### Applications

Schools, Universities and Research Facilities

> Hospitals, Medical and Healthcare

Nuclear Power Generation Facilities

Utilities

Telecommunications

Industrial and Chemical Processing Facilities

Law Enforcement

Fire Protection and Security

Military Services

Government Emergency Management

### LIGHTWORKS<sup>®</sup> BrightSites Series

#### Flexible Lighting Solutions in an Unpredictable World

Dependable, portable, and powerful lighting is crucial not only during emergency scenarios and essential operations, but it can also significantly enhance safety and productivity for a variety of applications. BlackStarTech's Lightworks BrightSites Series is made up of a family of industrialized, portable, highly reliable battery uninterruptible power source (UPS) lighting solutions. The BrightSites Series offers lighting options in all sizes, from a compact advanced handheld LED lightpack, to rolling out our rugged mobile light towers and stadium trailer lighting that can be used to support industrial facilities with various maintenance, shutdown, outage, and emergency applications.

The BrightSites Series advanced LED lighting fixtures are integrated with Lithium Iron Phosphate (LiFePO<sub>4</sub>) batteries to provide extensive battery runtime while maximizing power and luminosity between charges. Furthermore, all BrightSites Series lighting applications are configured as an UPS lighting power unit running on a normal 110VAC outlet and automatically swapping to battery mode to keep lights on when AC power is lost. When AC power is restored the BrightSites Series products automatically swap to AC mode and recharge the internal battery for the next unforeseen power outage event. The dual power supply combination makes BrightSites Series lighting equipment substantially more adaptable for both planned and emergency deployments, while providing flexibility when power is not available. The BrightSites units are significantly lighter, provide higher energy density, deliver a 3X longer life expectancy, and are more environmentally friendly. As a result, the BrightSites Series delivers cost-effective, powerful lighting with minimal maintenance requirements for facility resiliency solutions and cost saving deployments.

Lightworks BrightSites products can be leveraged in many industries and applications. Whether it's providing ample lighting for worker safety during shutdowns or outages, to increasing productivity, or casting light on an emergency rescue situation for first responders, the BrightSites Series is able support all your flexible lighting needs.

### Lightworks BrightSites Series Lighting vs. Portable Lighting from Competitors

#### Lightworks BrightSites Product Family

Configurable up to 48-Hour LED run time and can be integrated with long term power capabilities with a compact, environmentally friendly propane generator

15-year expected battery lifespan / 15,000 rechargeable battery cycles

15-year expected battery lifespan

Increased reliability using Lithium Iron Phosphate (LiFePO4) batteries

Remotely monitor health performance of all devices, with real-time communication updates

Acts as an UPS running on alternate low current 110VAC or integral propane generator

#### LiFePO<sub>4</sub>: Superior to Your Current Battery

LiFePO<sub>4</sub> batteries are safe, reliable, and more environmentally friendly than lead acid or general lithium-ion batteries. The chemical make-up provides extreme stability, longer expected lifecycle of up to 15 years, meaning fewer battery replacements, less downtime, and increased reliability.

LiFePO<sub>4</sub> batteries have a high power density and require less maintenance and surveillances than typical lead acid batteries.

#### Battery Management System (BMS)

The internal BMS optimizes functionality and safety. The system monitors battery health including cell voltage, maximum charge and discharge current, overvoltage, overcurrent, temperature, cell balancing, short circuit, and more. The BMS takes protective actions to improve safety by automatically disconnecting the battery for any potential transient event. Temperature-sensing self-diagnostics eliminate the possibility of dangerous temperature ranges for the battery, avoiding thermal runaway.



