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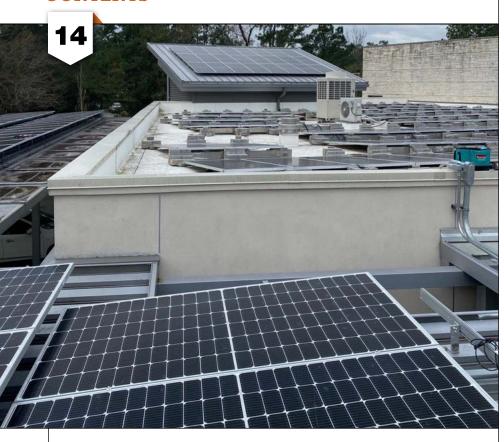
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Photo courtesy of Evluma





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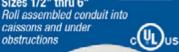
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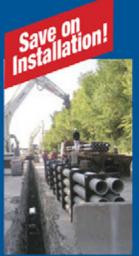
IP2



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IP1

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About Us:



iTOOLco is a unique research and development company that has led the electrical tool industry with their groundbreaking designs since 2001. iTOOLco's inventors & Co-Founders David & Michael Jordan have developed and patented countless innovative products, pushing the envelope of what can be done to improve the lives of electricians and distribution partners alike. iTOOLco has been awarded prestigious accolades, including numerous NECA Showstopper Awards, for its groundbreaking work in

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Ib. puller - the Cannon 12K, with built in reverse. As well as their Cordless Cannon 3K & 6K (the first on the market of each, respectively). Capable of reaching areas where power may not be available, these pullers allow users to achieve the same amount of power, without worrying where it will come from. Also known for their Gear Punch which includes lifetime replacement on draw studs, Tray Rollers, numerous Material Handling solutions, etc. iTOOLco ensures that no matter the job, we have a solution.

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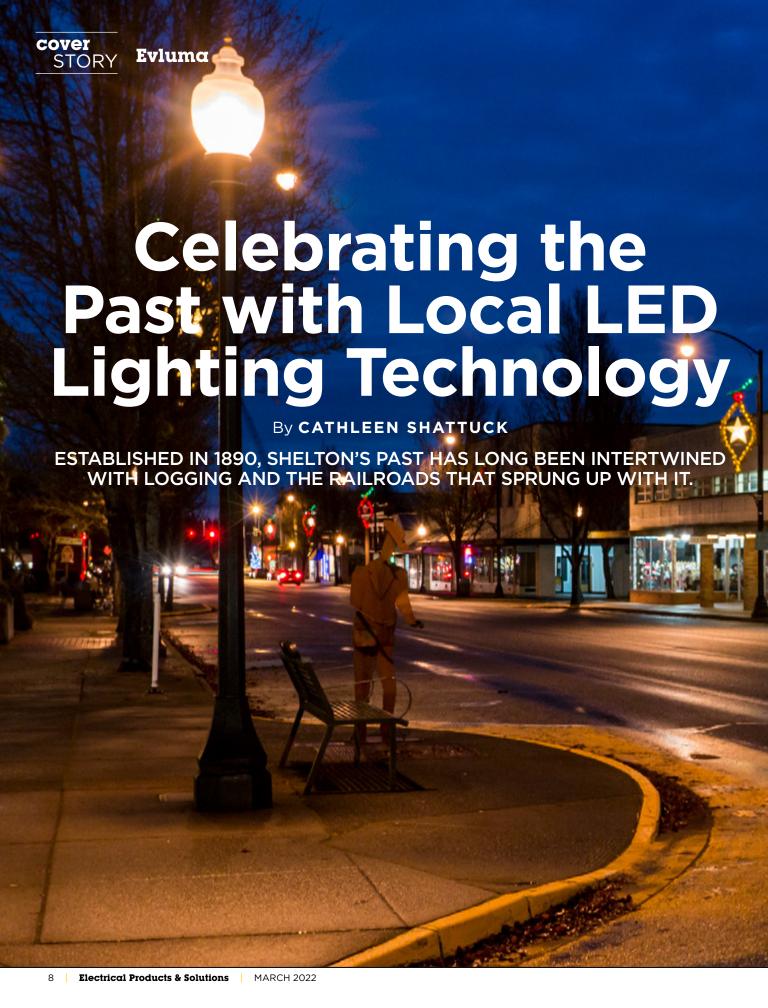
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"Tollie" The Shay, a locomotive built in 1924, rests next to the post office, anchoring the historic town center; antique shops and small businesses line Railroad Avenue. In the evening, the decorative pedestal and streetlights that run along the busy street give off a warm glow – the warm glow of LED.

