20A-40A	40A-60A
Cut off voltage(V)	10.5	10.2	9.9	9.3	8.7

Influence of Temperature on Trickle life

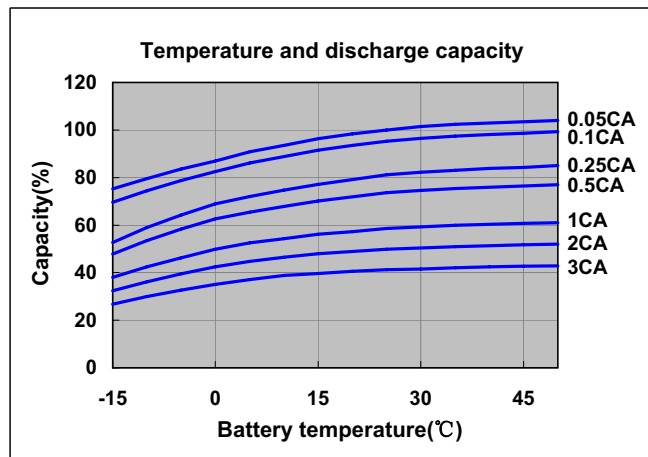
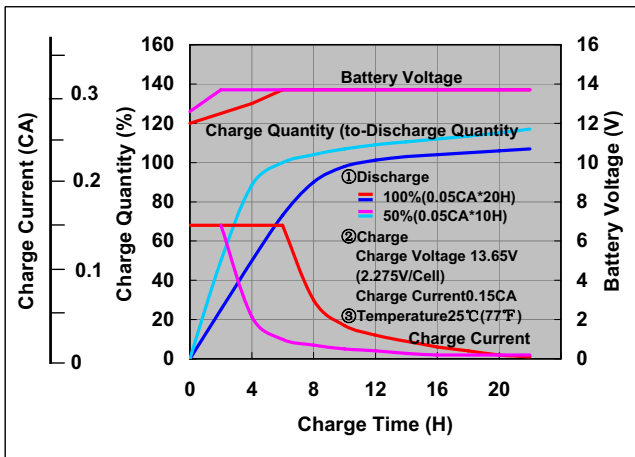


Residual capacity test result

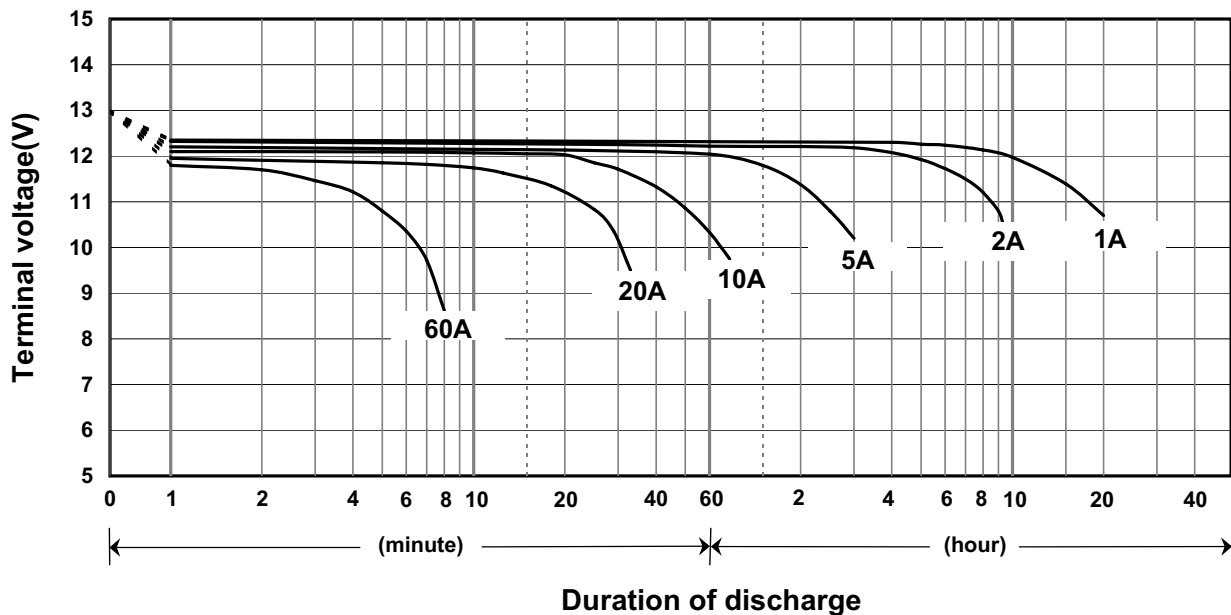


Constant-voltage and constant-current charge characteristics

Discharge capacity by temperature and by discharge current



Discharge characteristics(25°C)

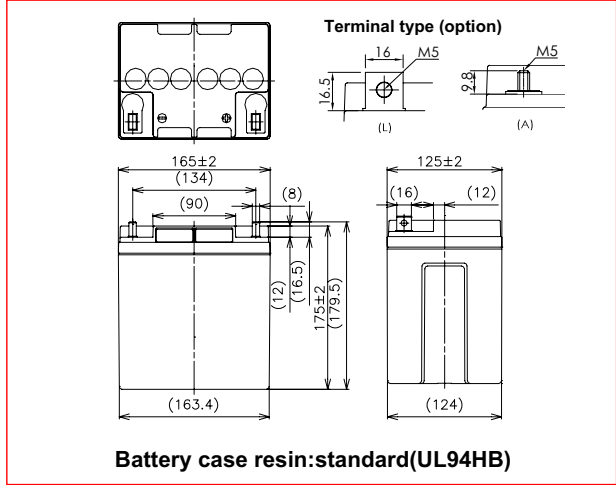


LC-X1224

For standby power supplies
Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



■ Dimensions(mm)



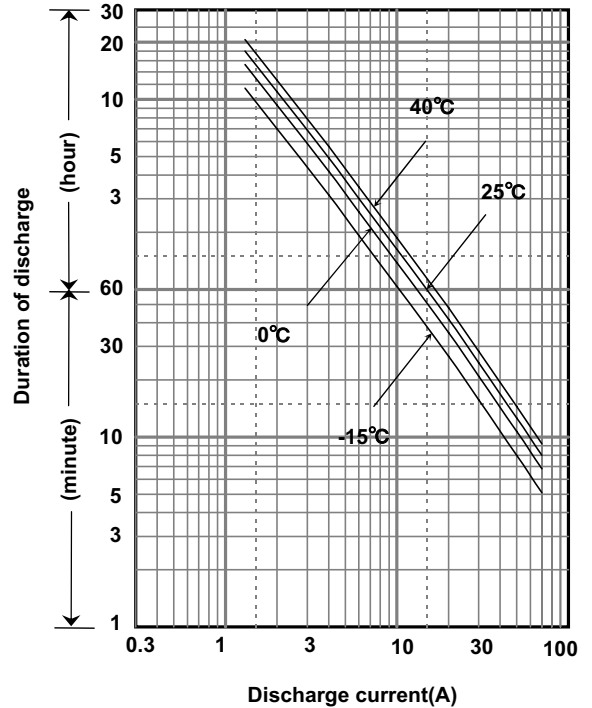
■ Specification

Nominal Voltage	12V	
Rated Capacity(20HR)	24Ah	
Dimensions	Length	165 mm
	Width	125 mm
	Height	175 mm
	Total height	175 mm/179.5 mm
Approx. Mass	8.25 kg	
Terminal	M5 threaded post Bolt and Nut type	

■ Characteristics

Capacity (25 °C)	20 hour rate	24Ah
	10 hour rate	22Ah
	5 hour rate	19Ah
	1 hour rate	14Ah
Internal Resistance	Fully charged battery (25 °C)	11 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

■ Duration of discharge vs. discharge current



■ Watt Table(25°C)

(Wattage/Battery)

Cut-off V	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	1290	992	739	523	441	317	234	183	118	104	73.8	58.6	47.9	40.8	26.4	14.6	12.0
9.9V	1197	931	724	520	434	314	232	183	116	103	73.4	58.2	47.5	40.6	26.3	14.6	12.0
10.2V	1104	872	706	509	426	310	230	179	113	101	72.7	57.8	47.2	40.3	26.0	14.6	11.9
10.5V	982	782	654	474	405	303	226	175	111	97.2	71.6	57.4	46.8	39.8	25.9	14.4	11.9
10.8V	829	691	583	442	394	293	223	172	108	92.6	70.1	56.6	45.6	39.2	25.6	14.3	11.8

■ Ampere Table(25°C)

(Ampere/Battery)

Cut-off V	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	116	89.0	66.0	45.5	38.0	27.1	19.9	15.5	10.0	8.80	6.20	4.90	4.00	3.40	2.20	1.22	1.000
9.9V	108	83.5	64.7	45.2	37.4	26.8	19.8	15.5	9.80	8.73	6.17	4.87	3.97	3.39	2.19	1.22	0.997
10.2V	99.3	78.2	63.0	44.3	36.8	26.5	19.6	15.2	9.60	8.51	6.11	4.84	3.94	3.36	2.17	1.21	0.993
10.5V	88.3	70.1	58.4	41.2	34.9	25.9	19.3	14.9	9.40	8.21	6.01	4.80	3.90	3.32	2.16	1.20	0.990
10.8V	74.6	62.0	52.1	38.4	34.0	25.0	19.0	14.6	9.14	7.82	5.89	4.74	3.81	3.27	2.13	1.19	0.983

Charging Method

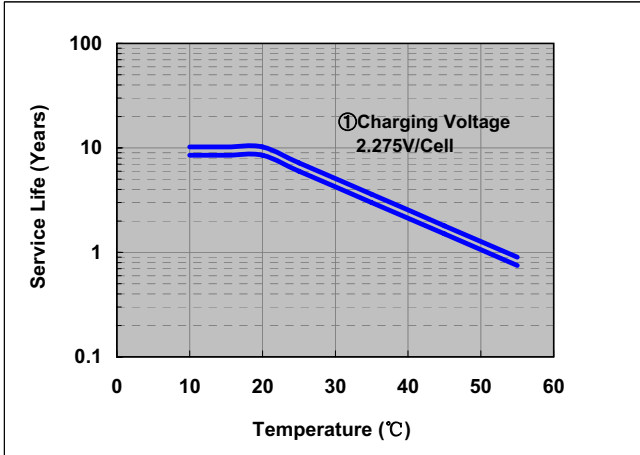
(25°C)

Trickle use	Control voltage 13.6-13.8V; Initial current 3.6A or smaller
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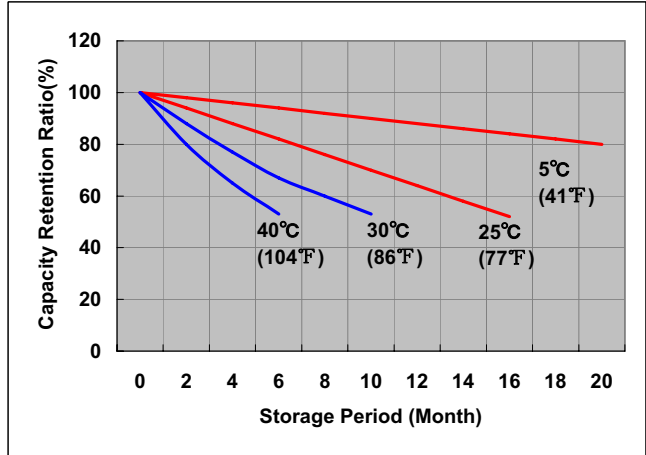
Cut off voltage

Discharge current	1.2A-4.8A	4.8A-12A	12A-24A	24A-48A	48A-72A
Cut off voltage(V)	10.5	10.2	9.9	9.3	8.7

