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Be Safe Be Seen

Hella LED Safety DayLights™

"It is acknowledged from in-depth accident studies that failing to see another road user in time (or at all) is a contributing factor in 50% of all daytime accidents. For daytime intersection accidents this increases to as much as 80%." Source:The Safety Effects of Daytime Running Lights, SWOV, 1997

In September 2009 Hella launched the new LED ***Safety DayLights***™ that will enhance vehicle visibility and have a positive impact on lowering fatal and non-fatal accidents.

Hella design and technology has been incorporated into an ultra efficient LED daytime running lamp providing an industry benchmark - lowest power consumption of less than 2 watts. The high efficacy LED ***Safety DayLights***™ offer a one-off cost, 'Fit and Forget' solution for the lifetime safety enhancement of the vehicle.

Hella has developed a solution to improve and enhance the visibility of vehicles without the disadvantages of increased fuel consumption and bulb failure. The use of Hella LED ***Safety DayLights***™ (DRL) during daylight hours maximises your vehicle visibility. A reduction of over 95% in energy consumption is also achieved when compared to the use of dipped headlamps during daylight hours.

Safety DayLights™ have the potential to play a pivotal role in decreasing the number of fatal and non fatal accidents and the associated costs incurred with each accident. The Hella LED ***Safety DayLights***™ will be an effective tool in lowering the number of accidents that impact on the lives of over 11,000 people every year.

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Safety on the Road

The ***Safety DayLights™*** (also known as a Daytime Running Lamp or DRL) is a lamp designed as a forward facing signal light to enhance the visibility of a vehicle during daylight hours.

Increasing vehicle visibility through the use of ***Safety DayLights™*** will contribute to a positive reduction in road fatalities and injuries, including pedestrians and cyclists.

The Institute for Road Safety Research (SWOV) has estimated that full ***Safety DayLights™*** (Daytime Running Lamp) utilization in the European Union would prevent:

- 24.6% of fatalities in multiple daytime accidents
- 20.0% of injuries in multiple daytime accidents
- 12.4% multiple daytime accidents (without injury)

Source: The Safety Effects of Daytime Running Lights, SWOV, 1997

Safety DayLights™ are an effective solution to improve and enhance the visibility of vehicles.

Safety DayLights™ are an effective system in preventing daytime head-on and front-corner collisions by increasing vehicle visibility and allowing early identification of an approaching vehicle, thus giving vital extra seconds to avoid a head-on collision.

Over 25% of all fatal road crashes in New Zealand are head-on crashes. Many of these involve multiple deaths.

Source: NZ Transport Agency, Fact sheet 29

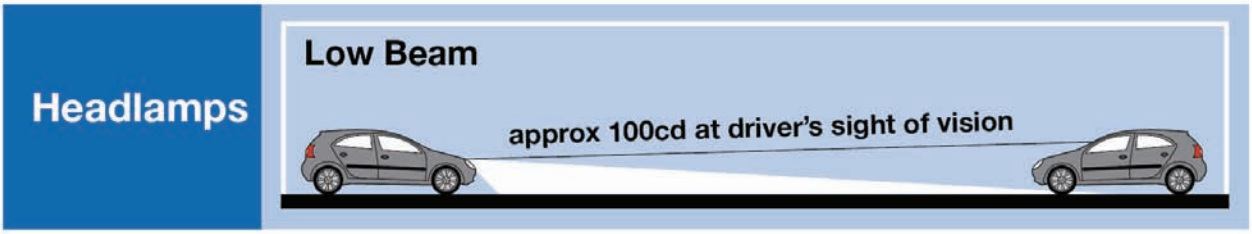
Nearly one-third of road deaths in New Zealand result from head-on crashes.
The most common causes of head-on crashes are:

- Loss of control on a bend (30%)
- Swinging wide on a bend (18 %)
- Straying to the wrong side of the centre line on a straight (21%)
- Overtaking in the face of on coming traffic (9%)

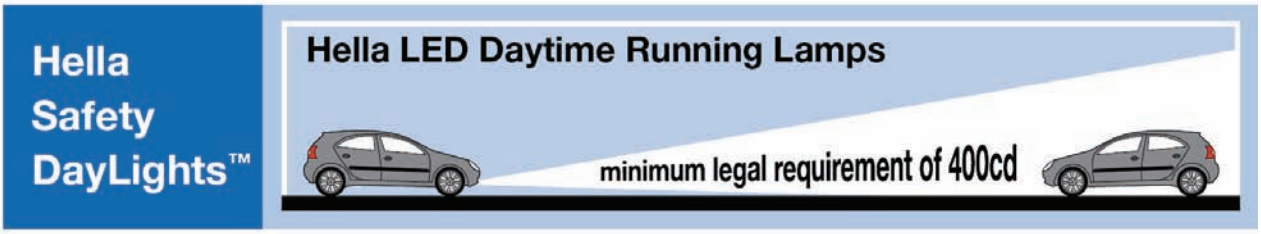
Source: NZ Transport Agency, Fact sheet 29

In the 4 common causes of head-on crashes outlined above, ***Safety DayLights™*** would provide a number of drivers with life-saving reaction time to avoid a potential head-on collision.

