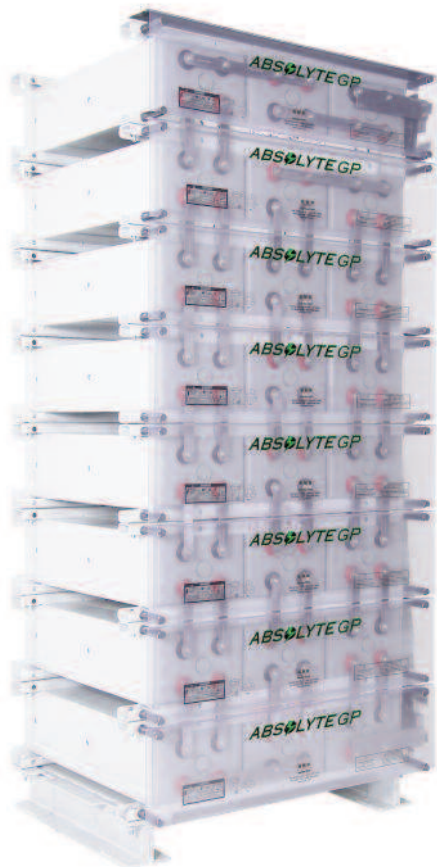


# ABSØLYTE® GP



## PHOTOVOLTAIC & ALTERNATIVE ENERGY



INDUSTRIAL POWER

A Division of **EXIDE** Technologies

# ABSOLYTE<sup>®</sup> GP

## A WORLD LEADER IN VALVE REGULATED LEAD ACID (VRLA) BATTERY POWER FOR PHOTOVOLTAIC AND ALTERNATIVE ENERGY APPLICATIONS

- Proven Field Experience Since 1983.
- The Absolyte was developed by GNB, in conjunction with Sandia National Laboratories, as the first VRLA, large capacity, deep-cycle battery for photovoltaic applications.
- Patented lead-calcium-tin-silver positive grid alloy provides excellent cycle life for photovoltaic applications.
- Provides for extended partial state of charge operation and allows for deep discharge recovery.
- Wide band of temperature operation — retains more capacity in cold temperatures than traditional flooded batteries.
- Modular steel tray design provides excellent heat dissipation in high temperature applications.
- Housed in protective steel trays designed for maximum installation flexibility.
- Single cell modules are available that simplify transport to remote locations.
- Eliminates the need for periodic water additions as found in flooded cells. Periodic visual inspections, voltage readings, and connection retorquing is all that is required.
- Absolyte GP is qualified to stack horizontally up to eight high for use in 1997 UBC /2001 CBC Seismic Zone IV (at or below grade).
- UL Recognized, ISO 9001:2000, NEBS Level 3 Certified in Certain Configurations.

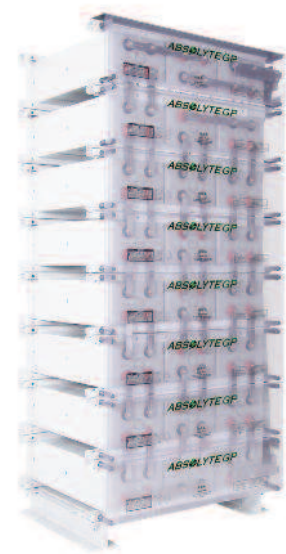
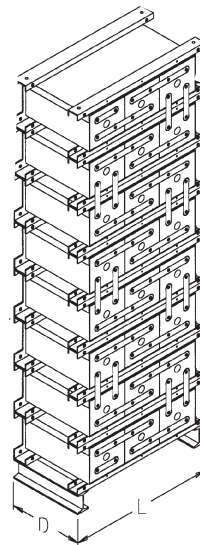
## APPLICATIONS

Absolyte GP batteries are ideal for photovoltaic and alternative energy applications including:

- Village Electrification
- Telecommunications
- Residential Power
- Railroad Signal
- Navigational Aids

## ADDED FEATURES AND BENEFITS

- Extended partial state of charge operation
- Deep discharge recovery
- Freezing tolerant
- Does not require separate battery room
- Recombination efficiency greater than 99%
- Globally recyclable design
- Single cell and stackable modules are available
- Simple cell replacement capability



## ASSEMBLY CONFIGURATIONS

**Horizontal Stack Assembly**  
Depth is overall, including module cover assembly. Add 102mm (4") for bottom I-beam supports to determine total height of assembled horizontal stack.

