

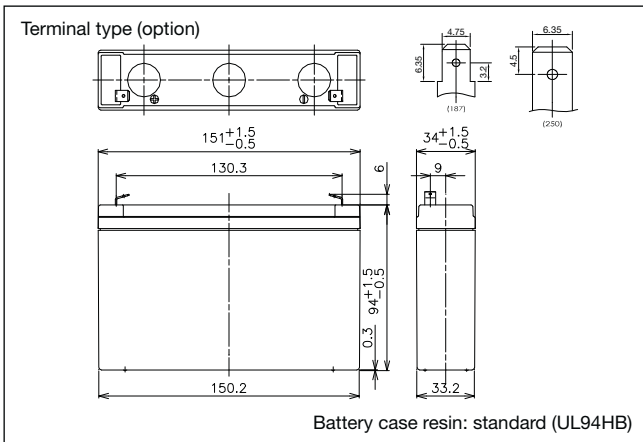
UP-RW0645P*1



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

For standby power supplies.
Expected trickle design life: 6 – 9 years at 20°C according to Eurobat.

Dimensions (mm)



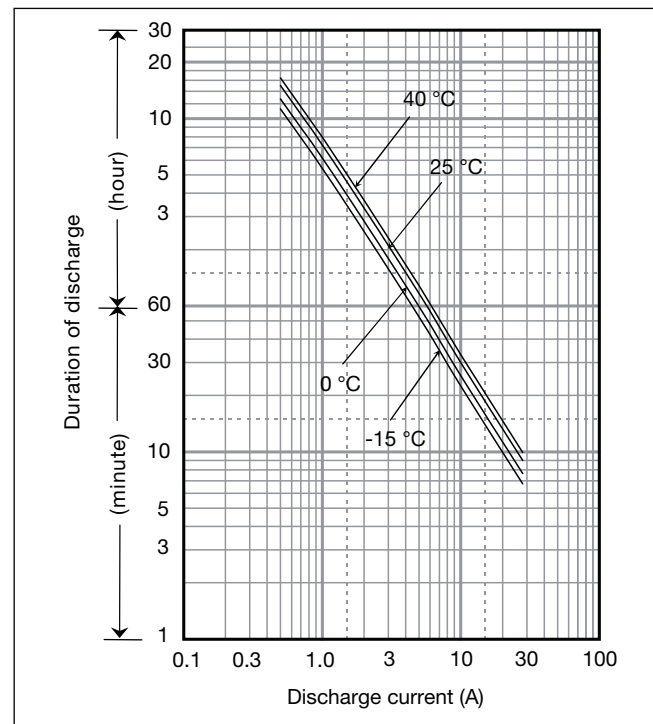
Specifications

Nominal voltage	6V	
Nominal capacity (10 minute rate)	135W	
Dimensions	Length	151mm
	Width	34mm
	Height	94mm
	Total Height	100mm
Approx. mass	1.3kg	
Terminal	Faston 187 or Faston 250 with hole	

Characteristics

Capacity (25°C)	20 hour rate	56W
	10 hour rate	97W
	5 hour rate	134W
	1 hour rate	205W
Internal resistance	Fully charged battery (25°C)	10mΩ
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

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	265	205	134	97.5	79.5	56.0	41.1	32.8	22.6	17.5	13.0	10.0	8.25	6.63	4.39	2.38	1.99
4.95V	254	200	131	97.2	78.9	55.9	40.8	32.8	22.1	17.3	12.9	9.92	8.18	6.60	4.37	2.37	1.98
5.1V	245	195	129	96.5	78.0	55.5	40.4	32.2	21.7	16.9	12.8	9.86	8.12	6.55	4.33	2.37	1.97
5.25V	231	180	123	93.4	75.4	55.0	39.3	31.5	20.8	16.4	12.8	9.85	8.07	6.48	4.31	2.36	1.97
5.4V	217	165	117	90.0	73.0	54.5	39.1	30.9	20.6	15.5	12.4	9.66	7.85	6.37	4.26	2.35	1.95

Ampere Table

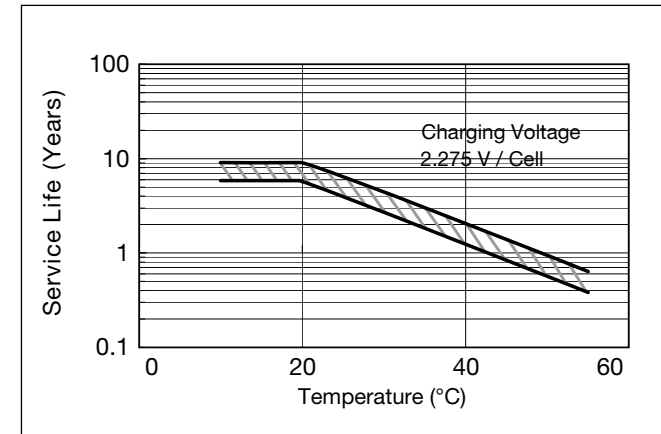
Cut-off V	(Ampere/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
4.8V	47.7	36.8	23.9	17.0	13.7	9.6	6.99	5.57	3.82	2.95	2.19	1.67	1.38	1.11	0.732	0.397	0.331
4.95V	45.8	35.9	23.5	16.9	13.6	9.6	6.95	5.57	3.75	2.93	2.17	1.66	1.37	1.10	0.729	0.396	0.330
5.1V	44.1	35.0	23.0	16.8	13.5	9.5	6.88	5.46	3.67	2.86	2.15	1.65	1.36	1.09	0.721	0.394	0.329
5.25V	41.6	32.3	22.0	16.3	13.0	9.4	6.70	5.35	3.53	2.77	2.16	1.65	1.35	1.08	0.718	0.393	0.328
5.4V	39.0	29.6	20.9	15.7	12.6	9.3	6.67	5.25	3.50	2.62	2.08	1.62	1.31	1.06	0.710	0.391	0.326

*1 This battery is also available with a flame retardant battery case resin (UL94 V-0).

Charging Method

Trickle use	Control voltage: 6.8 - 6.9V; Initial current: 1.2A or smaller
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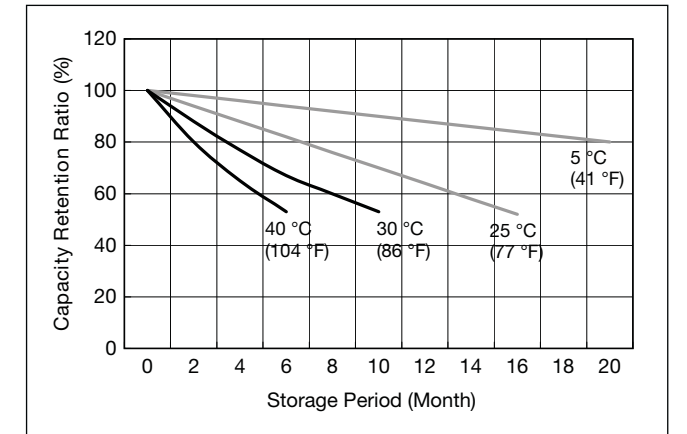
Influence of Temperature on Trickle life



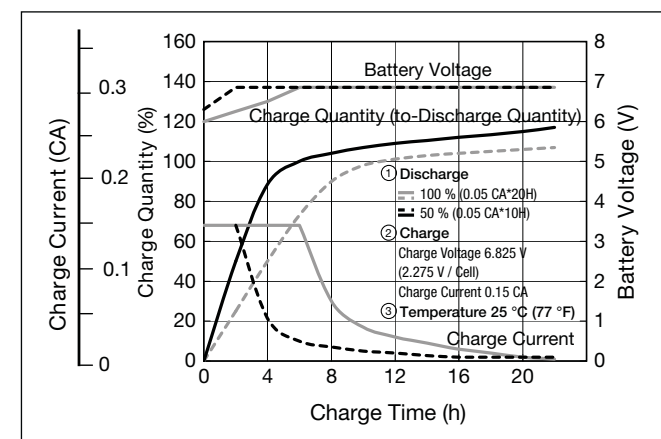
Cut off voltage

Discharge current	0.4A - 1.6A	1.6A - 4A	4A - 8A	8A - 16A	16A - 24A
Cut off voltage (V)	5.25	5.1	4.95	4.65	4.35

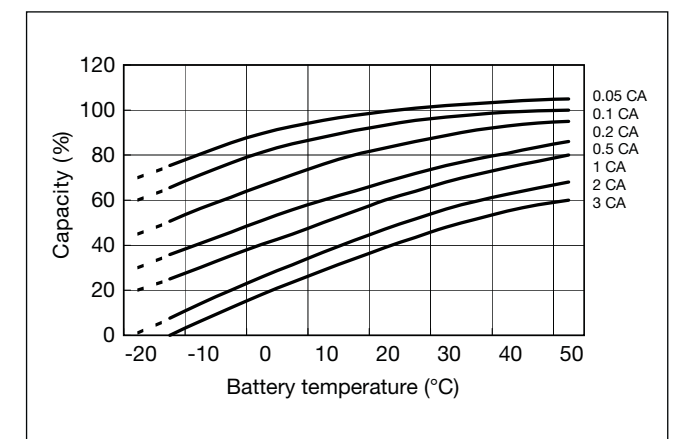
Residual capacity vs storage period



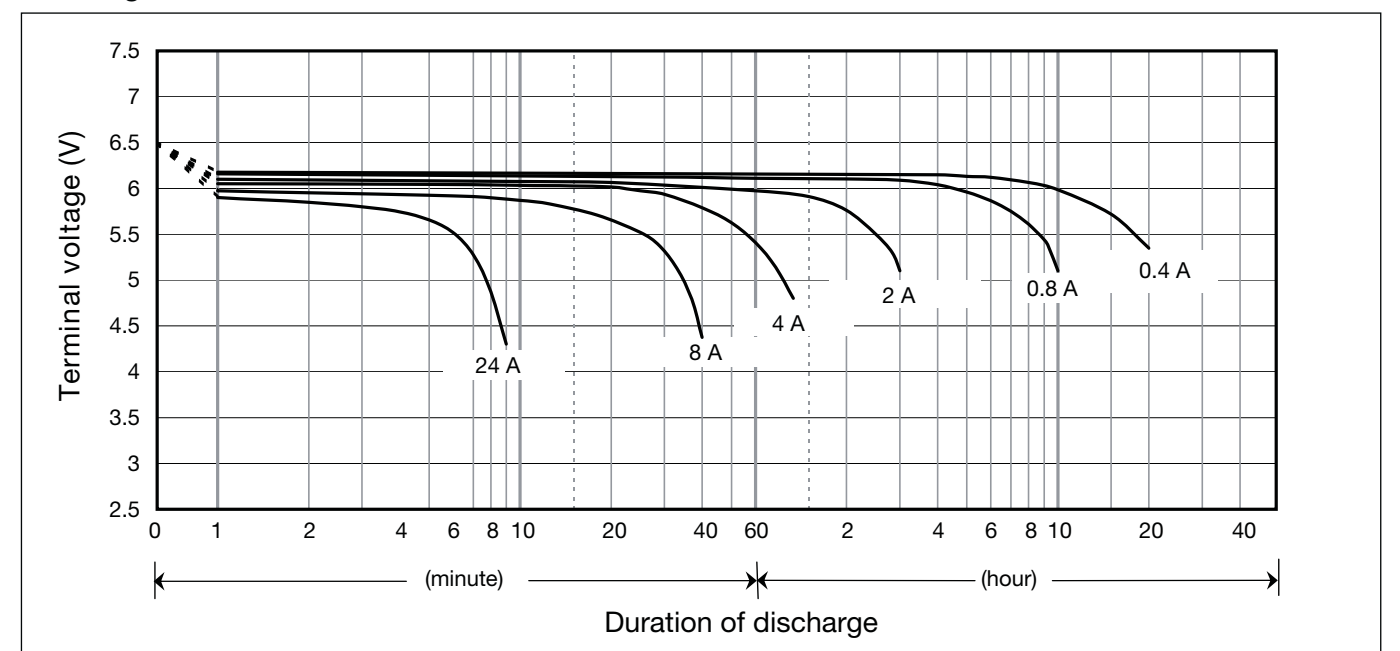
Constant-voltage and constant-current charge characteristics for Trickle use