Railroad Avenue's ornamental streetlights installed in the mid to late 1990s and maintained by Mason PUD 3 required a great deal of maintenance. Knowing the ballasts on the 20 year-old fixtures would need changing again soon, Justin Holzgrove, Engineering Services & Community Relations Manager at Mason PUD 3, was looking for an LED solution that would eliminate the constant upkeep required by HPS lights, yet still deliver the warm look that residents and

visitors had come to expect.

"The people at Evluma have always been very responsive and a pleasure to work with."

The team at Mason PUD 3 tested several different solutions including corncobs and downlights. "Anything less than a 10-year warranty was a non-starter for us. Some didn't fit our fixtures, one was too tall and downlights weren't appropriate for our omnidirectional globes," stated Justin. Mason PUD 3 also obtained a sample OmniMax by Evluma. The OmniMax fit their fixture, met their pre-requisite of a 10-year warranty and came in a 2000K color temperature. "The goal was to keep that gaslight look for the downtown corridor. The color of the 3000K OmniMax was more 'yellow' than bright. It didn't preserve the soft glow that suggests a small-town charm." Having worked with Evluma since 2014 when Mason PUD 3 adopted the AreaMax LED Street Lights as their light standard for residential lighting, their choice was made. "The people at Evluma have always been very responsive and a pleasure to work with."

Retrofitted with the Evluma OmniMax

A total of 63 fixtures were retrofitted with the Evluma OmniMax. The 70W HPS bulbs in the decorative pedestal lights were replaced with 70W LED OmniMax. The 200W HPS bulbs in the teardrop roadway lights were also replaced with 70W LED OmniMax. "With the ballast calculated in the 200W HPS lights we (CONTINUED ON PAGE 12)

- + Rise Higher
- + Go Farther
- + Shine Brighter
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The New

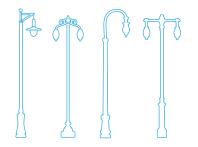
100W OmniMax



You asked, and we delivered. The 100W OmniMax LED retrofit was designed specifically for applications where you need more light from your decorative fixtures, such as taller pendant and teardrop applications (>25'), and locations where decorative luminaires are the primary light source.

A new patented Evluma driver delivers higher lumen output, even at lower CCT levels. Pair that with OmniMax's revolutionary low-glare optics, and you get the kind of light your decorative fixtures were built for: warm, beautiful and bright.









were pulling approximately 240W. The 70W HPS lights were closer to 75W," stated Holzgrove. All the lights run on two separate circuits with a single photocontrol for each. "The lighting design along Railroad Ave pairs an overhead street light on a decorative 33' pole opposite a shorter 15' decorative pedestrian light. While we are seeing slightly less light output from the streetlight, we are getting more output from the pedestrian lights since we remained at 70 watts, instead of selecting the 40 watt OmniMax. Altogether, we are achieving a similar amount of illumination on the streets and sidewalks as we were with the HPS. The OmniMax gives us the same performance, but now

with energy and maintenance savings."

The lights converted from 200W to 70W count towards Washington Initiative 937, the Energy Independence Act (2006), that requires utilities undertake all cost-effective energy conservation. The OmniMax LED retrofit lamp comes in multiple color temperatures from 5000K for a bright white, contemporary look, to the 2000K 'gaslight' CCT that Mason PUD 3 ultimately chose for their downtown.

OmniMax are also compatible with ConnectLED, a Bluetooth Low Energy wireless app for dimming and quick disconnects. Mason PUD 3 will likely not use the app for OmniMax in downtown Shelton, but have this

as an extra tool for working with the 1,500+ Evluma AreaMax they have installed in other areas of Mason County.

The Railroad Avenue retrofit project was one of the last performed by long-time Mason PUD 3 lineman John Donovan right before he retired. "John has done a lot of maintenance on those ornamental lights replacing ballasts and replacing bulbs and I think for him to see a long-term solution in place was probably rewarding," stated Holzgrove.

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GLOBAL SHOP SOLUTIONS, a leading producer of ERP software for manufacturers around the globe, has a reputation of doing the right thing for their employees and clients. Now they're doing the right thing for the planet by switching to solar power for the company's electricity needs.