*The Use of Dipped Beam Headlamps versus **Safety DayLights™** During Daylight Hours*



Dipped beam headlamps are optically designed to light up the road with approximately 100cd at driver's sight of vision.



Hella LED ***Safety DayLights™*** designed as a forward facing signal lamp to enhance the visibility of a vehicle during daylight hours, provides a minimum legal 400cd at the driver's sight of vision.

Social Costs – Fatality and Injury Based Costs in New Zealand

During the 2007 calendar year there were:

- 376 fatal road crashes resulting in 422 deaths: and
- 11,667 injuries as a result of road crashes

Source: Motor Vehicle Crashes in New Zealand, 2007

The social cost of road crashes and injuries, includes loss of life, loss of life quality, loss of productivity, medical, legal, court and property damage costs.

The average cost per fatality - Value of Statistical Life (VOSL) - is $3.35 million.

Source: Ministry of Transport, NZ

The total social cost of motor vehicle injury crashes in 2007 is estimated at approximately $3.83 billion (excludes property-damage-only crashes).

Source: Ministry of Transport, NZ

Using data from studies carried out in Australia and applied to New Zealand, the fitment of dedicated ***Safety DayLights***™ (Daytime Running Lamps) to the vehicle fleet would save:

- Between 3% and 11%* of non-pedestrian fatal crashes and an estimated $42 - $156 million**; plus
- Between 4% and 15%* of non-pedestrian non-fatal crashes and an estimated $96 – $361 million**.

**Source: NZ Ministry of Transport
*Source: A Review of Daytime Running Lights, RACV, NRMA, 2003

Environmental Impact – Minimizing Fuel Consumption and CO_2 Emissions

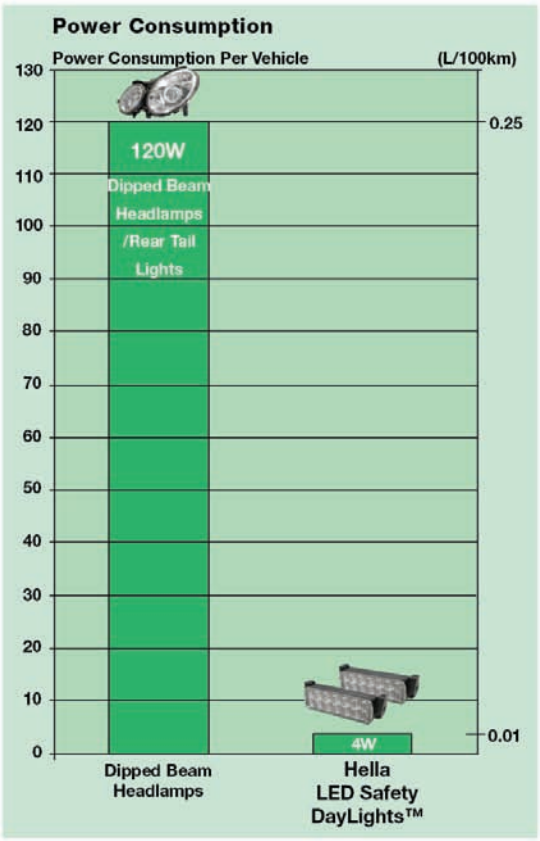
Switching on your dipped headlamps during daytime driving increases the petrol consumption of your vehicle by as much as 0.2 litres per 100km and shortens the life of your costly headlamp bulbs.

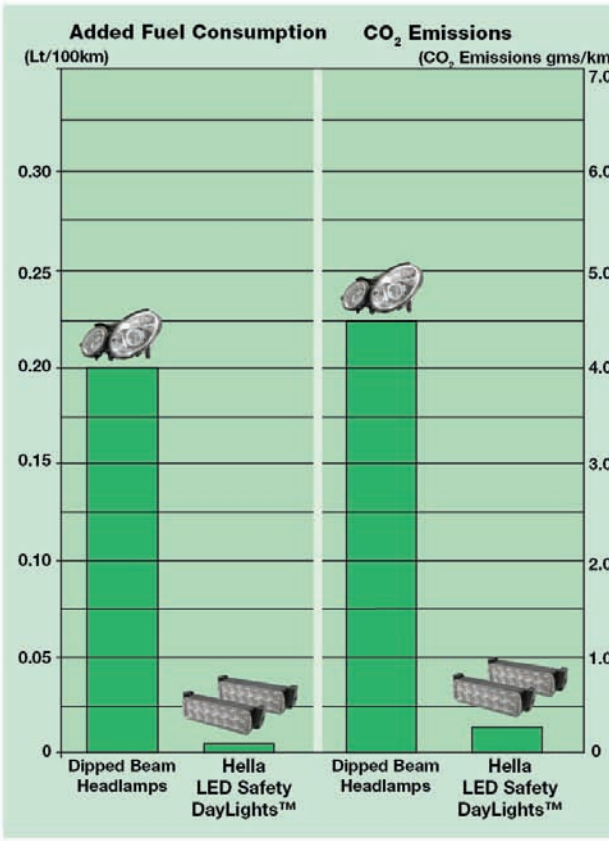
If the total New Zealand light vehicle fleet runs with dipped headlamps* during daytime hours:

*Diminished safety benefits compared to dedicated DRLs

- Additional fuel consumption would be an estimated 43 million litres per annum,
- CO_2 emissions would increase by up to 101,000 tonnes.

Dipped Headlamp Versus High Efficacy Hella LED *Safety DayLights*™ Power and Fuel Consumption and CO_2 Emissions





The Hella LED ***Safety DayLights***™ provide a durable environmental solution to running a vehicle on dipped headlamps. As outlined above the power consumption of a Hella LED ***Safety DayLights***™ is over 95% less than a dipped headlamp. There are other LED DRL versions on the market but these consume 10-12 watts of power, still 3 times more than the new Hella LED ***Safety DayLights***™.

Hella has developed a solution to improve and enhance the visibility of vehicles without the disadvantages of increased fuel consumption and bulb failure. The use of Hella LED ***Safety DayLights***™ (DRL) during daylight hours maximises your vehicle visibility. As stated above, a reduction of over 95% in energy consumption is also achieved when compared to the use of dipped headlamps during daylight hours.

Running dipped headlamps has a serious impact on fuel consumption and CO_2 emissions. Hella LED ***Safety DayLights***™ will use 95 % less fuel and emit 95% less CO_2 emissions.

Add the commercial transport fleet to these figures and the savings become significant.

A Durable Social and Environmental Solution

High efficacy Hella LED ***Safety DayLights™*** offer a one-off cost, 'Fit and Forget' solution for the lifetime safety enhancement of the vehicle.

The Social plus Environmental savings of dedicated 'Fit and Forget' low power consumption LED ***Safety DayLights™***, based on the best available data, is estimated at NZ $250 - $600 million per annum.

These figures are at best estimates, however, they are based on extensive research carried out on ***Safety DayLights™*** and on the social and economic costs of fatal and non-fatal vehicle accidents. There is enormous potential to decrease accidents on the road if vehicles are fitted with ***Safety DayLights™***.

High Perfomance Hella LED ***Safety DayLights***™ for the Aftermarket

The Advantages of Hella ***Safety DayLights***™ (DRL)

Resistant to harsh UV

- ***Safety DayLights***™ will increase the probability that a vehicle will be detected when ambient lighting levels are low (low sun) and with changing contrasts between light and shade (tree lined roads and country roads).
- Reduces the number of accidents as other road users are seen earlier and appropriate avoiding actions can be put in place.
- There will be a positive reduction of fatalities and casualties in multiple vehicle daytime accidents.
- There will be a significant reduction in the social cost of road crashes and injuries, including loss of life, loss of life quality, loss of productivity, medical, legal, court and property damage costs.
- Hella LED ***Safety DayLights***™ have ultra low power consumption and will have a positive environmental effect, reducing the output of carbon emissions and reducing the amount of fuel used over the lifetime of a vehicle, when compared to vehicles running with dipped headlamps.
- Hella Featherlight™ ***Safety DayLights***™ will have a near zero effect on the performance of a vehicle, weighing only 150 grams each and safe for mounting on plastic trim.
- The Hella LED ***Safety DayLights***™ are designed to withstand harsh environmental conditions including long-term exposure to very high UV levels without fading or embrittlement.

Hella LED ***Safety DayLights***™ (DRL) – Be Safe, Be Seen

Features of Safety DayLights™:

- ***Safety DayLights™*** are activated when ignition is switched ON for 'never forget' safety enhancement.
- Automatic switch OFF when headlamps are switched ON (DRL legal requirement).
- ADR compliant.
- Energy efficient LED ***Safety DayLights™*** set the automotive industry benchmark for lowest power consumption (< 2 watts).
- Fully Multivolt™ 9-33 volts for installation to 12 or 24-volt systems.
- Universal mount suitable for cars and commercial vehicles.
- Featherlight™ - only 150 grams.
- These lamps are designed to withstand harsh environmental conditions including long-term exposure to very high UV levels without fading or embrittlement.
- 5-year warranty.

For further information on Hella products contact customer services on 09 576 0366 or visit the Hella web site www.hella.co.nz.