



PHOTOVOLTAIC BATTERIES

UNIGY II MODULES



The DEKA UNIGY II LINE features two module designs with a wide range of capacities and sizes to fit the requirements of renewable energy applications. These modules are constructed using the finest quality materials and state-of-the-art manufacturing techniques enhancing their performance in these demanding applications.

Built-in advanced features such as:

- “Two Way” Post design is lead plated solid copper providing a large contact area with front access bolting for easier installation and maintenance.
- Pure Virgin Lead (99.99%) positive grid alloy is very resistant to corrosion/growth.
- Positive and Negative plates are formed with IPF® technology to ensure plates operate at 100% capacity.
- Collapsible bottom bridge accommodates for normal plate growth, reducing stress on battery post seals.
- Air Gap between cells has been designed to reduce foot print while maintaining required cooling.
- Front safety shield design easily slides on and off without tools for quicker assembly.

DEKA UNIGY II INTERLOCK™ SYSTEM utilizes:

- Interlocking modules require only front access bolts for mounting, providing quick and safe installation.
- Modules are coated with acid resistant epoxy powder paint.
- Each module has mounting holes for grounding option.
- Standard one-piece base enables it to be used as anchoring template. Anchors can be drilled and installed with base in place.
- Meets UBC 97 Zone 4 certification of top of building in most applications up to 8 modules high.

DEKA UNIGY II NON-INTERLOCK SYSTEM utilizes:

- Non-Interlock modules require front and rear access bolts for mounting, providing easy and safe installation.
- Modules are coated with acid resistant epoxy powder paint.
- Each module has mounting holes for grounding option.
- Standard two-piece base enables anchors to be drilled and installed with base in place.
- Meets UBC 97 Zone 4 certification of ground level in most applications up to 8 modules high.

FEATURES AND BENEFITS	
Container and Cover	Impact-Resistant Polypropylene, UL 94 V-0, 28% L.O.I.
Separators	Microporous Glass Mat
Individual Plate Formation	Shipped at 100% Capacity
Cycle Life	2400 cycles @ 20% DOD



QUALITY SYSTEM
CERTIFIED
ISO 9001
IATF 16949
ENVIRONMENTAL
SYSTEM CERTIFIED
ISO 14001

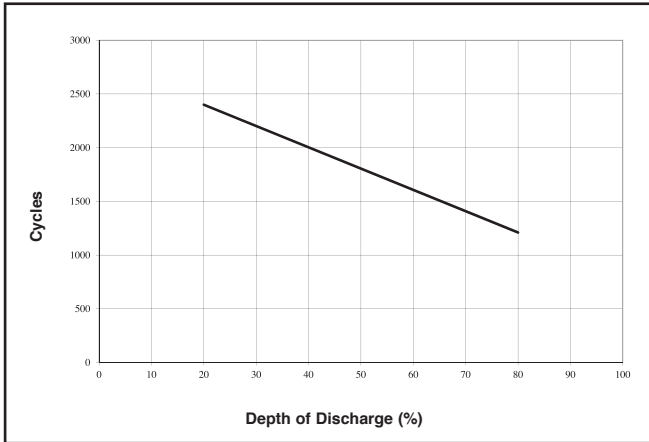


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Photovoltaic Charging Parameters		
Bulk Charge	Max Current (amps)	20% of 20 Hr Rate
Absorption (Regulation) Charge	Constant Voltage	2.35 - 2.40 vpc
Float Charge	Constant Voltage	2.24 - 2.26 vpc
Equalize Charge	Constant Voltage	2.40 - 2.43 vpc
Temperature Coefficient	0.003 v / °C	