Influence of Temperature on Trickle life

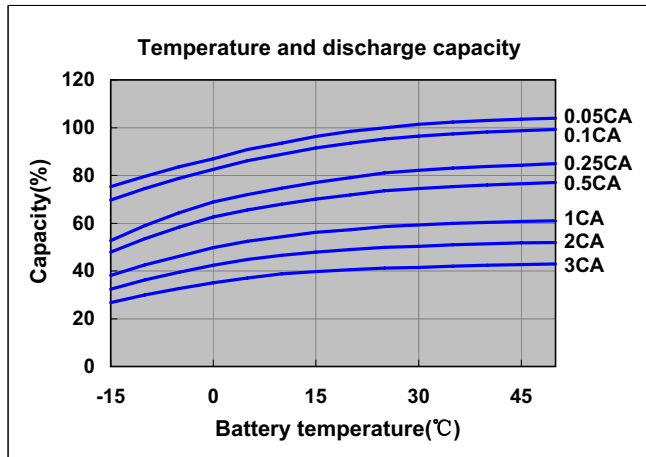
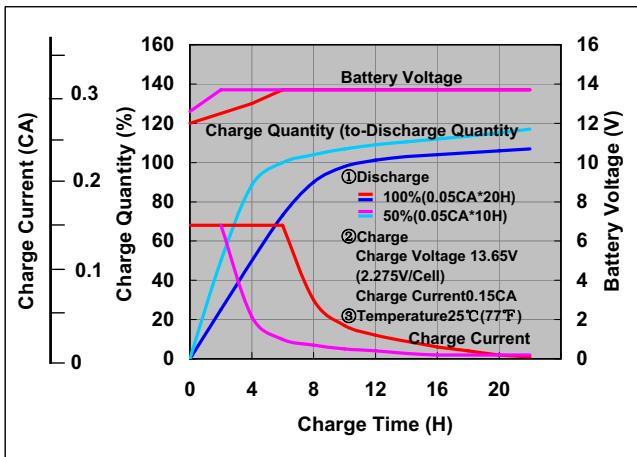


Residual capacity test result

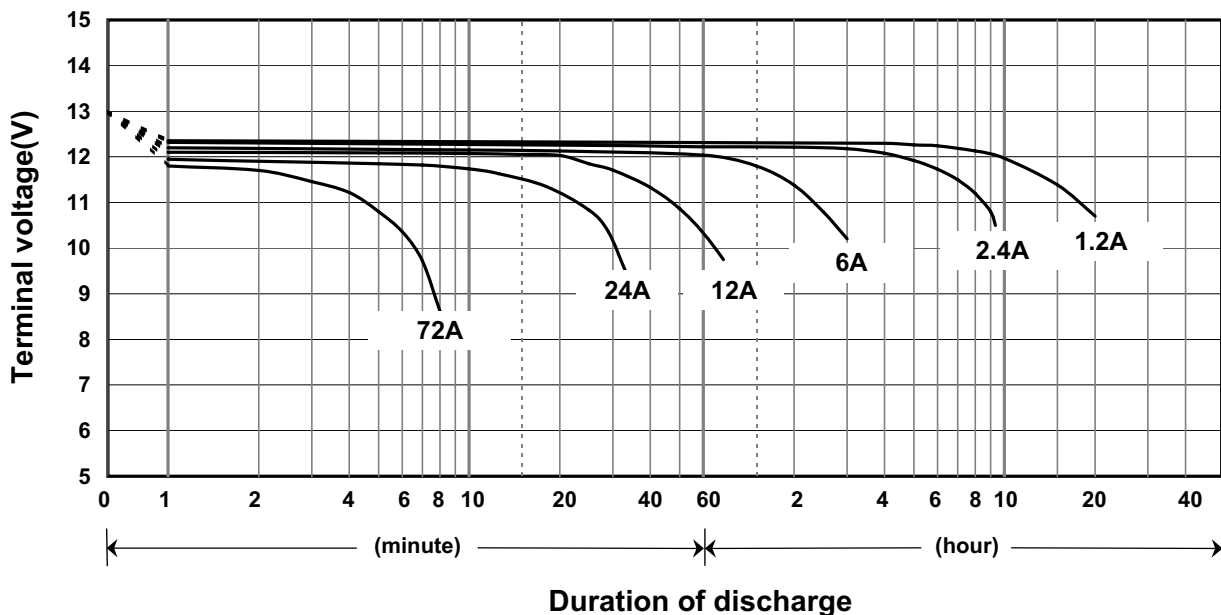


Constant-voltage and constant-current charge characteristics

Discharge capacity by temperature and by discharge current



Discharge characteristics(25°C)

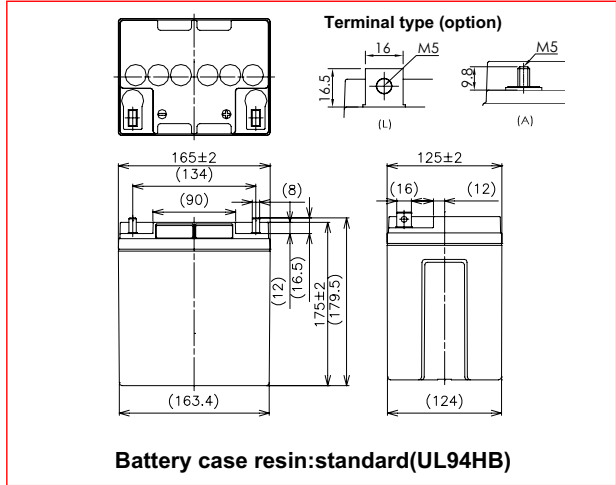


LC-X1228

For standby power supplies
 Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



Dimensions(mm)



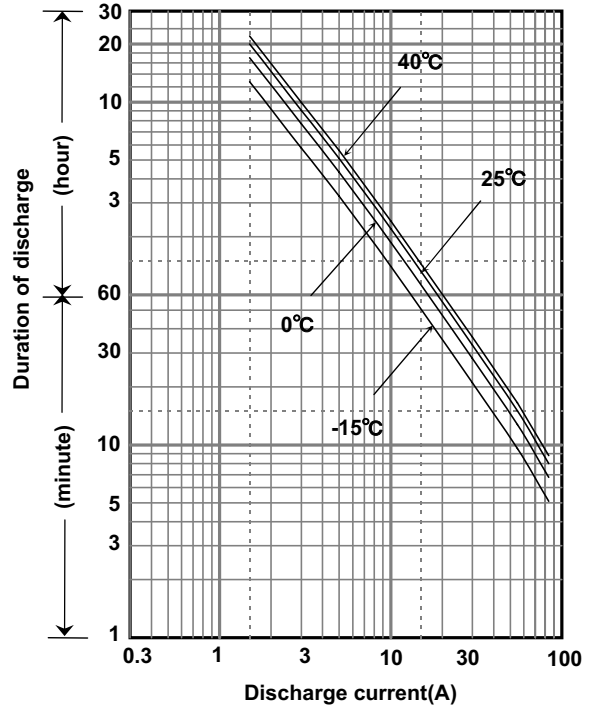
Specification

Nominal Voltage		12V
Rated Capacity(20HR)		28Ah
Dimensions	Length	165 mm
	Width	125 mm
	Height	175 mm
	Total height	175 mm/179.5 mm
Approx. Mass		9.95 kg
Terminal		M5 threaded post Bolt and Nut type

Characteristics

Capacity (25 °C)	20 hour rate	28Ah
	10 hour rate	26.5Ah
	5 hour rate	25Ah
	1 hour rate	21Ah
Internal Resistance	Fully charged battery (25 °C)	8 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

Duration of discharge vs. discharge current



Watt Table(25°C)

(Wattage/Battery)

Cut-off V	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	1423	1160	865	664	585	410	304	260	159	129	91.6	74.1	61.1	40.8	31.8	16.8	14.0
9.9V	1357	1093	849	654	579	404	294	254	156	128	90.4	72.9	59.9	51.6	31.8	16.8	14.0
10.2V	1301	1026	818	643	567	397	294	251	155	127	89.3	71.7	59.9	51.6	31.8	16.8	14.0
10.5V	1201	976	784	621	545	386	282	247	154	126	88.1	71.7	59.9	51.6	31.8	16.8	14.0
10.8V	1052	903	773	610	539	374	255	218	149	118	84.5	70.5	59.9	50.4	31.8	16.8	13.9

Ampere Table(25°C)

(Ampere/Battery)

Cut-off V	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	128	104	77.2	57.7	50.4	35.0	25.9	22.1	13.5	10.9	7.70	6.20	5.10	3.40	2.65	1.40	1.17
9.9V	122	98.0	75.8	56.9	49.9	34.5	25.0	21.6	13.2	10.8	7.60	6.10	5.00	4.30	2.65	1.40	1.17
10.2V	117	92.0	73.0	55.9	48.9	33.9	25.0	21.3	13.1	10.7	7.50	6.00	5.00	4.30	2.65	1.40	1.17
10.5V	108	87.5	70.0	54.0	47.0	33.0	24.0	21.0	13.0	10.6	7.40	6.00	5.00	4.30	2.70	1.40	1.17
10.8V	94.6	81.0	69.0	53.0	46.5	32.0	21.7	18.5	12.6	10.0	7.10	5.90	5.00	4.20	2.65	1.40	1.16

■ Charging Method

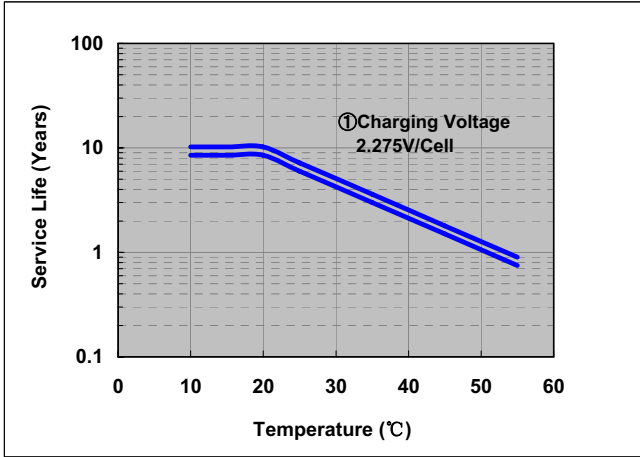
(25°C)

Trickle use	Control voltage 13.6-13.8V; Initial current 4.2A or smaller
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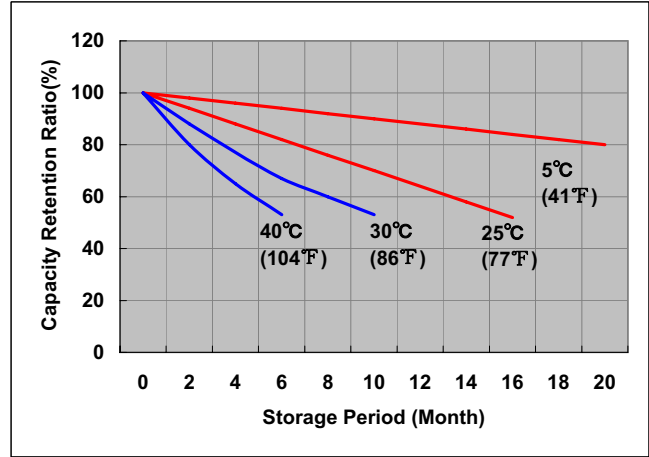
■ Cut off voltage

Discharge current	1.4A-5.6A	5.6A-14A	14A-28A	28A-56A	56A-84A
Cut off voltage(V)	10.5	10.2	9.9	9.3	8.7

