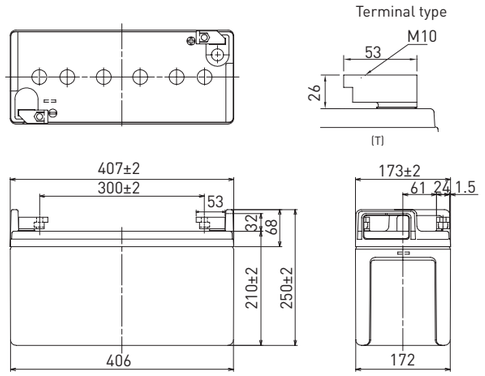
LC-QA06210TP

FOR STANDBY POWER SUPPLIES.
EXPECTED TRICKLE DESIGN LIFE: 15 YEARS AT 20°C.

DIMENSIONS (MM)



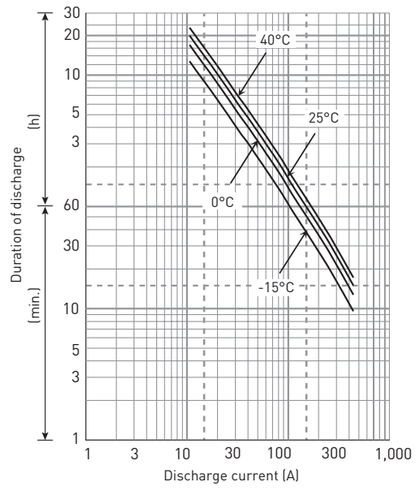
Contents indicated (including the recycle marking, etc.) are subject to change without notice.

Battery case resin: flame retardant (UL94 V-0)

SPECIFICATIONS

Name		LC-QA06210TP
Nominal voltage		6V
Nominal capacity (20 hour rate)		210Ah
Dimensions	Length	407mm
	Width	173mm
	Height	250mm
Approx. mass		36.5kg
Terminal		M10 T-shape
Capacity (25°C)	20 hour rate	212Ah
	10 hour rate	202Ah
	3 hour rate	176Ah
	1 hour rate	135Ah
Impedance	Fully charged battery (25°C)	1.5mΩ
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 month	91%
	After 6 month	82%
	After 12 month	64%

DURATION OF DISCHARGE VS. DISCHARGE CURRENT



WATT TABLE (25°C)

(Wattage/battery)

Cut-off	15min.	20min.	30min.	45min.	1h	1.5h	2h	3h	4h	5h	6h	10h	20h
4.80V	2,220	1,816	1,349	986	769	561	467	343	274	222	191	121	61.8
4.95V	2,167	1,773	1,317	964	749	546	454	337	268	215	185	117	61.3
5.10V	2,089	1,709	1,274	954	729	531	448	331	262	209	180	115	61.1
5.25V	2,063	1,696	1,264	939	708	517	439	325	260	206	179	114	60.6
5.40V	1,966	1,687	1,223	905	698	509	428	319	254	203	177	113	59.8

AMPERE TABLE (25°C)

(Ampere/battery)

Cut-off	15min.	20min.	30min.	45min.	1h	1.5h	2h	3h	4h	5h	6h	10h	20h
4.80V	440	364	274	200	153	107	88.1	61.5	47.6	39.5	32.3	20.5	10.6
4.95V	438	362	272	195	144	105	87.5	60.4	47.1	38.8	32.2	20.4	10.6
5.10V	436	358	268	193	140	104	86.4	60.0	46.7	38.2	32.1	20.3	10.6
5.25V	412	341	263	191	135	103	85.4	58.7	46.2	38.0	32.0	20.2	10.6
5.40V	398	333	259	165	131	92.3	81.1	57.3	45.6	37.8	31.0	20.1	10.4

All mentioned values are average values

LC-QA06210TP

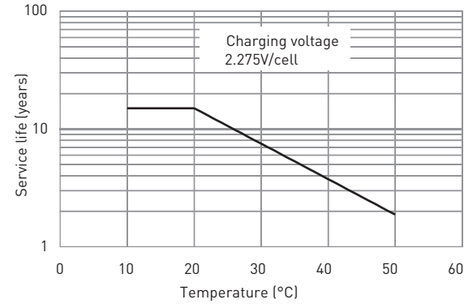
CHARGING METHOD (25°C)

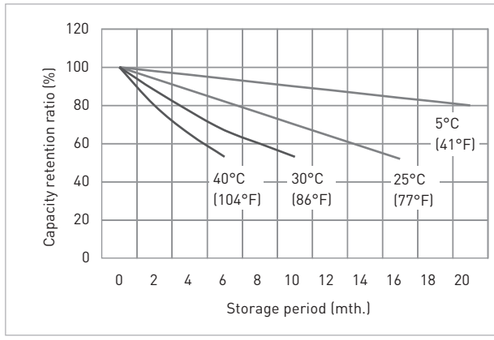
Trickle use	Control voltage: 6.80V - 6.90V Initial current: 31.5A or smaller