Meeting Global Shop Solutions' energy needs required enough solar panels to cover the rooftops on all three buildings at their headquarters in The Woodlands, Texas. The project took six months to complete, and will generate more than enough electricity to power

the entire campus for 30 years while providing significant cost savings.

"Based on the energy we use at headquarters, it will take about seven years for the solar panels to pay for themselves," says Erika Klein, VP of R&D for Global Shop Solutions. "After that they will generate 'free' electricity for the next 23 years, so it ends up being a good investment for us and the planet. The system will produce more electricity than we need, so we're considering installing charging stations for employees to charge their electric vehicles at work."

Up Next: Reducing the Carbon Footprint

The transformation to solar energy is the first project implemented by the company's "Green Team." Led by Klein, the team consists (CONTINUED ON PAGE 16)





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Global Shop Solutions (CONTINUED FROM PAGE 14)



of a dozen employee volunteers working together to make the company more environmentally friendly. Their biggest goal for 2022 consists of finding ways to reduce Global Shop Solutions' carbon footprint.

The company's sales force, consultants and implementation teams incur significant travel time in the air and on the road. So the first step consists of calculating the total amount of travel and devising a plan to offset the firm's carbon footprint resulting from travel. The Green Team also meets regularly to discuss ideas for improving recycling, lowering water usage, and other ways to positively impact the environment.

"At this point, our biggest challenge is figuring out carbon accounting," says Klein. "It's a complex issue and we want to make sure we get it right before putting together a plan to reduce our footprint."

Helping Customers Go Green

Global Shop Solutions builds features into their ERP software that actively encourage green processes in customers' manufacturing plants.

The software enables manufacturers to operate in a paperless or near-paperless environment by putting information at everyone's fingertips via digital dashboards rather than printed reports. The cloud offering gives customers' employees the flexibility of working

from home, reducing the impact of traveling to and from work five days a week. Global Shop Solutions also helps customers cut down on travel by offering training and consulting online.

"We care about our employees, our customers, and the world around us," adds Klein. "Lowering our carbon footprint is definitely the right thing to do."

About Global Shop Solutions

We simplify your manufacturing.TM Global Shop Solutions ERP software provides the applications needed to deliver a quality part on time, every time from quote to cash and everything in between including shop management, scheduling, inventory, accounting, quality control, CRM and 25 more. Available in the cloud or on premise, our manufacturing customers benefit from real-time inventory accuracy, improved on-time delivery, lower administrative costs, increased sales and improved customer service. Headquarters in The Woodlands, Texas includes a state-ofthe-art R&D facility and Global Shop Solutions training center. Through its offices in the U.S., Mexico, Indonesia, Singapore, Australia, New Zealand and the United Kingdom, the company supports thousands of manufacturing facilities in over 25 countries and nearly 30 industries. \Box

Global Shop Solutions ERP software provides the applications needed to deliver a quality part on time, every time from quote to cash and everything in between including shop management, scheduling, inventory, accounting, quality control, CRM and 25 more.



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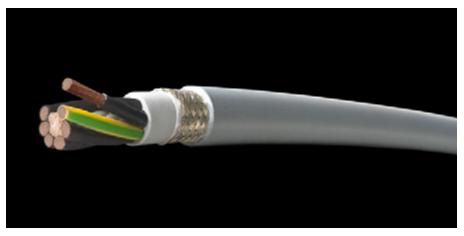
MULTIFLEX 512®-PUR UL/CSA Receives NEK 606 Approval

Drag chain-rated cable resists drilling mud and is suitable for use in the oil and gas industry

HELUKABEL, a leading international manufacturer and supplier of cables, wires and cable accessories, recently announced its MULTIFLEX 512®-PUR UL/CSA and its shielded variant 512®-C-PUR (MULTIFLEX CSA) are now certified according to the internationally recognized Norwegian Electrotechnical Committee (NEK) standard TS 606, which defines the requirements for halogen-free cables that are resistant to drilling mud. This approval is found primarily in applications associated with the oil and gas industry. Additionally, MULTIFLEX 512®-PUR UL/CSA and MULTIFLEX 512®-C-PUR UL/CSA comply with the more stringent Det Norske Veritas (DNV) ship approval tests for flexible electrical cables (CP-0417) making it ideal for offshore applications.