# ABSOLYTE® GP

## CELL SPECIFICATIONS

### 140-6300 AH @ 100 Hour Rate

**Container and Cover** — Polypropylene.

Flame retardant UL94 V-0/28% L.O.I. is optional.

**Separators** — Spun glass, microporous matrix.

**Safety Vent** — 3-10 psi opening pressure, self-resealing.

**Terminals** — Solid copper insert.

**Positive Plate** — Patented Lead-Calcium-Tin-Silver grid alloy.

**Negative Plate** — Lead-Calcium grid alloy.

**Operating Temperature** — Temperature excursions between -40°C (-40°F) to +50°C (122°F) allowed (battery performance and life will be affected).

**Cycle Life** — 1200 cycles at 80% D.O.D. [at 25°C (77°F)] when operated per the I&O Manual.

**Self Discharge** — 0.5 to 1.0% per week maximum at 25°C (77°F).

**Charge Controller Upper Voltage Settings**— at 25°C (77°F) with a maximum charge current of 5% of nominal C/100 Amp-hour rating.

2.28 ± 0.02 V.P.C. @ 0-2% D.O.D.

2.33 ± 0.02 V.P.C. @ 3-5% D.O.D.

2.38 ± 0.02 V.P.C. @ >5% D.O.D.

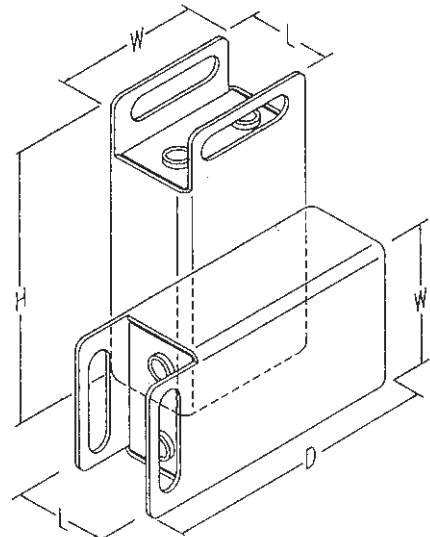
For other temperatures and charge currents, contact GNB for recommendations.

## Absolyte GP Single Cell Module Weights and Dimensions

CELL TYPE	NOM AH CAP (100 HR)	LENGTH		WIDTH		DEPTH OR HEIGHT		UNPACKED WEIGHT		DOMESTIC PACKED WEIGHT		EXPORT PACKED WEIGHT	
		IN	MM	IN	MM	IN	MM	LB	KG	LB	KG	LB	KG
<b>50G</b>													
50G05	140	3.80	97	6.49	165	16.00	406	32	15	35	16	44	20
50G07	210	3.80	97	6.49	165	16.00	406	39	18	41	19	51	23
50G11	370	4.55	116	6.49	165	16.00	406	50	23	53	24	61	28
50G13	430	5.30	135	6.49	165	16.00	406	58	26	61	28	69	31
50G15	510	6.05	154	6.55	166	16.00	406	66	30	69	31	77	35
50G19	660	7.67	195	6.67	169	16.00	406	91	41	95	43	112	51
50G27	950	10.67	271	6.67	169	16.00	406	124	56	130	59	147	67



NOTE: Design and/or specifications subject to change without notice. If questions arise, contact your local GNB sales representative for clarification.