#### **Typical Competitor**

Low Battery Lighting Run Time and predominately Gas/Diesel generator lighting with high maintenance and environmental risk factors

> 8-year battery lifespan / 4,000 rechargeable battery cycles

> > 4-8-year battery lifespan

Lower reliability with typical lead acid or low-quality lithium solutions

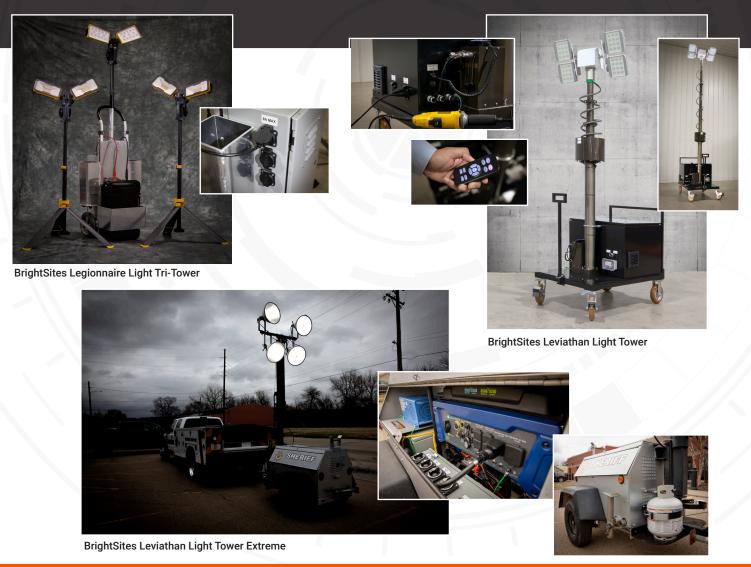
Time-intensive, manual field monitoring and maintenance of individual lighting devices

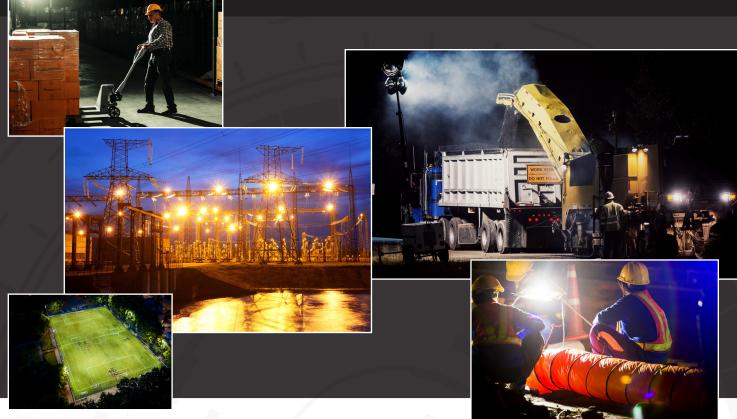
Not available from known competitors

#### **Portable and Ready**

The BrightSites Series offers industrial grade, lightweight, and simple to operate lighting solutions that automatically work on AC or internal battery providing versatility in emergency response or a variety of maintenance scenarios. Extensive run times on battery mode provide portable deployment scenarios that eliminate external power for up to 48 hours. Other competitors large portable lighting solutions rely on generators requiring diesel or gas and contribute to environmental risks from spillage that need to be environmentally mitigated with berm kits.

All BrightSites products are configured to act as an uninterruptable power supply and have the added capability to plug in tools or instruments increasing flexibility and usefulness. BrightSites deployable lighting provide flexibility to run on 110AC power when available, and automatically swap to battery mode when electricity is lost providing contingency and flexibility in your lighting applications. When AC power is restored, the units automatically swap to AC Power mode and recharge the batteries. The BrightSites products can also work with integrated small propane generator units that provide nearly unlimited deployment times while eliminating environmental spillage risks and minimizing carbon emissions. No matter the situation BrightSites can be staged or rapidly deployed to provide immediate backup lighting and power for safety, maintenance, or emergency lighting response.





No emergency? No problem. Dependable Lighting at Your Fingertips!