CUT-OFF VOLTAGE

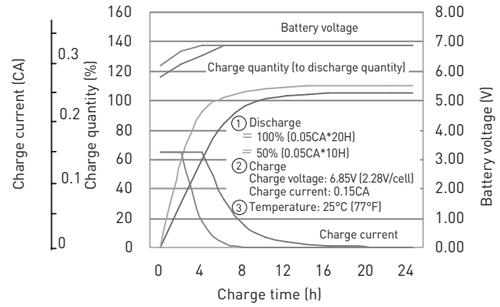
Discharge current	10.5A - 42.0A	42.0A - 105A	105A - 210A	210A - 420A	420A - 630A
Cut-off voltage	5.25V	5.10V	4.95V	4.65V	4.35V

INFLUENCE OF TEMPERATURE ON TRICKLE LIFE

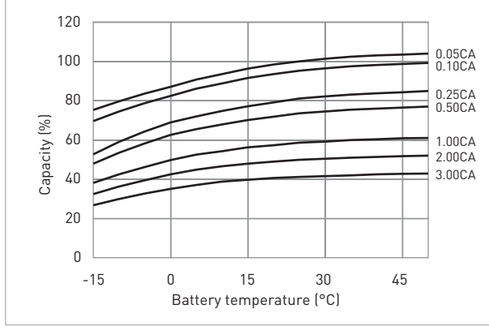




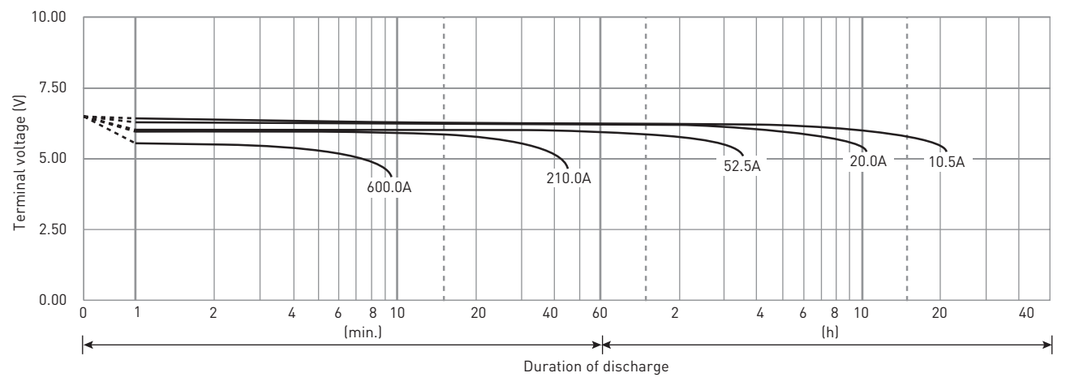
CONSTANT-VOLTAGE CONSTANT-CURRENT CHARGE CHARACTERISTICS FOR TRICKLE USE



DISCHARGE CAPACITY BY TEMPERATURE AND BY DISCHARGE CURRENT



DISCHARGE CHARACTERISTICS



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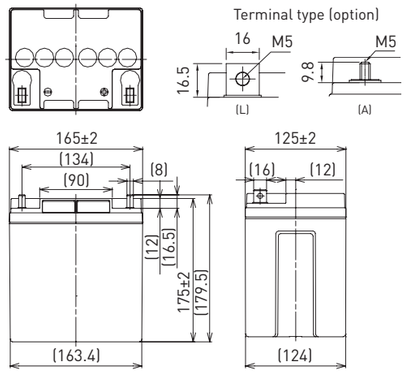
LC-QA1224P

FOR STANDBY POWER SUPPLIES.
EXPECTED TRICKLE DESIGN LIFE: 15 YEARS AT 20°C.

DIMENSIONS (MM)



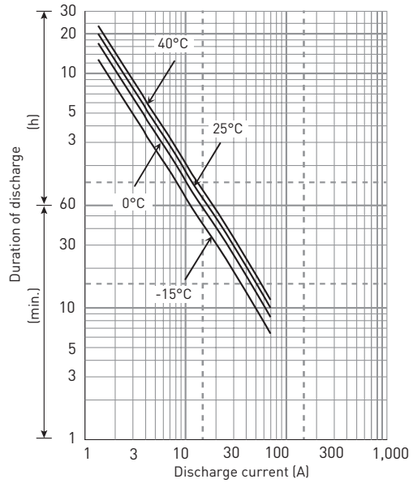
Contents indicated (including the recycle marking, etc.) are subject to change without notice.

