



SOLAR

PHOTOVOLTAIC BATTERIES



Sealed, Valve-Regulated, Gelled-Electrolyte Batteries for Renewable Energy Applications

Features

- Valve-regulated...
- Gelled electrolyte...
- Compu-cast, power path grids and computer-controlled oxide...
- Low stand loss...
- Tank formed plates...
- Rated non-spillable by ICAO, IATA and DOT...
- Made in the U.S.A...

Benefits

- Sealed construction eliminates periodic watering, corrosive acid fumes and spills.
- Electrolyte will not stratify. No equalization charging required.
- Increases durability and deep cycle ability for heavy demand applications.
- Less than 2% per month stand loss means little deterioration during transport and storage.
- Ensure voltage matching between cells.
- Transports easily and safely by air. No special containers needed.
- Ensures reliable service, support and quality.



QUALITY SYSTEM
CERTIFIED TO
ISO 9001
ISO/TS 16949



UL Recognized Component

Deka® SOLAR® PHOTOVOLTAIC BATTERIES

The Deka Solar series of valve-regulated, gelled-electrolyte batteries is designed to offer reliable, maintenance-free power for renewable energy applications where frequent deep cycles are required and minimum maintenance is desirable.

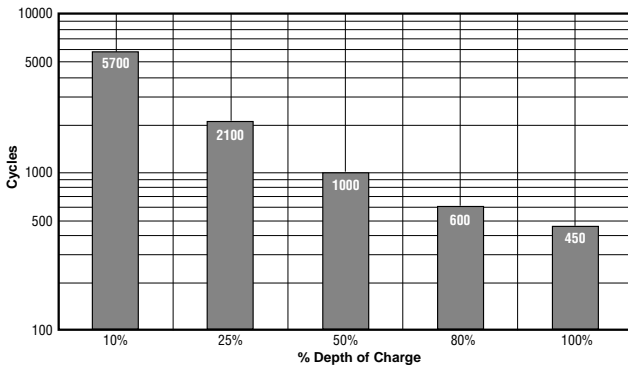
Applications

Water pumping • Residential • Communications
Cathodic protection • Remote monitoring • Refrigeration
Lighting • Aids to navigation • Wind generation

Specifications

Voltage 12 volts nominal (8GGC2 is 6 volts)
Plate alloy Lead calcium
Element, post Threaded stud or "flag" terminal, forged bushing
Container/cover ... Polypropylene
Charge voltage ... Cycle 2.30 to 2.35; Float 2.25 to 2.30 per cell
Electrolyte Sulfuric acid thixotropic gel
Vent Self sealing

**Gel Cycle Life vs Depth of Discharge at +25°C (77°F)*
Based on BCI 2-hour Capacity**



Cycle Chart applies to types with similar design characteristics, ex., U1, 22NF, 24, 27, 31.

The solar battery excels in cycling applications.

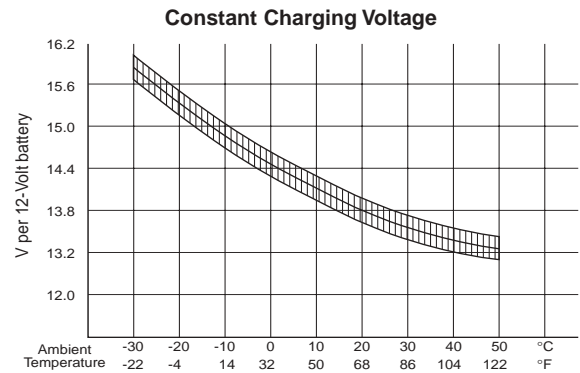
*Dependent upon proper charging and ambient temperatures.

Discharge Amps per unit to 1.75VPC at 80°F (27°C)

