

LED WHITELIGHT™ INTERIOR LIGHTING

LED WhiteLight™ BETTER LIGHT
BETTER PERFORMANCE
INNOVATION by Grote Industries, Inc.

See the Difference®

INCREASE YOUR WORKFORCE PRODUCTIVITY
AND ROI WITH GROTE'S LED WHITELIGHT™



Grote

The first name in vehicle
safety systems®

A group of five diverse workers, including a man in the foreground and four others behind him, are standing in a long, brightly lit trailer hallway. They are all wearing work clothes and looking towards the camera. The hallway has white walls and a wooden floor.

GROTE'S LED WHITELIGHT™ LAMPS GIVE YOUR FLEET A PERFORMANCE ADVANTAGE™

No idling-no problem-

when your trailers are outfitted with Grote LED WhiteLight™. Workers need light to get the job done, but incandescent lamps can dim when the engine is off, taking a toll on your vehicle's battery. Grote LED WhiteLight™ lamps give your work force bright, white, ergonomic lighting, with one-third the power consumption of incandescent lamps. So even with the engine off, you'll minimize downtime and visual errors, while maximizing fleet and worker performance.

More High-Quality Light

By using Grote's LED WhiteLight™ interior lamps you can generate over 400% more quality light output without using any more energy!

LEDs Provide Less Wear and Tear on Your Vehicle's Electrical System

Grote's LED WhiteLight™ interior lamp will last 50,000 hours vs. the rated life of a fluorescent bulb (12,000 hours) or the rated life of an incandescent bulb (300 hours).

With the new "No Idle" laws being enforced, you will begin to see significant power management gains with LEDs:

Less strain on your electrical system when compared to power-hungry incandescent lamps

Lighter LED lamps use less fuel to operate

More dependable, longer-lasting light source

Less than a quarter of the battery drain than incandescent lamps

No time and cost associated with changing failed bulbs

Right Light

The Strategic Value of Light

Founded in 1901, Grote Industries has a rich history in original thinking and continues to be one of the most innovative thought leaders in the vehicle lighting industry. More than 20 years ago, Chairman and CEO Bill Grote set forth his vision to strategically use light to optimize operational and human performance within the transportation industry. As a result, Grote quite literally brought the first LED lighting products to market.

Grote's visionary objectives:

- Create high-performance lighting solutions that help customers achieve a higher return on their lighting investment
- Optimize vehicle and workforce output with lighting technologies that enhance visual acuity
- Bring innovative, intelligent, environmentally-responsible, energy-efficient, longer-lasting lighting solutions to market – *fast*

Engineering Light for Higher Productivity and Profits

Grote engineers have collaborated with customers and have spent countless hours in the field, conceiving of LED applications designed to enhance human productivity and performance, and to benefit business efficiency and profitability.

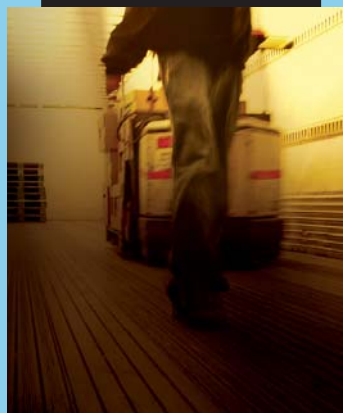
Ergonomic lighting:

- Lamps specifically engineered for their work environment and the tasks to be performed within them
- Some LED WhiteLight™ lamps now approach the color temperature of natural sunlight
- Superior beam reach and light pattern control
- Longer lasting lighting technology with lower energy requirements



New Grote LED WhiteLight™ technology is proven, affordable and truly impressive!

Incandescent Lighting



Fluorescent Lighting



LED WhiteLight™ Lighting



Poor lighting affects workers' performance and health as poor visibility increases the chances of errors and injuries. Proper lighting helps workers to see and recognize hazards, reduce ocular strain and discomfort and assume a natural working posture that may not be possible under poor lighting conditions, as depicted in the photographic representations (right).

vs. Bright Light

Better Light, Better Performance

The Grote lighting philosophy draws a distinction between "Bright Light" and "Right Light." Delivering products based upon the *right* principles is where Grote really shines. We're literally changing the way the transportation industry sees light and how it fits into their business objectives. This vision underscores Grote's long-standing value as "The first name in vehicle safety systems" as it relates to workers, their well-being and their effectiveness.