Discharge capacity by temperature and by discharge current

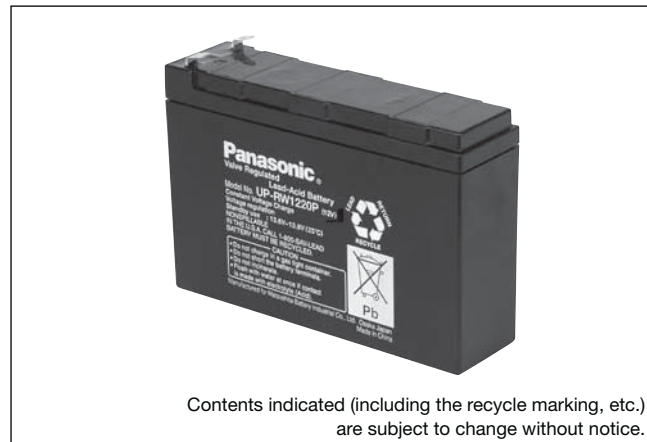


Discharge characteristics

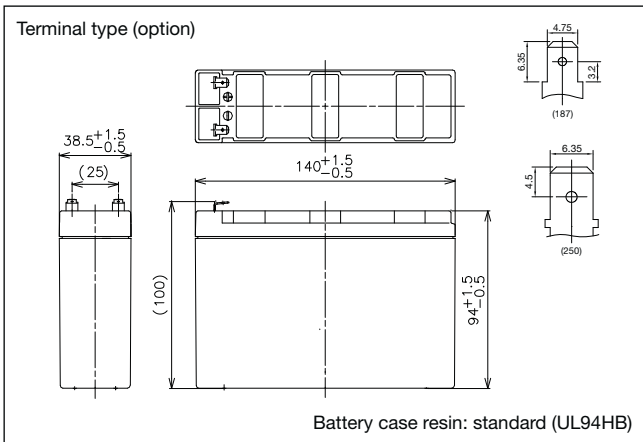


UP-RW1220P*1

For standby power supplies.
Expected trickle design life: 6 – 9 years at 20°C according to Eurobat.



Dimensions (mm)



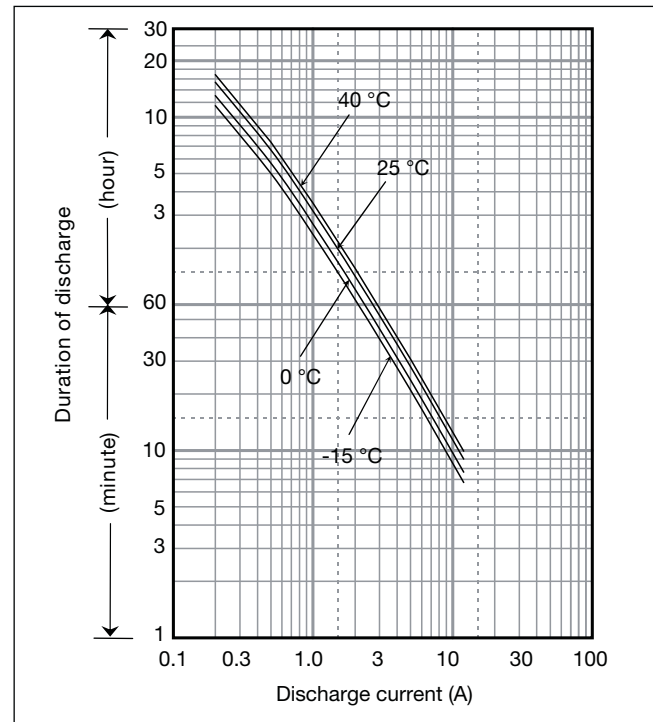
Specifications

Nominal voltage	12V	
Nominal capacity (10 minute rate)	120W	
Dimensions	Length	140mm
	Width	38.5mm
	Height	94mm
	Total Height	100mm
Approx. mass	1.35kg	
Terminal	Faston 187 or Faston 250 with hole	

Characteristics

Capacity (25°C)	20 hour rate	57W
	10 hour rate	91W
	5 hour rate	120W
	1 hour rate	180W
Internal resistance	Fully charged battery (25°C)	44mΩ
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

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	237	180	120	91.0	75.0	57.0	41.8	33.4	23.0	17.8	13.2	10.2	8.39	6.75	4.47	2.42	2.02
9.9V	227	173	116	89.1	74.0	58.4	39.3	31.6	21.3	16.7	12.5	9.56	7.88	6.36	4.21	2.29	1.91
10.2V	217	167	113	87.0	73.0	52.0	37.9	30.2	20.3	15.9	12.0	9.24	7.60	6.14	4.05	2.22	1.85
10.5V	197	152	108	84.5	69.5	49.5	35.4	28.3	18.7	14.8	11.6	8.86	7.26	5.83	3.88	2.12	1.77
10.8V	177	137	102	82.0	66.0	47.0	33.7	26.6	17.8	13.4	10.7	8.33	6.77	5.49	3.68	2.02	1.69

Ampere Table

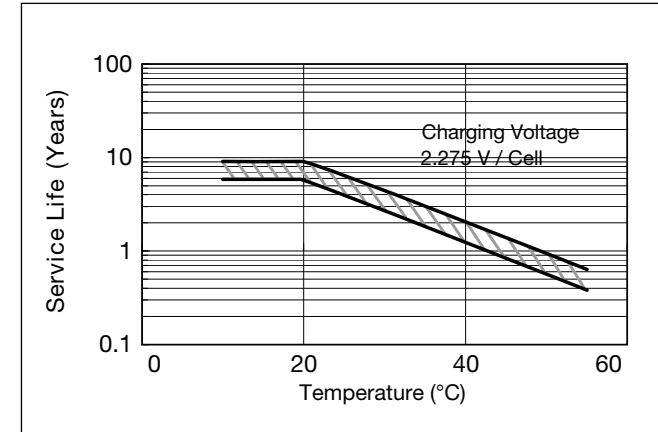
Cut-off V	(Ampere/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	21.3	16.1	10.7	7.91	6.47	4.87	3.56	2.84	1.95	1.50	1.11	0.85	0.70	0.56	0.373	0.202	0.169
9.9V	20.4	15.6	10.4	7.75	6.38	4.99	3.35	2.68	1.80	1.41	1.05	0.80	0.66	0.53	0.351	0.190	0.159
10.2V	19.5	15.0	10.1	7.57	6.29	4.44	3.23	2.56	1.72	1.34	1.01	0.77	0.63	0.51	0.338	0.185	0.154
10.5V	17.7	13.7	9.60	7.35	5.99	4.23	3.02	2.41	1.59	1.25	0.97	0.74	0.61	0.49	0.323	0.177	0.148
10.8V	15.9	12.3	9.11	7.13	5.69	4.02	2.87	2.26	1.51	1.13	0.90	0.70	0.57	0.46	0.306	0.169	0.140

*1 This battery is also available with a flame retardant battery case resin (UL94 V-0).

Charging Method

Trickle use	Control voltage: 13.6 - 13.8V; Initial current: 0.6A or smaller
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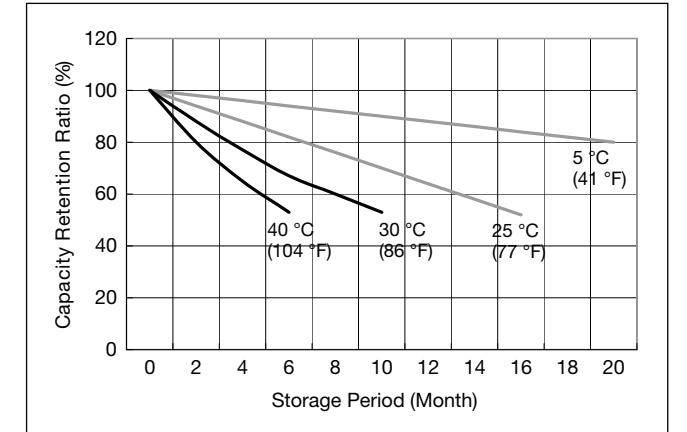
Influence of Temperature on Trickle life



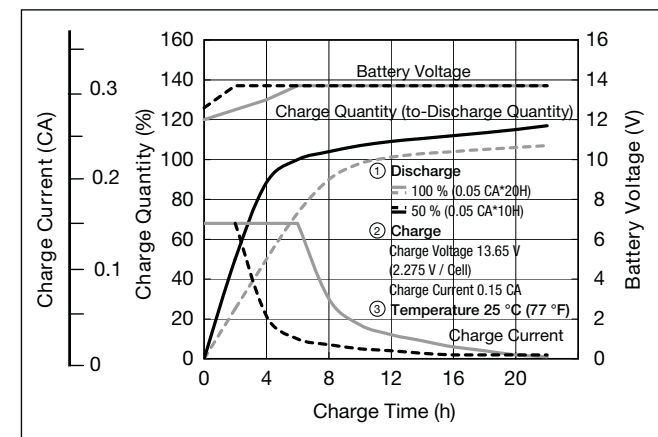
Cut off voltage

Discharge current	0.2A - 0.8A	0.8A - 2A	2A - 4A	4A - 8A	8A - 12A
Cut off voltage (V)	10.5	10.2	9.9	9.3	8.7

