

# Proper Prototype

In this day and age, the automotive industry is being required to produce more efficient vehicles every year. It is a tough and costly task to meet new guide lines on more efficient vehicles.

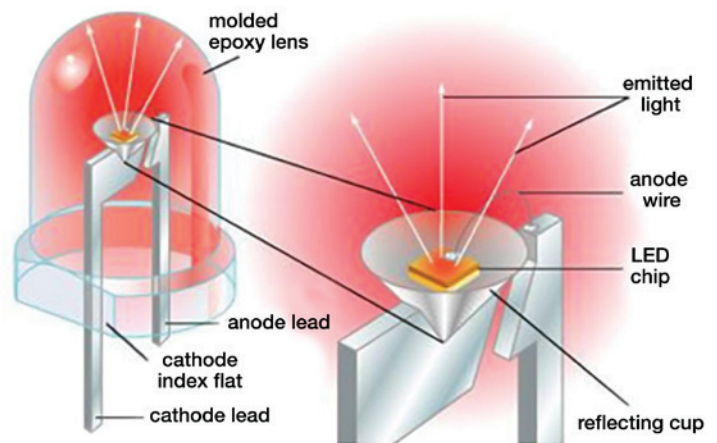
We are working on weight reductions in the vehicle by lightening up interior and exterior components. Exteriors are going from steel panels to aluminum panels. Interiors, parts are thinning, foaming and trimming down.

Recently, Proper Tooling Prototype division has complete the prototype tooling for the Ford U554 Rear Applique program and we are currently assembling the full Rear Applique in house for our customer Automotive Lighting. Photo's of the Unlit and Lit Rear Applique assembly are shown.



The lighting aspect of the vehicle, is a specialty that Proper Tooling knows very well and excels in. The new efficient direction that automobile lighting industry is venturing down is exciting for it not only offer efficient aspects but also can add eye catching design and style to the vehicle. This direction is LED's.

LED stands for "light emitting diode." A diode is an electrical component with two terminals which conduct the electricity only in one direction. With an electrical current, the diode emits a bright light around the small bulb.



The old and faithful incandescent light bulbs are being forced out of automotive lighting, to be replaced by LED lights. LEDs can be installed in ways and in locations that are impossible with incandescent and fluorescent lighting. The LEDs have a number of advantages over incandescent lighting that are very attractive for automotive use:

- They are very insensitive to vibrations
- They last for the life of the vehicle (does not apply to headlight LEDs yet)
- They can be baked into moisture proof casings to be installed in all kinds of harsh environments
- They light up much quicker than incandescent bulbs
- They are extremely compact
- They can be made to emit different colors
- They run cool
- They give more light per supplied watt than incandescent light bulbs
- They allow the design to be creative in an area that was traditionally boxed in