■ Influence of Temperature on Trickle life

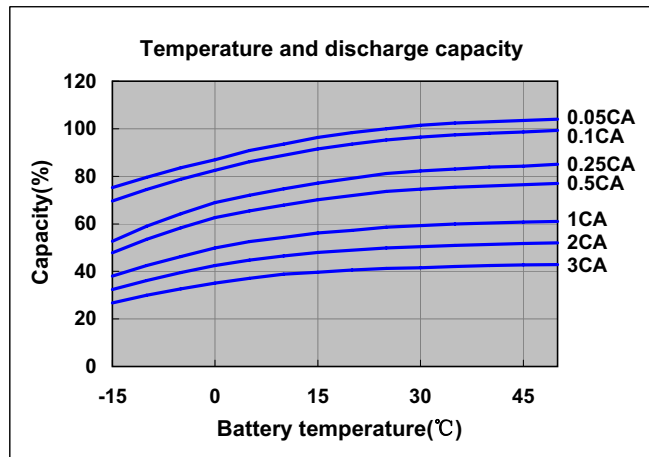
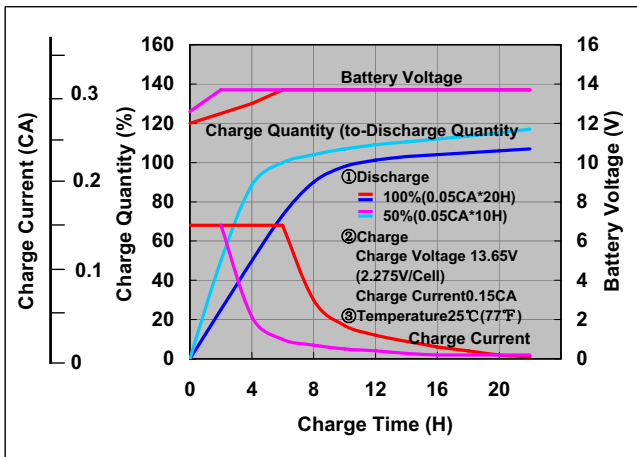


■ Residual capacity test result

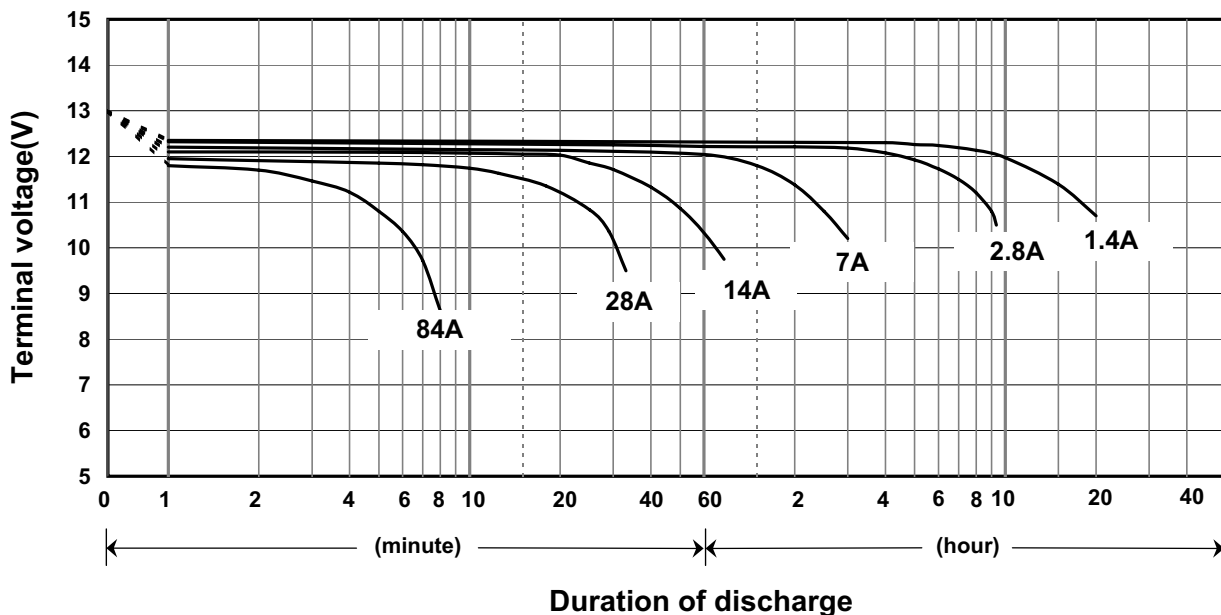


■ Constant-voltage and constant-current charge characteristics

■ Discharge capacity by temperature and by discharge current



■ Discharge characteristics(25°C)

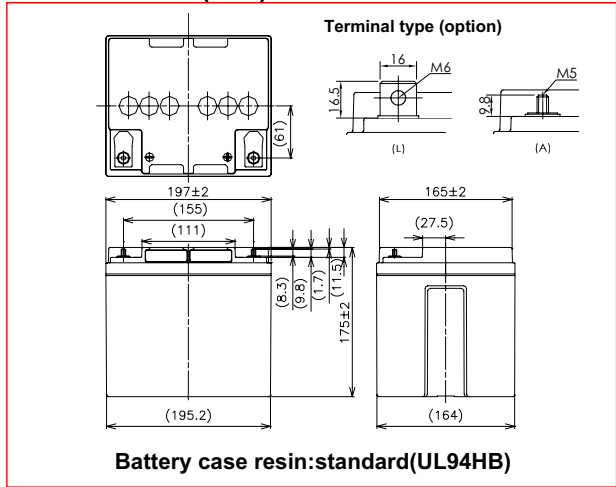


LC-X1238

For standby power supplies
 Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



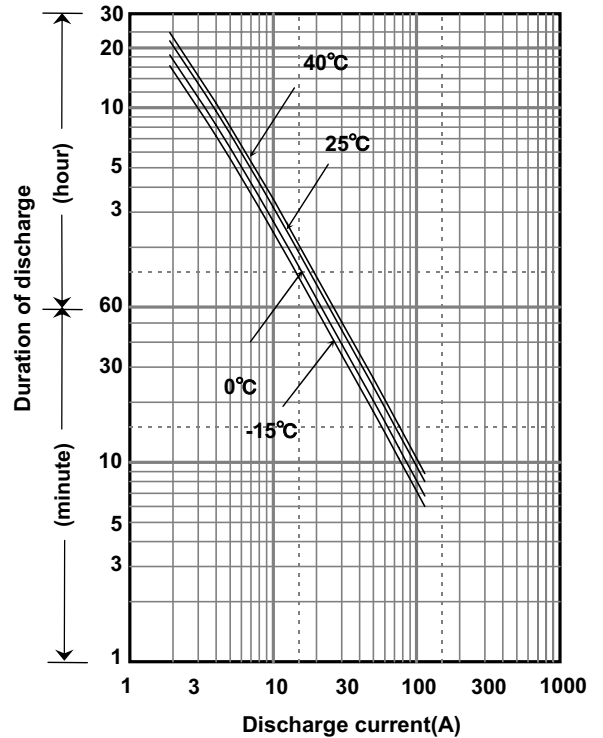
■ Dimensions(mm)



■ Specification

Nominal Voltage		12V
Rated Capacity(20HR)		38Ah
Dimensions	Length	197 mm
	Width	165 mm
	Height	175 mm
	Total height	175 mm/180 mm
Approx. Mass		12.5 kg
Terminal		M5 threaded post Bolt and Nut type

■ Duration of discharge vs. discharge current



■ Characteristics

Capacity (25 °C)	20 hour rate	38Ah
	10 hour rate	35Ah
	5 hour rate	31.5Ah
	1 hour rate	22.5Ah
Internal Resistance	Fully charged battery (25 °C)	8 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

■ Watt Table(25°C)

(Wattage/Battery)

Cut-off V	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	1668	1349	1030	800	686	505	351	276	214	169	123	99.2	77.9	68.3	42.0	22.8	19.0
9.9V	1535	1271	1008	788	682	500	350	269	209	168	120	98.0	76.7	68.3	42.0	22.8	19.0
10.2V	1457	1204	980	768	672	489	349	267	185	167	119	96.8	75.5	68.3	42.0	22.8	19.0
10.5V	1446	1126	952	748	661	480	346	265	183	166	119	96.8	75.5	68.3	42.0	22.8	19.0
10.8V	1311	1098	874	716	640	468	308	247	175	155	114	94.4	74.3	67.1	42.0	22.8	18.7

■ Ampere Table(25°C)

(Ampere/Battery)

Cut-off V	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	150	121	92.0	69.6	59.1	43.2	29.9	23.4	18.1	14.3	10.3	8.30	6.50	5.70	3.50	1.90	1.58
9.9V	138	114	90.0	68.5	58.8	42.7	29.8	22.8	17.7	14.2	10.1	8.20	6.40	5.70	3.50	1.90	1.58
10.2V	131	108	87.5	66.8	57.9	41.8	29.7	22.7	15.7	14.1	10.0	8.10	6.30	5.70	3.50	1.90	1.58
10.5V	130	101	85.0	65.0	57.0	41.0	29.5	22.5	15.5	14.0	10.0	8.10	6.30	5.70	3.50	1.90	1.58
10.8V	118	98.5	78.0	62.3	55.2	40.0	26.2	21.0	14.8	13.1	9.60	7.90	6.20	5.60	3.50	1.90	1.56

Charging Method

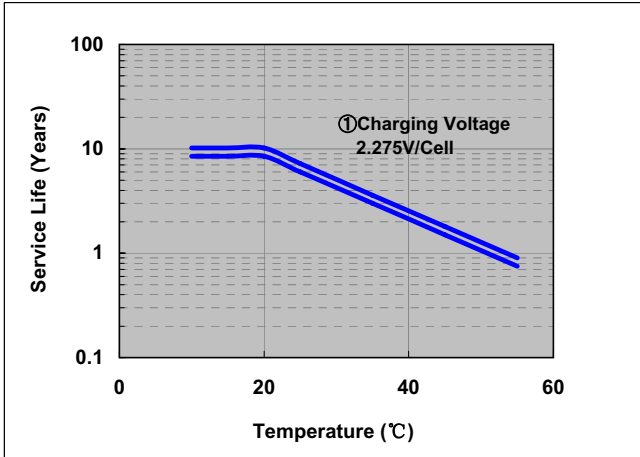
(25°C)

Trickle use	Control voltage 13.6-13.8V; Initial current 5.7A or smaller
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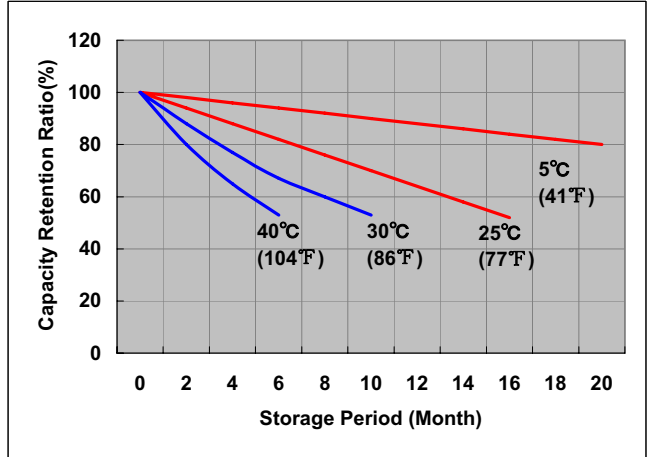
Cut off voltage

Discharge current	1.9A-7.6A	7.6A-19A	19A-38A	38A-76A	76A-114A
Cut off voltage(V)	10.5	10.2	9.9	9.3	8.7