Type No.	Foot-notes	Volts	Discharge Amps per unit to 1.75VPC at 80°F (27°C)										Approx. Wt. Lbs. (Kgs.)	Dimensions In (mm)						
			5 Min	10 Min	15 Min	20 Min	30 Min	60 Min	90 Min	3 Hr	6 Hr	8 Hr		20 Hr	24 Hr	48 Hr	100 Hr	L	W	H
8GU1	Z	12	74.7	54.3	44.6	38.8	31.9	21	15	8.50	4.67	3.56	1.58	1.33	0.73	0.36	23.4 (10.6)	7 3/8 (197)	5 1/2 (130)	7 1/4 (184)
8GU1H	HZ	12	74.7	54.3	44.6	38.8	31.9	21	15	8.50	4.67	3.56	1.58	1.33	0.73	0.36	23.4 (10.6)	8 3/8 (211)	5 1/2 (130)	7 1/4 (184)
8G22NF	G	12	120	86.7	69.1	60	47	31.8	23.2	13.30	7.65	5.74	2.55	2.15	1.16	0.58	37 (16.8)	9 1/2 (238)	5 1/2 (140)	9 1/2 (235)
8G24	GH	12	204	152	119	100	78	48.5	35	19.77	10.75	8.30	3.68	3.12	1.68	0.845	52 (23.5)	10 1/2 (276)	6 1/4 (171)	9 1/2 (251)
8G27	GH	12	242	185.3	142.5	118.8	90.25	57	41.5	23.30	12.67	9.80	4.32	3.67	1.99	0.99	62.7 (28.4)	12 3/4 (324)	6 3/4 (171)	9 1/2 (251)
8G30H	BH	12	266	199.5	161.5	137.8	104.5	64.5	47	26.20	14.20	11.00	4.88	4.10	2.15	1.08	69.5 (31.5)	12 1/8 (329)	6 1/4 (171)	9 1/2 (248)
8G31	HX	12	266	199.5	161.5	137.8	104.5	64.5	47	26.20	14.20	11.00	4.88	4.10	2.15	1.08	69.5 (31.5)	12 1/8 (329)	6 1/4 (171)	9 1/2 (238)
8GGC2	G	6	325	250	210	180	150	99	76	45.30	25.80	20.00	9.00	7.60	3.90	1.98	68.4 (31.0)	10 1/4 (267)	7 1/2 (181)	10 1/2 (276)
8G4D	HS	12	485	375	300	255	195	122	88	49.20	26.70	20.70	9.15	7.78	4.22	2.10	127 (57.6)	20 1/2 (527)	8 1/2 (216)	10 (254)
8G8D	HS	12	600	460	370	315	245	150	105	60.60	33.00	25.50	11.25	9.54	5.18	2.65	157 (71.2)	20 1/2 (527)	11 (279)	10 (254)

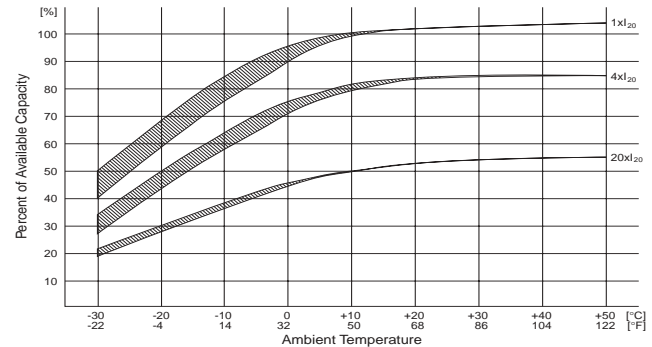
ALL RATINGS ARE AFTER 15 CYCLES AND CONFORM TO B.C.I. SPECIFICATIONS.

IMPORTANT CHARGING INSTRUCTIONS: WARRANTY VOID IF OPENED OR IMPROPERLY CHARGED. Do not install in a sealed container. Constant under or overcharging will damage any battery and shorten its life! Use a good constant potential, voltage-regulated charger. **For 12-volt batteries, charge to at least 13.8 volts but no more than 14.1 volts at 68°F (20°C).** **For 6-volt batteries, charge to at least 6.9 volts but no more than 7.05 volts at 68°F (20°C).** The open circuit voltage of a fully charged 12-volt battery is 12.8V at 68°F (20°C). However, as the battery charges, the building internal pressure (voltage) causes resistance to the charge. Therefore, the on-charge voltage must be higher (at least 13.8V) to overcome this internal pressure (voltage) during charging.



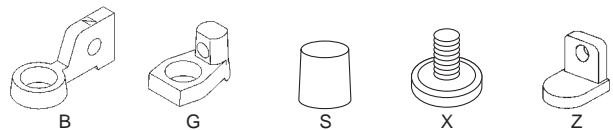
Constant Charging Voltage: Shown is the constant charging voltage in relation to the ambient temperature. The bandwidth shows a tolerance of $\pm 30\text{mV/cell}$. This constant voltage is suitable for continuous charging and cyclic operation. In a parallel standby mode it always keeps the battery in a fully charged state; in a cyclic mode, it provides for rapid recharging and high cyclic performance.

Capacity vs. Operating Temperature



Capacity vs. Operating Temperatures: Shown are the changes in capacity for wider ambient temperature range, giving the available capacity, as a percentage of the rated capacity, at different ambient temperatures for 3 different load examples with uninterrupted discharge to the appropriate discharge cut-off voltage. The values for the upper edge of the curve were obtained from charging at an ambient temperature of +20°C with a voltage limit of 2.3 V/cell. For the lower edge, charging was carried out at the specified ambient temperature. The curves show the behavior of the battery after a number of cycles.

Terminal Information



Footnotes:

B - Flag terminal w/ 3/8" diameter hole
G - Offset post w/ horizontal hole, stainless steel 5/16" bolt & hex nut
H - Includes handles

S - SAE "automotive type" post
X - 3/8" x 16 stainless steel stud posts
Z - Terminals have round holes

Batteries manufactured in polypropylene cases and covers.

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