# ABSOLYTE<sup>®</sup> GP

## Absolyte GP Performance Characteristics — Constant Current Amperes to 1.75 Volts Per Cell @ 25°C (77°F)

CELL TYPE	HOURS									
	120	100	72	48	36	24	20	12	10	8
<b>50G</b>										
50G05	1.2	1.4	1.9	2.8	3.6	5.1	6	9.3	11	13
50G07	1.8	2.1	2.9	4.2	5.5	7.7	9.1	14	16	19
50G09	2.4	2.9	3.9	5.6	7.3	10	12	18	22	26
50G11	3.1	3.7	5.0	7.1	9.2	13	15	23	27	33
50G13	3.7	4.3	5.9	8.5	11	15	18	28	33	39
50G15	4.3	5.1	6.9	10	13	18	21	33	38	46
50G19	5.6	6.6	8.9	13	17	23	27	42	49	59
50G27	8.0	9.5	13	19	24	34	39	61	71	85
<b>90G</b>										
90G07	3.0	3.6	4.9	7.0	9.1	12	15	23	27	32
90G09	4.0	4.8	6.5	9.4	12	17	20	31	36	43
90G11	5.0	6.0	8.1	11	15	21	25	39	46	54
90G13	6.1	7.2	9.8	14	18	25	30	47	55	65
90G15	7.1	8.4	11	16	21	30	35	55	64	76
<b>100G</b>										
100G13	6.7	7.9	10	15	20	29	34	54	62	75
100G15	7.8	9.2	12	18	23	33	40	63	73	87
100G17	8.9	10	14	20	26	38	45	72	83	100
100G19	10	11	16	23	30	43	51	81	94	112
100G21	11	13	17	25	33	48	57	90	104	125
100G23	12	14	19	28	36	53	63	99	115	137
100G25	13	15	21	31	40	58	68	108	125	150
100G27	14	17	23	33	43	62	74	117	135	162
100G29	15	18	25	36	46	67	80	127	146	175
100G31	16	19	26	38	50	72	85	136	156	187
100G33	17	21	28	41	53	77	91	145	167	200
100G39	20	23	30	45	60	87	102	162	186	225
100G45	23	27	36	54	69	99	120	189	219	261
100G51	26	30	42	60	78	114	135	216	249	300
100G57	30	33	48	69	90	129	153	243	282	336
100G63	33	39	51	75	99	144	171	270	312	375
100G69	36	42	57	84	108	159	189	297	345	411
100G75	39	45	63	93	120	174	204	324	375	450
100G81	42	51	69	99	129	186	222	351	405	486
100G87	45	54	75	108	138	201	240	381	438	525
100G93	48	57	78	114	150	216	255	408	468	561
100G99	51	63	84	123	159	231	273	435	501	600

For additional ratings, refer to section 26.10B.

