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WCDE-11-HLM65-16X500LTL-LED

77' Hydraulic Megatower™ Light Plant - 33' Trailer - (20) 500W LED Fixtures - 20KW Genset w/ 110 Gal

Product ID: 147278

Please see last page for supporting documentation for this product (certificates, CAD files & drawings, IES files, wiring diagrams, etc).



Image: WCDE-11-HLM65-16X500LTL-LED

Larson Electronics LLC manufactures a wide variety of products, including custom built to spec designs. The pictures displayed for this unit are a general representation of form factor for the product line and may not accurately represent this exact configuration in every detail due to custom builds and changes between similar products in our standard catalog. The specifics for this configuration are listed in the specification table and supporting documentation (CAD files, Dimensional Drawing, Name Plate Diagram, Wiring Diagram, etc.). This means that specific details (receptacles, plugs, wires, connections, mounting brackets, external finishes, etc.) may not be accurately represented in images vs specifications. Please review specifications and do not order based solely on images.

WCDE-11-HLM65-16X500LTL-LED Trailer Mounted LED Megatower™

Genset Specs:

Genset: 20kw
Engine: Perkins 28.9HP
Engine Type: Vertical, liquid-cooled, 4-cycle diesel engine, naturally aspirated
Engine Speed: 1800 RPM
No. of Cylinders: 4
Generator: 20KW Stamford Brushless
Voltage: 120/240V Single Phase
Battery: 12V @ 36aH
Fuel Cell Capacity: 110 Gallons - External Tank w/ Anti-Splash Baffles
Fuel Delivery: Electric
Sound Level: 68 dB - Full load @ 23` away
Cold Weather Package: Yes - Factory Included

Quick Summary

11KW Kubota Brushless Genset
110 Gallon External Fuel Cell
Cold Weather Package Factory Installed
Up to 43 Hour Continuous Operation
33.5` to 77` Light Mast
Hydraulic Aluminum Mast
Steel Construction Trailer
Hydraulic Mast Operation
Powered Boom Deployment
High Output LED Lamps
Extreme Area Coverage
Direct Replacement for (20) 1000W MH Light Plants
10,000W LED compared to 16,000W MH
1,350,000 Total Lumen Output

Light Mast Specs

Tower Length: 30` to 77`
Lamp Qty: 20
Materials: Carbon Steel
Finish: Galvanized

Independently Adjustable Light Heads
Dial-in Adjustability per light head
98% Transmission High Purity PMMA Optics
Multiple LED Banks for Heat Dispersion
135 Lumens Per Watt Efficiency

Operation: Hydraulic (Upright and Extension)

Light Head Specs
Lamp Type: LED
Total Wattage: 10,000W (500W per lamp)
Total Lumens: 1,350,000 (67,500 per lamp)
Lighting Configuration: Flood Beam Pattern

Trailer Specs
Materials: Steel
Trailer Dimensions: 33`-L x 8`-W trailer bed
Height (Mast Collapsed): 33`-H
Height (Mast Extended): 77`-H
Footprint (Outriggers Extended): 36` x 19`-11"
Hitch: Gooseneck (12" I-beam Construction)
Wiring: 7-Pin Flat
Axles: (2) 10,000 lbs w/ Electric Brakes
Suspension: Tandem Dually
Outriggers: (6) 12` x 12" x 12" I-Beams Retractable w/ (6) 7,000 lbs Manual Leveling Jacks
Wheels: (8) 16" 5x4.5" Steel Rims
Tires: (8) P235/80R16

Total Dimensions: 142"T x 504"L x 99"W
Total Weight: 13,000 Lbs
Shipping: Common Freight
Shipping Weight:

70% Lumen Retention after 80,000 Hours
Switched Breaker System per Lamp Head

IP67 Waterproof LED Fixtures
All Equipment Mounted on a 33` x 8` Trailer
Steel Trailer w/ Industrial Grade Paint Finish
Towable Height Under 13` w/ Light Heads
6-Point Outrigger System
7,000 lb Leveling Jacks

Powered Boom Deployment
External Oil Pump System-Change Oil Every 3,000 Hours

Special Orders - Special Requirements
Contact us for special requirements
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Made in the USA

