

Amglo Provides Longer, Brighter Light for Via Rail Canada

Halogen and LED technologies mean longer life, reduced maintenance costs



THE CHALLENGE

The right locomotive lighting provides more than convenience and ambience; it's a safety issue with high-stakes consequences for operators and passengers. Poor illumination can lead to accidents, injuries and loss of life with costly implications for railway companies in terms of legal fees and loss of customer trust, so making sure locomotives have the right lighting solution is imperative.

Via Rail Canada (Via Rail) is an independent Crown Corporation that provides intercity rail service from coast to coast. Its main operation

is in Quebec and Ontario, in the bustling corridor between Quebec City, Montreal, Toronto and Windsor. When the company was looking for exterior and interior lighting to replace the incandescent lamps on its locomotive fleet, they knew they needed a rugged solution that provides high visibility. In addition, the bulbs needed to withstand the vibrations of moving locomotives and the freezing temperatures of frigid Canadian winters. Via Rail also wanted a solution that was easy to replace, energy efficient and cost effective.

THE SOLUTION

Rugged exterior lighting

From its founding, the company has continuously reviewed and renewed its equipment and, since it operates on a government-approved budget, is always measuring operating efficiencies with an eye toward upgrading and maintaining quality. "From the very start, Via Rail knew that Amglo had what it takes to meet our lighting needs," said Eugen Grecu, Senior Reliability Specialist, Electrical, for Via Rail locomotives. "We knew that Amglo was well-positioned within the lighting industry and had a reputation as a reliable vendor that sells high-quality products. Amglo had approached Via Rail with the new technology at the time, which was the halogen lamps."

Via Rail had been using incandescent lamps for the headlights, but, Grecu notes, "The halogen lamps are characterized by the regeneration of their filament, which gives these lamps a longer life. The incandescent lamps would last probably up to 500 hours of operation, whereas the halogen lamps have an average life of 4,000 hours or more." The time and labor costs of replacing the lamps also must be factored in. "If a lamp burns out, we don't just unscrew it and screw in another in the same place," Grecu explains. "We have to reach in to remove it, and it takes some time. When the lamp's light lasts longer, we replace them less often and so we spend less money on replacing them."

Amglo's PAR Series Halogen lamps, used as train headlights and in other exterior locations, were designed to withstand environmental elements and to maintain the mandatory 200,000 candela output required by the FRA (Federal Railroad Administration) and Transport Canada. These lamps are critical for lighting the view of the tracks in front of the train for engineers, as well as illuminating the back. Via Rail uses four PAR 56, 75-volt halogen lamps on the front of every locomotive and two on the back.

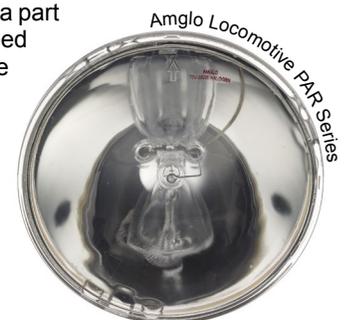
Brighter interior lighting

In selecting an interior lighting solution for locomotives, Grecu evaluated a variety of options based on several criteria, including cost, durability, longevity and ease of use. He finally settled on Amglo's A19 LED lamp. The LED lamp is designed to illuminate locomotive interiors that require bright lighting, including walkways, stairways, engine rooms and electrical cabinets.



"We did a preliminary test before proceeding, and these lamps were durable. The regular bulbs are made of glass and have to be handled carefully," Grecu said. "The LED lamps take less energy – some about six to seven times less than a regular incandescent for the same amount of illumination. They are also less prone to breakage, so they are safer in that sense.

And, of course, longer life span is a part of the maintenance cost: we need to replace them less often. We decided to phase them in as we use up the stock that we had already of the incandescent bulbs and as that stock gets depleted ramp up the use of the LED lamps." Currently Via Rail uses 23 A19 LED lamps on one type of locomotive and 27 on the other.



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–Eugen Grecu, Senior Reliability Specialist,
Electrical For Via Rail Locomotives

THE BENEFITS

Both the PAR Series Halogen lamps and the A19 LED lamps can withstand a wide range of operating temperatures, from -40°F to 158°F, which provides flexibility in deploying locomotives anywhere in the world. They both can be used on either diesel or electric locomotives as well.

Via Rail's commitment to providing the best experience possible for its passengers includes updating its own equipment and technology for the comfort and safety of its customers. While cost-efficiency is always a consideration, quality and reliability are just as important, if not more, and as new products and processes are developed, Via Rail is open to taking a good look at them.

Grecu notes, “We do appreciate a good partnership with vendors, and we're not normally seeking replacements, especially when they have good quality products. I would recommend Amglo without reservation.”



AMGLO LAMP BENEFITS INCLUDE:

Increased safety and regulatory compliance –

PAR Series headlamps maintain their candela output throughout the entire life of the lamp (minimum light output 200,000 candelas), ensuring compliance with Federal Railroad Administration and Transport Canada specifications. **The A19** provides improved visibility throughout the locomotive with a 270-degree beam angle and meets the EMI standard S-9401 for eliminating radio transmission interruptions.

Versatile and resilient – The A19 and PAR Series can withstand a wide range of operating temperatures, from -40°F to 158°F, providing flexibility in deploying locomotives globally.

Long life-span – The lightweight PVC/acrylic construction of **the A19** decreases vibrations and improves heat distribution, leading to longer bulb life. A single LED bulb lasts up to 50,000 hours.

Energy efficient – LEDs use six to seven times less energy than a regular incandescent bulb for the same amount of illumination.

Brighter light – **The A19** produces 600+ lumens at 6000K to provide a brighter light than its competitors.



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