




# PHOTOVOLTAIC BATTERIES



**GEL MONOBLOC/  
6V & 12V**

The **Deka Solar Valve-Regulated Gel Monobloc series** offers reliable, versatile, maintenance-free power. The thixotropic gel enables these batteries to be completely

spillproof providing many available options

for installation. The gelled electrolyte gives more protection to the battery plates, and is better suited for deep cycle discharge. With longer discharge and less charging time, these batteries are ideal for many renewable energy applications.

## FEATURES & BENEFITS

Valve-Regulated	Sealed construction eliminates periodic watering, corrosive acid fumes, and spills
Gelled Electrolyte	Electrolyte will not stratify
Positive and Negative Plate	Lead calcium
Self-Discharge	Less than 2% per month stand loss means little deterioration during transport and storage
Exclusive IPF® Technology	Optimizes power capacity, cell consistency, and long-term reliability
Rated Non-Spillable by ICAO, IATA, and DOT	Transports easily and safely by air, no special containers needed

## APPLICATIONS

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



QUALITY SYSTEM  
CERTIFIED  
**ISO 9001**  
**ISO/TS 16949**  
ENVIRONMENTAL  
SYSTEM CERTIFIED  
**ISO 14001**



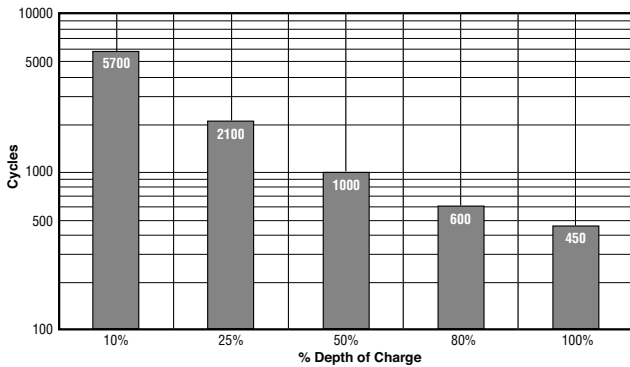
# Deka® SOLAR® PHOTOVOLTAIC BATTERIES

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.

### Specifications

Voltage ..... 12 volts nominal (8GGC2 is 6 volts)  
 Plate alloy ..... Lead calcium  
 Container/cover..... Polypropylene  
 Electrolyte ..... Sulfuric acid thixotropic gel  
 Valve ..... Self sealing

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



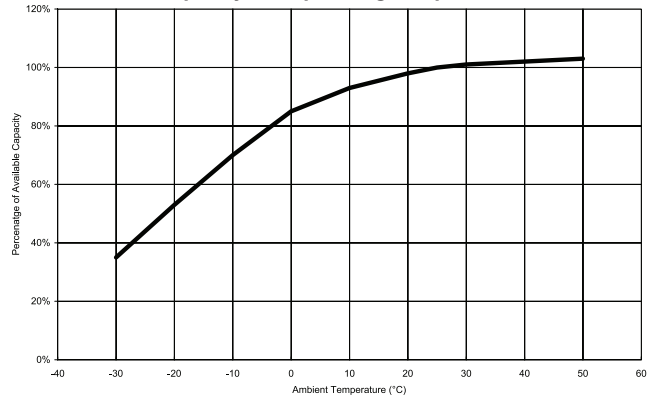
Cycle Chart applies to types with similar design characteristics, ex., U1, 22NF, 24, 27, 31.

The solar battery excels in cycling applications.  
*\*Dependent upon proper charging and ambient temperatures.*

Photovoltaic Charging Parameters		
Bulk Charge	Max Current (amps)	30% of 20 Hr Rate
Absorption (Regulation) Charge	Constant Voltage	2.35 - 2.40 vpc
Float Charge	Constant Voltage	2.25 vpc ± .01
Equalize Charge	Constant Voltage	2.30 - 2.43 vpc
Temperature Coefficient	0.003 v / °C	

Cut-off parameters per charge & equalize intervals are application specific and will vary dependent upon site specific characteristics such as temperature, days of autonomy, array to load ratio, ect.

**Capacity vs. Operating Temperature**



**Capacity vs. Operating Temperatures:** Above 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. The curves show the behavior of the battery after a number of cycles.

### Terminal Information



BATTERY TYPE	FOOT NOTE	VOLTS	AMPERE HOUR CAPACITY 77°F (25°C)				WEIGHT lb (kg)	DIMENSIONS - in (mm)		
			10 HR	20 HR	24 HR	100 HR		L	W	H
8GU1	39,39,Y	12	30.5	31.6	31.9	36.0	23 (10.5)	7.71 (196)	5.18 (132)	7.22 (183)
8GU1H	17,38,39,Y	12	30.5	31.6	31.9	36.0	23 (10.5)	8.31 (211)	5.18 (132)	7.22 (183)
8G40C	38,39,C	12	37.0	40.0	40.8	48.0	32 (14.5)	7.76 (197)	6.62 (168)	6.87 (174)
8G22NF	38,39,G	12	47.5	51.0	51.6	58.0	37 (16.8)	8.99 (228)	5.47 (139)	9.24 (235)
8G34R	38,39,C	12	53.0	60.0	61.7	70.0	42 (19.1)	10.20 (259)	6.65 (169)	7.05 (179)
8G24	17,38,39,G	12	68.0	73.6	74.9	84.5	52 (23.6)	10.20 (259)	6.80 (173)	9.24 (235)
8G27	17,38,39,G	12	80.3	88.0	88.1	99.0	63 (28.6)	12.83 (326)	6.56 (167)	9.24 (235)
8G30H	17,38,39,B	12	90.0	97.6	98.4	108	70 (31.8)	12.93 (329)	6.75 (171)	9.76 (248)
8G31	17,38,39,X	12	90.0	97.6	98.4	108	70 (31.8)	12.93 (329)	6.75 (171)	9.34 (237)
8GGC2	38,39,U	6	168	180	182	198	68 (30.8)	10.26 (261)	7.09 (180)	11.06 (281)
8G4D	17,38,39,T	12	169	183	187	210	127 (57.6)	20.73 (527)	8.44 (214)	10.82 (275)
8G8D	17,38,39,T	12	210	225	229	265	157 (71.2)	21.03 (534)	11.00 (279)	10.82 (275)
8G5SHP	17,38,39,B	12	107	115	116	123	85 (38.5)	13.58 (345)	6.77 (172)	11.42 (290)

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. The **open circuit voltage** of a fully charged 12-volt battery is 12.8V at 68°F (20°C).

Batteries manufactured in polypropylene cases and covers.  
 Batteries manufactured with gray case / gray cover unless noted.

#### Footnotes:

- 17 - Includes handle
- 38 - "Non-Spillable" defined by DOT (Department of Transportation) definitions
- 39 - "Non-Spillable" defined by ICAO (International Commercial Airline Organization) and IATA (International Airline Transport Association) definitions

- B - Flag Terminal w/ 3/8" diameter hole
- C - 1/4-20 Treaded Insert
- G - Flag Terminal w/ 5-16" diameter hole
- T - "L" Terminal w/ 3/8" diameter hole

- U - 5/16" Threaded Post / SAE
- X - 3/8-16 stainless steel threaded post
- Y - Small "L" terminal w/ 5/16" diameter hole

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