Oil and gas production platforms, oil tankers, refinery ships and offshore wind turbines have one thing in common: they put extreme strain on electrical equipment. Therefore, to function reliably, the cables installed must be resistant to oil, petrol, ozone and UV radiation as well as withstand coolants and lubricants or cold cleaning agents. HELUKABEL's MULTIFLEX 512®-PUR UL/CSA and MULTIFLEX 512®-C-PUR UL/CSA series perform optimally under these demanding conditions.

Conventional jacket materials tend to swell when exposed to aggressive agents such as lubricants and coolants,



which negatively impacts the cable performance and shortens its service life. The polyurethane (PUR) polymers used by HELUKABEL are significantly more resistant, which ensures that the cables can withstand the toughest operating conditions. With this, downtime or disruptions in the production process can be drastically reduced.

About MULTIFLEX 512®-PUR UL/ CSA Drag Chain Cables

MULTIFLEX 512®-PUR UL/CSA, available with or without a shield, is a drag chain-rated control and power cable suitable for nominal voltages up to 1000 volts (UL AWM). It is designed to withstand extreme mechanical stress and can be used in ambient temperatures from -30 to +90 degrees Celsius. The wide operating temperature range also

benefits the cable's service life because higher temperatures tend to deteriorate conventional insulation causing their mechanical properties to fail sooner. The cable is flame-retardant, resistant to weathering and retains its high tear and abrasion resistance even at low temperatures. Additionally, it is extremely flexible with a minimum bending radius of five times the cable diameter for moving applications, and three times the diameter when static. It has been tested to withstand approximately 10 million alternating bending cycles ensuring it performs reliably in multishift operations and when it's exposed to the tight bending stresses. Finally, it is UL 758 (AWM Style 212090) and CSA C22.2 No. 210 (AWM I/II A/B) approved making it ideal for exportoriented manufacturers.

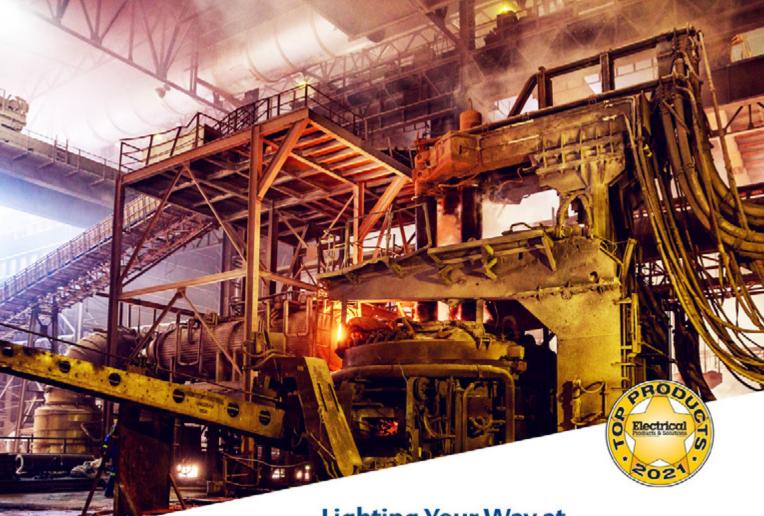
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ABOUT HELUKABEL USA

HELUKABEL USA, Inc. is the wholly owned U.S. subsidiary of HELUKABEL GmbH, a leading international manufacturer and supplier of cables, wires and cable accessories with 58 locations in 37 countries throughout the world. In its 75,000-square-foot, suburban-Chicago facility HELUKABEL USA stocks over 4,000 cable, wire and accessory line items for a multitude of application areas including mechanical and plant engineering, industrial automation, oil and gas, building



technology, infrastructure, mobility and renewable energy. Direct access to a 1.72 million-square-foot, fully automated warehouse with 33,000 line items, enables HELUKABEL USA to provide extremely short delivery times.