Battery case resin: flame retardant (UL94 V-0)

SPECIFICATIONS

Name		LC-QA1224P/AP
Nominal voltage		12V
Nominal capacity (20 hour rate)		24Ah
Dimensions	Length	165mm
	Width	125mm
	Height	175mm
Approx. mass		9.9kg
Terminal		M5 bolt/nut & threaded post
Capacity (25°C)	20 hour rate	27Ah
	10 hour rate	25Ah
	3 hour rate	20Ah
	1 hour rate	16Ah
Impedance	Fully charged battery (25°C)	8mΩ
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 month	91%
	After 6 month	82%
	After 12 month	64%

DURATION OF DISCHARGE VS. DISCHARGE CURRENT



WATT TABLE (25°C)

(Wattage/battery)

Cut-off	10min.	15min.	20min.	30min.	45min.	1h	1.5h	2h	3h	4h	5h	6h	10h	20h
9.6V	773	605	521	401	280	215	167	113	79.9	65.8	51.8	46.8	27.0	13.5
9.9V	760	600	512	396	274	210	163	112	79.7	65.3	50.9	46.0	26.8	13.5
10.2V	746	591	503	390	268	205	159	111	79.3	64.7	50.1	45.3	26.4	13.4
10.5V	724	575	479	372	261	200	155	107	78.2	64.0	49.7	44.8	26.1	13.3
10.8V	701	558	456	344	256	196	152	104	77.1	63.2	49.5	44.3	25.9	13.3

AMPERE TABLE (25°C)

(Ampere/battery)

Cut-off	10min.	15min.	20min.	30min.	45min.	1h	1.5h	2h	3h	4h	5h	6h	10h	20h
9.6V	72.6	51.2	42.8	30.5	22.4	17.4	11.3	9.90	6.98	5.51	4.50	3.83	2.48	1.35
9.9V	70.3	50.1	42.3	30.3	21.8	17.0	11.2	9.79	6.86	5.46	4.41	3.71	2.48	1.35
10.2V	67.7	49.2	41.3	30.0	21.4	16.7	11.1	9.68	6.75	5.40	4.36	3.69	2.48	1.35
10.5V	64.9	47.3	39.5	29.3	20.3	15.8	11.0	9.56	6.64	5.29	4.32	3.65	2.48	1.35
10.8V	63.8	46.4	38.8	28.2	18.0	13.8	10.3	9.00	6.41	5.18	4.28	3.60	2.48	1.35

All mentioned values are average values

LC-QA1224P

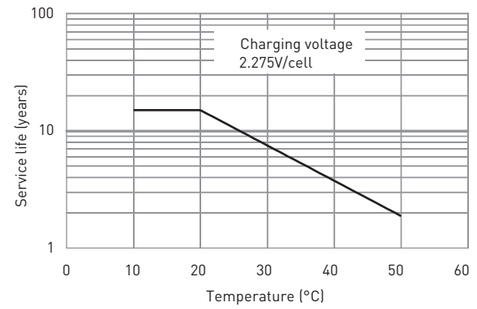
CHARGING METHOD (25°C)

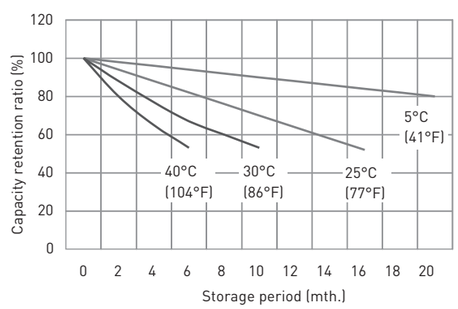
Trickle use	Control voltage: 13.6V - 13.8V Initial current: 3.60A or smaller

CUT-OFF VOLTAGE

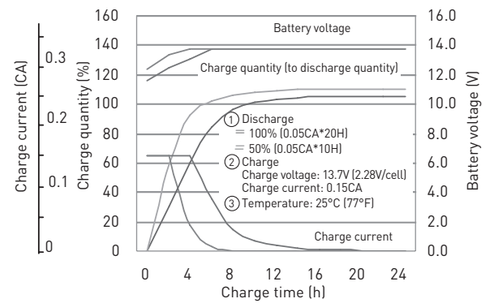
Discharge current	1.20A - 4.80A	4.80A - 12.0A	12.0A - 24.0A	24.0A - 48.0A	48.0A - 72.0A
Cut-off voltage	10.5V	10.2V	9.9V	9.3V	8.7V