# ABSOLYTE<sup>®</sup> GP

## Absolyte GP Performance Characteristics — Constant Current Amperes to 1.80 Volts Per Cell @ 25°C (77°F)

CELL TYPE	HOURS									
	120	100	72	48	36	24	20	12	10	8
<b>50G</b>										
50G05	1.2	1.4	1.9	2.8	3.6	5.1	6.0	9.2	10	12
50G07	1.8	2.1	2.9	4.2	5.4	7.7	9.0	13	16	19
50G09	2.4	2.8	3.9	5.6	7.2	10	12	18	21	25
50G11	3.1	3.6	4.9	7.0	9.1	13	15	23	26	31
50G13	3.6	4.3	5.8	8.4	10	15	18	27	32	38
50G15	4.3	5.1	6.8	10	13	18	21	32	37	44
50G19	5.5	6.5	8.8	13	16	23	27	42	48	57
50G27	8.0	9.4	13	18	24	34	39	60	69	82
<b>90G</b>										
90G07	3.0	3.5	4.8	6.9	9.0	12	14	23	27	32
90G09	4.0	4.7	6.4	9.3	12	17	19	31	36	43
90G11	5.0	5.9	8.0	11	15	21	24	39	45	53
90G13	6.0	7.1	9.7	13	18	25	29	46	54	64
90G15	7.0	8.3	11	16	21	29	34	54	63	75
<b>100G</b>										
100G13	6	7	10	15	19	28	33	53	62	73
100G15	7	9	12	17	23	33	39	62	72	85
100G17	8	10	14	20	26	38	45	71	82	97
100G19	9	11	15	22	29	42	50	80	93	110
100G21	11	13	17	25	32	47	56	89	103	122
100G23	12	14	19	28	36	52	62	98	113	134
100G25	13	15	21	30	39	57	67	107	124	146
100G27	14	17	22	33	42	61	73	116	134	159
100G29	15	18	24	35	46	66	78	125	144	171
100G31	16	19	26	38	49	71	84	134	155	183
100G33	17	20	28	40	52	76	90	143	165	195
100G39	19	23	30	45	57	84	99	159	186	219
100G45	23	27	36	51	69	99	117	186	216	255
100G51	26	30	42	60	78	114	135	213	246	291
100G57	29	33	45	66	87	126	150	240	279	330
100G63	33	39	51	75	96	141	168	267	309	366
100G69	36	42	57	84	108	156	186	294	339	402
100G75	39	45	63	90	117	171	201	321	372	438
100G81	42	51	66	99	126	183	219	348	402	477
100G87	45	54	72	105	138	198	234	375	432	513
100G93	48	57	78	114	147	213	252	402	465	549
100G99	51	60	84	120	156	228	270	429	495	585

For additional ratings, refer to section 26.10B.



