

LED LIGHTING PORTFOLIO™

Performance Style Value

CHOOSE FROM THE INDUSTRY'S
WIDEST ARRAY OF LED
LIGHTING SOLUTIONS

Grote

The first name in vehicle
safety systems®

Performance

Style

Value

First in LED technology

Grote Industries introduced the first LED lighting products to the heavy-duty trucking market more than 20 years ago, so it's only fitting that Grote is now the first in the industry to introduce a complete portfolio of high-performance, high-style and high-value LED lamps.

LED performance, style and value

Grote LED lamps are intelligently engineered for a variety of tastes and applications, from the most robust electronics and highest performing LED lamps (SuperNova[®]), to the highest style multi-diode LED lamps (Hi Count[®]) to the highest value LED lamps anywhere (Grote Select[®]).

LED lighting solutions focused on you

Grote has created a full array of LED lighting solutions designed exclusively with the application and end-user in mind. So no matter what you're looking for in LED lighting – Grote's got it!

A complete LED lighting portfolio

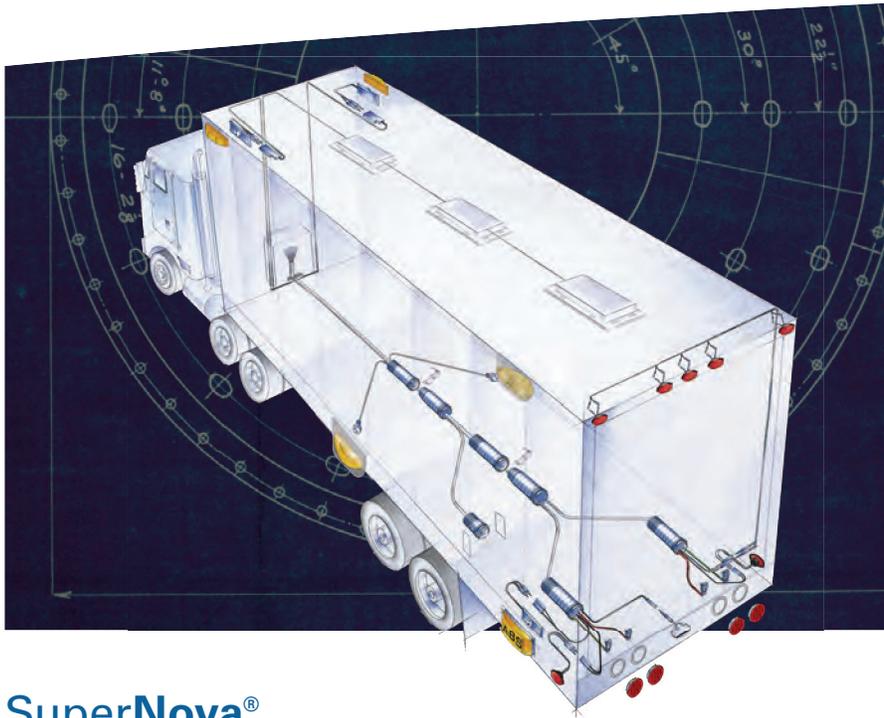
Are you an OEM establishing build specifications? Are you a fleet professional specifying new equipment or considering an incandescent to LED retrofit strategy? Or, are you an independent owner/operator with personal opinions about your vehicle's lighting? If LED lighting is what you want, Grote has a wide variety of lighting options to meet your needs.

Buy Grote and you're buying the best

The best thing about Grote's LED lighting portfolio is the strength of the Grote brand name. Grote has been here for more than 109 years, and Grote will be here tomorrow with innovative new lighting technologies. No matter what products in our portfolio interest you, you can rest assured that you're purchasing the very best LED lighting products available on the planet.

Grote, the intelligent LED lighting choice

You're choosing LED lighting for a reason. Whether you're interested in improved reliability, greater fuel efficiency, higher style or one of the many other advantages LED lighting provides, Grote is your smartest choice for LED lighting solutions.



When you're designing or specifying vehicle lighting with durability in mind

SuperNova®

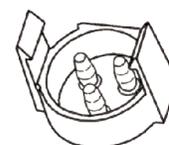
For the OEM and fleet professional, specifying the appropriate lighting system on new equipment is mission critical. That's why it's good to know that SuperNova® premium LED lamps are the industry's most recognized choice for new equipment specs.

The SuperNova® line quite literally represents the state of the art in performance LED lighting technology. No other lighting manufacturer delivers the combination of engineering and innovation that Grote does, and no one builds a more resilient or longer lasting LED lighting product.

If long life, durability and performance are part of your decision tree, consider the SuperNova® line. And remember, Grote Industries' SuperNova® premium 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.