INFLUENCE OF TEMPERATURE ON TRICKLE LIFE

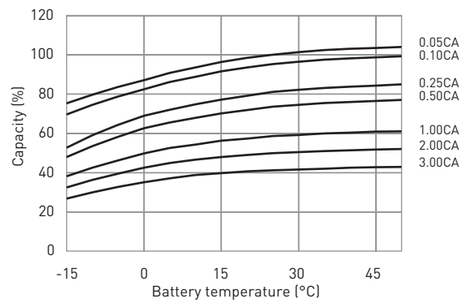




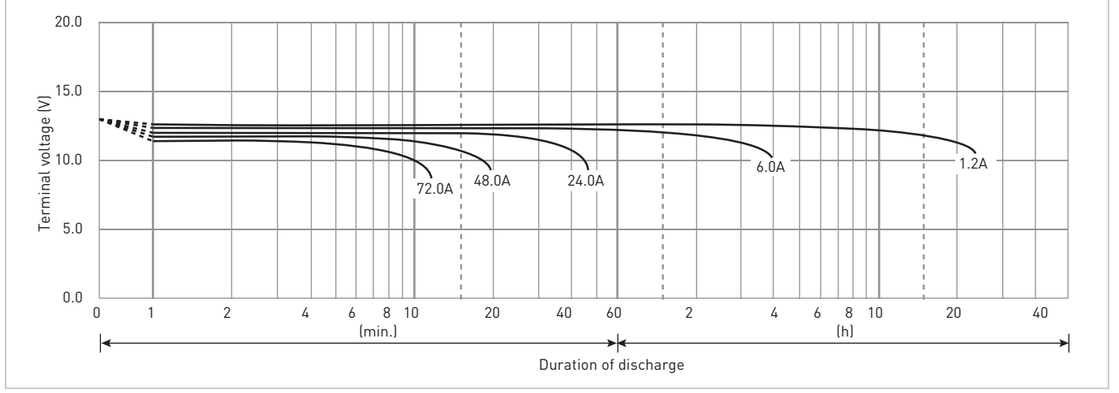
CONSTANT-VOLTAGE CONSTANT-CURRENT CHARGE CHARACTERISTICS FOR TRICKLE USE



DISCHARGE CAPACITY BY TEMPERATURE AND BY DISCHARGE CURRENT



DISCHARGE CHARACTERISTICS



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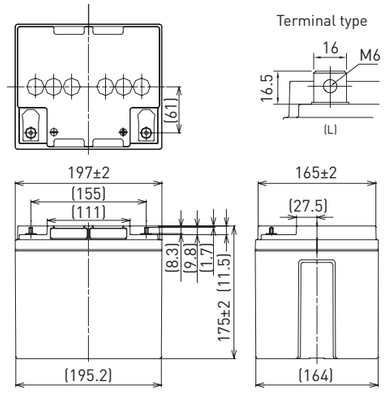
LC-QA1242P

FOR STANDBY POWER SUPPLIES.
EXPECTED TRICKLE DESIGN LIFE: 15 YEARS AT 20°C.

DIMENSIONS (MM)

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

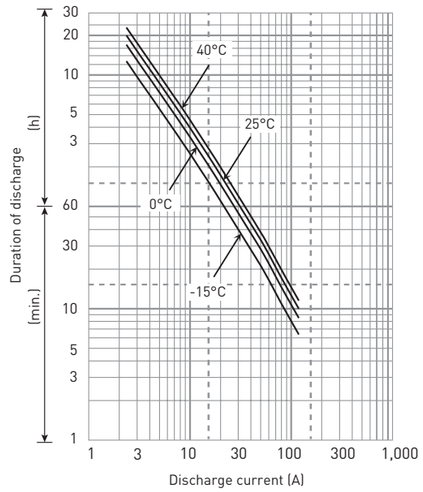


Battery case resin: flame retardant (UL94 V-0)

SPECIFICATIONS

Name		LC-QA1242P
Nominal voltage		12V
Nominal capacity (20 hour rate)		42Ah
Dimensions	Length	197mm
	Width	165mm
	Height	180mm
Approx. mass		15.5kg
Terminal		M6 bolt/nut
Capacity (25°C)	20 hour rate	47Ah
	10 hour rate	45Ah
	3 hour rate	36Ah
	1 hour rate	29Ah
Impedance	Fully charged battery (25°C)	8mΩ
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 month	91%
	After 6 month	82%
	After 12 month	64%

DURATION OF DISCHARGE VS. DISCHARGE CURRENT



WATT TABLE (25°C)

(Wattage/battery)

Cut-off	10min.	15min.	20min.	30min.	45min.	1h	1.5h	2h	3h	4h	5h	6h	10h	20h
9.6V	1,313	993	805	621	444	354	256	220	156	121	101	86.0	55.2	28.1
9.9V	1,252	930	775	597	435	349	253	215	152	117	98.9	84.5	54.3	28.1
10.2V	1,187	868	724	574	425	344	249	205	149	116	97.6	83.2	53.9	28.1
10.5V	1,176	847	694	545	414	327	237	202	142	113	93.4	79.4	50.4	26.9
10.8V	1,170	826	673	517	405	320	231	195	139	110	90.2	76.9	49.1	25.1

AMPERE TABLE (25°C)

(Ampere/battery)

Cut-off	10min.	15min.	20min.	30min.	45min.	1h	1.5h	2h	3h	4h	5h	6h	10h	20h
9.6V	123	94.5	81.0	60.1	39.3	29.8	23.0	17.8	12.5	10.4	8.44	7.43	4.50	2.36
9.9V	121	93.4	79.9	58.4	39.0	29.6	22.3	17.7	12.3	10.3	8.35	7.37	4.50	2.36
10.2V	119	92.3	78.8	57.3	38.9	29.4	20.7	17.4	12.0	10.2	8.30	7.31	4.50	2.36
10.5V	116	90.0	77.6	56.3	38.8	29.3	20.1	16.9	11.9	10.1	8.26	7.20	4.50	2.36
10.8V	107	86.6	75.4	55.1	37.4	28.1	19.1	16.4	11.5	9.90	8.21	7.09	4.50	2.36

All mentioned values are average values

LC-QA1242P

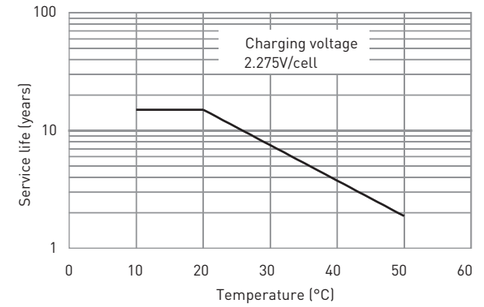
CHARGING METHOD (25°C)