Influence of Temperature on Trickle life

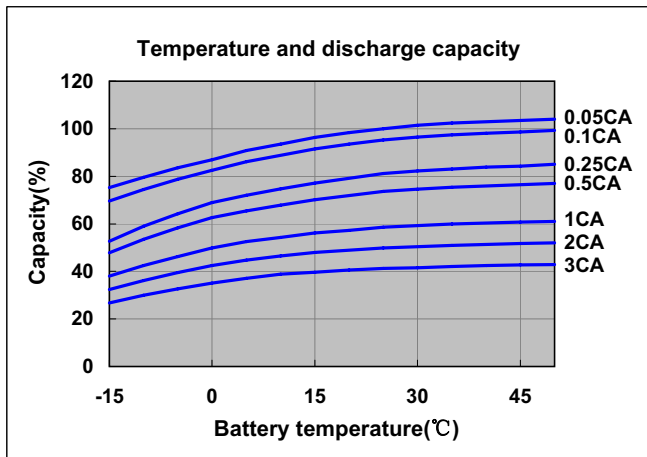
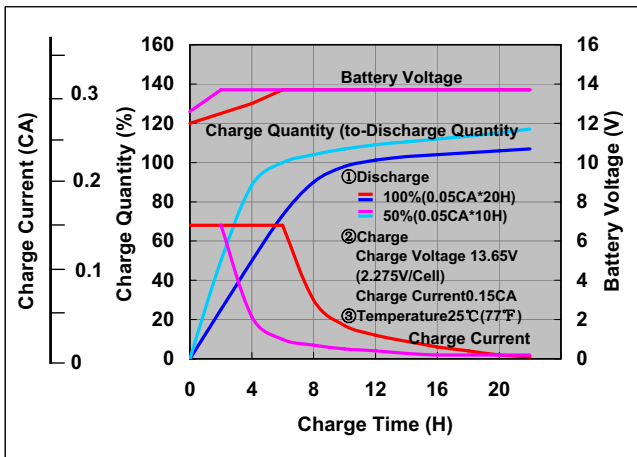


Residual capacity test result

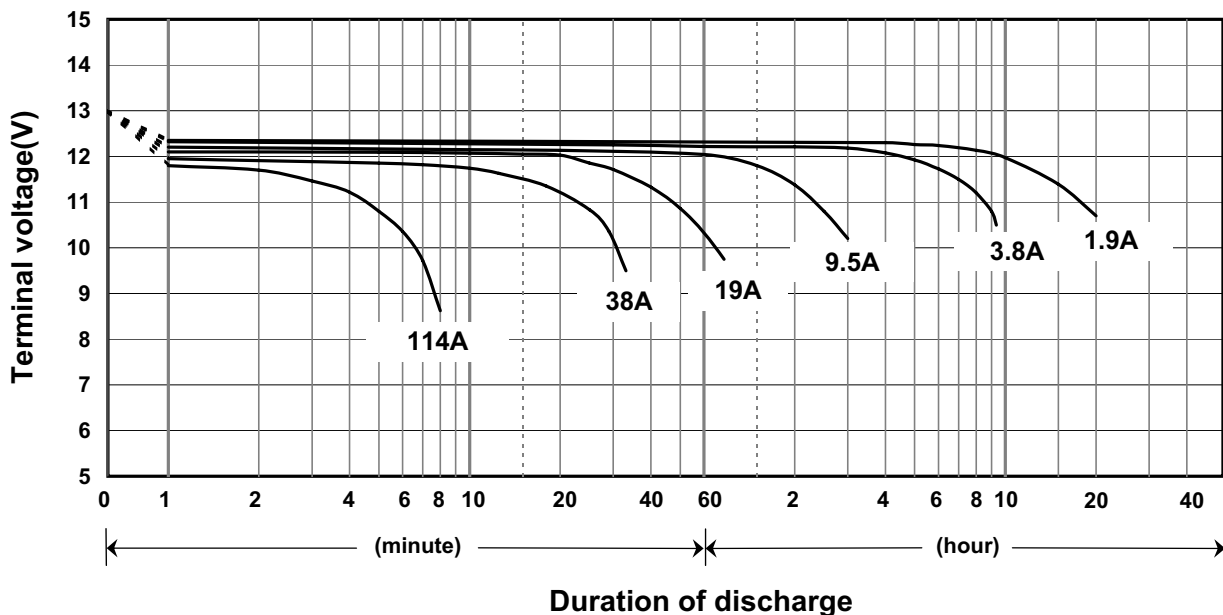


Constant-voltage and constant-current charge characteristics

Discharge capacity by temperature and by discharge current



Discharge characteristics(25°C)

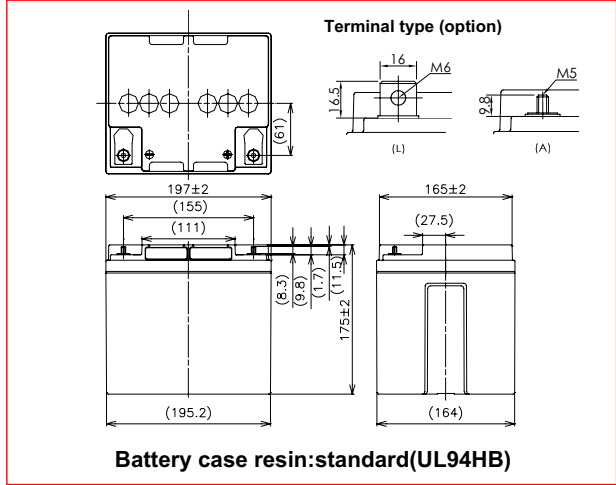


LC-X1242

For standby power supplies
Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



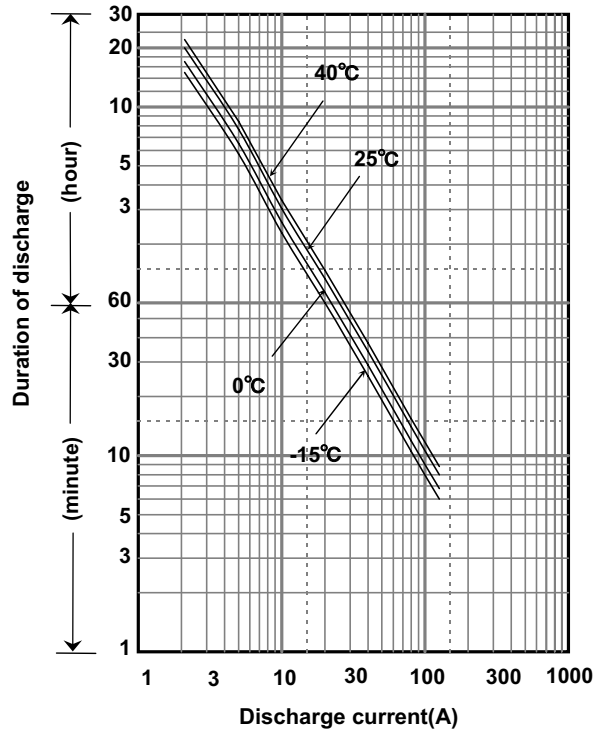
■ Dimensions(mm)



■ Specification

Nominal Voltage	12V	
Rated Capacity(20HR)	42Ah	
Dimensions	Length	197 mm
	Width	165 mm
	Height	175 mm
	Total height	175 mm/180 mm
Approx. Mass	14.0 kg	
Terminal	M5 threaded post Bolt and Nut type	

■ Duration of discharge vs. discharge current



■ Characteristics

Capacity (25 °C)	20 hour rate	42Ah
	10 hour rate	40Ah
	5 hour rate	37Ah
	1 hour rate	26Ah
Internal Resistance	Fully charged battery (25 °C)	8 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

■ Watt Table(25°C)

Cut-off V	(Wattage/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	1846	1483	1254	966	835	625	410	312	241	187	132	110	89.9	79.1	48.0	25.2	21.0
9.9V	1701	1405	1232	966	824	607	407	310	234	186	130	109	88.7	79.1	48.0	25.2	21.0
10.2V	1612	1327	1210	943	812	596	406	307	217	184	127	108	88.7	77.9	48.0	25.2	21.0
10.5V	1590	1249	1176	920	800	585	405	306	211	184	126	108	88.7	77.9	48.0	25.2	21.0
10.8V	1449	1215	1086	886	777	573	390	295	201	173	121	105	87.5	75.5	48.0	25.2	20.8

■ Ampere Table(25°C)

Cut-off V	(Ampere/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	166	133	112	84.0	72.0	53.4	34.9	26.5	20.4	15.8	11.1	9.20	7.50	6.60	4.00	2.10	1.75
9.9V	153	126	110	84.0	71.0	51.9	34.7	26.3	19.8	15.7	10.9	9.10	7.40	6.60	4.00	2.10	1.75
10.2V	145	119	108	82.0	70.0	50.9	34.6	26.1	18.4	15.5	10.7	9.00	7.40	6.50	4.00	2.10	1.75
10.5V	143	112	105	80.0	69.0	50.0	34.5	26.0	17.9	15.5	10.6	9.00	7.40	6.50	4.00	2.10	1.75
10.8V	130	109	97.0	77.0	67.0	49.0	33.2	25.0	17.0	14.6	10.2	8.80	7.30	6.30	4.00	2.10	1.73

Charging Method

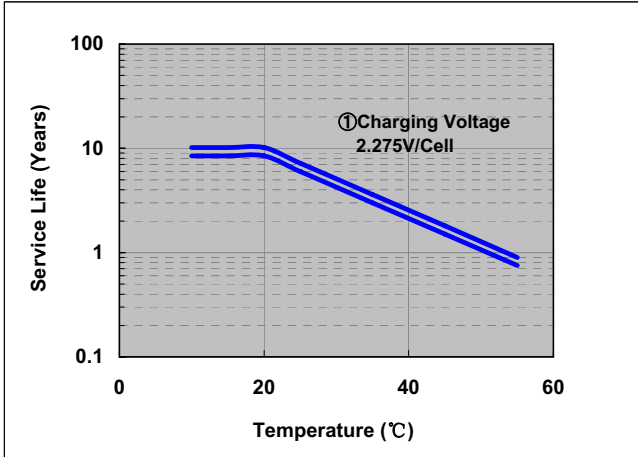
(25°C)

Trickle use	Control voltage 13.6-13.8V; Initial current 6.3A or smaller
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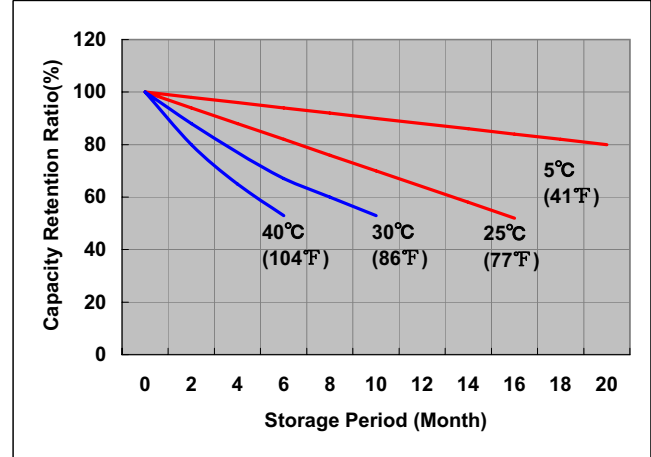
Cut off voltage

Discharge current	2.1A-8.4A	8.4A-21A	21A-42A	42A-84A	84A-126A
Cut off voltage(V)	10.5	10.2	9.9	9.3	8.7