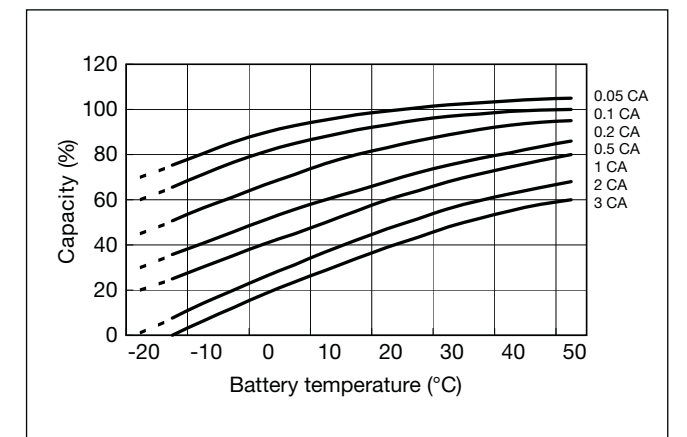
Residual capacity vs storage period



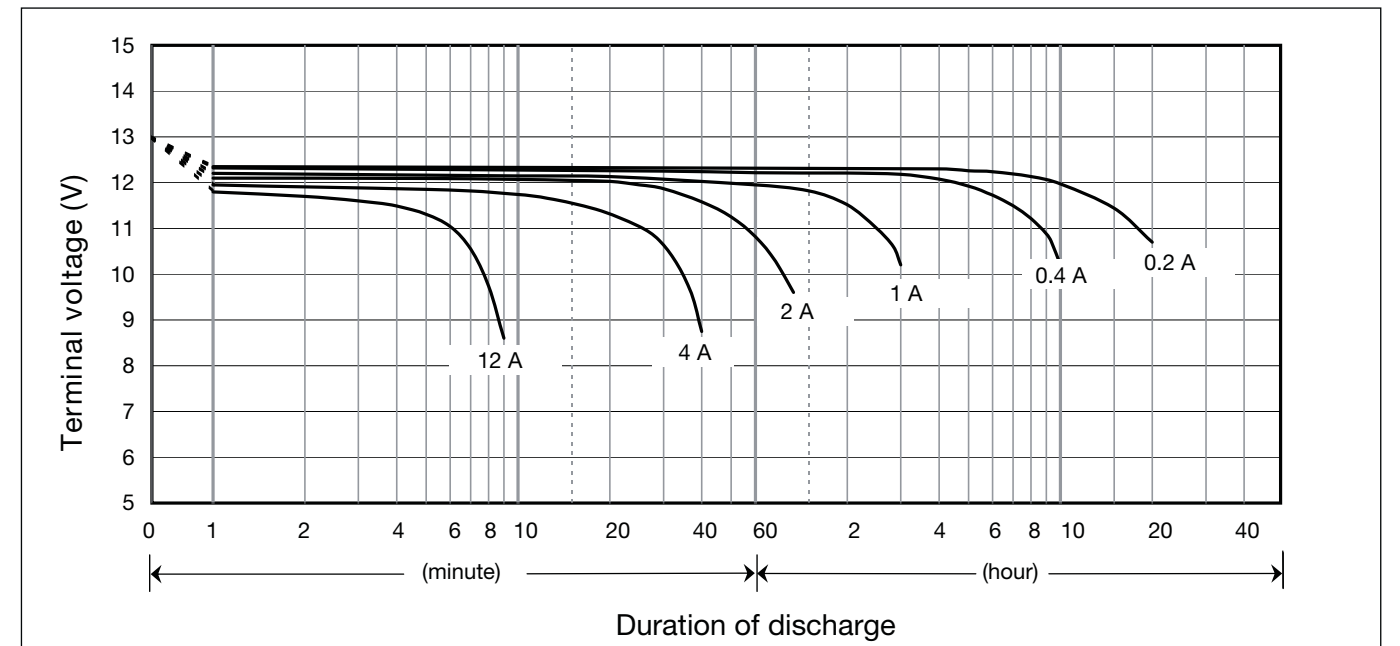
Constant-voltage and constant-current charge characteristics for Trickle use



Discharge capacity by temperature and by discharge current

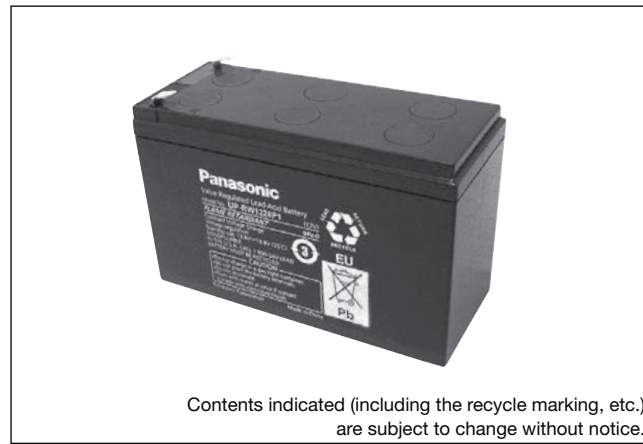


Discharge characteristics

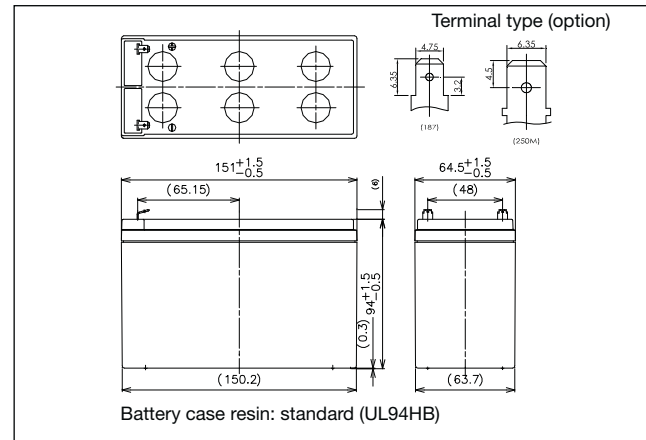


UP-RW1228P*1

For standby power supplies.
Expected trickle design life: 6 – 9 years at 20°C according to Eurobat.



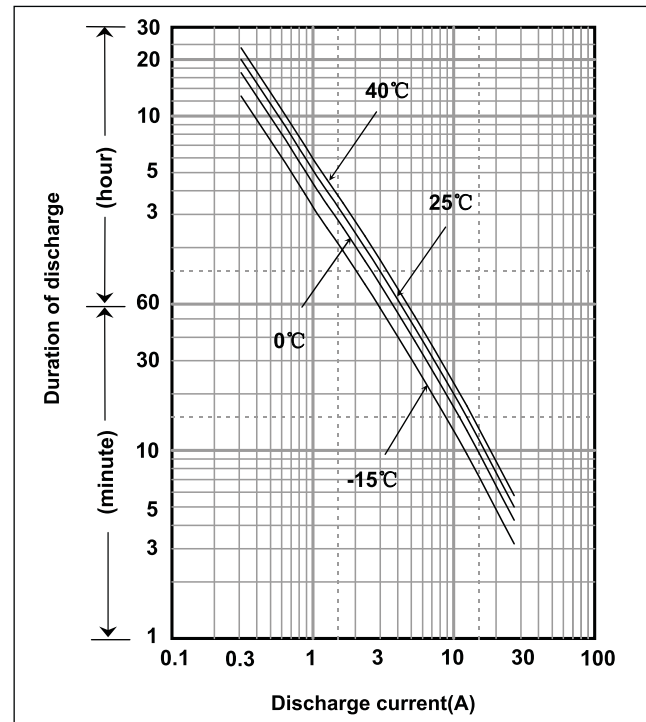
Dimensions (mm)



Specifications

Nominal voltage	12V	
Nominal capacity (10 minute rate)	200W	
Dimensions	Length	151mm
	Width	64.5mm
	Height	94mm
	Total Height	100mm
Approx. mass	1.85kg	
Terminal	Faston 187 & 250M	

Duration of discharge vs Discharge current



Characteristics

Capacity (25°C)	30 minute rate	80W
	15 minute rate	151W
	10 minute rate	200W
	5 minute rate	210W
Internal resistance	Fully charged battery (25°C)	23mΩ
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

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	415	320	200	151	113	80.4	60.0	50.4	37.2	28.8	20.1	15.2	12.5	10.3	6.26	3.01	2.46
9.9V	391	274	170	144	109	78.7	59.6	49.2	36.4	28.6	20.0	15.1	12.4	10.1	6.23	3.00	2.46
10.2V	365	261	165	137	106	77.0	57.1	47.8	34.5	27.0	19.2	14.8	11.9	9.85	5.97	2.90	2.37
10.5V	331	237	158	131	101	74.1	55.6	46.8	33.2	26.2	18.8	14.5	11.8	9.75	5.94	2.89	2.36
10.8V	298	213	149	125	96.9	71.2	52.1	43.2	31.0	23.3	17.4	13.4	10.8	9.02	5.53	2.71	2.21

Ampere Table

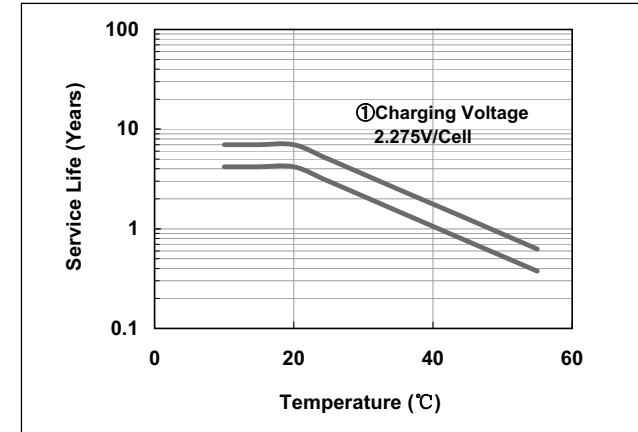
Cut-off V	(Ampere/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	35.6	26.9	16.6	13.2	10.7	8.01	5.86	4.67	3.20	2.47	1.83	1.40	1.15	0.926	0.613	0.332	0.277
9.9V	33.5	25.6	16.1	12.6	10.3	7.85	5.82	4.55	3.14	2.45	1.82	1.39	1.14	0.922	0.610	0.331	0.276
10.2V	31.4	24.4	15.7	11.9	10.0	7.68	5.58	4.43	2.97	2.32	1.74	1.34	1.10	0.885	0.584	0.320	0.266
10.5V	28.5	22.1	15.0	11.4	9.57	7.40	5.43	4.33	2.86	2.24	1.68	1.29	1.05	0.876	0.581	0.310	0.257
10.8V	25.6	19.9	14.2	10.9	9.17	7.11	5.08	4.00	2.67	2.00	1.58	1.23	1.00	0.810	0.542	0.298	0.248

*1 This battery is also available with a flame retardant battery case resin (UL94 V-0).