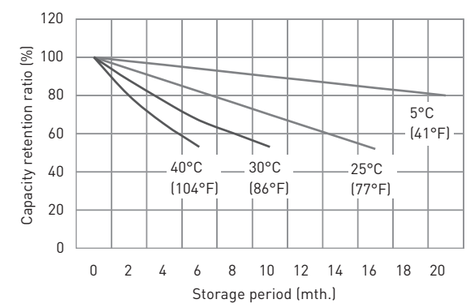
Trickle use	Control voltage: 13.6V - 13.8V Initial current: 6.30A or smaller

CUT-OFF VOLTAGE

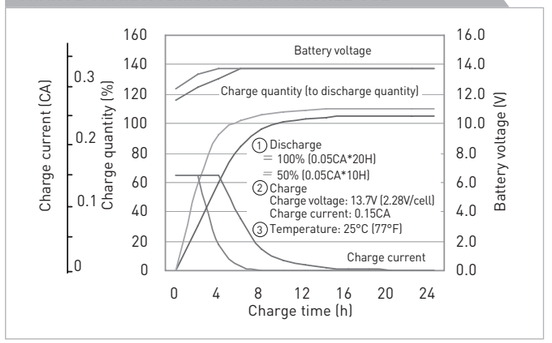
Discharge current	2.10A - 8.40A	8.40A - 21.0A	21.0A - 42.0A	42.0A - 84.0A	84.0A - 126A
Cut-off voltage	10.5V	10.2V	9.9V	9.3V	8.7V

INFLUENCE OF TEMPERATURE ON TRICKLE LIFE

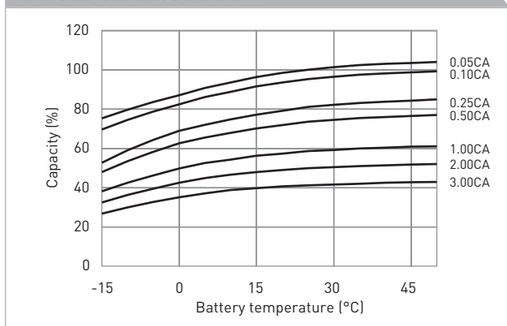




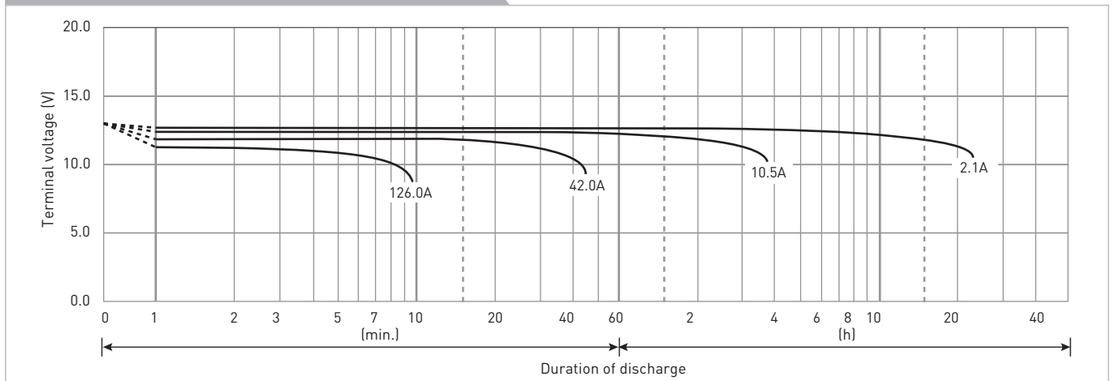
CONSTANT-VOLTAGE CONSTANT-CURRENT CHARGE CHARACTERISTICS FOR TRICKLE USE



DISCHARGE CAPACITY BY TEMPERATURE AND BY DISCHARGE CURRENT



DISCHARGE CHARACTERISTICS



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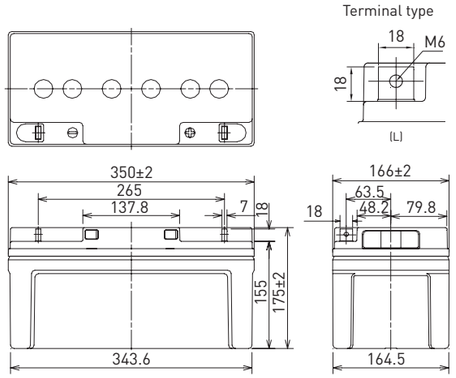
LC-QA1270P

FOR STANDBY POWER SUPPLIES.
EXPECTED TRICKLE DESIGN LIFE: 15 YEARS AT 20°C.