The BrightSites Series of lights can be used for non-emergency applications to support your lighting needs for safety and maintenance purposes. For instance, construction crews can use these at a job site. Hospitals can use these lights if they have an outage. Universities and high schools can use them for outdoor activities and special events.

Many industrial facilities such as chemical plants, manufacturing facilities or nuclear sites have recurring shutdowns or outages. This means they must shut down the operation or power to ensure facility reliability as personnel work on large mechanical equipment that would be dangerous to work on when in operation. In anticipation of shutdowns or outages, facilities often hire electricians to hang wired light strings throughout the facility that can take days if not weeks. With BrightSites Series, the Legionnaire Lightpack or mobile light towers can provide sufficient lighting quickly and efficiently, providing long illumination duration times.

BrightSites Series flexible lighting can be applied to any industry that needs adequate lighting, from road construction lighting to large events, BrightSites offers robust solutions.

#### Rugged Portable Lighting Delivers Cost Savings You Can Count On

BrightSites Series lights are easy to deploy, saving you significant hourly costs for workers compared to the utilization of competitive solutions that may involve labor-intensive installation of temporary lighting in high places.

Long run times on the BrightSites Series in battery mode enable portable implementation situations that get rid of external power or fossil fuel sources, removing the cost of dealing with fuel spillage or berm kits.

BrightSites Series lights are cost-effective to purchase, making it feasible to own your portable lighting solutions, as opposed to paying for costly rentals.

### **BrightSites Series Products**

The Lightworks BrightSites Series delivers high quality industrial portable battery powered lightpacks and light towers for commercial and municipal customers who need equipment that is resilient, highly reliable, and easy to use.



#### BrightSites Legionnaire Light Tri-Tower - Model # LW-BSL-Tri-Tower

The Lightworks BrightSites Legionnaire Light Tri-Tower provides a versatile, rugged, portable light tower solution that can be mobilized at a wide range of job sites, including offices, parking lots, law enforcement, fire and emergency rescue, road construction, building construction, warehousing, special events, and industrial areas. The Legionnaire Light Tri-Tower features three telescoping tripods that scope up from 47 to 60-inches and provides 11,000 lumens per tower for 10 to 30 hours of battery powered lighting depending on the number of towers in use. It also provides AC power for portable tooling while also providing up to 33K total lumens of advanced LED lighting. As a UPS, they can run on a standard 20 Amp 120V circuit to run lights and charge batteries, and the light tower seamlessly transfers from AC to the battery if you lose AC power, making lighting available in any unexpected scenario.



#### BrightSites Leviathan Light Tower - Model # LW-BSL-Leviathan

The Lightworks BrightSites Leviathan Light Tower provides extended run time illumination on a convenient 4-wheel cart assembly to address the challenging requirements found in law enforcement, road construction, building construction, warehousing, special events, and industrial lighting applications. The mast extends up to 16 feet high. As a UPS, it can run on a standard 20 Amp 120V circuit to run lights and charge batteries and the light tower seamlessly transfers to the battery if you lose AC power, without losing lighting for up to 12 to 24 hours. The Leviathan has 2-lamp or 4-lamp configurations and provides 45K lumens or 90K lumens, respectively, of advanced LED lighting. The Leviathan Light Tower acts as a temporary AC power station for portable tooling and small electronics, while simultaneously running the lights.



#### BrightSites Leviathan Light Tower Extreme - Model # LW-BSL-Leviathan-EXT

If you need to solve a massive illumination problem, look no further than the towable BrightSites Leviathan Light Tower Extreme. It provides towable, extra-long run time illumination to address the challenging requirements found in law enforcement, road construction, building construction, warehousing, special events, utilities, and industrial areas. As a UPS, it can run on a standard 20 Amp 120V circuit to run lights and charge batteries and the Leviathan Light Tower Extreme seamlessly transfers to the battery if you lose AC power, without losing lighting for 15 to 30 hours. The Leviathan has extra-long runtime illumination with up to 180K lumens of advanced LED lighting. It acts as a temporary AC power station for portable tooling and small electronics, while simultaneously running the lights. Use it with line power or generator power. Add our small propane powered BlackStarTech Genesis Defender Series Generator which can be integrated with this unit to extend run time for days.