SuperNova® high performance LED lamps:

- Are lightweight, and the new NexGen™ lamps weigh 50% less than the major competitor lamps
- Require one-eighth the amperage needed to drive an incandescent lamp
- Use diodes that are rated up to 100,000 hours
- Include solid brass terminals in male pin and hard shell configurations, for a more secure connection and maximum protection against corrosion
- Feature specially formulated encapsulant potting that seals out moisture and dirt, improving reliability and longevity
- Fit all Grote brackets and grommet mounting options
- Feature a hermetic lens-to-housing seal that prevents moisture intrusion
- Come with a 10-year warranty when configured with male pin or hard shell connectors and a 3-Year Warranty when configured with hardwire connectors



Male Pin



Hard Shell

High Style



When your vehicle lighting is more about making a personal statement

Hi Count®

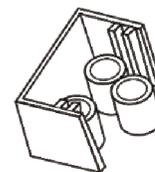
For some folks in the heavy-duty industry, lighting is all about style. High pride, high polish and high profile are all part of the game.

The Hi Count® line has become famous for blazingly-bright, multi-diode LED lamps that leave no doubt that others will see you both coming and going.

If style is important to you, then take a closer look at Grote's Hi Count® line – you can't miss it. Hi Count® is the premium style choice for those who believe the more diodes the better. And there's no better line of high-style LED lamps than Hi Count® by Grote.

Hi Count® high style LED lamps:

- Are the highest visibility LED lamps around
- Offer premium styling and maximum diode count
- Come with standard female pin terminations and stop/tail/turn lamps accept all popular incandescent plug-in connectors
- Feature built-in attitude
- Fit all popular mountings and grommets
- Come with a 2-year warranty



Female Pin



When it's time to consider converting from incandescents to LEDs

Grote Select®

For the value-conscious buyer, Grote has engineered an intelligent technological solution that addresses the need for compliant, reliable vehicle lighting – all with the strength of the Grote brand behind it.

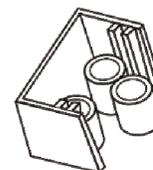
If higher value is driving your decision to retrofit to LED lighting, then Grote Select® LED lamps offer the most value of any US-made LED products on the market today. The standard female pin connectors further save you money by making it simple to retrofit old incandescent lighting systems.

If you've been considering converting from incandescent to LED lighting, but couldn't justify the cost – it's time to do the math again, with Grote Select® as part of the equation.

Grote Select® high value LED lamps:

- Incorporate the latest LED technology and offer much longer life than incandescent lamps
- Provide faster light-on response times that increase stopping alert distances
- Have low power requirements making more voltage available to other systems
- Require less maintenance on your electrical system
- Make use of existing wiring/pigtails for retrofit purposes
- Employ surface-mount electronics for cost effective reliability
- Use specifically formulated encapsulated circuitry that provides protection against the elements
- Have hermetic lens-to-housing seal preventing moisture intrusion
- Are similar in look to incandescent, so they are not prone to theft
- Fit all Grote brackets and grommet mounting options
- Come with a 2-year warranty and Grote's exclusive Performance Advantage™ Plus Extended Warranty Program when installed with Grote's UBS™ pigtail connectors

LED



Female Pin

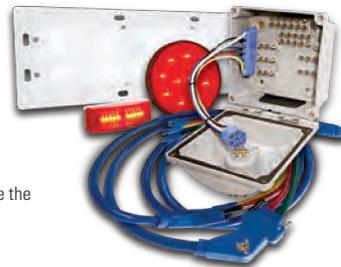
Gain a Performance Advantage™ by converting to LED

Grote is dedicated to helping you increase vehicle and workforce productivity while reducing your overall cost-per-mile. If you're considering converting from incandescent to more efficient LED lighting, please use the worksheet below to calculate your savings and return on investment.

Line	Description	Calculation	Input	Notes	
A	Number of Trailers				
B	Average Life of Trailers		Yrs		
C	# of Incandescent Lamps Per Trailer				
D	Price of One Incandescent Lamp		\$		
E	Price of One LED Lamp		\$		
F	Additional Investment Per Lamp	E - D	\$		
G	Incandescent Replacement / Life Cycle		Yrs		
H	Maintenance Time to Replace One Lamp	(Min/60)	Hr		
I	Average Maintenance Cost Per Hour		\$		
J	Average Downtime (Time trailer is not generating revenue during the replacement period)	(Min/60)	Hr		
K	Average Downtime Cost Per Hour		\$		
Calculations			Output		
Total Incandescent Costs			1 Lamp	1 Trailer (1 Lamp x C)	Entire Fleet (Trailer x A)
L	# of Replacements Over Life of Trailer	B / G			
M	Lifetime Maintenance Costs	H x I x L	\$	\$	\$
N	Lifetime Downtime Costs	J x K x L	\$	\$	\$
O	Incand. Replacement Product Costs	L x D	\$	\$	\$
P	Total Incandescent Costs	M + N + O	\$	\$	\$
Total Savings by using Grote LEDs					
R	Total Savings	P	\$	\$	\$
S	Total Savings/Year	R/B	\$	\$	\$
				R/(FxC) x 100	R/(FxC) x 100
T	Total ROI (Return on Investment)	(R/F) x 100	%	%	%
				(FxC)/S x 12	(FxCxA)/S x 12
U	Payback Period (Total Investments/Savings Per Year)	(F/S) x 12	Months	Months	Months
Online Calculator: grote.com/fleets/roi					

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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The first name in vehicle
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