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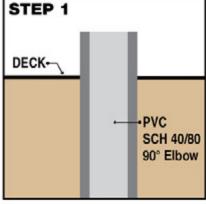
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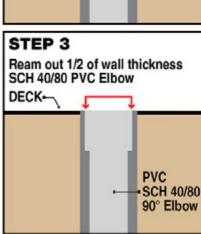


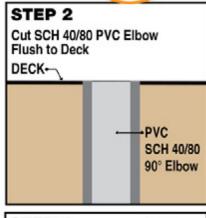
UL 651 specifications

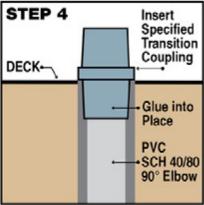
Transition Couplings			
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1"	100PVC-IN/PVC-IN		
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11/2"	150PVC-IN/PVC-IN		
2"	200PVC-IN/PVC-IN		
21/2"	250PVC-IN/PVC-IN		
3"	300PVC-IN/PVC-IN		
3-1/2"	350PVC-IN/PVC-IN		
4‴	400PVC-IN/PVC-IN		
5"	500PVC-IN/PVC-IN		
6"	600PVC-IN/PVC-IN		

All Above Meet UL651 CSA C22.2, No.85 and US Army Corps Engineers Specifications

















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Emergency Lighting Compliant with DALI-2 Part 202 – Future-Proof through Compatibility

First Tridonic LED drivers for emergency lighting applications certified to DALI-2 Part 202 (IEC 62386-202 version 2)

Tridonic's EM powerLED PRO LiFe-PO4 1-4W is the first generation of LED drivers for emergency lighting applications that are certified to DALI-2 Part 202.

A Standard with a Past and Future

A DALI-2 standard for "Self-contained emergency control gear" was released in September 2021. Essentially, DALI-2 Part 202 defines bidirectional communication between an emergency luminaire and the associated lighting management system. Consequently, the new part of the standard particularly focuses on multi-vendor interoperability of these safety-critical components. This means users can be confident that emergency lighting components certified to DALI-2 Part 202 "speak the same language". This simplifies project design and makes it easier to select components for emergency lighting systems.

The standard IEC 62386-202, first released in 2009, was updated to version 2 last autumn after 12 years. As a member of the DALI Alliance (formerly the Digital Illumination Interface Alliance, DiiA), Tridonic played a part in defining the DALI standards and DALI-2 by participating in committees. Tridonic was also proactively involved in the new Part 202. The company, which is headquartered in Dornbirn, Austria, is committed to taking an active role in standards that provide greater compatibility between lighting components, and therefore allow lighting solutions to be implemented more easily.



"At Tridonic, we prioritise interoperability right from the development stage," explains Thomas Ender, Vice President Product Marketing at Tridonic. "By being actively involved in standards such as DALI-2 Part 202, we can share our expertise with the industry and ensure interoperability. We always develop our solutions in compliance with the latest standards. Because of this, we are now able to offer the first emergency lighting LED driver that is certified to DALI-2 Part 202."

First Emergency Lighting LED Driver Certified to DALI-2

The EM powerLED PRO LiFePO4 1-4W driver marks a new generation of self-contained emergency lighting LED drivers that has been developed for emergency luminaires and emergency exit luminaires. The drivers, containing sustainable lithium iron phosphate batteries (LiFePO4), are the first emergency lighting LED

drivers to be certified to DALI-2 Part 202. The drivers also bear the lumDATA label - Tridonic's mark to indicate compliance with the three main DALI or D4i specifications for data collection: DALI Part 251 (luminaire data), DALI Part 252 (energy data) and DALI Part 253 (diagnostics data). That means the benefits of lumDATA now apply to emergency lighting applications too: luminaire data allows installed luminaires to be monitored efficiently, while greatly simplifying luminaire commissioning and maintenance. Energy data shows the consumption of each luminaire in the entire installation. Diagnostics data is used for predictive maintenance, because it records errors in defective devices such as overvoltage or overtemperature.

Interoperability Allows Greater Flexibility

Thanks to the interoperability guaranteed by DALI-2, the certified components can be freely combined with other lighting components that are certified to DALI-2. This creates more options for luminaire manufacturers and means they do not have to depend on proprietary solutions from individual manufacturers. Consequently, all DALI-2-certified emergency lighting drivers can be combined with certified DALI-2 lighting management systems without further testing being required. Plus, the release of the new DALI-2 Part 202 standard means manufacturers can now have their emergency luminaires with built-in DALI-2 emergency lighting drivers certified as DALI-2 luminaires. •

ABOUT TRIDONIC

Tridonic is a world-leading supplier of lighting technology, supporting its customers with intelligent hardware and software and offering the highest level of quality, reliability and energy savings. As a global driver of innovation in the field of lighting-based network technology, Tridonic develops scalable,



future-oriented solutions that enable new business models for lighting manufacturers, building managers, systems integrators, planners and many other types of customer. To promote the vision of the "Internet of Light", Tridonic relies on partnerships with other specialists. The goal is the joint development of innovative technological solutions that convert lighting systems into intelligent networks and thereby enable associated services. Tridonic's in-depth industry expertise makes it an ideal driver for partnerships with other visionaries.