Influence of Temperature on Trickle life

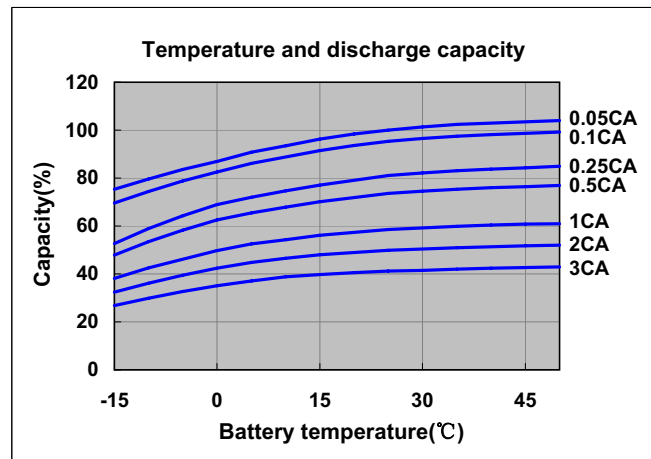
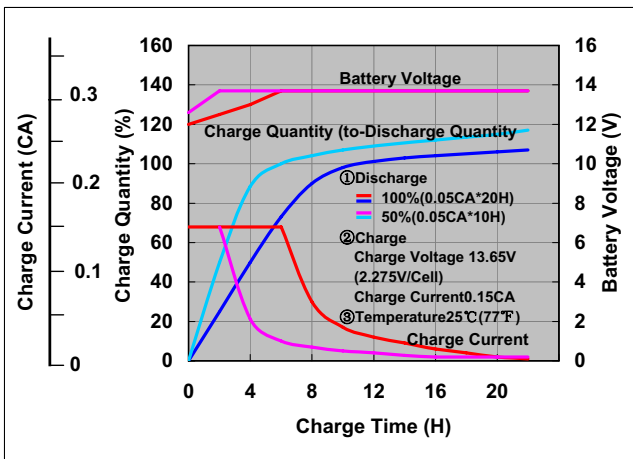


Residual capacity test result

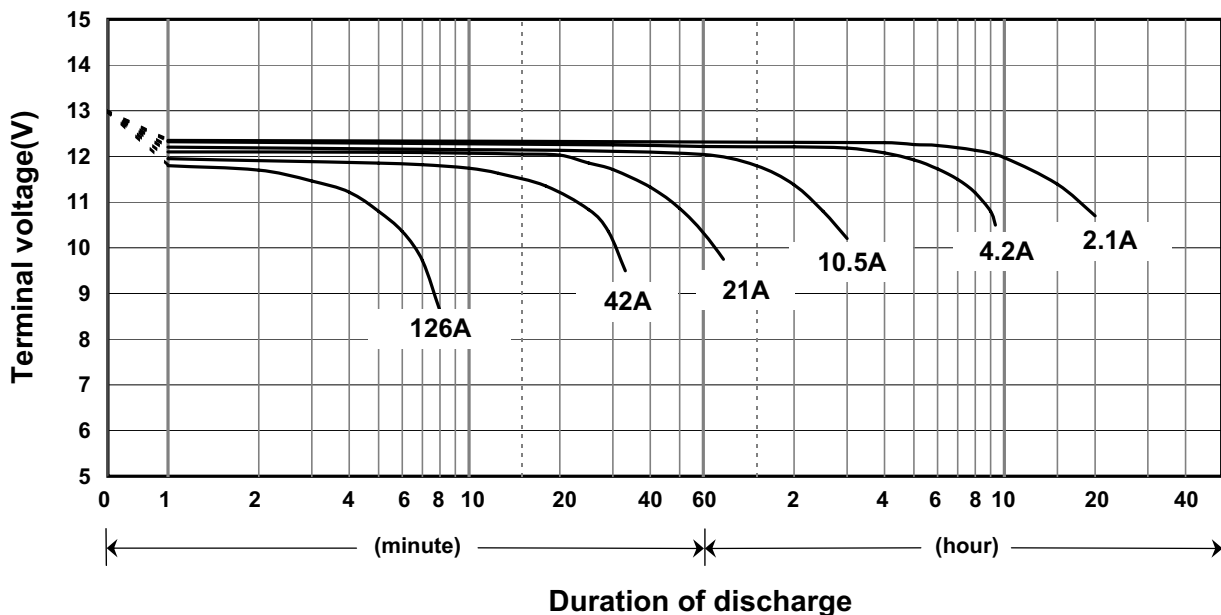


Constant-voltage and constant-current charge characteristics

Discharge capacity by temperature and by discharge current



Discharge characteristics(25°C)

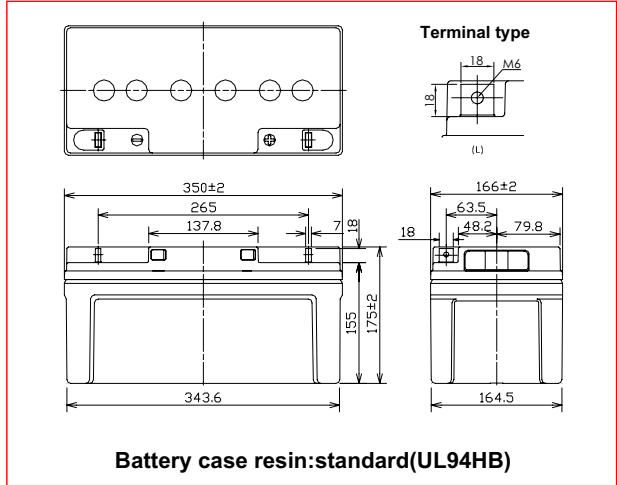


LC-X1265

For standby power supplies
 Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



■ Dimensions(mm)



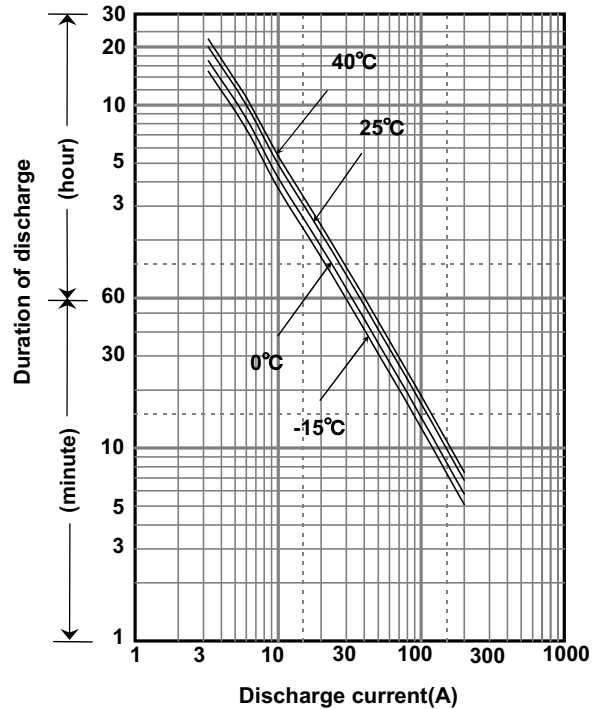
■ Specification

Nominal Voltage		12V
Rated Capacity(20HR)		65Ah
Dimensions	Length	350 mm
	Width	166 mm
	Height	175 mm
	Total height	175 mm
Approx. Mass		19.5 kg
Terminal		M6 threaded post Bolt and Nut type

■ Characteristics

Capacity (25 °C)	20 hour rate	65Ah
	10 hour rate	59Ah
	5 hour rate	53Ah
	1 hour rate	40Ah
Internal Resistance	Fully charged battery (25 °C)	7 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

■ Duration of discharge vs. discharge current



■ Watt Table(25°C)

(Wattage/Battery)

Cut-off V	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	2235	1884	1439	1127	956	742	533	501	321	290	201	158	131	115	70.8	39.0	32.4
9.9V	2180	1851	1422	1116	951	734	520	494	313	289	198	157	127	115	70.8	39.0	32.4
10.2V	2010	1735	1386	1093	935	725	515	484	307	281	196	156	126	114	70.1	38.9	32.3
10.5V	1787	1554	1284	1017	888	709	507	474	300	272	193	154	125	113	69.7	38.8	32.2
10.8V	1509	1374	1145	949	865	685	499	465	292	259	189	152	122	111	69.0	38.6	32.0

■ Ampere Table(25°C)

(Ampere/Battery)

Cut-off V	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	201	169	129	98.0	82.4	63.4	45.4	42.5	27.2	24.5	16.9	13.2	10.9	9.60	5.90	3.25	2.70
9.9V	196	166	127	97.0	82.0	62.7	44.3	41.9	26.5	24.4	16.6	13.1	10.6	9.60	5.90	3.25	2.70
10.2V	181	156	124	95.0	80.6	62.0	43.9	41.1	26.0	23.8	16.4	13.0	10.5	9.52	5.84	3.24	2.69
10.5V	161	139	115	88.4	76.6	60.6	43.2	40.3	25.4	22.9	16.2	12.9	10.4	9.41	5.81	3.23	2.68
10.8V	136	123	102	82.5	74.5	58.5	42.5	39.4	24.7	21.9	15.8	12.8	10.2	9.26	5.75	3.21	2.66

Charging Method

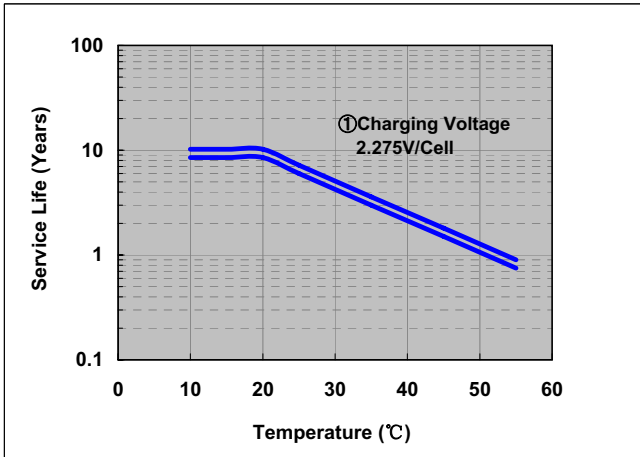
(25°C)

Trickle use	Control voltage 13.6-13.8V; Initial current 9.75A or smaller
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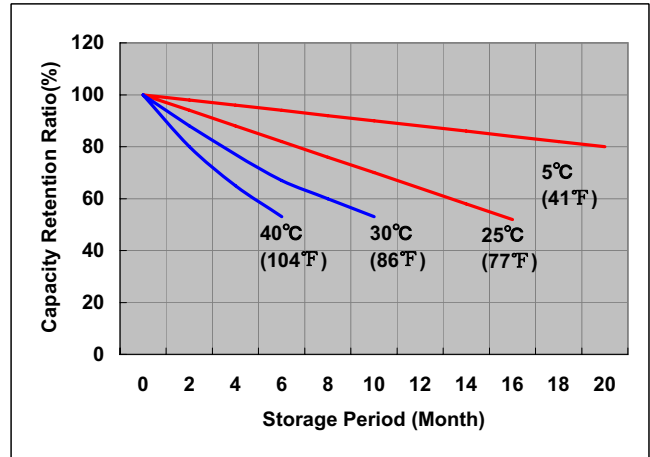
Cut off voltage

Discharge current	3.25A-13A	13A-32.5A	32.5A-65A	65A-130A	130A-195A
Cut off voltage(V)	10.5	10.2	9.9	9.3	8.7