Charging Method

Trickle use Control voltage: 13.6 - 13.8V; Initial current: 0.87A or smaller

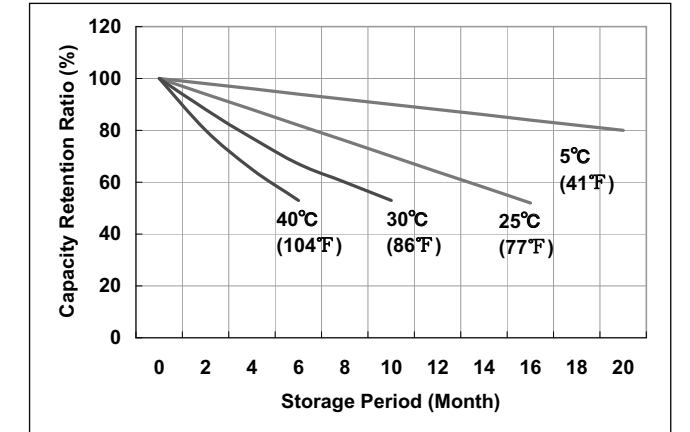
Influence of Temperature on Trickle life



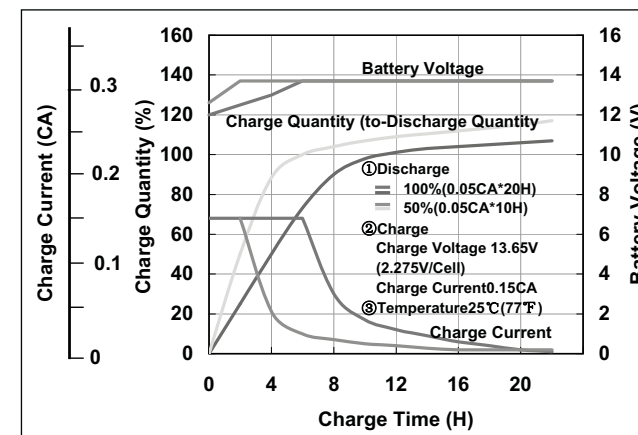
Cut off voltage

Discharge current	0.29A - 1.16A	1.16A - 2.9A	2.9A - 5.8A	5.8A - 11.6A	11.6A - 17.4A
Cut off voltage (V)	10.5	10.2	9.9	9.3	8.7

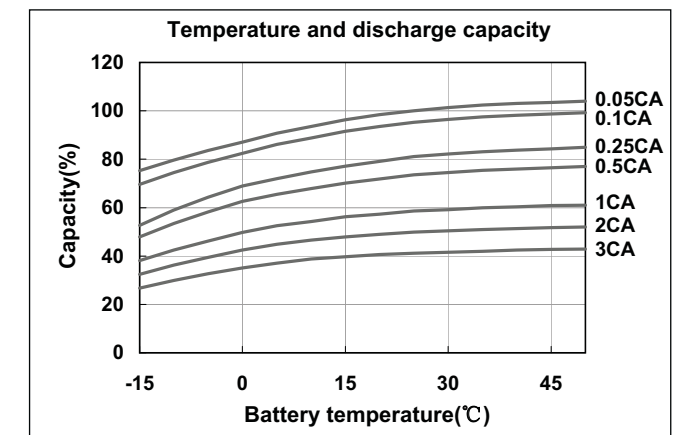
Residual capacity test result



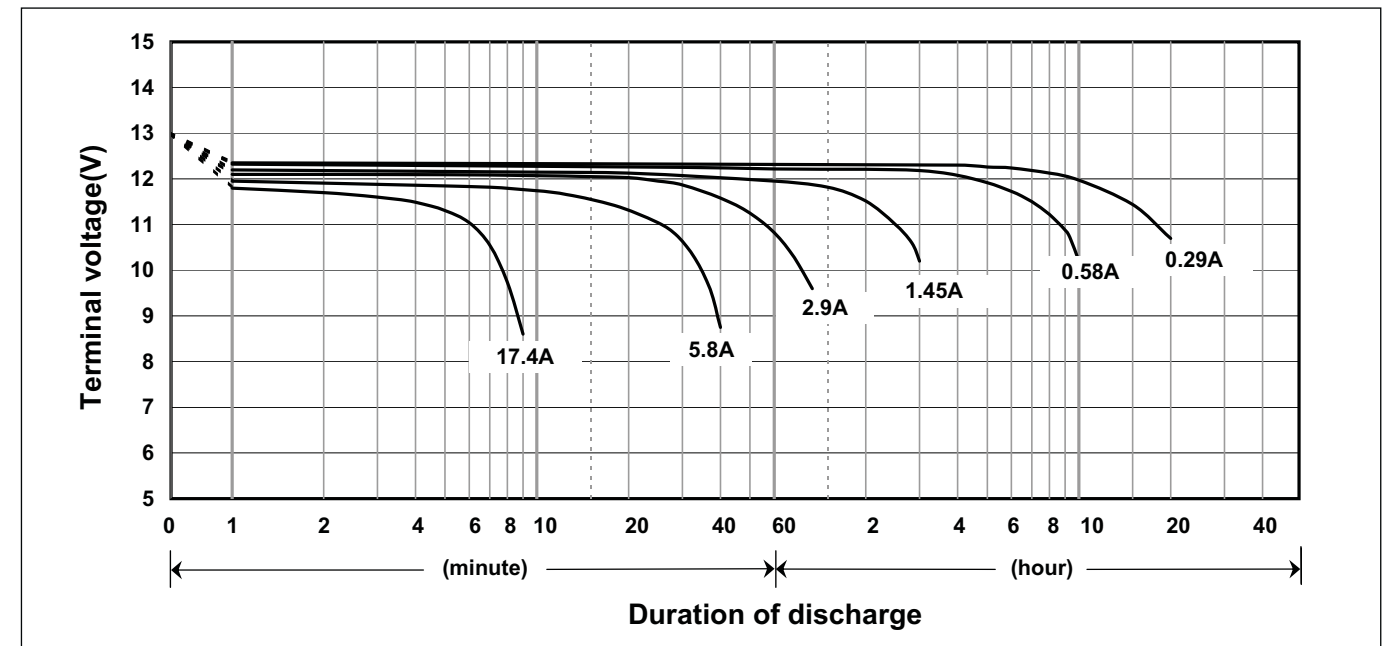
Constant-voltage and constant-current charge characteristics



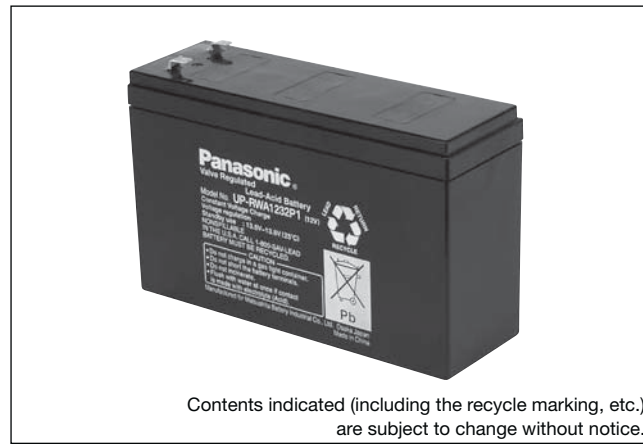
Discharge capacity by temperature and by discharge current



Discharge characteristics

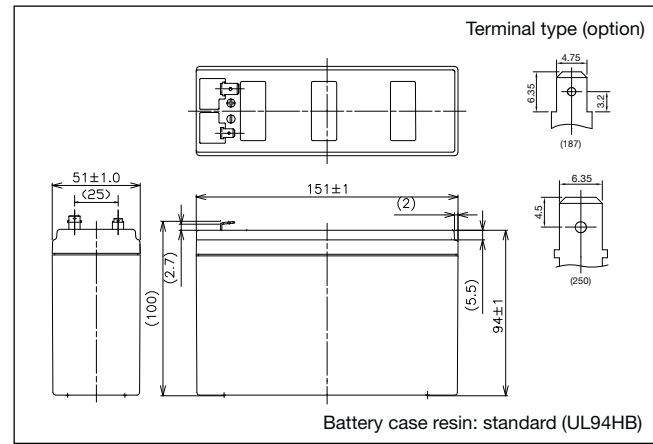


UP-RWA1232P1/P2*1



For standby power supplies.
Expected trickle design life: 6 – 9 years at 20°C according to Eurobat.

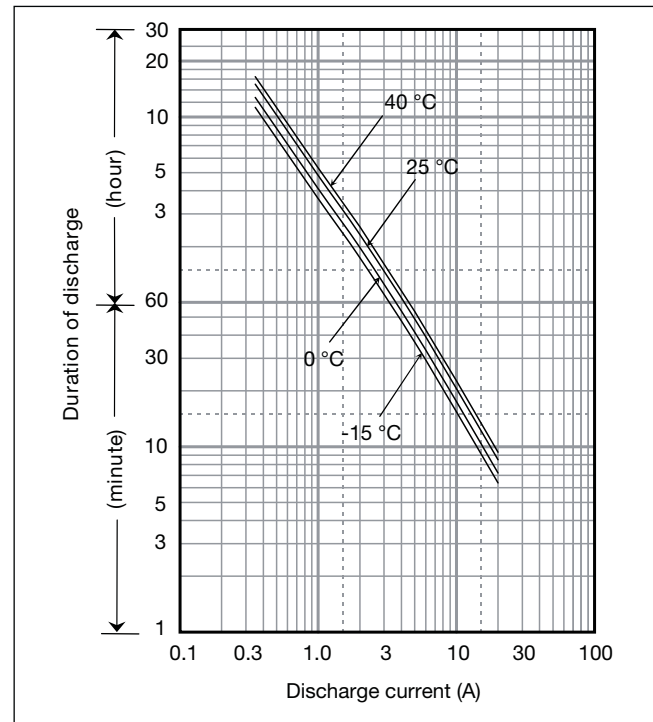
Dimensions (mm)



Specifications

Nominal voltage	12V	
Nominal capacity (10 minute rate)	192W	
Dimensions	Length	151mm
	Width	51mm
	Height	94mm
	Total Height	100mm
Approx. mass	2kg	
Terminal	Faston 250 with hole or Faston 187/250 mixed	

Duration of discharge vs Discharge current



Characteristics

Capacity (25°C)	20 hour rate	97W
	10 hour rate	157W
	5 hour rate	192W
	1 hour rate	310W
Internal resistance	Fully charged battery (25°C)	33mΩ
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

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	410	310	192	157	128	97.0	71.1	56.9	39.1	30.3	22.5	17.3	14.3	11.5	7.61	4.12	3.44
9.9V	386	295	187	150	124	95.0	70.7	56.9	38.3	30.0	22.4	17.2	14.2	11.4	7.58	4.11	3.43
10.2V	361	281	182	142	120	93.0	67.7	53.9	36.3	28.4	21.5	16.5	13.6	11.0	7.25	3.97	3.31
10.5V	327	255	174	136	115	89.5	65.9	52.8	34.9	27.5	21.5	16.5	13.5	10.9	7.22	3.96	3.30
10.8V	294	230	164	130	110	86.0	61.7	48.8	32.6	24.5	19.5	15.2	12.4	10.0	6.73	3.70	3.08