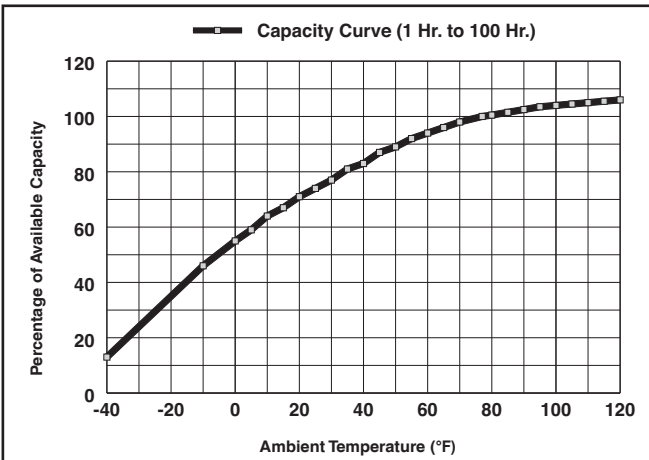
Cut-off parameters per charge & equalize intervals are application specific and will vary dependent upon site specific characteristics such as temperature, days of autonomy, array to load ratio, etc.

Cycle Life vs Depth of Discharge at +25°C (77°F)*



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

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.

PROPOSITION 65 WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer. **WASH HANDS AFTER HANDLING.**

Cell Performance – Photovoltaic Batteries

Capacity in Ampere Hours, Temperature at 77° F (25°C), Cut-Off Voltage at 1.75 VPC

Amp Hours at 77°F (25°C) to 1.75 v.p.c.						
Cell Type	10	20	24	100	Cell Weights**	
					lb.	kg
AVR45-5	96	107	110	121	18	8
AVR45-7	144	161	165	181	25	11
AVR45-9	192	214	220	242	32	15
AVR45-11	240	268	275	302	39	18
AVR45-13	288	322	330	363	46	21
AVR45-15	336	375	385	423	53	24
AVR45-17	384	429	440	484	60	27
AVR45-19	432	482	495	544	67	30
AVR45-21	480	536	550	605	74	34
AVR45-23	528	590	605	665	81	37
AVR45-25	576	643	660	726	88	40
AVR45-27	624	697	715	786	95	43
AVR45-29	672	750	770	847	102	46
AVR45-31	720	804	825	907	109	49
AVR45-33	768	858	880	968	116	53
Amp Hours at 77°F (25°C) to 1.75 v.p.c.						
Cell Type	10	20	24	100	Cell Weights**	
					lb.	kg
AVR75-5	159	177	182	205	28	13
AVR75-7	239	266	273	308	39	18
AVR75-9	318	355	364	410	50	23
AVR75-11	398	443	455	513	61	28
AVR75-13	477	532	546	615	72	33
AVR75-15	557	621	637	718	83	38
AVR75-17	636	709	728	820	94	43
AVR75-19	716	798	819	923	105	48
AVR75-21	795	887	910	1025	116	53
AVR75-23	875	976	1001	1128	127	58
AVR75-25	954	1064	1092	1230	137	62
AVR75-27	1034	1153	1183	1333	148	67
AVR75-29	1113	1242	1274	1435	159	72
AVR75-31	1193	1330	1365	1538	170	77
AVR75-33	1272	1419	1456	1640	181	82
Amp Hours at 77°F (25°C) to 1.75 v.p.c.						
Cell Type	10	20	24	100	Cell Weights**	
					lb.	kg
AVR95-7	298	339	348	403	44	20
AVR95-9	398	452	464	538	57	26
AVR95-11	497	565	580	672	70	32
AVR95-13	596	678	696	807	83	38
AVR95-15	696	791	812	941	96	44
AVR95-17	795	904	928	1076	108	49
AVR95-19	895	1016	1044	1210	121	55
AVR95-21	994	1129	1160	1345	134	61
AVR95-23	1093	1242	1276	1479	147	67
AVR95-25	1193	1355	1392	1613	160	73
AVR95-27	1292	1468	1508	1748	172	78
AVR95-29	1392	1581	1624	1882	186	84
AVR95-31	1491	1694	1740	2017	198	90
AVR95-33	1591	1807	1856	2151	211	96
AVR125-33	2104	2367	2423	2930	300	136

** = Cell weight does not include steel module



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