#### BrightSites Leviathan Light Tower Extreme Retrofit Model # LW-BSL-Leviathan-RETROFIT

Our retrofit option allows you the flexibility to update your standard mobile light tower and transform the inner hardware with our long-lasting LiFePO<sub>4</sub> batteries and propane generator integration. Contact us for a custom quote.

### BRIGHTSITES SERIES LEGIONNAIRE LIGHTPACK

The compact BrightSites Legionnaire Lightpack offers flexible, portable lighting. Carry it like a lantern to where it is needed most. It comes standard with LED lighting and a battery backup system to support it for long illumination durations up to 24 hours. While it can be mounted on a wall to meet emergency lighting requirements for facility safety, it is also entirely portable and can be used to provide adequate lighting during critical operations and work areas. The Legionnaire turns on automatically when power is off. The Legionnaire Lightpack runs on LiFePO4 batteries.

#### HEADLAMPS

The Legionnaire Lightpack provides essential illumination in the range of 2000 to 4000 lumens. The headlamps support both local (attached) and remote headlamps. Each lighting device can have up to four headlamps with a combination of zero to four local or remote, while not exceeding greater than four total headlamps.



#### **PHOTOCONDUCTIVE PHOTOCELLS**

Photocells are a customized option with the all the BrightSites Lighting Solutions. If AC power to the BrightSites device is lost, but there is still adequate daylight or another lighting source, having the photocell means the lights will not turn on, saving battery life. The Photocell options will have an override switch enabling or deactivating photocell light detection.



#### **MOUNTING SHELF**

While the Legionnaire Lightpack is completely portable, it is designed to be easily installed as a permanent fixture on most existing mounting shelfs. A seismically qualified mounting shelf is available to facilitate permanent installations. Units if wall-mounted use AC power accessible from either side of the unit by rigid or flex conduit. Alternatively, an AC power cable with a cord grip entrance fitting can be installed to allow the device to be plugged into an available wall power outlet.

### BrightSites Series Legionnaire Lightpack

#### How To Order

Base Model Number	Local Head Lamps on the Device	Remote Head Lamps Associated with the Device (with long cables)	Mounting Shelf	Photoconductive Photocells
LW-BSL	L2 = two L3 = three L4 = four	R0 = none R1 = one R2 = two	<ul><li>M = with permanent mounting</li><li>0 = without permanent mounting</li></ul>	<ul><li><b>P</b> = with photoconductive photocells</li><li><b>0</b> = without photoconductive photocells</li></ul>
	Total Local + Remote is not to exceed 4.	Total Local + Remote is not to exceed 4.		

Example:

LW-BSL-L2R1-MP would denote Legionnaire Lightpack, with 2 Local Headlamps, 1 Remote Headlamp, Mounting Shelf, Photoconductive Photocell

#### Table of Specifications for Lightworks BrightSites Legionnaire Lightpack

		BrightSites Legionnaire Lightpack	
BrightSites Device		Base Model #: LW-BSL	
	Dimensions (W x H X D)	16.5"x14"x 9" with Oval heads 16.5"x16.5"x 9" with Round heads	
	Weight	20 lbs	
	Operational Temperature	0° - 140° F	
Enclosure Case			
	Nema Rating	4	
	Ingress Protection Rating	IP 65 guards against overhead water deluge	
	Unit Fire Protection	UL 94-V0 self-extinguishing resin	
	Pressure Equalize	2L/min equalization vent	
Battery			
	Voltage	12.8 VDC	
	Wattage	38ah	
	Battery Type	12.8 VDC LiFePO₄	
	Battery Run Time	18 hrs (oval heads) 24 hrs (round heads)	
	Battery Run time 70% SOH 1/2/3/4 Heads	36 hrs / 18 hrs / 12 hrs / 9 hrs	
	Cell Certification	CE / RoHS / UN38.3 / UL 1642 / IEC 62133 / CB	