Ampere Table

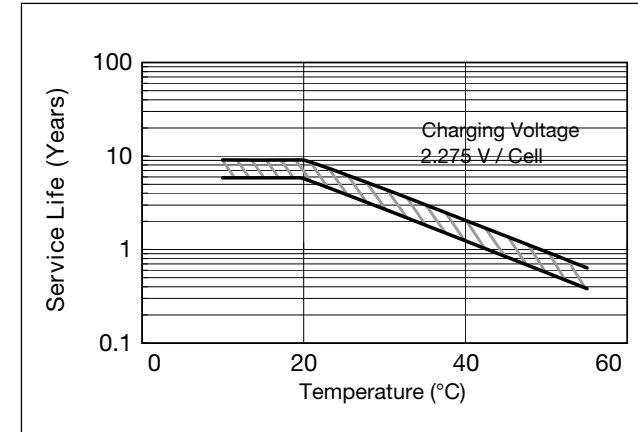
Cut-off V	(Ampere/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	36.9	27.8	17.1	13.7	11.0	8.29	6.06	4.83	3.31	2.56	1.89	1.45	1.19	0.96	0.634	0.344	0.287
9.9V	34.7	26.5	16.7	13.0	10.7	8.12	6.02	4.83	3.25	2.54	1.88	1.44	1.18	0.95	0.631	0.343	0.286
10.2V	32.5	25.2	16.3	12.3	10.3	7.95	5.77	4.58	3.08	2.40	1.80	1.38	1.14	0.92	0.604	0.331	0.276
10.5V	29.5	22.9	15.5	11.8	9.9	7.65	5.61	4.48	2.96	2.32	1.81	1.38	1.13	0.91	0.602	0.330	0.275
10.8V	26.4	20.6	14.6	11.3	9.5	7.35	5.26	4.14	2.76	2.07	1.64	1.28	1.03	0.84	0.560	0.309	0.257

*1 This battery is also available with a flame retardant battery case resin (UL94 V-0).

Charging Method

Trickle use	Control voltage: 13.6 - 13.8V; Initial current: 1.05A or smaller
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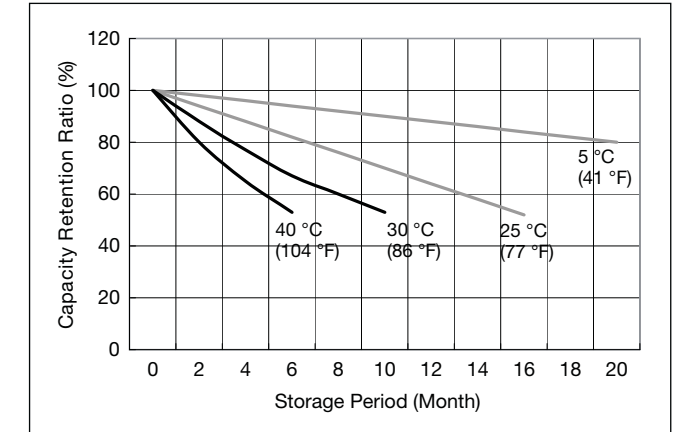
Influence of Temperature on Trickle life



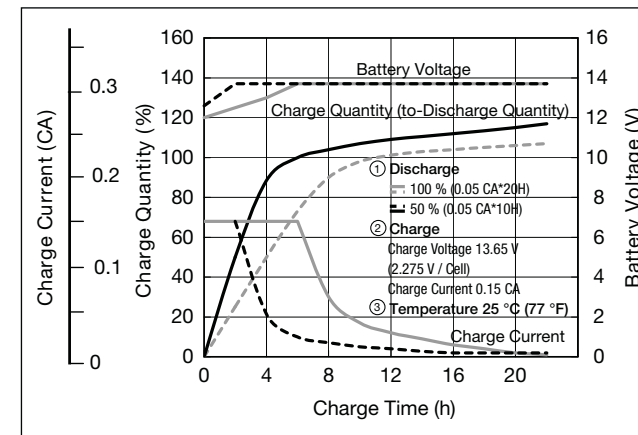
Cut off voltage

Discharge current	0.35A - 1.4A	1.4A - 3.5A	3.5A - 7A	7A - 14A	14A - 21A
Cut off voltage (V)	10.5	10.2	9.9	9.3	8.7

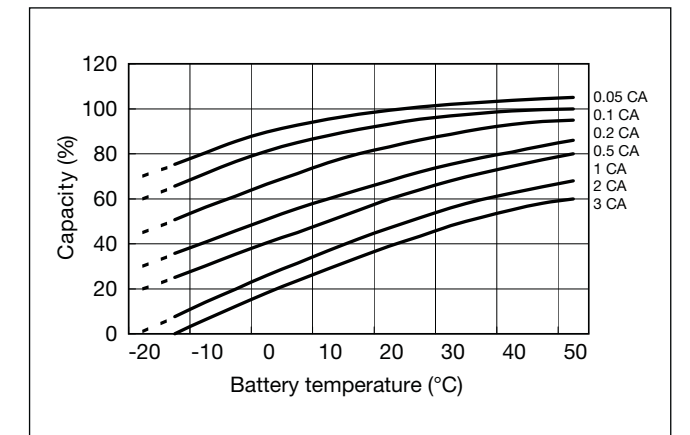
Residual capacity vs storage period



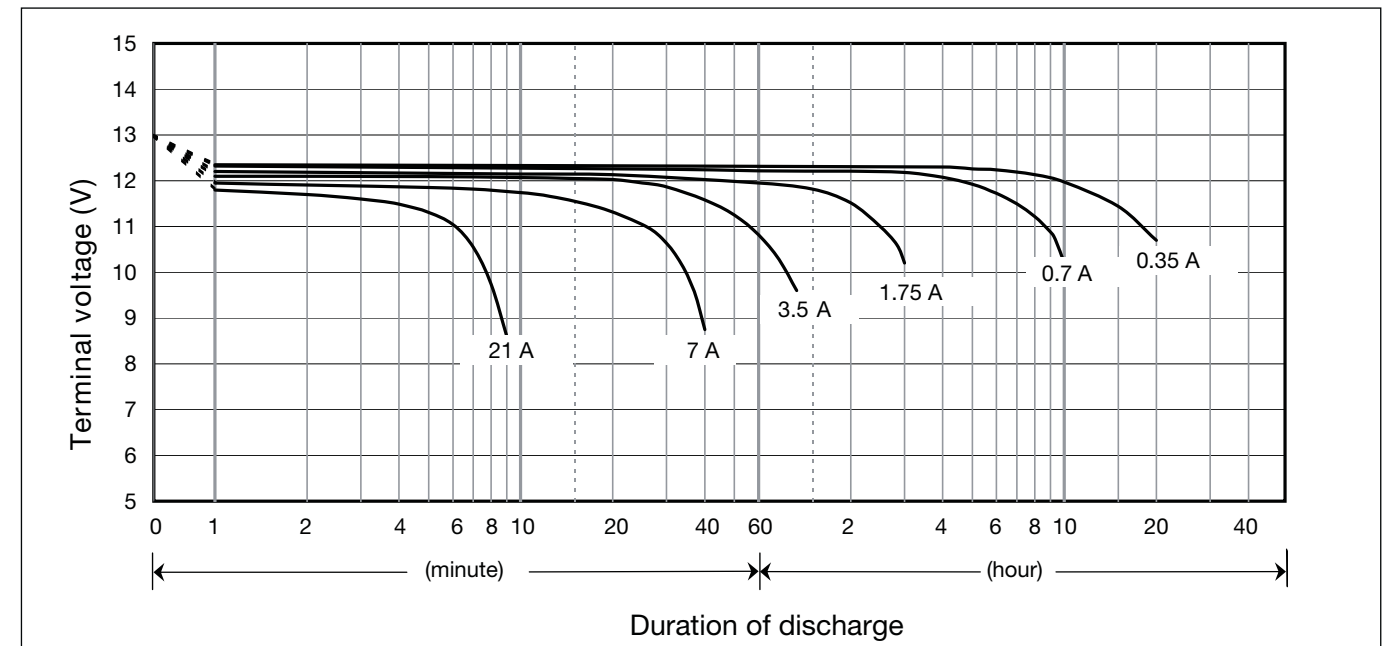
Constant-voltage and constant-current charge characteristics for Trickle use



Discharge capacity by temperature and by discharge current



Discharge characteristics

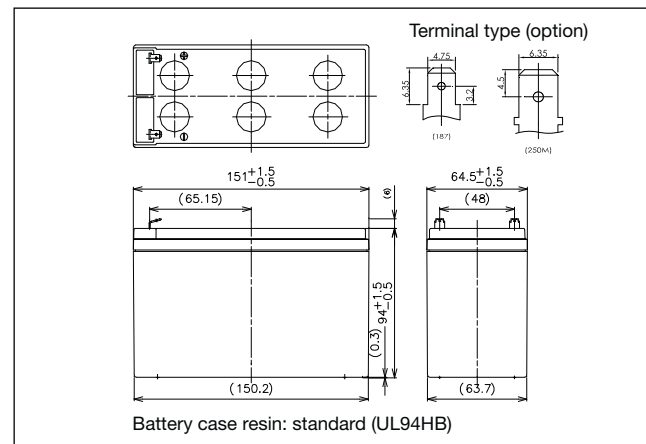


UP-RW1236P*1

For standby power supplies.
Expected trickle design life: 6 – 9 years at 20°C according to Eurobat.