# ABSOLYTE<sup>®</sup> GP

## Absolyte GP Performance Characteristics — Constant Current Amperes to 1.90 Volts Per Cell @ 25°C (77°F)

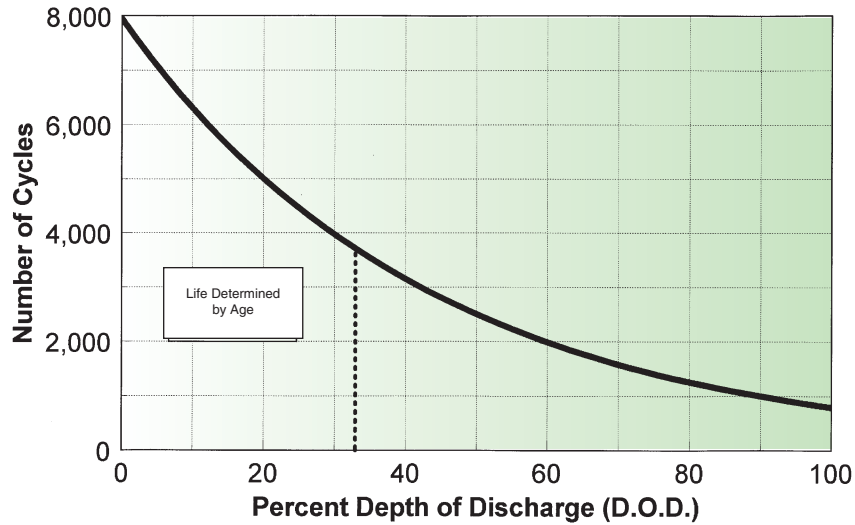
CELL TYPE	HOURS									
	120	100	72	48	36	24	20	12	10	8
<b>50G</b>										
50G05	1.1	1.3	1.7	2.4	3.1	4.5	5.3	8.3	9	11
50G07	1.6	1.9	2.6	3.7	4.8	6.8	8.0	12	14	16
50G09	2.2	2.6	3.4	4.9	6.3	9.1	10	16	18	22
50G11	2.8	3.3	4.4	6.2	8.0	11	13	21	23	28
50G13	3.3	3.9	5.2	7.4	9.6	13	16	25	28	33
50G15	3.9	4.6	6.1	9	11	16	19	29	33	39
50G19	5.0	5.9	7.8	11	14	21	24	38	42	50
50G27	7.3	8.5	11	16	21	30	35	55	61	73
<b>90G</b>										
90G07	2.8	3.2	4.3	6.2	8.0	11	13	21	24	28
90G09	3.7	4.3	5.8	8.3	10	15	18	28	32	38
90G11	4.6	5.4	7.3	10	13	19	22	35	40	47
90G13	5.6	6.5	8.7	12	16	23	27	42	48	57
90G15	6.5	7.6	10	14	18	27	31	49	56	67
<b>100G</b>										
100G13	5.9	7.0	9.4	13	17	25	30	47	54	63
100G15	6.9	8.1	11	15	20	29	35	55	63	74
100G17	7.9	9.3	12	18	23	33	40	63	72	85
100G19	8.9	10	14	20	26	38	45	71	81	95
100G21	9.9	11	15	22	29	42	50	79	90	106
100G23	10	12	17	24	32	46	55	87	99	117
100G25	11	14	18	27	35	50	60	95	108	127
100G27	12	15	20	29	38	55	65	103	117	138
100G29	13	16	22	31	41	59	70	110	126	149
100G31	14	17	23	34	44	63	75	118	135	159
100G33	15	18	25	36	47	67	80	126	144	170
100G39	17	21	28	39	51	75	90	141	162	189
100G45	20	24	33	45	60	87	105	165	189	222
100G51	23	27	36	54	69	99	120	189	216	255
100G57	26	30	42	60	78	114	135	213	243	285
100G63	29	33	45	66	87	126	150	237	270	318
100G69	30	36	51	72	96	138	165	261	297	351
100G75	33	42	54	81	105	150	180	285	324	381
100G81	36	45	60	87	114	165	195	309	351	414
100G87	39	48	66	93	123	177	210	330	378	447
100G93	42	51	69	102	132	189	225	354	405	477
100G99	45	54	75	108	141	201	240	378	432	510

For additional ratings, refer to section 26.10B.

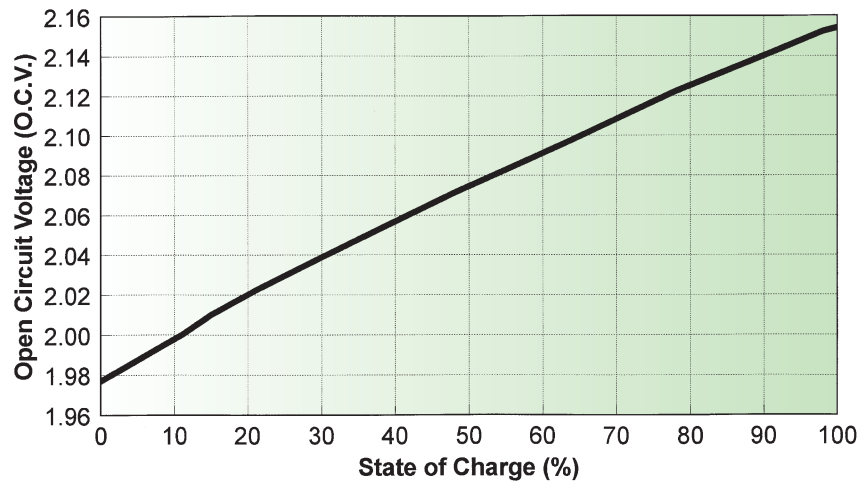
# ABSOLYTE<sup>®</sup> GP

## Absolyte GP Performance Characteristics

### Cycle Life vs. Depth of Discharge [at 25°C (77°F)]



### Open Circuit Voltage vs. State of Charge [at 25°C (77°F)]



### Capacity Retention vs. Temperature