The Appleton™ Mercmaster™ Connect LED by Emerson is designed to illuminate hazardous and harsh industrial locations with integrated motion and illuminance sensors. Paired with Emerson's Plantweb Insight Connected Lighting Application, operators have access to lighting usage data and sustainability analytics.

The Mercmaster Connect LED provides facility managers with continuous monitoring of their LED lighting with real-time insights gained into sustainability goals, diagnostics and lumen levels from any remote location at dramatically lower costs as compared to wired alternatives, with faster installation time and minimal disruption to plant operations.



Learn more at: masteringled.com





new PRODUCTS

More Beautiful Lumens, Evluma adds 100W OmniMax to LED Retrofit Line

New 100W LED retrofit lamp for use in decorative post top, acorn and globe streetlights.

Evluma recently added a new 100W addition to the OmniMaxTM LED retrofit line for out-door decorative luminaires. Leading LED streetlight manufacturer Evluma launched the OmniMax product line in 2016 with 40W and 70W models. Due to customer demand, a 100W model is now being released.

"Sold in six different color temperatures (2000K to 5000K) the OmniMax offers lighting designers and municipal lighting specifiers a wide range of CCT to work with," said Cathleen Shattuck, marketing director for Evluma. The 100W OmniMax is intended as a replacement for up to 150W HID lamps in legacy fixtures but can also be used for new construction.

The OmniMax combines a novel radial light engine with Bluetooth connectivity to create a dimmable, diffuse light source. Emulating the burn center of the HID bulbs it was designed to replace, OmniMax uses the prismatic optics of existing fixtures as they were intended. A four-layered thermal management strategy supports long life in enclosed fixtures. OmniMax carries a 10-year warranty, 20kV-10kA surge protection tested to EEE/ANSI C136.2 – 2018 and includes Evluma's patented Photocontrol Failsafe.

Initially designed to solve photocontrol failures on street and area lights, Photocontrol FailsafeTM is also a maintenance saver for owners of decorative streetlights. "'Dayburners' — a term for a streetlight with a failed-on photocontrol and thus energized 24 hours a day — consume added energy, especially if it is on a contactor controlling multiple lights," says Shattuck. Post lights are also typically located on a busy main street where stopping traffic to perform maintenance is inconvenient. ConnectLEDTM, Evluma's proprietary Bluetooth app, saves maintenance crew's time by being able to wirelessly dim or disconnect OmniMax to augment seasonal lighting, movie nights in the park, or other events. A dim-to-off setting allows lights to be turned off altogether for some portion of the night.



For more information, visit www.evluma.com



20V MAX* XR 1/2-in. Mid-Range Cordless Impact Wrenches

DEWALT has announced two new 20V MAX* XR 1/2-in. Mid-Range Cordless Impact Wrenches – DCF891 with a Hog Ring Anvil and DCF892 with a Detent Pin Anvil. Each impact wrench delivers up to 600 ft-lbs. of maximum fastening torque and 800 ft-lbs. of maximum breakaway torque where power is needed in compact spaces. The impacts are designed with a Precision Wrench feature to improve user control and help prevent overtightening in forward mode and run-off in reverse mode. The lightweight and ergonomic design allows users to complete a variety of applications.

The DEWALT 20V MAX* XR 1/2-in. Mid-Range Cordless Impact Wrenches will be available where DEWALT products are sold in April.