Influence of Temperature on Trickle life

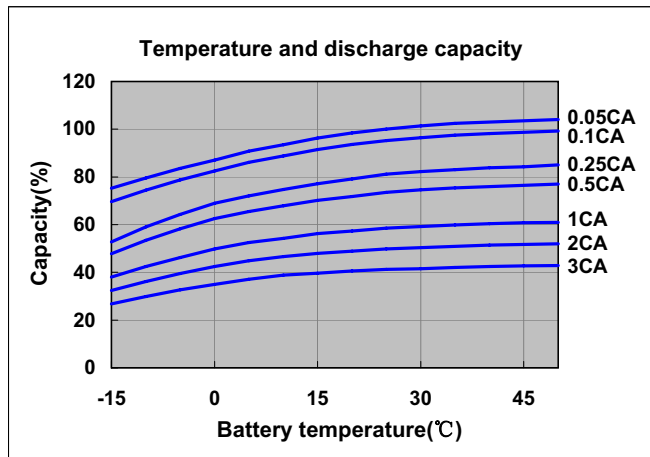
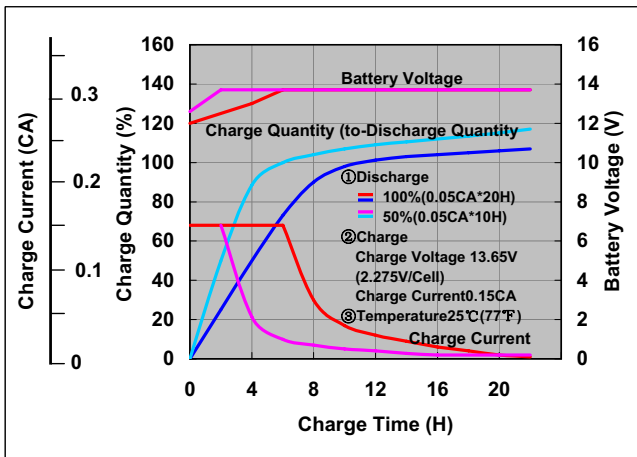


Residual capacity test result

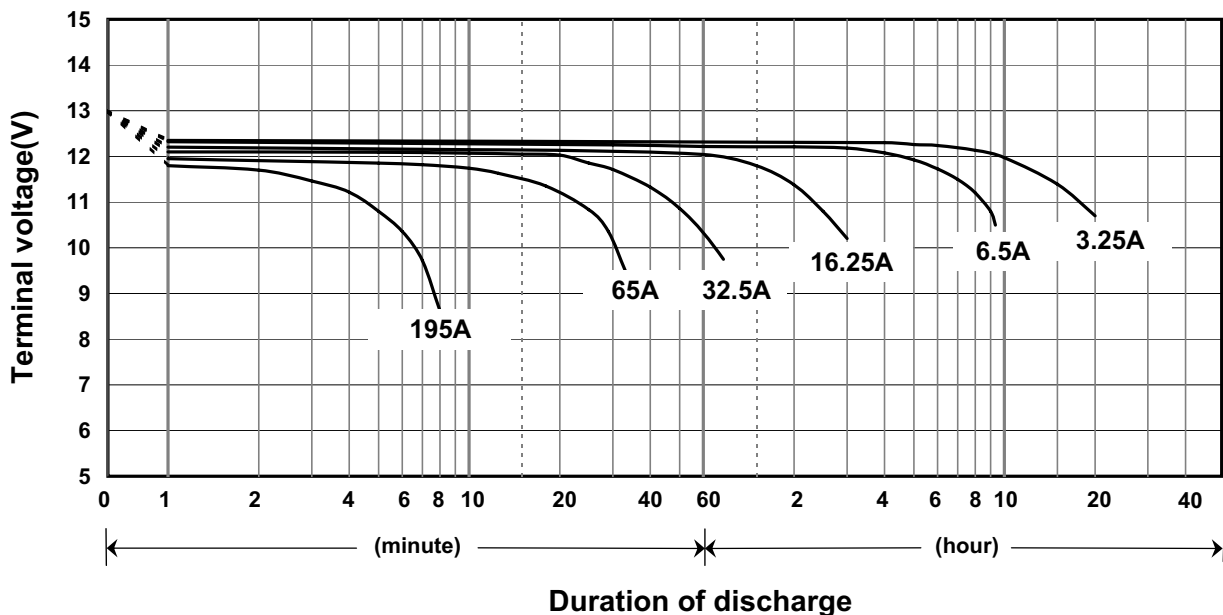


Constant-voltage and constant-current charge characteristics

Discharge capacity by temperature and by discharge current



Discharge characteristics(25°C)

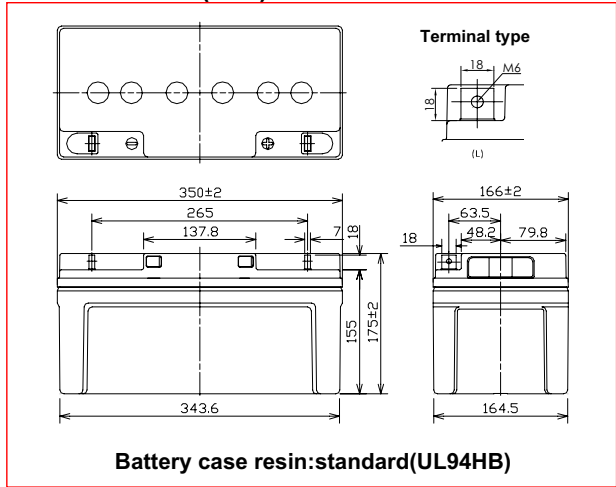


LC-X1275

For standby power supplies
Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



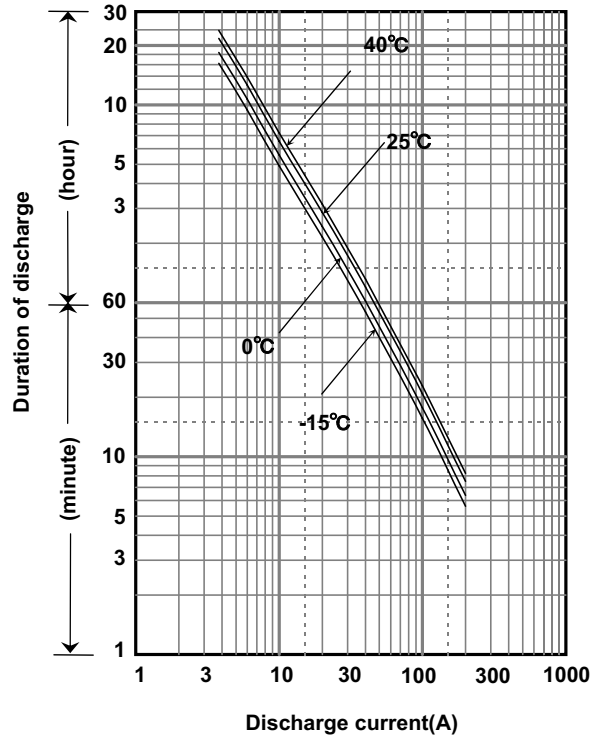
■ Dimensions(mm)



■ Specification

Nominal Voltage		12V
Rated Capacity(20HR)		75Ah
Dimensions	Length	350 mm
	Width	166 mm
	Height	175 mm
	Total height	175 mm
Approx. Mass		23.5 kg
Terminal		M6 threaded post Bolt and Nut type

■ Duration of discharge vs. discharge current



■ Characteristics

Capacity (25 °C)	20 hour rate	75Ah
	10 hour rate	68Ah
	5 hour rate	61Ah
	1 hour rate	45Ah
Internal Resistance	Fully charged battery (25 °C)	5 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

■ Watt Table(25°C)

Cut-off V	Duration (min)														
	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	1985	1546	1350	1017	722	601	411	327	220	171	149	125	79.5	45.0	37.2
9.9V	1962	1538	1342	1009	703	599	403	325	216	169	147	125	79.5	45.0	37.2
10.2V	1955	1531	1327	994	699	595	400	321	215	168	144	124	78.6	45.0	37.2
10.5V	1783	1446	1265	978	691	591	395	317	215	168	144	124	78.6	45.0	37.2
10.8V	1693	1400	1234	962	597	512	355	301	205	164	143	120	77.8	44.1	37.2

■ Ampere Table(25°C)

Cut-off V	Duration (min)														
	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	177	134	116	86.9	61.5	51.0	34.8	27.6	18.5	14.3	12.4	10.4	6.62	3.75	3.10
9.9V	175	134	116	86.3	59.9	50.8	34.1	27.4	18.2	14.2	12.2	10.4	6.62	3.75	3.10
10.2V	175	133	114	84.9	59.5	50.5	33.8	27.1	18.1	14.0	12.0	10.4	6.55	3.75	3.10
10.5V	159	126	109	83.6	58.9	50.2	33.4	26.8	18.1	14.0	12.0	10.4	6.55	3.75	3.10
10.8V	151	122	106	82.3	50.8	43.5	30.1	25.4	17.3	13.7	11.9	10.0	6.49	3.68	3.10

Charging Method

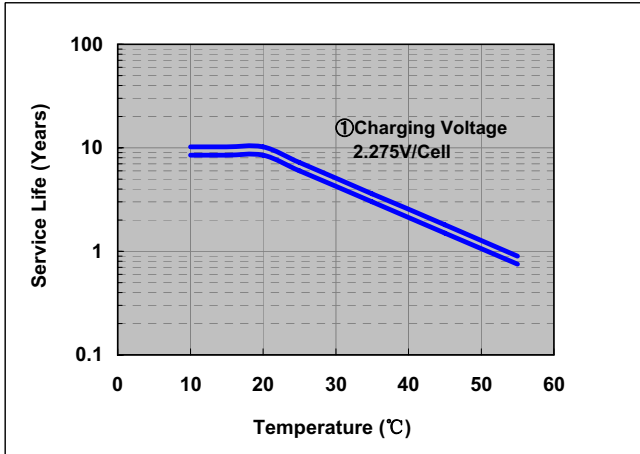
(25°C)

Trickle use	Control voltage 13.6-13.8V; Initial current 11.25A or smaller
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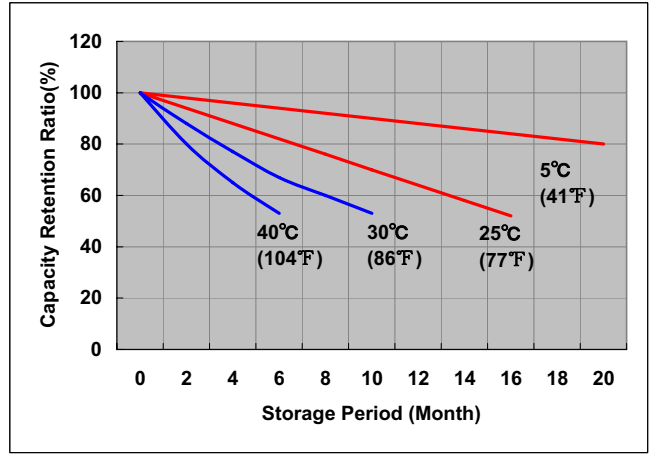
Cut off voltage

Discharge current	3.75A-15A	15A-37.5A	37.5A-75A	75A-150A	150A-225A
Cut off voltage(V)	10.5	10.2	9.9	9.3	8.7

Influence of Temperature on Trickle life

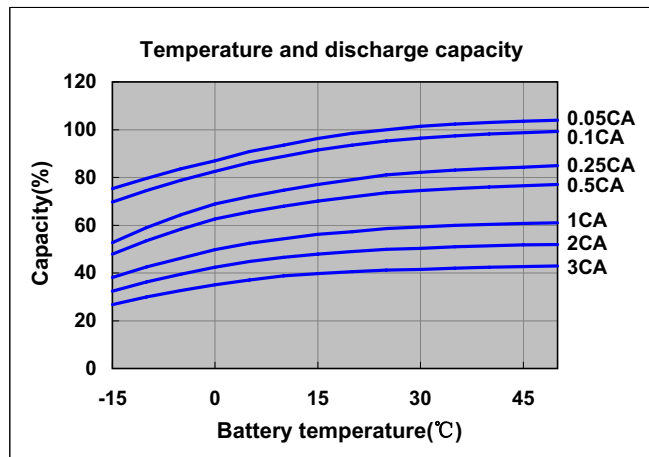
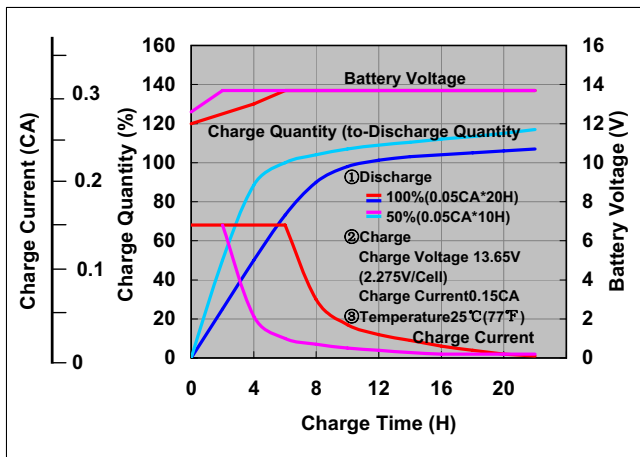