### Table of Specifications for Lightworks BrightSites Legionnaire Lightpack (continued)

Charger			
	Size NOCO GENIUS2 Quick Charge 3.0 Car Charger B07Q6JGX1L	12V 2 amp lithium battery trickle charger	
	Output Power	30 W	
	Charge Time	20 hrs	
Mount		-	
	Mount Type	Shelf 60639	
	Mount Dimensions (W x H X D)	15.25"x 9.61"x 9.13"	
Lighting			
	Lighting Type (oval head)	2 Chip Cree LED 30-degree beam angle	
	Lumens	1100lm 200' beam	
	Lamp Head Dimensions	3.25" x 2.5" oval x 3" depth	
	Lighting Type (round head)	9 Chip Cree LED 60-degree beam angle	
	Lumens	910lm 75' beam	
	Lamp Head Dimensions	4.5" diameter x 1.5" depth	
	Local Head Lamp Count	2	
Connectivity and Storage			
	Blue Tooth Capability	N/A	
	Wi-Fi	N/A	
	LTE Connectivity	N/A	
	Secure Digital (SD) boot card	N/A	
	Solid State Drive (SSD)	N/A	
Warranty			
	1 Year Manufacturer's Warranty		

#### Table of Specifications for BrightSites Portable Light Towers

		BrightSites Legionnaire Light Tri-Tower	BrightSites Leviathan Light Tower	BrightSites Leviathan Light Tower Extreme	BrightSites Leviathan Lig Tower Extreme Retrofit (customizable)		
Model #		LW-BSL-Tri-Tower	LW-BSL-Leviathan	LW-BSL-Leviathan-EXT	LW-BSL-Leviathan- RETROFIT		
Portability	y and Mast	1					
	L x W x H in	18.675" x 7.5" x 50"	30" x 46" x 96"	Depends on model	-		
	Operating Weight	165 lbs	350 lbs	Depends on model	DETROFIT		
	Portability Mechanism	Aluminum Dolly 500 lbs capacity	Cart	Towable	RETROFIT Product Specifications will vary based on		
	Wheel Count	2	4	2	customer's existing equipment		
	Mast Height	47" to 60" open	9' to 16' fully extended	12' telescopic	equipment		
	Mast Weight	12 lbs	130 lbs	220 lbs			
Lighting			` 	` 			
	Light Type						
	Lumens	11,000 lumens per light tower	90,000 lumens	180,000 lumens (max configuration)	RETROFIT Product Specifications will vary based on customer's existing equipment		
	Light Wattage	93 W per light tower	900 W	1500 W			
	Lamp Count	6	4	4 conical type			
	Lamp Size	4.6" LED	6" LED	12"			
Battery	Ì						
	Battery Type						
	Power	100ah	200ah	15 kwh (max)			
	Voltage		24 VDC		RETROFIT Product Specifications will vary based on customer's existing equipment		
	Run Time	3 towers: 10 hours 2 towers: 20 hours 1 tower: 30 hours	2.5 hours	24 hours			
	Charging Time	20 hours	5 hours	12 hours			
	Charging Cycles		5000-8000 cycles				
Generator	r						
	Generator Type	N/A	N/A	Flex-fuel (optional) propane recommended	RETROFIT Product Specifications will vary based on customer's existing equipment		
	Power / Voltage	N/A	N/A	1500-3000 W @ 120 VAC			
Warranty							
		1	Year Manufacturer's War	ranty			

For more information on standard or customized products, contact us at 1-844-585-6439 and info@blackstartech.com.

Resilient Solutions for Targeted Power, Lighting and Communications. Anytime. Anywhere.

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