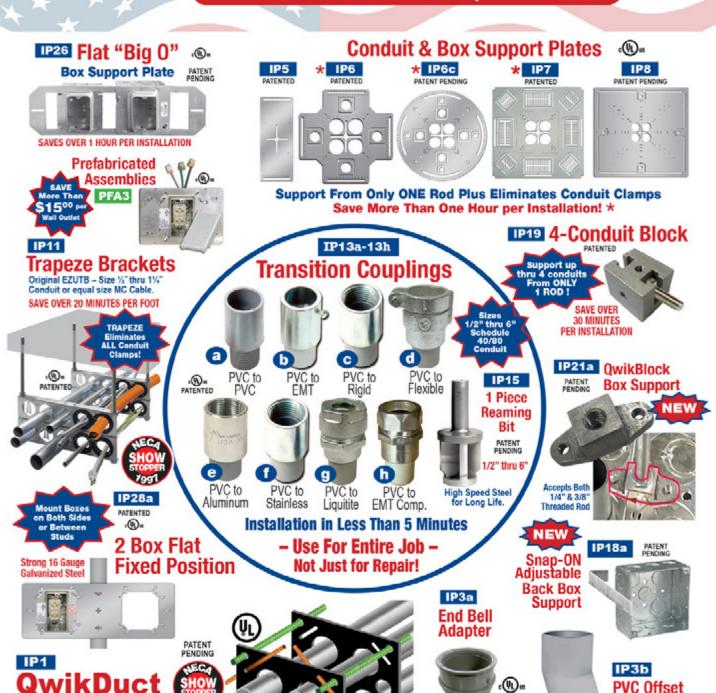
For more information, visit www.dewalt.com

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Multi-Cable Bushing System With Large Clamping Range Solves High-Density Requirements

LAPP has introduced its SKINTOP® MULTI-M round multi-cable bushing system for applications requiring a high packing density. Up to 30 entry points are available, depending on the MULTI-M bushing version, to accept cables, wires, conduits and pneumatics and media conduits. These metric-style units offer a large, 4-millimeter clamping range per entry point compared to just 1 to 2 millimeters typically offered by competitive products.

Installation is easy and secure thanks to the MULTI-M's elastic gel technology's innovative membrane seal. Simply push in the cable, and the gel will

hold the cable in place while providing optimal strain relief for the entire cable bundle. The gel does not apply stress to the installed cable, and unused entry points remain sealed.

SKINTOP MULTI-M also offers the following features and specifications:

- Halogen- and silicone-free
- UV-, ozone- and oil-resistant
- Operating temperature:
- With o-ring: -30° C to 100° C
- Without o-ring: -30° C to 100° C
- Protection class: IP68
- UL-approval pending; additional approvals can be checked and fulfilled on demand
- Eliminates the need for a pricking awl

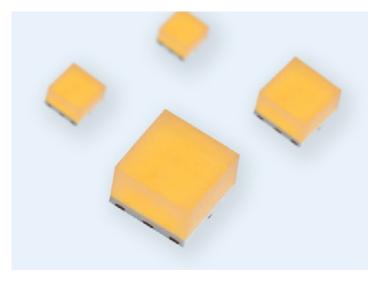
Applications include switch cabinet-, controls- and apparatus construction as well as automated machinery and other innovative industrial equipment.

For more information, visit www.lappusa.com

Luminus Releases MP-5050-250R High-Performance Mid-Power LEDs

Luminus Devices recently announced the launch and immediate availability of a new high efficacy family of 5050 Mid-Power LEDs designed with sulfur resistance for high-performance and long-term reliability in outdoor lighting and horticulture applications. These new MP-5050-250R high-performance LEDs provide low thermal resistance, up to 185 lumens/Watt, high PPF/W, and CRI options of 70, 80 and 90 minimum. In addition, they are compatible with automatic placement equipment and are RoHs and REACH compliant. Customers who are listing their products with DLC can leverage the MP-5050-250R series 17,000 hour LM-80 report under a wide range of operating conditions. These MP-5050 Mid Power LEDs allow illumination engineers and designers to develop lighting solutions with maximum efficacy, brightness, and overall quality.

What makes the MP-5050-250R stand out from other 5050



LEDs? Tom Jory, VP of Illumination Marketing, highlights "Our customers are turning to 5050s to replace multiple 3030s in horticulture or to replace 3535 die-on-ceramic LEDs in outdoor applications. The 250R series, with sulfur resistance and best-in-class efficacy, is now our flagship in the 5050 line, which we will continue to expand with more voltage options in the near future."

