



**DELIVERY OF LONG-LIFE LED HEADLAMP REFLECTOR  
MEETING DOT STANDARDS FOR CLASS 8 TRUCK OEM**

OPTIMIZED TO MEET THE MOST  
DEMANDING EV REQUIREMENTS



## FORWARD LIGHTING FOR CLASS 8 TRUCK OEM

- Mar-Bal was asked to supply large forward lighting reflectors that met DOT standards for LED lighting which included large complex part geometry and surface flatness requirements.
- High dimensional stability was also needed for precision LED optics.
- Halogen and LED reflector assemble together with Front/Park/Turn reflectors.
- In addition, LED headlamp reflectors had to possess long-life durability.





## FORWARD LIGHTING FOR CLASS 8 TRUCK OEM

- Mar-Bal aided in mold design and reviewed best practices in forward lighting.
- We also formulated a dimensionally stable, high-performance material that withstands high temperatures and meets DOT requirements for optics.
- During this process we were able to deliver high volume BMC compounding production.
- Unique 700 ton press with large shot size to meet molding capacity.
- Mar-Bal also managed third party coating and metalizing, while developing a unique paint process that eliminated light scatter to meet optic requirements.



# FORWARD LIGHTING – DEVELOPED LONG-LIFE LED HEADLAMP REFLECTOR MEETING DOT STANDARDS FOR CLASS 8 TRUCK OEM

## Problem:

- Large complex part geometry requiring surface flatness and high dimensional stability for precision LED optics.

## How Solved:

- Formulated zero shrink material technology with high adhesion properties and custom metalizing finish solution eliminating light scatter to meet DOT lighting specs.

## Benefit:

- Delivery of large long-life durable LED headlamp reflector for heavy truck (Class 8) OEM that met DOT standards.
- Developed an 8-10 year program.