DIMENSIONS (MM)



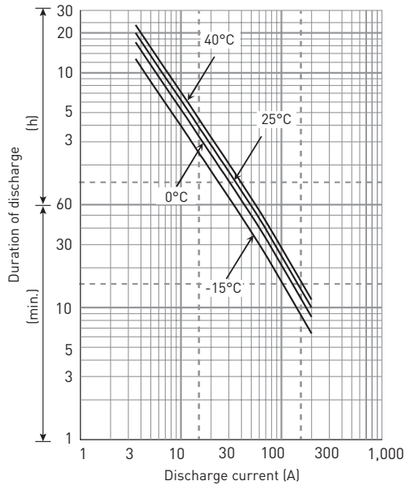
Contents indicated (including the recycle marking, etc.) are subject to change without notice.

Battery case resin: flame retardant (UL94 V-0)

SPECIFICATIONS

Name		LC-QA1270P
Nominal voltage		12V
Nominal capacity (20 hour rate)		70Ah
Dimensions	Length	350mm
	Width	166mm
	Height	175mm
Approx. mass		23.5kg
Terminal		M6 bolt/nut
Capacity (25°C)	20 hour rate	71Ah
	10 hour rate	65Ah
	3 hour rate	55Ah
	1 hour rate	46Ah
Impedance	Fully charged battery (25°C)	5mΩ
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 month	91%
	After 6 month	82%
	After 12 month	64%

DURATION OF DISCHARGE VS. DISCHARGE CURRENT



WATT TABLE (25°C)

(Wattage/battery)

Cut-off	10min.	15min.	20min.	30min.	45min.	1h	1.5h	2h	3h	4h	5h	6h	10h	20h
9.6V	1,977	1,504	1,234	916	676	549	386	333	240	181	148	130	75.5	41.7
9.9V	1,947	1,491	1,227	909	660	520	367	323	234	177	146	127	74.0	41.5
10.2V	1,867	1,463	1,197	899	655	519	365	311	224	168	138	122	73.1	41.2
10.5V	1,814	1,436	1,173	884	641	509	358	306	221	166	137	120	73.0	39.8
10.8V	1,704	1,357	1,153	865	626	499	351	299	219	165	135	119	12.5	39.4

AMPERE TABLE (25°C)

(Ampere/battery)

Cut-off	10min.	15min.	20min.	30min.	45min.	1h	1.5h	2h	3h	4h	5h	6h	10h	20h
9.6V	200	146	118	85.9	62.8	48.4	34.8	27.1	19.4	15.0	12.5	10.5	6.50	3.53
9.9V	199	144	117	85.0	61.2	47.7	33.9	27.0	19.1	14.9	12.4	10.4	6.50	3.53
10.2V	197	140	116	83.8	60.9	47.3	33.7	26.8	18.9	14.8	12.3	10.3	6.50	3.53
10.5V	187	136	110	82.7	59.5	45.6	33.3	26.7	18.4	14.7	12.1	10.2	6.50	3.53
10.8V	177	132	108	81.4	51.1	41.0	29.4	24.9	17.8	14.4	12.0	10.1	6.50	3.47

All mentioned values are average values

LC-QA1270P

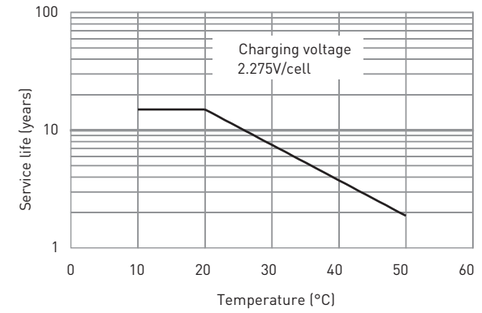
CHARGING METHOD (25°C)

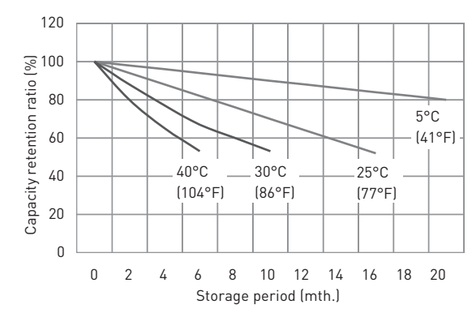
Trickle use	Control voltage: 13.6V - 13.8V Initial current: 10.5A or smaller

CUT-OFF VOLTAGE

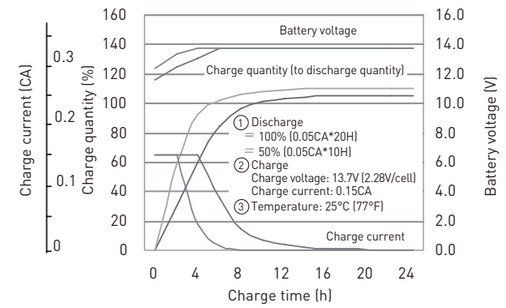
Discharge current	3.50A - 14.0A	14.0A - 35.0A	35.0A - 70.0A	70.0A - 140A	140A - 210A
Cut-off voltage	10.5V	10.2V	9.9V	9.3V	8.7V