For more information, visit www.luminus.com



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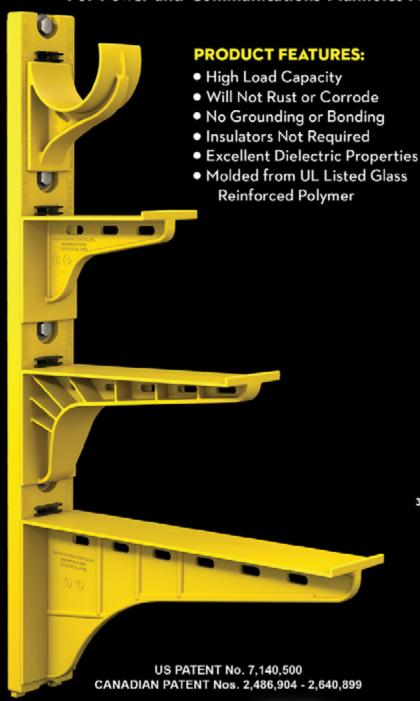


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HDL Arm Lock shown with RA04 Arm and CR36-B Stanchion



3HDS - 3" throat saddle shown with a cable secured by cable ties.



RA08 - 8" arm shown with three cables secured by cable ties.







DMF Lighting Launches New DID M-Series Fixtures Featuring Additional Trim and Installation Options

The M-Series Offers the Custom Integrator Channel Broader Aesthetic Options, Flexibility, and Ease of Installation

DMF Lighting, the leader in modular downlighting in the custom integration channel, recently announced the launch of its new DID M-Series fixtures that provide even more installation options for the CI channel. They feature a new flangeless option for wood ceiling applications, new trim colors, and redesigned housings that make them even easier to install.

"The flangeless wood application takes seamless ceiling light integration to a new level," said Mike Libman, National Sales Director, Residential Systems, DMF Lighting. "The installation process is both precise and easy with DMF's patented housing and trim technology. Combined, these create a clean, uninterrupted wood plane while still providing accessibility for any future changes and serviceability."

The M-Series boasts new trim colors in Bronze, Warm and Cool Diffused with White Flange trims to match more design aesthetics. Plus, DMF has precision-crafted trims to meet every need, whether customers want a diffused glow or a narrow spotlight, an eye-catching trim, or one that disappears. The redesigned housings are now offered for Round New Construction in both Fire-Rated and Standard models, as well as Chicago Plenum. Remodel housings are also available in both Square and Round versions to enable installations without tearing open the ceiling.

"DMF offers a wide range of lighting applications that continue to be optimized for the residential lighting sector, with customization unmatched in the industry," continued Libman. "They complement and enhance how a room looks and feels without sacrificing energy efficiency."

For more information, visit www.dmflighting.com



Greenlee® Introduces High-Performance Ratchet Cable and ACSR Cutters

Emerson's new ratchet cutter line from Greenlee offers up to a 35% reduction in peak energy

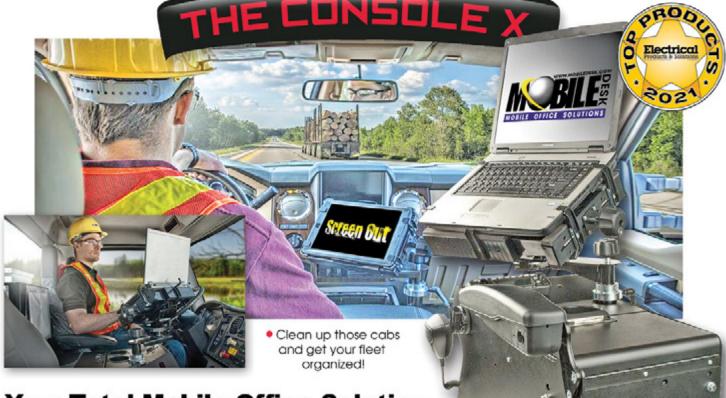
Greenlee, part of Emerson's professional tools portfolio, introduces their complete line of high-performance Ratchet Cable and ACSR Cutters with up to 35% reduction in peak energy when cutting copper in comparison to a manual cutter.

The line includes five cutters – three cable cutters and two ACSR cutters – and comes in both open jaw and flip-top designs ideal confined work areas. Together the ratchet cutters provide a complete solution for cutting copper up to 600 MCM, aluminum up to 750 MCM and ACSR up to 336 MCM.

The precision ratcheting mechanism holds cable tight to allow for rapid advance cuts; material-specific blade design gives clean cuts and robust durability; and the two-step ratchet mechanism enables fewer strokes per cut. Elongated handles give better leverage and a quick release lever allows mid-cut release.

"Our line of ratchet cutters are designed with performance in mind, giving maximum leverage with minimum effort. Eliminating strokes per cut lets you work faster, while putting less strain on the body," said Ryan Berg, director of product management, Greenlee for Emerson.

For more information, visit Greenlee.com/us/en/ratchet-cutters



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