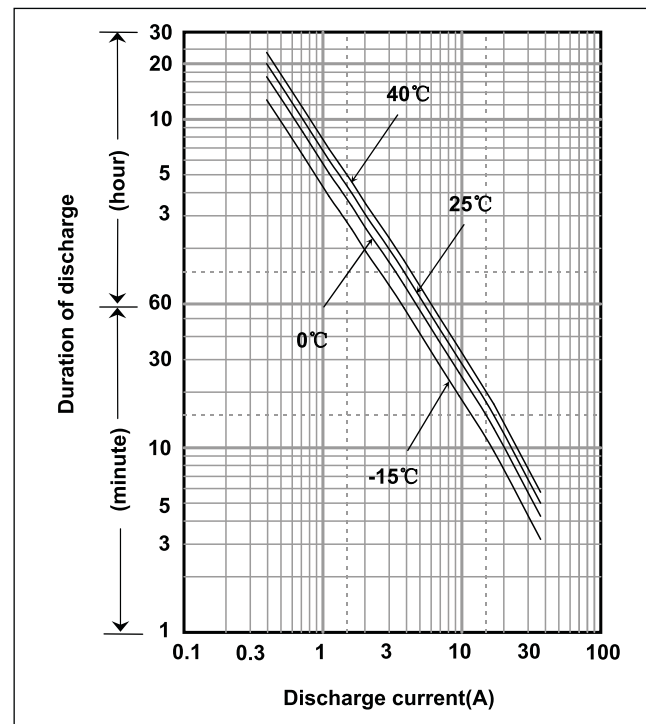
Dimensions (mm)



Specifications

Nominal voltage	12V	
Nominal capacity (10 minute rate)	192W	
Dimensions	Length	151mm
	Width	51mm
	Height	94mm
	Total Height	100mm
Approx. mass	2kg	
Terminal	Faston 250 with hole or Faston 187/250 mixed	

Duration of discharge vs Discharge current



Characteristics

Capacity (25°C)	20 hour rate	97W
	10 hour rate	157W
	5 hour rate	192W
	1 hour rate	310W
Internal resistance	Fully charged battery (25°C)	33mΩ
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

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	461	348	224	169	140	102	73.3	58.3	44.1	34.5	24.3	18.6	15.1	12.7	7.60	4.02	3.33	
9.9V	434	298	190	161	135	99.5	72.8	56.9	43.3	34.2	24.2	18.4	15.0	12.4	7.56	4.01	3.32	
10.2V	406	283	185	153	131	97.4	69.8	55.3	41.0	32.3	23.1	18.1	14.4	12.1	7.24	3.87	3.20	
10.5V	368	258	177	146	125	93.7	67.9	54.1	39.4	31.3	22.6	17.7	14.3	12.0	7.21	3.86	3.19	
10.8V	331	232	167	140	120	90.1	63.6	50.0	36.8	27.9	21.0	16.4	13.1	11.1	6.72	3.61	2.98	

Ampere Table

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	38.1	28.7	17.7	14.1	11.4	8.57	6.26	4.99	3.42	2.64	1.96	1.50	1.23	0.990	0.655	0.355	0.296	
9.9V	35.9	27.4	17.3	13.4	11.0	8.39	6.22	4.85	3.35	2.62	1.95	1.49	1.22	0.986	0.652	0.354	0.295	
10.2V	33.5	26.0	16.8	12.8	10.7	8.21	5.96	4.73	3.18	2.48	1.86	1.43	1.17	0.946	0.624	0.342	0.285	
10.5V	30.4	23.7	16.0	12.2	10.2	7.91	5.80	4.63	3.05	2.40	1.82	1.37	1.10	0.936	0.622	0.330	0.284	
10.8V	27.3	21.3	15.1	11.7	9.80	7.60	5.43	4.28	2.85	2.14	1.69	1.32	1.07	0.866	0.579	0.319	0.265	

*1 This battery is also available with a flame retardant battery case resin (UL94 V-0).

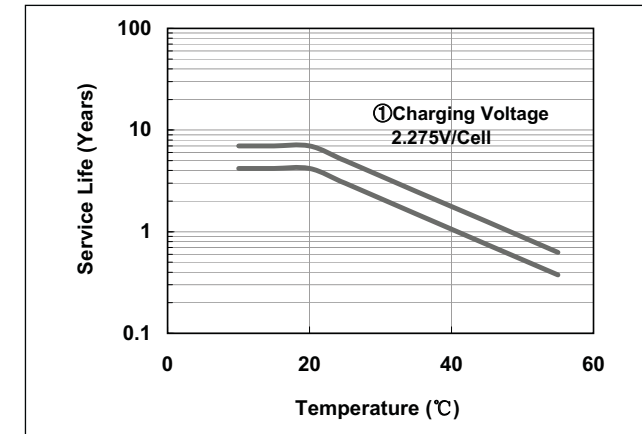
Charging Method

Trickle use	Control voltage: 13.6 - 13.8V; Initial current: 0.93A or smaller
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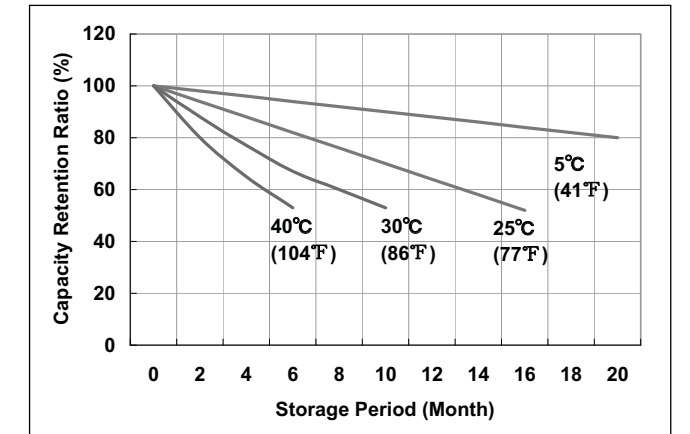
Cut off voltage

Discharge current	0.31A - 1.24A	1.24A - 3.1A	3.1A - 6.2A	6.2A - 12.4A	12.4A - 18.6A
Cut off voltage (V)	10.5	10.2	9.9	9.3	8.7

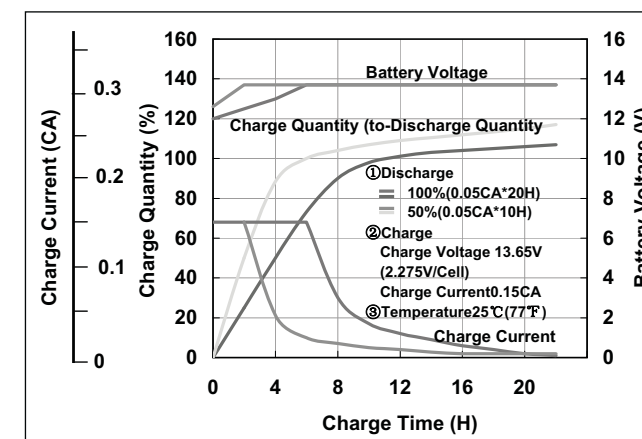
Influence of Temperature on Trickle life



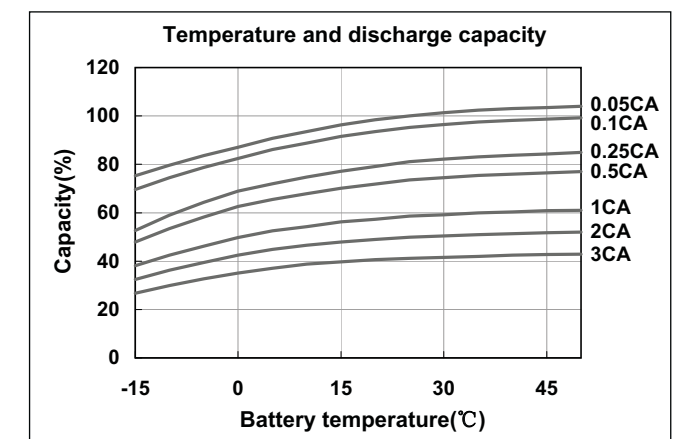
Residual capacity test result



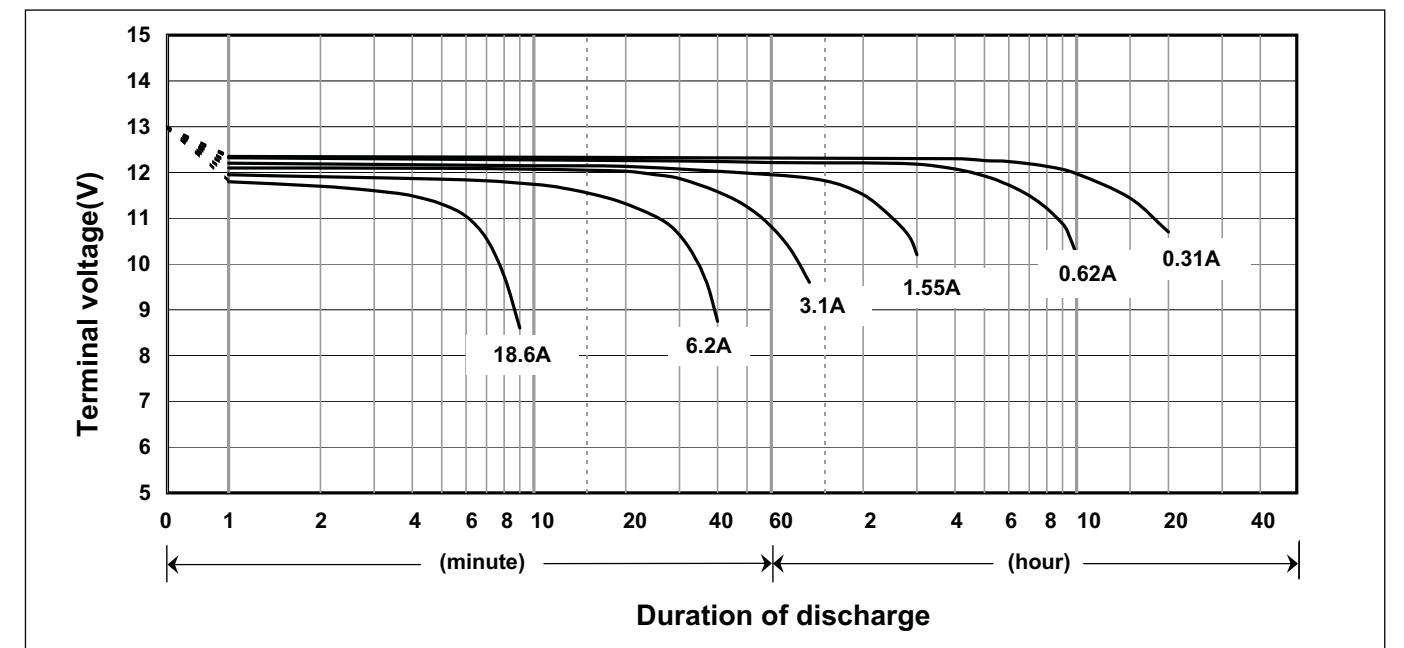
Constant-voltage and constant-current charge characteristics



Discharge capacity by temperature and by discharge current

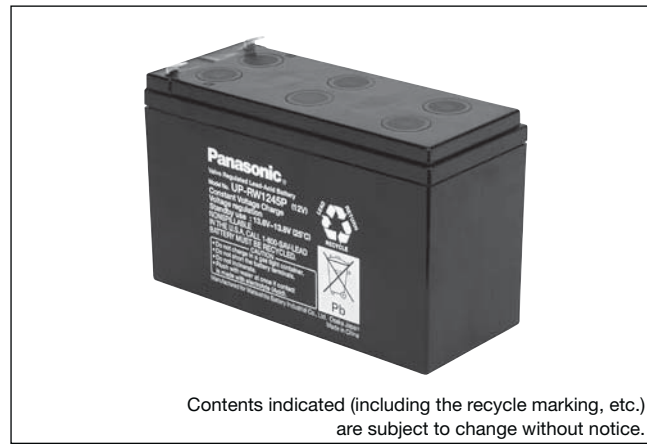


Discharge characteristics

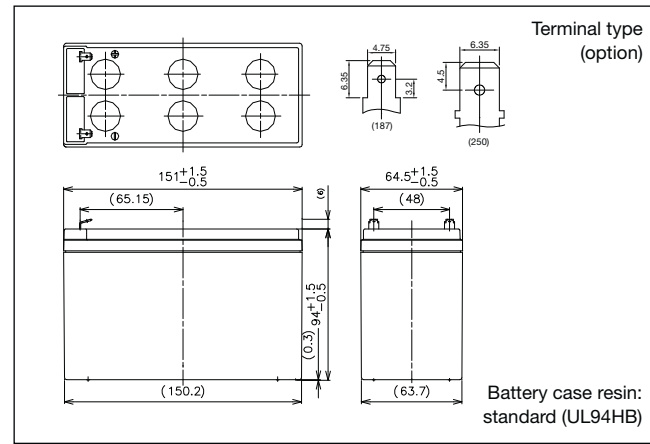


UP-RW1245P*1

For standby power supplies.
Expected trickle design life: 6 – 9 years at 20°C according to Eurobat.