The right light can make all the difference:

- A safer, happier, less fatigued workforce, performing to the best of their visual abilities
- Fewer injuries, reduced visual errors, less downtime
- Better productivity, alertness and performance
- More advanced, effective, longer-lasting lighting products
- Lower repair and maintenance costs
- A better looking bottom line

A Broad Spectrum of Applications

Grote is dedicated to delivering new lighting products that make vehicles better places for people to work. We build the largest selection of LED lighting for interior uses. No matter what the vehicle – chances are we have an LED WhiteLight™ lamp just right for it.

You'll find LED WhiteLight™ solutions for:

- Aisleways
- Ambulances
- Buses
- Compartments
- Courtesy Lamps
- RVs
- Sleeper Cabs
- Specialty Vehicles
- Step Vans
- Stepwells
- Tool Boxes
- Trailers
- Truck Bodies
- Trucks

When vision is mission critical

EMS responders have reported that Grote LED WhiteLight™ is so phenomenal, that it enhanced their ability to find patients' veins for IV access.



LED WhiteLight™ vs. incandescent lamps using the same amperage (4.5A) on the circuit



Illustration based on Grote LED WhiteLight™ 4" Round Flange-Mount Dome Lamp pulling .5A each, versus an Incandescent Round Dome Lamp pulling 1.44A each.

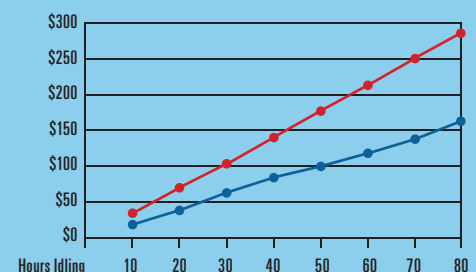
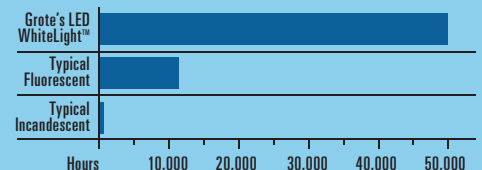
Grote's LED WhiteLight™ interior lamp will last 50,000 hours vs. the rated life of a fluorescent bulb (12,000 hours) or the rated life of an incandescent bulb (300 hours)

Monthly "No Idle" fuel cost savings

Monthly fuel savings at \$4.33/gallon ●
Monthly fuel savings at \$2.45/gallon ●

Chart demonstrates revenue saved when trucks do not need to idle to run lamps. Fuel costs are shown at \$4.33/gallon on 5/12/2008 and \$2.45/gallon on 12/15/08, as cited by the Energy Information Administration.

Assumes average Class 8 commercial vehicle fuel use at idle (600-1000 rpm) to be 0.82 gph as cited in EPA study EPA420-R-02-025 dated October 2002.



Visit grote.com to see our entire line of LED WhiteLight™ Products

SOME OF OUR NEWEST LED WHITELIGHT™ INTERIOR LAMPS ARE FEATURED BELOW



LED

LED WHITELIGHT™ 4" SURFACE MOUNT DOME LAMP (61171)

- Low-profile design (less than 1-1/4" depth)
- Enhanced light pattern for optimal interior illumination
- Rated to 50,000 hours
- Consumes less power and produces less heat than comparable incandescents
- Fits existing brackets, grommets and pigtails



LED

LED WHITELIGHT™ 7" ROUND LAMP WITH DIMMING FUNCTION (61191)

- Ideal for areas requiring illumination that may also need to be dimmed, such as ambulances, RVs, buses and sleeper cabs
- Encapsulated potting protects circuit boards against moisture, vibration and corrosion
- Robust, one-piece aluminum housing
- Removable acrylic lens and built-in thermal protection device
- Meets GSA-KKK 1828 ambulance dome lamp standards, when properly mounted
- Also available in non-dimming (61811)