The WCDE-11-HLM65-16X500LTL-LED from Larson Electronics is a Trailer Mounted Hydraulic LED Megatower™ Light Plant that offers high output illumination and can withstand the extreme abuse found within heavy-duty industrial applications. This trailer mounted fold over 7-stage hydraulic light plant provides a safe and effective way for operators to quickly deploy twenty 500-watt LED light heads to elevations above 65` (ground to mast head), reaching a total height of 77` (with 11` of light head assembly) for any heavy-duty industrial application. This mining grade light tower folds over for easy transportation, features a hydraulic ram upright assist, hydraulic mast and high output LED fixtures. The LED light tower is powered by an 20KW Kubota diesel generator with a 110 gallon fuel tank. The entire assembly is mounted onto a 33` by 8` tandem axle trailer, allowing operators to transport this fold over boom from location to location. The WCDE-11-HLM65-16X500LTL-LED is a direct replacement for 1000W metal halide light plants and has been specifically designed to transport over rough terrain with ease.

PLEASE NOTE: ANY FREE SHIPPING OFFERS DO NOT APPLY TO LIGHT MASTS OR LIGHT TOWERS

The WCDE-11-HLM65-16X500LTL-LED LED Light Plant is a self contained, towable, high power light tower package. This unit contains a water cooled diesel engine powering a 20KW Kubota generator, which supplies the current for twenty 500-watt LED lights producing 67,500 lumens each, for a combined total of 1,350,000 lumens of light. This unit can run uninterrupted for up to 43 continuous hours without refueling and includes a hydraulic telescoping light mast which can elevate twenty high output LED lamps to heights above 65`. The hydraulic tower is capable of

reaching heights up to 77` with the light head assembly, which measures 11` in height, and an overall transport height of 8` 6". This light plant features an external oil pump system. Oil must be changed every 3,000 hours. This heavy-duty Megatower has been specifically made for extremely rough applications and can be transported over almost any kind of rough terrain. This mobile floodlight package is ideal for large scale event illumination, construction, mining, industrial operations, and anywhere a mobile full power, durable lighting system capable of extended operation and rough abuse is needed.

This telescoping seven stage hydraulic light mast from Larson Electronics is designed to allow operators to quickly and safely deploy up to 10,000 watts of high intensity LED lighting in locations where illumination must be elevated to heights above 65` (from ground to mast head; 77` in total height with 11` light head assembly) for effective coverage. This light boom can be collapsed to 30` for applications where a footprint smaller is required. The tower is constructed of carbon steel tubing with 2` foot of overlap per section. The mast is elevated using an included hydraulic ram and extended to its full height using a second hydraulic system.





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A 90" wide by 132" tall and 2" by 2" by 1/4" thick steel mast head is attached to the upper section of the mast which provides a strong and stable platform for the twenty 480-watt LED light heads.

Lights: The WCDE-11-HLM65-16X500LTL-LED Hydraulic LED Megatower™ from Larson Electronics features twenty GAU-LTL-500W-LED fixtures that each draw 500 watts, for a total fixture wattage of 10,000 watts. Each module produces 67,500 lumens at a color temperature of 5000K for an impressive lumen total of 1,350,000 lumens which provides operators with a superior lighting solution for even the most challenging areas to illuminate. To ensure even coverage of wide areas, the LED modules used on this hydraulic light plant are configured in Larson Electronics for even distribution pattern.

LED Benefits: Unlike gas burning and arc type lamps that have glass bulbs, LEDs have no filaments or fragile housings to break during operation and/or transportation. Instead of heating a small filament or using a combination of gases to produce light, light emitting diodes (LEDs) use semi-conductive materials that illuminate when electric current is applied, providing instant illumination with no warm up or cool down time before re-striking. Because there is no warm up period, this light can be cycled on and off with no reduction in lamp life.

LED lights run at significantly cooler temperatures than traditional metal halide and high pressure sodium lights and contain no harmful gases, vapors, or mercury, making them both safer and more energy efficient. No extra energy is wasted in cooling enclosed work areas due to external heat emissions from bulb type lights, and the operator risks associated with traditional lighting methods, such as accidental burns and exposure to hazardous substances contained in the glass bulbs, are eliminated. In addition, LEDs are also safer for the environment as they are 100% recyclable, which eliminates the need for costly special disposal services required with traditional gas burning and arc type lamps.



Click Photo to Enlarge

Durability: As well as unparalleled heat control, the LED lights used in the WCDE-11-HLM65-16X500LTL-LED also offer IP67 rated construction that is designed to withstand extremes of environmental and operating conditions. These units can withstand rapid temperature changes of -40° Celsius to +85° Celsius, are waterproof, and resist ingress of dust, dirt and humidity. We recommend these LED lights for use in applications where a lot of vibration, dust, dirt, dampness and abusive working conditions are encountered.