Residual capacity test result

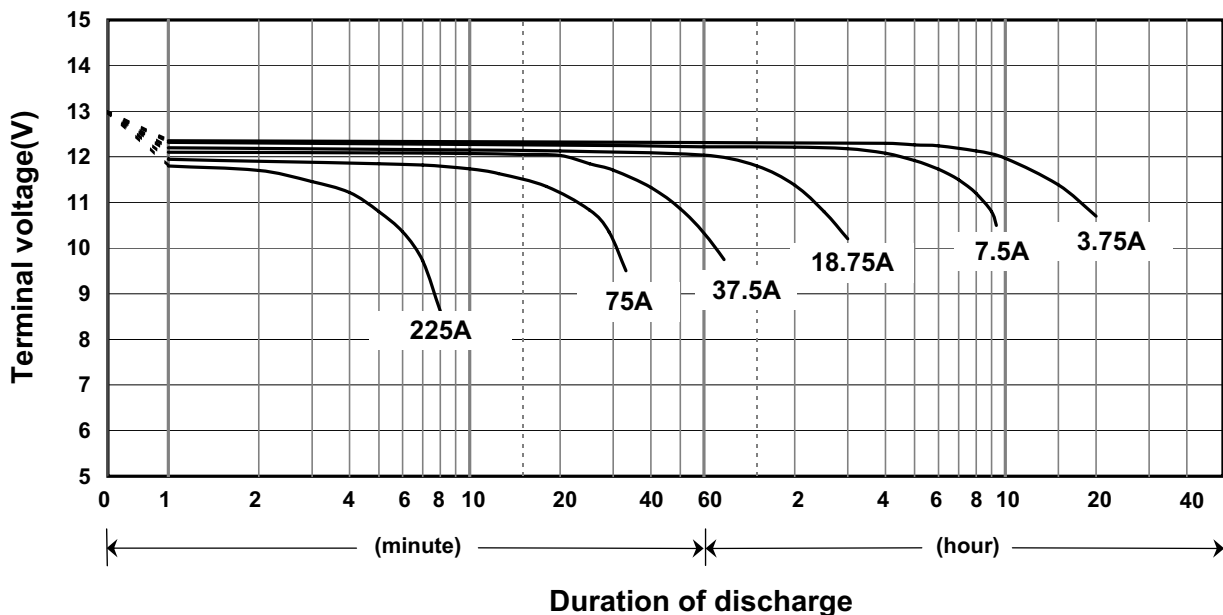


Constant-voltage and constant-current charge characteristics

Discharge capacity by temperature and by discharge current



Discharge characteristics(25°C)

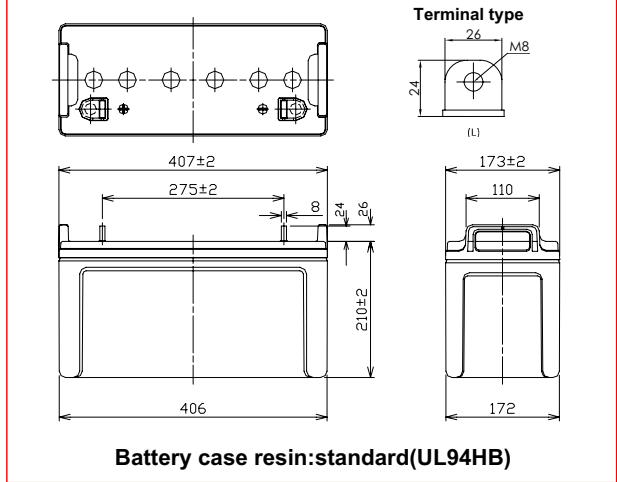


LC-XB12100

For standby power supplies
Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C



■ Dimensions(mm)



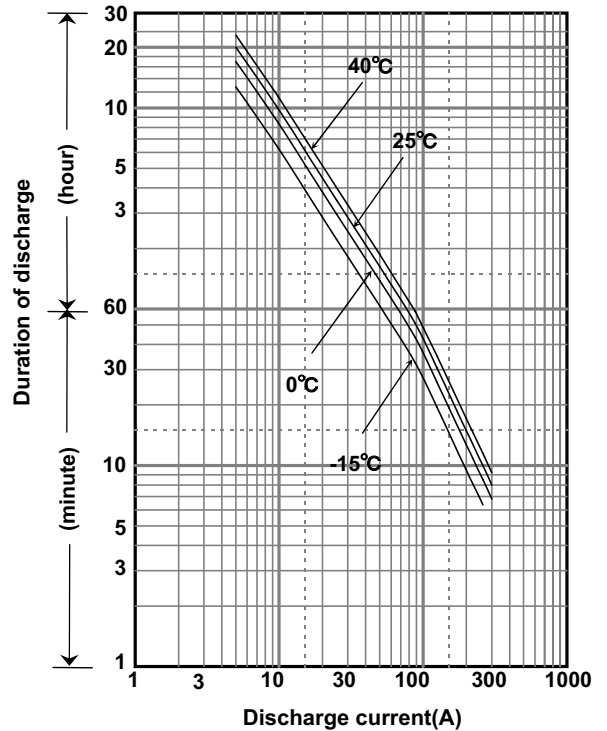
■ Specification

Nominal Voltage		12V
Rated Capacity(20HR)		100Ah
Dimensions	Length	407 mm
	Width	173 mm
	Height	210 mm
	Total height	236 mm
Approx. Mass		36.5 kg
Terminal		M8 threaded post Bolt and Nut type

■ Characteristics

Capacity (25 °C)	20 hour rate	100Ah
	10 hour rate	98Ah
	5 hour rate	90Ah
	1 hour rate	70Ah
Internal Resistance	Fully charged battery (25 °C)	5 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

■ Duration of discharge vs. discharge current



■ Watt Table(25°C)

Cut-off V	(Wattage/Battery)														
	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	2306	1834	1592	1206	892	733	582	430	281	226	170	154	88.3	47.0	38.5
9.9V	2254	1790	1554	1177	869	714	567	419	276	221	165	149	85.3	47.0	38.5
10.2V	2204	1726	1498	1139	877	694	551	413	272	216	160	145	84.3	46.5	38.0
10.5V	2134	1705	1487	1130	852	675	536	405	267	213	160	145	83.3	46.5	38.0
10.8V	1947	1624	1479	1094	840	666	528	395	262	208	155	150	82.3	45.5	37.2

■ Ampere Table(25°C)

Cut-off V	(Ampere/Battery)														
	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	265	201	174	130	92.0	76.3	52.0	41.3	27.7	21.4	18.6	15.6	9.90	5.00	4.20
9.9V	262	200	173	129	89.5	76.0	51.0	41.0	27.2	21.2	18.3	15.6	9.90	5.00	4.20
10.2V	261	199	171	127	89.0	75.5	50.6	40.5	27.0	21.0	18.0	15.5	9.80	5.00	4.20
10.5V	238	188	163	125	88.0	75.0	50.0	40.0	27.0	21.0	18.0	15.5	9.80	5.00	4.20
10.8V	226	182	159	123	76.0	65.0	45.0	38.0	25.8	20.5	17.8	15.0	9.70	4.90	4.20

■ Charging Method

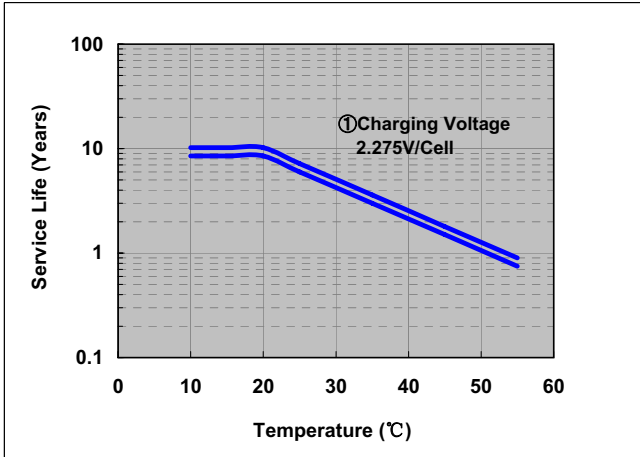
(25°C)

Trickle use	Control voltage 13.6-13.8V; Initial current 15A or smaller
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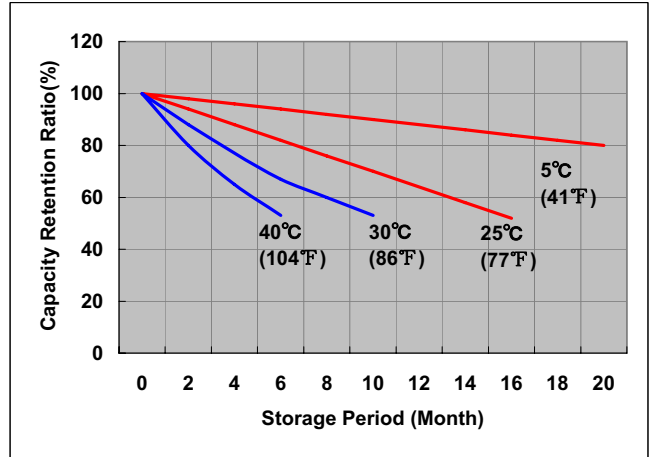
■ Cut off voltage

Discharge current	5A-20A	20A-50A	50A-100A	100A-200A	200A-300A
Cut off voltage(V)	10.5	10.2	9.9	9.3	8.7

■ Influence of Temperature on Trickle life

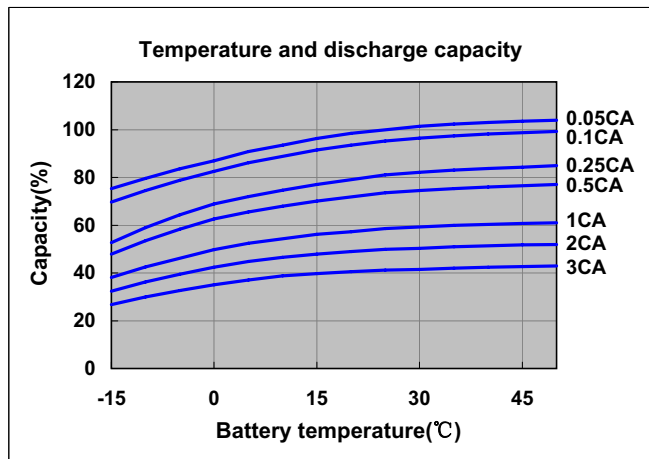
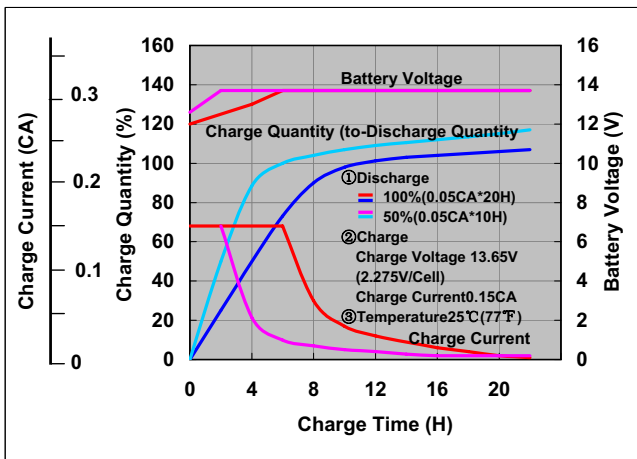