LED

LED WHITELIGHT™ RECESSED MOUNT 12V DOME LAMP (61261)

- Superior illumination for recessed areas
- Encapsulated potting protects circuit boards against moisture, vibration and corrosion
- Robust, one-piece aluminum housing
- Removable acrylic lens and built-in thermal protection device
- Available in 24-volt configuration (61111)
- Also available in ambulance version with dimming function (61E61)



LED

LED WHITELIGHT™ 4" LED DOME LAMP (61E41)

- Uses 70% less power than incandescent options
- Integrated flange for easy installation
- 2X brighter than any 4" dome lamp on the market today
- Male Pin for multiple pigtail and connection options



LED

LED WHITELIGHT™ COURTESY AND DOME RECTANGULAR LAMP (61861)

- Fits existing similar incandescent mountings
- Rated for 50,000 hours
- Encapsulated potting protects circuit boards against moisture, vibration and corrosion
- Comparable light output to a 32 candlepower incandescent lamp
- Low heat will not melt lens



LED

LED WHITELIGHT™ S100 MOTION-ACTIVATED 12V SURFACE MOUNT DOME LAMP (61411)

- Bright and even light at 300 lumens of output
- Sleek and slim housing is easily surface mounted
- Infrared motion activated
- Motion sensor detects human movement within 5 meters and switches on
- Available in 24-volt configuration (61421)



LED

LED SLIMWHITE 18" COURTESY LAMP (61E81)

- High-output 500 lumen LED dome lamp emits low heat
- Tough polycarbonate lens
- Sturdy aluminum base
- Profile is less than 3/4" high
- Rated at 50,000 service hours



LED

LED WHITELIGHT™ COURTESY STEPWELL LAMP (60571)

- Direct fit replacement lamp to upgrade incandescents
- Connections are easily adjusted for seamless integration
- Electronics are encapsulated in epoxy for circuit protection
- ADA compliant



AUTOMATIC OVERRIDE SWITCH WITH TIMER (44360)

- Allows for operation of trailer interior lighting system from the trailer
- Automatic setting can shutdown the lamps at 20, 40, 60 or 90 minute intervals
- Reduces the number of overall components to the interior lighting system
- Eliminates tapping into the air brake delivery system



**William D. Grote, Founder
Grote Industries 1901**

A family's commitment to the vehicle and transportation lighting industry, spanning more than four generations

Just like many of the distributors, fleets and OEM's Grote Industries serves, we're a family-owned business. Like a number of our customers, we're proud of our family's multi-generational commitment to the transportation industry, reaching back more than a century. If you know the Grote family, you also know that the vehicle lighting business is not just a job to us, it's something that's folded into our family's culture – part of our very DNA. We're fond of saying that "lighting is in our blood" and we're only half kidding.

Unlike many institutionally-owned companies, we're able to draw on our family's time-honored values, built upon our tradition of service to the industry and our fierce entrepreneurial spirit. We're thankful for the visionary legacy of our predecessors and because of it, we can't help but to see the past, present and future of the lighting industry in a different context from those who simply find themselves working in the lighting business.

Founded on the principles of solid customer relationships, continuous innovation and exceptional product performance, Grote is committed to propelling itself and its industry forward, with inventive products and challenging ideas.

As a corporation, our family's culture extends to our entire organization, around the globe and particularly to our customer-facing staff. Grote is not sales oriented, we're not engineering oriented – we're relationship oriented and we're working hard every day to uphold our reputation and continue to earn your trust.

The Grote family has played a prominent role in shaping the vehicle lighting industry. We are deeply and personally engaged today, as we will be in the future, to make the kind of brave choices and bold decisions that will help move the vehicle lighting industry ahead and into an even brighter tomorrow.

Get a Performance Advantage™ with the world's first modular power and lighting system.

Grote Industries' interior and exterior LED lamps, used in conjunction with Grote's Ultra-Nose-Box™ and Ultra-Blue-Seal® harness technology, create the industry's most robust modular power delivery and lighting system.



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Grote

The first name in vehicle
safety systems®