Heat Management: Heat is the single largest factor in premature LED failure and color shifting. The heat-sink on the LED modules has been engineered to provide optimum heat dissipation. Each LED module has been sized for proper passive cooling to prevent premature failure of LEDs or color shifting and to eliminate the need for an active cooling system typically associated with high powered LED systems.

Telescoping Boom: The hydraulic telescoping boom is constructed of carbon steel with a galvanized finish and extends to 65` in height from the ground to the mast head and 77` of total height with the light assembly (measures 11` in height). This boom is raised from and lowered to the folded position by a single hydraulic ram and extended or retracted by a second hydraulic system.

Wiring/Controls: The LED light heads are grouped into banks of four. Each bank in wired into the NEMA 3R breaker control box at the base of the mast. Operators control the light heads via an on/off switched breaker per bank of five light heads. The hydraulics are also powered from within this breaker box. Power is provided to the control box via an integrated 20KW genset. The mast elevation is controlled by a push button switch to operate the hydraulic ram allowing operators to raise the mast to the upright position. The vertical deployment is operated by a second push button switch allowing operators to extend it to its full 77` height or retract it to the collapsed height.



Click Photo to Enlarge



Click Photo to Enlarge



Click Photo to Enlarge

The above image show a side by side comparison of the WCDE-20-HLM65-20X500LTL-LED-WSM next to a 50` Pneumatic Megatower.

Genset: The WCDE-11-HLM65-16X500LTL-LED mobile hydraulic Megatower™ includes a specialized genset that houses a Perkins diesel engine that powers the 20KW Stamford 120/240V brushless generator. This genset is liquid cooled and features a single phase generator with electric start ignition. The diesel generator runs at 3600 RPM and is equipped with an EPA/CARB Tier 4 emissions system. A 110 gallon fuel cell sits beside the genset and is equipped with an electric fuel delivery system. The fuel cell is constructed of single a heavy gauge steel single wall frame with internal anti-splash baffles. This genset features key operated electric starting, a twelve volt electrical system, liquid cooling, replaceable dry element air cleaner, and a full enclosure for safe operation and protection against the elements. This engine also features cold weather options to improve performance under cold weather conditions.

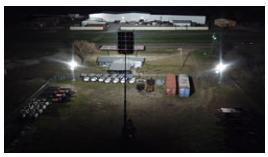


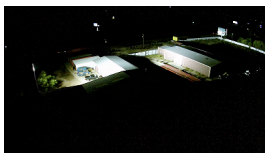


Click Images to enlarge.

The above images show a side by side comparison of the light output between our LED light plant and a traditional four lamp metal halide light plant. The left image shows the metal halide light plant raised to 30` and illuminating a 50,000 sq ft work area with four 1000 watt metal halide light fixtures. The right image shows the WCDE-20-HLM65-20X500LTL-LED-WSM light plant raised to 50`, illuminating the same 50,000 square foot work area with twenty 480 watt LED fixtures. Notice how the color and intensity of the work area is greatly improved when lit up by the LED fixtures.









Click Images to enlarge.

The left image above shows the light mast illuminating a 300,000+ square foot area. The yellow billboard in the image reaches 40 lux, while the fence at the tree line (480`+ away from the tower) reaches 35 lux. This image was taken from 50` behind the mast and at 100` above ground level. The image to the right shows the work space 75` in front of the mast, with the entire area work area reaching over 100 lux. The mast was extended to 35`.

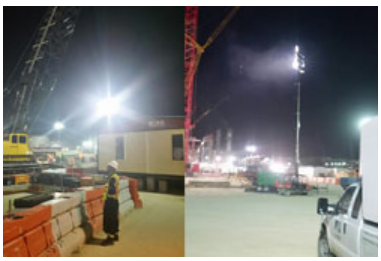
The left image above shows the same 300,000+ square foot area being illuminated. In the background you can see a vehicle with their headlights on, barely able to be seen in comparison to the WCDE-20-HLM65-20X500LTL-LED-WSM light plant. This image was taken at 80` to the right of the mast and 175` above ground level. The mast was extended to 35`. The image on the right is a Google Earth export of the physical area being illuminated, for scale purposes.

Trailer: The entire unit is mounted onto a four wheel, dual tandem axle trailer with 12" I-beam construction. Each axle is rated at 10,000 lbs and equipped with P235/80R16 tubeless tires and wheels. The rear axle is equipped with electric brakes. A gooseneck hitch system that extends to the truck bed, above the rear axle and the trailer, is available for secure hauling. Standard heavy duty safety chains are included. Overall length of the trailer is 33`.