INFLUENCE OF TEMPERATURE ON TRICKLE LIFE

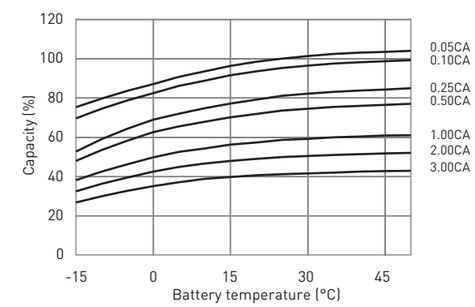




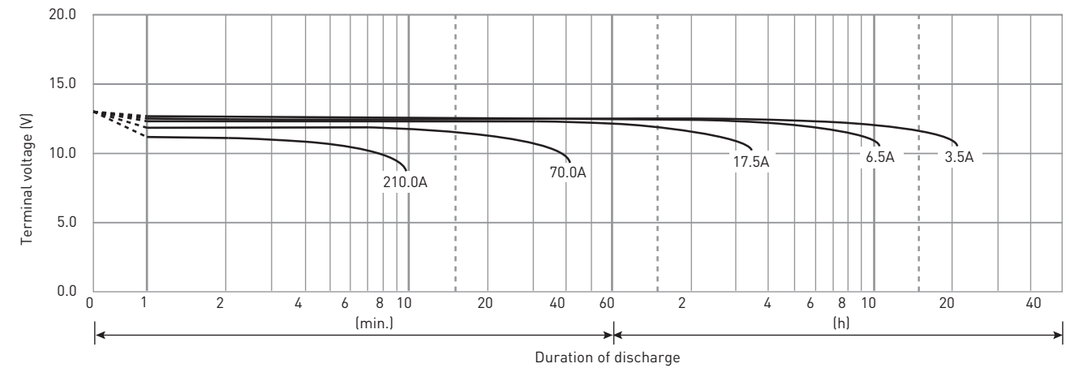
CONSTANT-VOLTAGE CONSTANT-CURRENT CHARGE CHARACTERISTICS FOR TRICKLE USE



DISCHARGE CAPACITY BY TEMPERATURE AND BY DISCHARGE CURRENT



DISCHARGE CHARACTERISTICS



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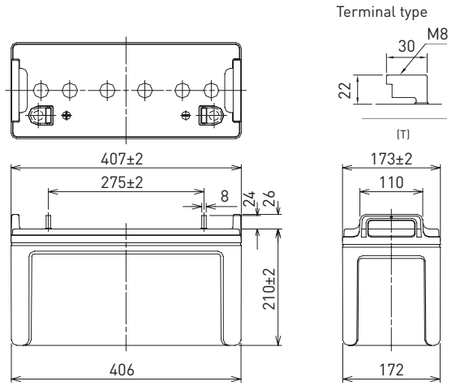
LC-QA12110TP

FOR STANDBY POWER SUPPLIES.
EXPECTED TRICKLE DESIGN LIFE: 15 YEARS AT 20°C.

DIMENSIONS (MM)



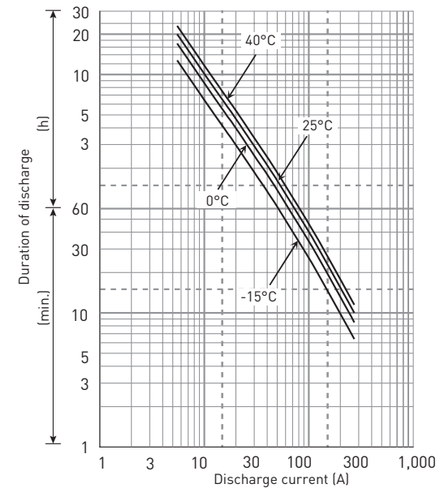
Contents indicated (including the recycle marking, etc.) are subject to change without notice.

Battery case resin: flame retardant (UL94 V-0)

SPECIFICATIONS

Name		LC-QA12110TP
Nominal voltage		12V
Nominal capacity (20 hour rate)		110Ah
Dimensions	Length	407mm
	Width	173mm
	Height	236mm
Approx. mass		36.0kg
Terminal		M8 T-shape
Capacity (25°C)	20 hour rate	110Ah
	10 hour rate	101Ah
	3 hour rate	86Ah
	1 hour rate	75Ah
Impedance	Fully charged battery (25°C)	4mΩ
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 month	91%
	After 6 month	82%
	After 12 month	64%

DURATION OF DISCHARGE VS. DISCHARGE CURRENT



WATT TABLE (25°C)

(Wattage/battery)

Cut-off	10min.	15min.	20min.	30min.	45min.	1h	1.5h	2h	3h	4h	5h	6h	10h	20h
9.6V	2,987	2,270	1,872	1,391	1,017	793	578	482	353	279	232	197	124	63.7
9.9V	2,920	2,215	1,827	1,358	995	772	563	469	346	273	225	192	120	63.2
10.2V	2,855	2,136	1,761	1,314	984	751	548	463	340	267	218	186	118	62.7
10.5V	2,764	2,110	1,748	1,303	968	730	532	453	334	264	215	185	117	62.1
10.8V	2,522	2,010	1,739	1,261	933	720	525	442	328	258	212	183	116	61.6

AMPERE TABLE (25°C)

(Ampere/battery)

