DUAK®
Smart Energy Solution

Lithium Battery Series

DUAK
Solar Lithium Battery

Reliable | Safe | Efficient | Long Life

DUAK offers a comprehensive range of advanced Lithium battery packs designed for solar and portable energy storage applications. These batteries deliver high energy density, long cycle life, superior safety and reliable performance with an intelligent Battery Management System (BMS).



Key Features

- Compact & Lightweight
- High Energy Density
- Enhanced Safety with BMS
- Flexible Design & Customization
- Long Cycle Life
- Cost Effective & Reliable

Applications

- Solar Street Light
- Garden Lighting
- Solar Home Lighting System
- Online UPS
- Torch & Emergency Light
- Portable Devices (Mini Fan, Toys, POS)
- DC & AC Backup Solutions

Technical Specification

SOLAR LFP BATTERY ($LiFePO_4$) – 12.8 V Series

Parameter	Unit	DSB12V6A	DSB12V12A	DSB12V18A	DSB12V24A	DSB12V30A	DSB12V36A	DSB12V42A	DSB12V48A	DSB12V54A	DSB12V60A
Battery Voltage (Nominal)	V	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
Battery Capacity	Ah	6	12	18	24	30	36	42	48	54	60
Energy (Nominal)	Wh	76.8	153.6	230.4	307.2	384.0	460.8	537.6	614.4	691.2	768.0
Max. Charge Current	A	1.5	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0
Max. Discharge Current	A	3.0	6.0	9.0	12.0	15.0	18.0	21.0	24.0	27.0	30.0
Charging Voltage (Recommended)	V	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
Charge Cut-Off Voltage (BMS)	V	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
Discharge Cut-Off Voltage (Recommended)	V	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
Low Cut-Off Voltage (BMS)	V	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2

SOLAR NMC BATTERY (Li-NMC) – 11.1 V Series

Parameter	Unit	DSB11V8A	DSB11V10A	DSB11V13A	DSB11V16A	DSB11V18A	DSB11V21A	DSB11V23A	DSB11V26A	DSB11V29A	DSB11V31A
Battery Voltage (Nominal)	V	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
Battery Capacity	Ah	7.8	10.4	13	15.6	18.2	20.8	23.4	26	28.6	31.2
Energy (Nominal)	Wh	86.6	115.4	144.3	173.2	202.0	230.9	259.7	288.6	317.5	346.3
Max. Charge Current	A	3.9	5.2	6.5	7.8	9.1	10.4	11.7	13.0	14.3	15.6
Max. Discharge Current	A	3.9	5.2	6.5	7.8	9.1	10.4	11.7	13.0	14.3	15.6
Charging Voltage (Recommended)	V	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6
Charge Cut-Off Voltage (BMS)	V	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6
Discharge Cut-Off Voltage (Recommended)	V	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Low Cut-Off Voltage (BMS)	V	9.792	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08

BMS Protection Features

- Over-charge Protection
- Over-discharge Protection
- Over-current Protection
- Over-temperature Protection
- Short-circuit Protection
- Cell Balancing & Voltage Monitoring

General Specifications*

Battery Chemistry	LFP ($LiFePO_4$) / NMC (Li-NMC)
Cycle Life	LFP: ≥ 4,000 Cycles | NMC: ≥ 1,500 Cycles (at 80% DoD)
Operating Temperature (Charge)	0°C to 55°C
Operating Temperature (Discharge)	-20°C to 60°C
Storage Temperature	-10°C to 45°C
Relative Humidity	≤ 95% (Non-Condensing)
Protection	Built-in BMS
Warranty	Up to 3 Years**

Certifications & Compliance

- BIS (Applicable Models)
- ISO 9001:2015 (Quality Management)
- RoHS Compliant
- Recyclable & Eco-Friendly

** Note: Specifications are typical values and may vary slightly based on configuration and application.*
*** Warranty terms & conditions as per DUAK standard warranty policy.*

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