Six 7,000 lbs hand crank jacks are used for raising the trailer up off the ground, and four 7,000 lbs hand crank jacks mounted on extending outriggers are used for leveling and stabilizing the trailer assembly. Each of the four jacks are attached to a pivoting outrigger constructed of 6` by 6" by 6.3" steel I-beams. The jacks can be leveled by hand crank or attachment provided for power drills. These outriggers can be extended 6` out from the side of the trailer for added stability. This light plant can withstand 35 mph winds when fully extended. When lowered to 30`, the mast can withstand 50 mph winds. When lowered to 33`, the mast can withstand wind speeds up to 95 mph with gusts of 125 mph. Custom builds can be provided for higher wind speed resistance when fully raised.

Runtime: The twenty 500-watt LED light heads have a considerably less amp draw than the metal halide light heads on traditional light plants. This allows the WCDE-11-HLM65-16X500LTL-LED to achieve up to 43 hours of continual use on a single tank of gas when only operating the light heads and air compressor. When running 24 hours a day and 7 days a week, this LED light plant will run for nearly 2 days straight without refueling. When the genset is running for 12 hours a day, this tower will provide on-site illumination for up to 4 days before needing more fuel. This self contained LED light plant provides operators with a worry free and energy efficient alternative to metal halide light plants.

We offer a choice of finishing, equipped light heads, and with or without gensets. These towers can be fitted with Larson Electronics line of high output light heads, or customize the mast head to meet the mounting requirements for your equipment. Optional diesel generators and fuel cells can be equipped from factory, or retrofitted after purchase.


Click Photos to Enlarge

Cold Weather Package: The LM-HLM65-16X500LTL-LED-TLR is designed to withstand extreme cold environments and harsh winters. The hydraulic system is equipped with a de-icing system to prevent the hydraulic lines and system from freezing from moisture building within system. This de-icing system uses an environmentally friendly (non-toxic) fluid. All hydraulic lines are equipped with cold weather rated hydraulic hoses rated for -65°C and fitted with metallic hardware. All the hydraulic controls are housed within an insulated and weather tight enclosure. This hydraulic control box features 1/2" thick polystyrene foam insulation and heat trace.

The hydraulic system features -65°C cold weather rated rubber hydraulic hoses with metallic fittings

and a cold weather rated high viscosity hydraulic fluid. All electrical components are wired using cold weather rated SOOW cable with rated to -50°C that features high flexibility, and extreme abrasion, acid, oil, and water resistance even in sub-zero climates.

The genset is retrofitted with a coolant heater to keep engine temperatures at optimum levels. The fuel system is equipped with an in-tank fuel heater to prevent gelling in arctic environments. The genset is equipped with 0W-40 synthetic oil. The genset`s electric battery is equipped with a battery blanket.

Suggested Applications: Temporary lighting, construction site illumination, outdoor event lighting, job site lighting and any other application that requires a self-contained source of illumination capable of covering a very large area effectively.

At Larson Electronics, we do more than meet your lighting needs. We also provide replacement, retrofit, and upgrade parts as well as industrial grade power accessories. Our craftsmen can custom build any lighting system and/or accessories to fit the unique demands of your operation. A commitment to honesty, quality, and dependability has made Larson Electronics a leader in the lighting and electronics business since 1973. Contact us today at 800-369-6671 or message sales@larsonelectronics.com for more information about our custom options tailored to meet your specific industry needs.

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Frequently Asked Questions (FAQ)

