



**On when  
it counts.**



## NLMK Pennsylvania Saves Nearly \$100k Annually So Far with Plant-wide Conversion to Dialight LEDs

**Midway through massive retrofit, NLMK already sees tremendous drop in lighting maintenance and energy consumption.**

In continuous operation since the 1890s, the Sharon, Pa. steel facility now known as NLMK PA is one of the oldest steel mills in the U.S. The facility is the birthplace of stainless steel, with an operational legacy of innovation and a keen eye on meeting the demands of tomorrow.

Today, the massive 350-acre site serves as a hot mill reheater, pickling and cold-rolling facility whose products ultimately end up in the automotive, construction, pipe and tube, heavy equipment industries.



Dialight Vigilant @ 60k LED High Bays (right) and HID lights (left) at NLMK PA.

### Challenge: Never-ending lighting maintenance

To keep the operation well-illuminated 24/7, the facility runs more than 10,000 lights throughout production, warehouse and inspection areas, in roadways, waterways and parking lots and perimeter security lighting. Just 6 years ago, the entire facility relied on a mix of conventional HID lights, including high pressure sodium and mercury vapor, with a few fluorescents in key areas.

### Project Snapshot:

- 350-acre steel mill facility in Sharon, Pa.
- Over 10,000 HID lights including mercury vapor, HPS, fluorescent & incandescent
- About 5,000 lights replaced so far at 40% completion
- Variety of Dialight LED High Bays, Area Lights, Linears, StreetSense street lights & RTO fixtures
- At least \$100,000 annual maintenance & energy savings so far

Because of the heavy industrial environment and the failure-prone nature of the HID bulbs and fixtures, electrical crews were continuously bogged down with lighting maintenance. "If we got two years out of the lights, we were happy, but they were very dim," said Jeff Stidham, NLMK facilities maintenance manager at the site. "Changing the bulbs was extremely difficult and required that we take production equipment and cranes offline, which cut severely into plant operations."

## Solution: Dialight Industrial LED Fixtures

Determined to find a better solution to reduce both the cost and the headache, Stidham began investigating LED lighting as an alternative to the conventional HIDs. He invited several companies to come in and run a 6-8 month trial with test fixtures throughout the plant. Among the several products tested, Dialight, the industry leader in industrial LED lighting solutions, rose to the top, primarily for its rugged, durable fixtures and its extended, full-performance warranty.

“Dialight was hands-down our top pick,” Stidham said. “We especially liked the heavy duty aspect of the fixtures, because



Dialight Vigilant High Bays at NLMK PA.

## Results: Massive Maintenance & Energy Savings

Working with Advanced Controls & Distribution near Pittsburgh, NLMK placed an initial order of 800 Dialight LED High Bays for its hot mill area, thus kicking off a full plant-wide conversion that’s now in its 6th year. Stidham estimates the facility is roughly 40% converted to Dialight LED, with a total fixture count nearing approximately 5,000 Dialight LEDs in place.

So far, the plant has already saved at least \$50,000 annually on maintenance, and Stidham says it could be perhaps as much as \$100,000. The energy savings have also been “huge” and the cost is still coming down as more lights are added. In addition, the changeover has freed up substantial space in the store room, because the plant no longer has to stockpile hundreds of bulbs and ballasts for the old, failure-prone fixtures.

“In 2015 alone, we purchased 2,500 lights. We still have a long way to go, but we’re already seeing a tremendous cost savings, drop in our kilowatt-hour consumption that could

we needed something that could hold up to the steel mill environment. This is where Dialight blew everyone out of the water.”

In addition to durability, light output and visual clarity were also key factors. With their much higher CRI, the Dialight LEDs produced a much more natural color, providing a tremendous improvement in visibility, particularly for troubleshooting and product quality inspection.

Finally, Dialight’s broad product portfolio promised to streamline supply chain management, allowing NLMK to source all of its fixtures to suit a wide range of applications



Dialight StreetSense Streetlight at NLMK PA.

only be attributable to the new lights, and much less burden on our maintenance staff,” he said. “It used to be that on any given day, someone somewhere in this plant was always working on the lights. We’ve seen that cut dramatically by about 50%.”

In some areas, the new High Bays provided such an improvement in visibility compared to the older HPS fixtures, the plant was able to replace two HPS units with just one Dialight High Bay. In addition to the mass quantity of High Bays in the rolling and other production areas, Stidham says their other “favorite” fixture and most popular are the 70W Area Lights, which was one of the first test products installed at the facility. After just 4 months in place, the Area Lights were enough to prompt the 2nd largest retrofit project in the plant – a street lighting upgrade using nearly 400 Dialight StreetSense fixtures.

## Results: Massive Maintenance & Energy Savings (Continued)

“The street lighting and perimeter lighting have been a major upgrade. We used to have electricians on the road every day to change streetlight bulbs, so this has been a huge savings in man-hours, not to mention the reduced electricity consumption,” Stidham said. “It’s also helped improve plant security. We have 130 HD cameras in place, and the upgraded lighting gives us images that are like day and night compared to the old fixtures. The security department wants them everywhere now. We’re getting there—we still have about 50% of our exterior lighting to replace.”

Other Dialight fixtures installed throughout the plant include RTO jelly-jar type of fixtures in the hazardous zones within the oil cellars near production equipment replacing incandescent fixtures, and Linear fixtures overtop each cold rolling inspection table, providing much improved visual clarity compared to the previous fluorescent fixtures there.

As the retrofit project continues, Stidham says NLMK remains committed to the product quality, variety, durability, warranty and service only Dialight can provide. “Now that LED has caught on, we have multiple vendors trying to sell us lights, but the Dialight product sells itself,” he said. “Everyone wants the new LEDs in their work area, and there’s no talk of any other type of light going in here.”

To learn more about Dialight’s industry leading LED lighting solutions, visit [www.dialight.com](http://www.dialight.com).



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