The problem of ‘blinding’ car headlights – and how to stay safe on the road

The Telegraph *By* James Foxall13 April 2022 •

The adoption of LED lighting and tall SUVs have been blamed, but what is the truth behind drivers complaining about bright car headlights?

Research by the RAC in 2019 revealed that nine out of 10 drivers thought that “some” or “most” car headlights are too bright CREDIT: Alamy

Sound familiar? “I get so dazzled by 4x4 lights I avoid driving at night.” “An SUV was following me and the headlights in my mirror basically melted my eyes.” “At a certain height some lights blind oncoming traffic.”
“Cyclists don’t seem to understand that if they blind people they’re not in any way more visible.”

“Auto dipping is a curse.” “LEDs are a very harsh light for my old eyes.”

You don’t have to look far on social media to find people complaining about being being dazzled by overly bright headlights on our roads. Research by the RAC in 2019 revealed that nine out of 10 drivers (91 per cent) thought that “some” or “most” car headlights are too bright. And seven in 10 (70 per cent) say bright lights are an accident risk.

So why are car headlights becoming increasingly blinding and what can we do about it?
What are the blinding headlights?
After three decades of halogen lights that weren’t bright enough to dazzle unless poorly adjusted or on main beam, car lighting technology moved on in the 1990s.

The trend was for manufacturers to fit High Intensity Discharge (HID lights) to upmarket models. More frequently called xenons because of the gas used inside the lamps, these have a distinctive bluish tinge. They can also produce up to five times as much light as halogens, using the same or far less power.
But these lights were expensive and in the early Noughties car makers switched again, this time to Light Emitting Diode (LED) technology. These use less energy to produce the same amount of light as a xenon unit so they don’t sap as much power – important for electric vehicles. They’re also much smaller than xenons, giving car designers more flexibility. And LED lights have a far longer lifespan.

Are they really that blinding? The simple answer is yes. Studies by America’s National Highway Traffic Safety Administration (NHTSA) found that HID lights emit 40 per cent more glare than halogens.
Optician Aishah Fazlanie added: “It’s a simple fact that more light from HID and LED bulbs will cause more glare. We are noticing more complaints of eye strain from people who drive a lot at night.”
The AA says blinding headlights is one of the most popular reasons its members get in touch. AA President Edmund King added: “In an AA survey of almost 14,000 drivers, seven out of 10 said they’d been blinded by headlights from oncoming traffic (53% dazzled from behind). Two thirds want tighter rules and regs on headlights.”
Why do new LEDs dazzle so much?

LED lighting used to be the preserve of upmarket cars but even budget offerings such as the Dacia Duster now have them as standard
LEDs give off a very directional light, which means if one is pointing straight at you it will appear far brighter than a halogen lamp. But the colour tone is much more like natural light so when you’re driving a car with LEDs, you’ll be able to see more in the dark.
Another benefit of LED lighting is that with headlights made up of multiple units, portions of the lamp can switch on or off automatically depending on different road conditions. This is called matrix lighting and enables cars to give drivers maximum ‘main beam’ lighting for the prevailing conditions and speed without dazzling oncoming drivers.
At least that’s the theory. I’ve tried these systems on numerous models over the years. Initially, they were terrible. After the early novelty, the first thing I’d do was switch the system off to stop other drivers flashing their annoyance at me.

The systems have got better. But they’re still prone to blinding oncoming drivers, particularly on country roads. A human driver can see an approaching car on a dark lane even if they’re round a bend. Matrix systems don’t have this anticipation and only switch off when they ‘see’ the oncoming headlights. Effectively, they must wait to blind another driver before adjusting.

Optician Fazlanie summed it up: “Brighter lights mean you can see hazards more clearly. But if you’re also suffering from the glare of other people’s headlights it cancels that benefit out.”
What can we do about it?

The law isn’t on the dazzled driver’s side. The AA’s Edmund King said: “Although some newer vehicle headlights are extremely bright, if the beam pattern is set correctly as per MOT spec, there isn’t much the law or MOT testers can do to change the brightness.”

Optician Aishah Fazlanie believes looking after our own eye health is vital. She said: “Regular eye tests are key. Ensure your prescription is up to date; make sure your glasses and windscreen are clean; and don’t drive with scratched lenses in your glasses.”

What about the yellow tinted glasses that claim to reduce glare? Fazlanie isn’t convinced. “If they’re not prescribed by an eye-care professional I’d be wary,” she said. “You’d be better off having regular eye tests.”
Are brighter lights solely to blame?

The Audi R8 supercar was the first production car with full LED lighting at the front, in 2009. Before then, Audi A8 saloons had featured LED daytime running lights and dipped beams respectively CREDIT: Dean Smith

The fact that we’re an ageing population isn’t helping. The Royal Society for the Prevention of Accidents says: “Between the ages of 15 and 65, the time it takes to recover from glare increases from one to nine seconds.

“As we grow older, our eyes become less able to react quickly to changes in light and we can have difficulty with colours and contrasts in poor light.”

Meanwhile the RAC believes vehicle size is also a factor. Spokesman Rod Dennis said: “Back when we all had halogen lights, there wasn’t a huge variation in the heights of vehicles. You’d be driving along in your Golf and virtually every other car would be riding at the same height. Now the higher mounted lights of increasingly popular SUVs will cause more glare for drivers in lower cars.”
Are bright headlights really an accident risk?

In casualty terms, drivers being dazzled represents a puny 3 per cent of crashes caused when ‘vision is affected by external factors’. It’s a ratio that hasn’t changed since 2013. That might not sound like much but in 2020, it meant 120 crashes caused by dazzling headlights, seven of them with fatalities. Surely that’s seven too many.

How to stay safe on the road - Useful tips from our readers

- "Night driving glasses are a real boon for me. They reduce the glare tremendously and I also wear them for playing golf in the winter." You could also speak to your optician about spectacles with an anti-dazzle coating.
- "Make sure your glasses and windscreen are clean. A clean windscreen isn't just about squirting the outside with jets, it's about the inside, too. Particularly in the colder months a residue can form from condensation; not just the visible misting up on a damp day that you clear with the heater but something that can only be shifted with a clean chamois leather or pad, or a microfibre cloth. This can contribute to veiling flare.
  "Avoid touching the inside of your windscreen with bare hands too; skin grease is easily transferred and makes matters even worse.
  "Finally on older or higher mileage cars even the smallest chip or abrasion built up over years can cause star effects. Consider a new windscreen if it's really bad."
- "Some problems could be helped by people not driving too close to the car in front. Double the following distance and the intensity reduces by a factor of 4."

You could also try the following:
- Make sure your rear-view mirrors are in the correct position
- New technology can help - some cars have an auto-dimming feature installed in the rear-view mirror to help limit the lights that reach the driver.
- Flip your sun visor down to help block any headlights