■ Residual capacity test result

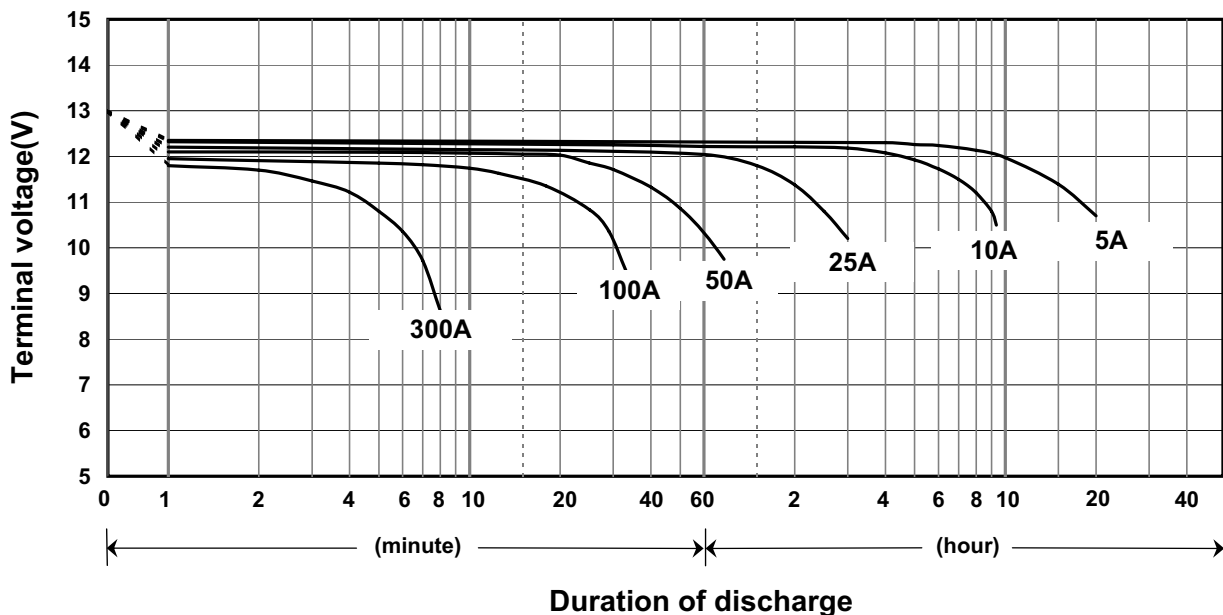


■ Constant-voltage and constant-current charge characteristics

■ Discharge capacity by temperature and by discharge current



■ Discharge characteristics(25°C)

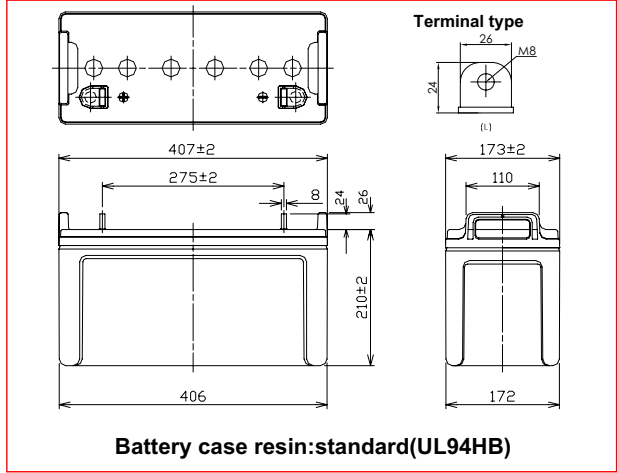


LC-X12120



For standby power supplies
Expected trickle life: Approx. 6 years at 25°C, approx. 10 years at 20°C

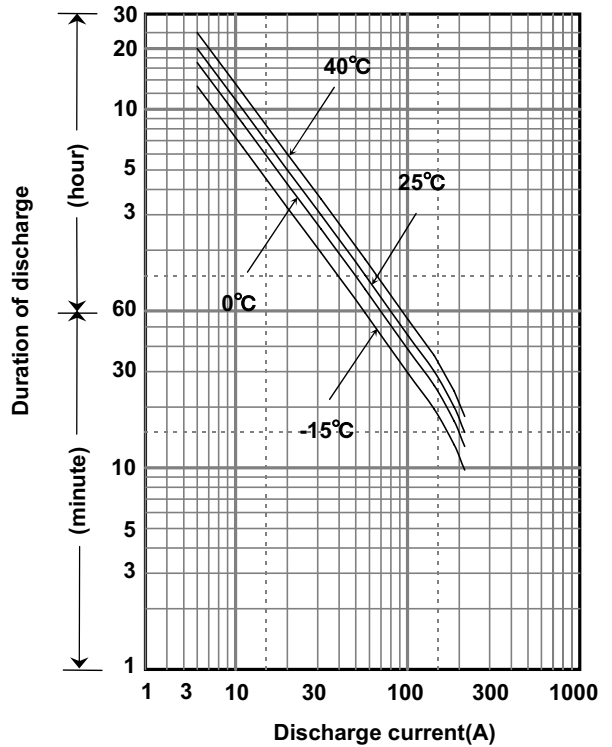
■ Dimensions(mm)



■ Specification

Nominal Voltage	12V	
Rated Capacity(20HR)	120Ah	
Dimensions	Length	407 mm
	Width	173 mm
	Height	210 mm
	Total height	236 mm
Approx. Mass	35.5 kg	
Terminal	Lead post	

■ Duration of discharge vs. discharge current



■ Characteristics

Capacity (25 °C)	20 hour rate	120Ah
	10 hour rate	109Ah
	5 hour rate	99Ah
	1 hour rate	74Ah
Internal Resistance	Fully charged battery (25 °C)	4 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

■ Watt Table(25°C)

Cut-off V	(Wattage/Battery)													
	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	1920	1677	1409	1095	835	663	499	326	261	197	179	104	60.2	46.8
9.9V	1910	1667	1370	1062	820	662	486	322	255	191	177	103	60.1	46.8
10.2V	1901	1648	1322	1040	805	642	479	315	249	185	168	101	60.0	46.7
10.5V	1796	1571	1316	1025	764	629	470	310	246	184	166	101	60.0	46.6
10.8V	1739	1532	1281	980	672	559	458	306	240	180	163	100	59.9	46.6

■ Ampere Table(25°C)

Cut-off V	(Ampere/Battery)													
	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	229	198	149	105	86.9	59.3	47.9	32.1	23.7	20.6	17.4	11.1	6.00	5.04
9.9V	228	197	148	102	86.6	58.1	47.5	31.5	23.4	20.4	17.4	11.1	6.00	5.04
10.2V	227	195	146	102	85.9	57.7	46.9	31.2	23.2	20.0	17.3	11.0	6.00	5.04
10.5V	215	186	143	101	85.4	56.9	46.3	31.3	23.2	20.0	17.3	11.0	6.00	5.04
10.8V	208	181	141	86.9	74.0	51.2	44.0	29.9	22.7	19.8	16.7	10.9	5.88	5.00

Charging Method

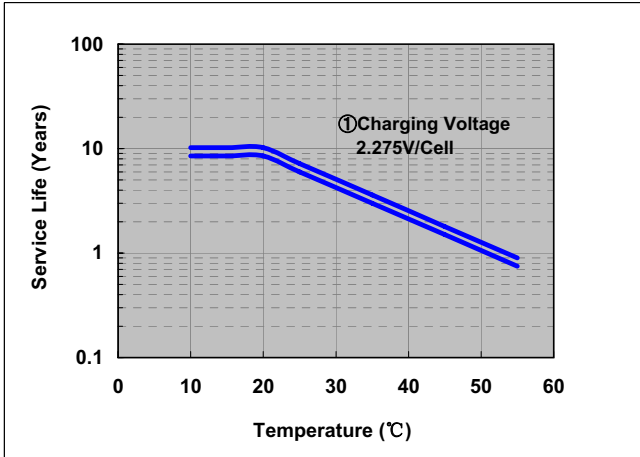
(25°C)

Trickle use	Control voltage 13.6-13.8V; Initial current 18A or smaller
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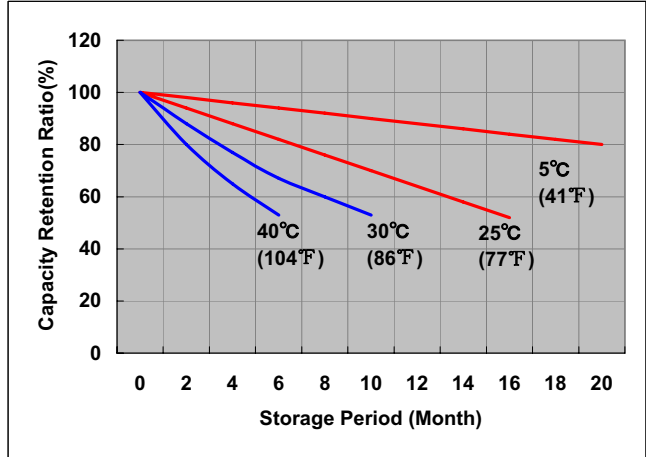
Cut off voltage

Discharge current	6A-24A	24A-60A	60A-120A	120A-240A
Cut off voltage(V)	10.5	10.2	9.9	9.3

Influence of Temperature on Trickle life

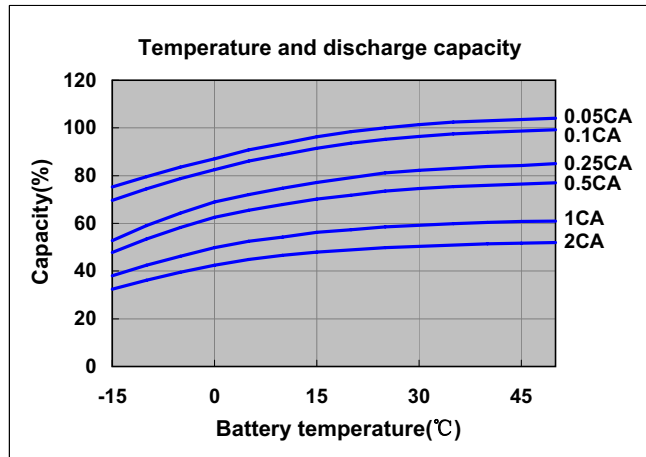
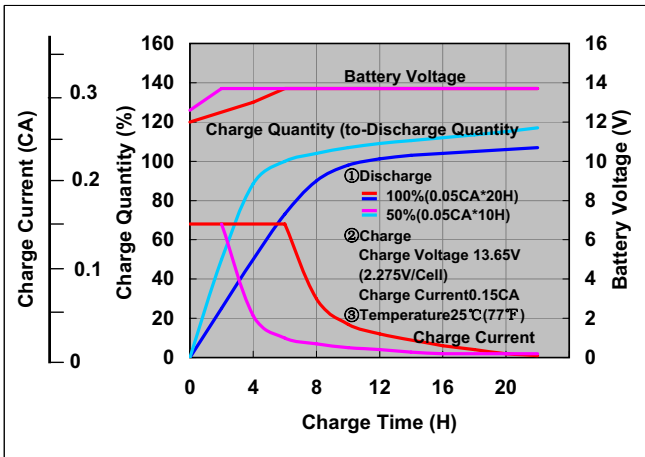


Residual capacity test result



Constant-voltage and constant-current charge characteristics

Discharge capacity by temperature and by discharge current



Discharge characteristics(25°C)