There are no Faqs

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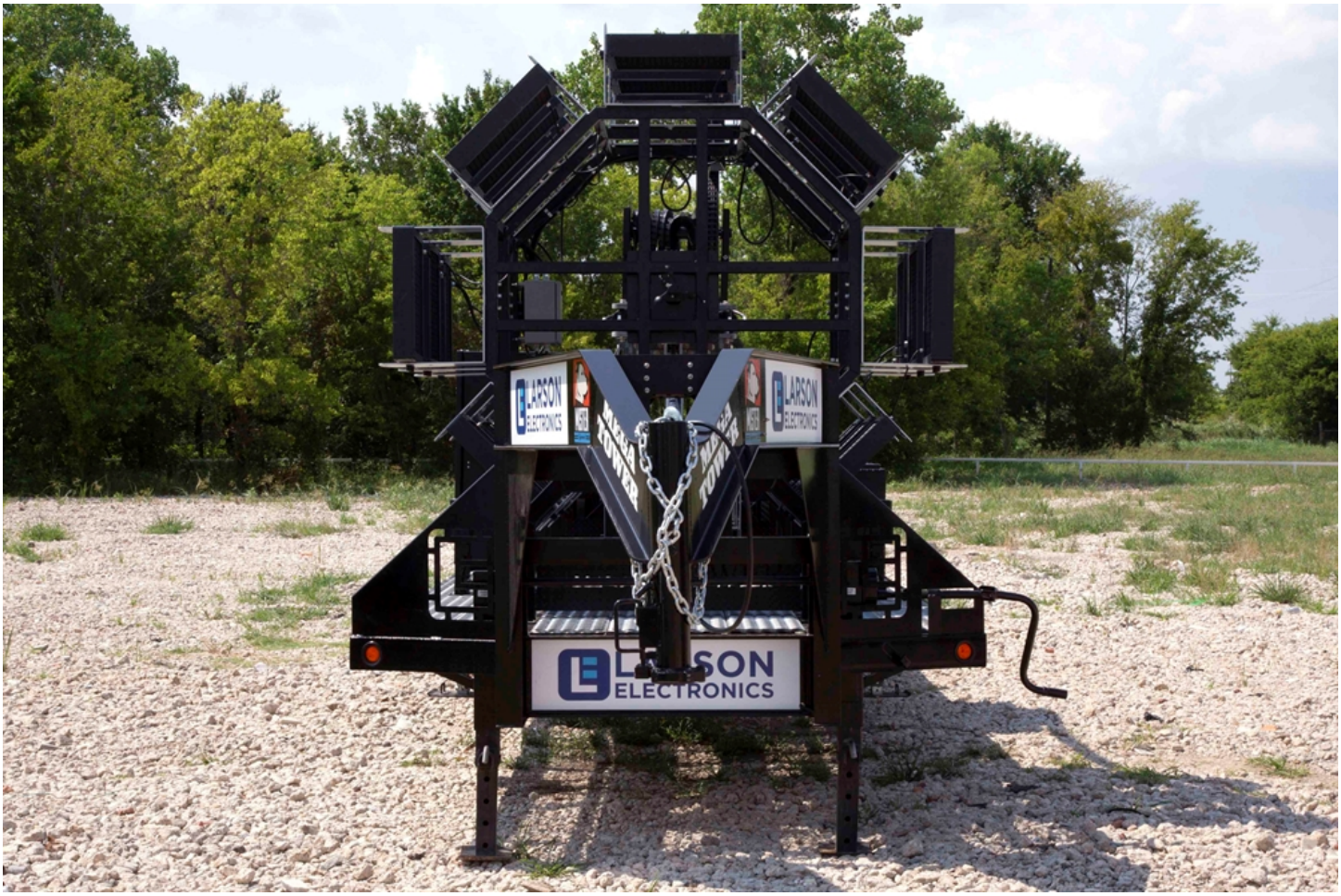


Image: WCDE-11-HLM65-16X500LTL-LED

Warranty: 36 Months.

Harmonized System (HS) Code: 9405.41.84.10

Export Control Classification Number (ECCN): EAR99

Links (Click on the below items to view):

- **Dimensional Drawing 2D**(https://www.larsonelectronics.com/images/product/DimensionalDrawing/147278.PDF)
- **Lighting Study (Layout) Example 1**(https://www.larsonelectronics.com/images/product/Layout1/147278.PDF)
- **Lighting Study (Layout) Example 2**(https://www.larsonelectronics.com/images/product/Layout2/147278.PDF)
- **Lighting Study (Layout) Example 3**(https://www.larsonelectronics.com/images/product/Layout3/147278.PDF)
- **Wiring Diagram**(https://www.larsonelectronics.com/images/product/WiringDiagram/147278.PDF)
- **HigResPic1**(https://www.larsonelectronics.com/images/product/HigResPic1/147278.JPG)
- **HigResPic2**(https://www.larsonelectronics.com/images/product/HigResPic2/147278.JPG)
- **HigResPic3**(https://www.larsonelectronics.com/images/product/HigResPic3/147278.JPG)
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- **HigResPic6**(https://www.larsonelectronics.com/images/product/HigResPic6/147278.JPG)
- **Video1**(https://www.youtube.com/watch?v=_lqicSc37Sk)
- **Video2**(https://www.youtube.com/watch?v=TiupyOYDnfU)
- **Video3**(https://www.youtube.com/watch?v=59IJHP3hmVI)
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