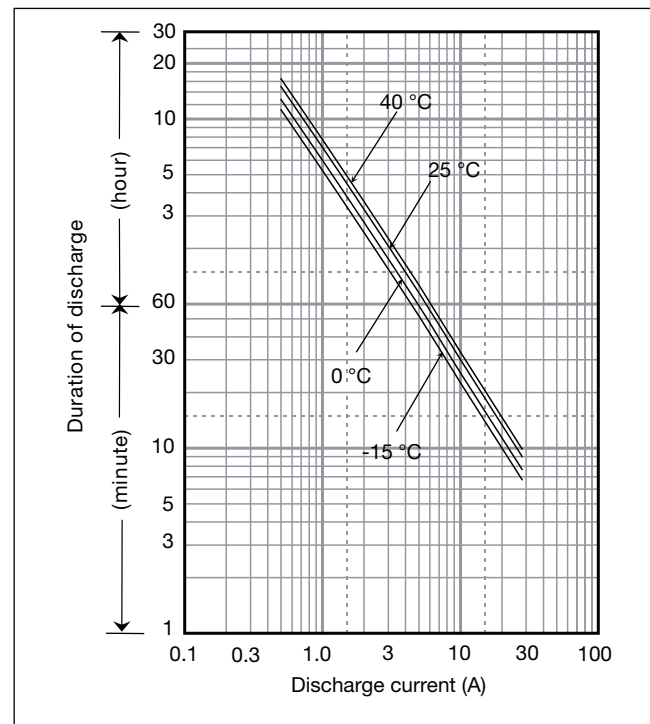
Dimensions (mm)



Specifications

Nominal voltage	12V	
Nominal capacity (10 minute rate)	270W	
Dimensions	Length	151mm
	Width	64.5mm
	Height	94mm
	Total Height	100mm
Approx. mass	2.6kg	
Terminal	Faston 187 or Faston 250 with hole	

Duration of discharge vs Discharge current



Characteristics

Capacity (25°C)	20 hour rate	112W
	10 hour rate	195W
	5 hour rate	268W
	1 hour rate	410W
Internal resistance	Fully charged battery (25°C)	20mΩ
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

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	530	410	268	195	159	112	82.1	65.7	45.2	34.9	26.0	20.0	16.5	13.3	8.79	4.76	3.97
9.9V	509	400	263	194	158	112	81.6	65.7	44.3	34.7	25.9	19.8	16.4	13.2	8.75	4.75	3.96
10.2V	490	390	258	193	156	111	80.8	64.4	43.4	33.9	25.6	19.7	16.2	13.1	8.65	4.73	3.95
10.5V	463	360	246	187	151	110	78.7	63.0	41.7	32.8	25.7	19.7	16.1	13.0	8.62	4.72	3.93
10.8V	434	330	234	180	146	109	78.3	61.8	41.3	31.1	24.7	19.3	15.7	12.7	8.52	4.69	3.91

Ampere Table

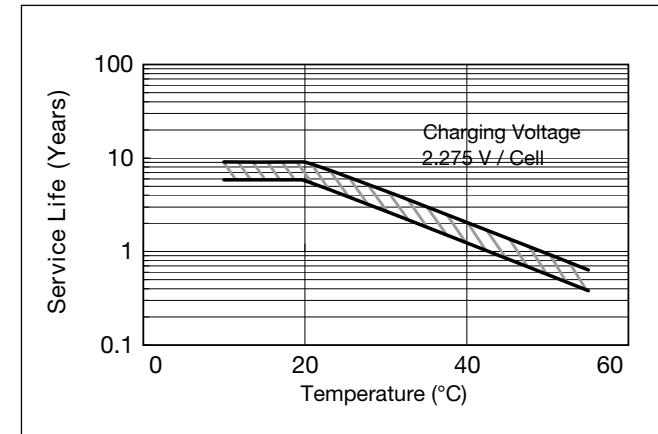
Cut-off V	(Ampere/Battery)																
	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	47.7	36.8	23.9	17.0	13.7	9.6	6.99	5.57	3.82	2.95	2.19	1.67	1.38	1.11	0.732	0.397	0.331
9.9V	45.8	35.9	23.5	16.9	13.6	9.6	6.95	5.57	3.75	2.93	2.17	1.66	1.37	1.10	0.729	0.396	0.330
10.2V	44.1	35.0	23.0	16.8	13.5	9.5	6.88	5.46	3.67	2.86	2.15	1.65	1.36	1.09	0.721	0.394	0.329
10.5V	41.6	32.3	22.0	16.3	13.0	9.4	6.70	5.35	3.53	2.77	2.16	1.65	1.35	1.08	0.718	0.393	0.328
10.8V	39.0	29.6	20.9	15.7	12.6	9.3	6.67	5.25	3.50	2.62	2.08	1.62	1.31	1.06	0.710	0.391	0.326

*1 This battery is also available with a flame retardant battery case resin (UL94 V-0).

Charging Method

Trickle use	Control voltage: 13.6 - 13.8V; Initial current: 1.2A or smaller
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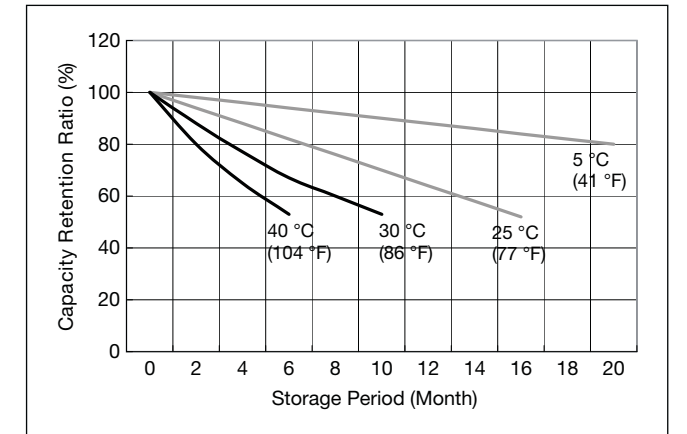
Influence of Temperature on Trickle life



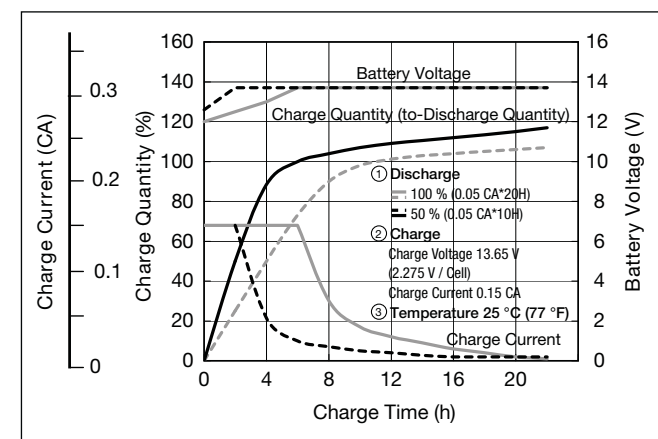
Cut off voltage

Discharge current	0.4A - 1.6A	1.6A - 4A	4A - 8A	8A - 16A	16A - 24A
Cut off voltage (V)	10.5	10.2	9.9	9.3	8.7

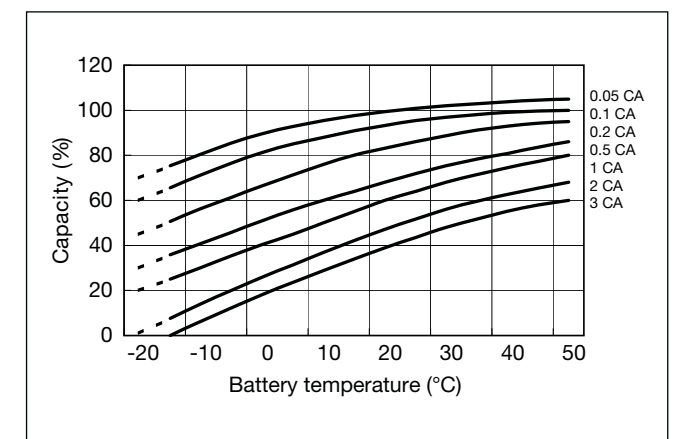
Residual capacity vs storage period



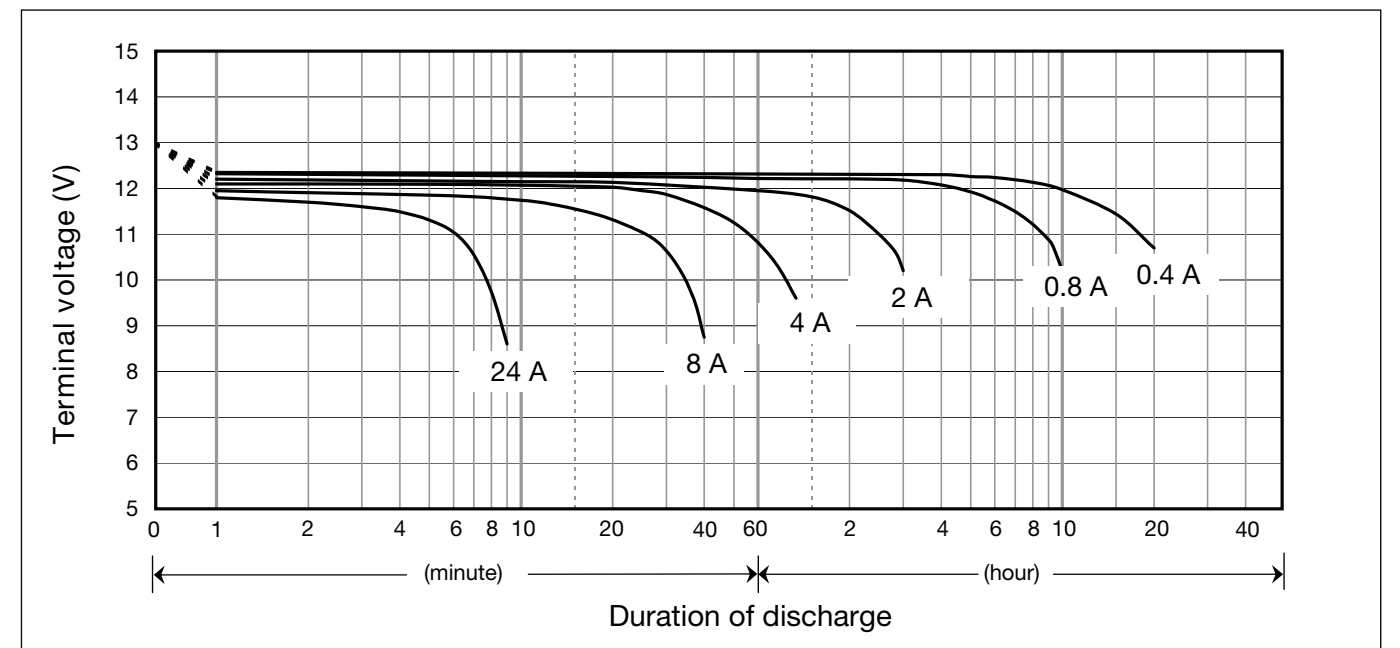
Constant-voltage and constant-current charge characteristics for Trickle use