Cut-off	10min.	15min.	20min.	30min.	45min.	1h	1.5h	2h	3h	4h	5h	6h	10h	20h
9.6V	272	212	175	133	96.7	76.7	53.6	43.2	30.2	23.3	19.7	16.1	10.4	5.50
9.9V	269	211	174	132	94.0	76.4	52.6	42.8	29.6	23.1	19.4	16.0	10.3	5.50
10.2V	268	210	172	130	93.5	75.9	52.1	42.3	29.4	22.9	19.1	15.9	10.2	5.50
10.5V	245	198	164	128	92.5	75.4	51.5	41.8	28.8	22.6	19.0	15.7	10.1	5.50
10.8V	232	192	160	126	79.9	65.4	46.4	39.7	28.1	22.3	18.9	15.5	10.0	5.39

All mentioned values are average values

LC-QA12110TP

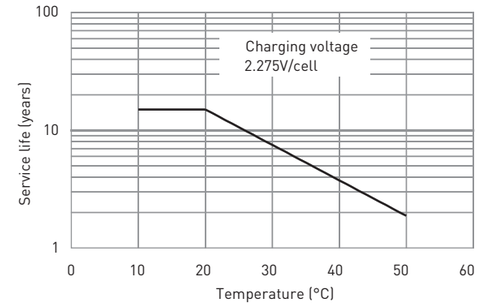
CHARGING METHOD (25°C)

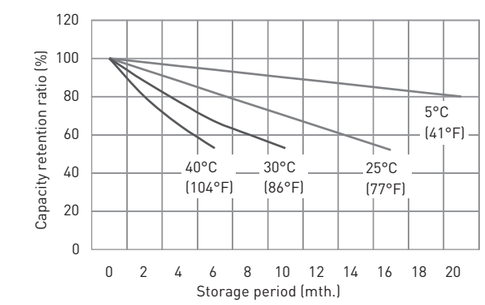
Trickle use	Control voltage: 13.6V - 13.8V Initial current: 16.5A or smaller

CUT-OFF VOLTAGE

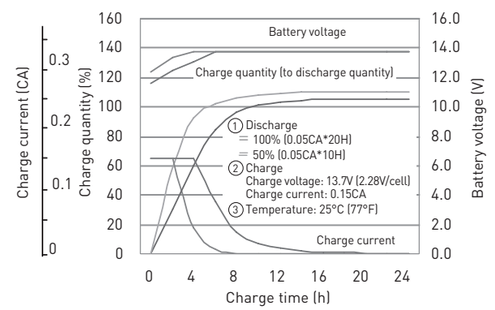
Discharge current	5.50A - 22.0A	22.0A - 55.0A	55.0A - 110A	110A - 220A	220A - 330A
Cut-off voltage	10.5V	10.2V	9.9V	9.3V	8.7V

INFLUENCE OF TEMPERATURE ON TRICKLE LIFE

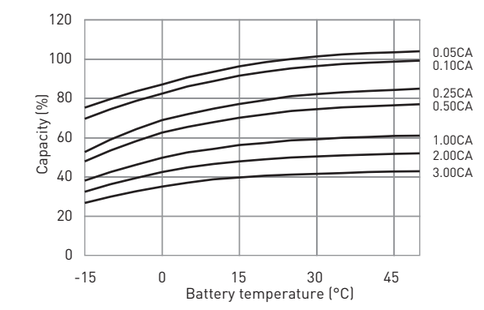




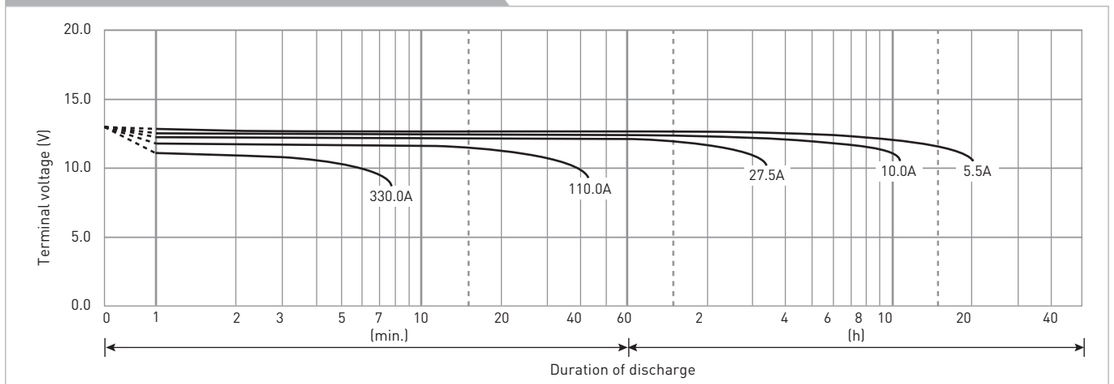
CONSTANT-VOLTAGE CONSTANT-CURRENT CHARGE CHARACTERISTICS FOR TRICKLE USE



DISCHARGE CAPACITY BY TEMPERATURE AND BY DISCHARGE CURRENT



DISCHARGE CHARACTERISTICS



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