Discharge capacity by temperature and by discharge current



Discharge characteristics



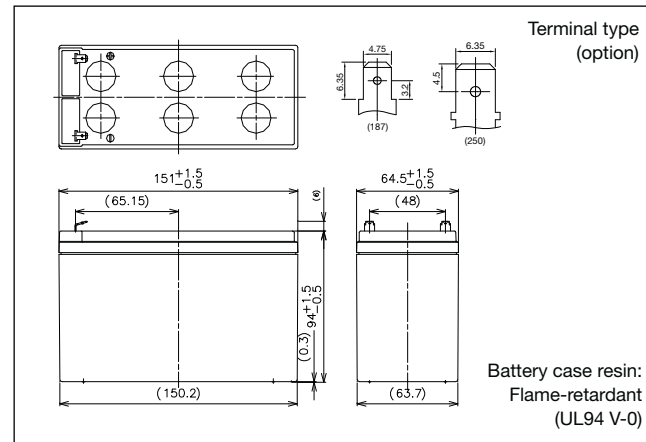
UP-PW1245P



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

For standby power supplies.
Expected trickle design life: 10 – 12 years at 20°C according to Eurobat.

Dimensions (mm)



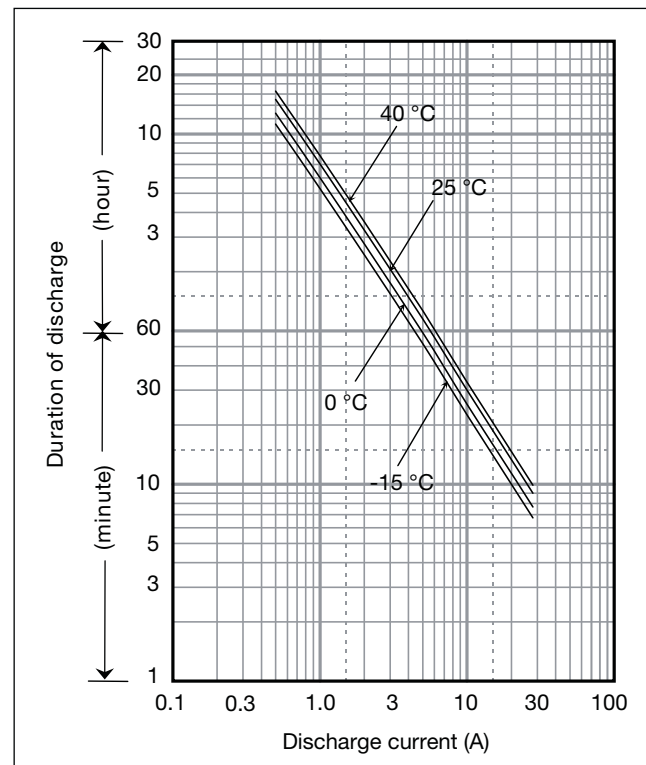
Specifications

Nominal voltage	12V	
Nominal capacity (10 minute rate)	270W	
Dimensions	Length	151mm
	Width	64.5mm
	Height	94mm
	Total Height	100mm
Approx. mass	2.6kg	
Terminal	Faston 187 or Faston 250 with hole	

Characteristics

Capacity (25°C)	20 hour rate	112W
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	5 hour rate	268W
	1 hour rate	410W
Internal resistance	Fully charged battery (25°C)	20mΩ
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	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

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	530	410	268	195	159	112	82.1	65.7	45.2	34.9	26.0	20.0	16.5	13.3	8.79	4.76	3.97	
9.9V	509	400	263	194	158	112	81.6	65.7	44.3	34.7	25.9	19.8	16.4	13.2	8.75	4.75	3.96	
10.2V	490	390	258	193	156	111	80.8	64.4	43.4	33.9	25.6	19.7	16.2	13.1	8.65	4.73	3.95	
10.5V	463	360	246	187	151	110	78.7	63.0	41.7	32.8	25.7	19.7	16.1	13.0	8.62	4.72	3.93	
10.8V	434	330	234	180	146	109	78.3	61.8	41.3	31.1	24.7	19.3	15.7	12.7	8.52	4.69	3.91	

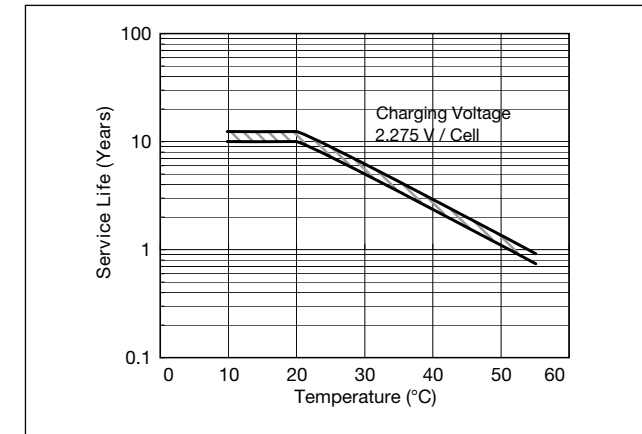
Ampere Table

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	47.7	36.8	23.9	17.0	13.7	9.57	6.99	5.57	3.82	2.95	2.19	1.67	1.38	1.11	0.732	0.397	0.331	
9.9V	45.8	35.9	23.5	16.9	13.6	9.55	6.95	5.57	3.75	2.93	2.17	1.66	1.37	1.10	0.729	0.396	0.330	
10.2V	44.1	35.0	23.0	16.8	13.5	9.49	6.88	5.46	3.67	2.86	2.15	1.65	1.36	1.09	0.721	0.394	0.329	
10.5V	41.6	32.3	22.0	16.3	13.0	9.40	6.70	5.35	3.53	2.77	2.16	1.65	1.35	1.08	0.718	0.393	0.328	
10.8V	39.0	29.6	20.9	15.7	12.6	9.32	6.67	5.25	3.50	2.62	2.08	1.62	1.31	1.06	0.710	0.391	0.326	

Charging Method

Trickle use	Control voltage: 13.6 - 13.8V; Initial current: 1.2A or smaller
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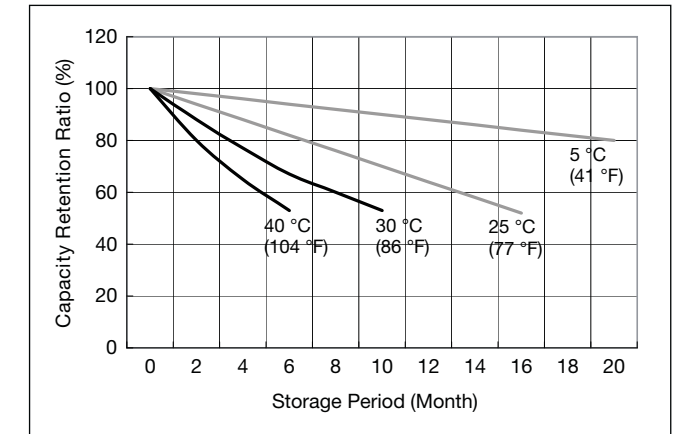
Influence of Temperature on Trickle life



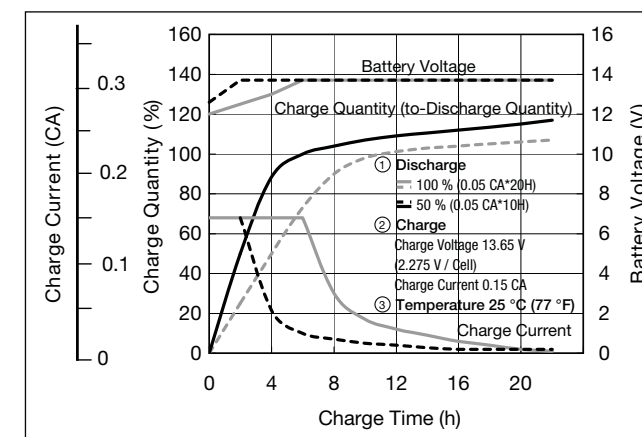
Cut off voltage

Discharge current	0.4A - 1.6A	1.6A - 4A	4A - 8A	8A - 16A	16A - 24A
Cut off voltage (V)	10.5	10.2	9.9	9.3	8.7

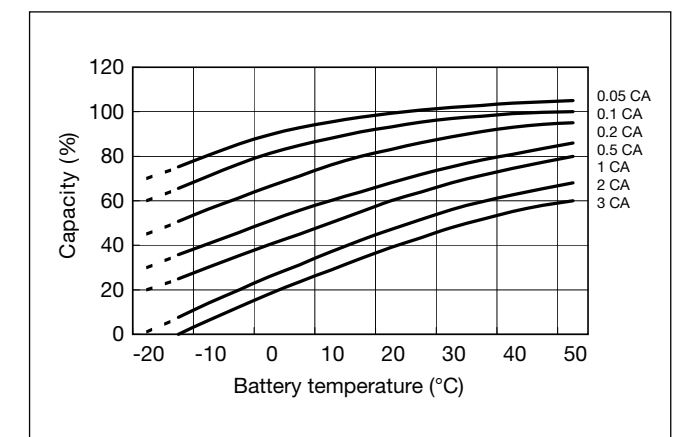
Residual capacity vs storage period



Constant-voltage and constant-current charge characteristics for Trickle use



Discharge capacity by temperature and by discharge current



Discharge characteristics

