

Glare for oncoming vehicles also is measured from low beams in each scenario to make sure it isn't excessive.

Headlights are tested as received from the dealer. Although the vertical aim of headlights can be adjusted on most vehicles, IIHS doesn't change headlight aim because few vehicle owners ever do and some manufacturers advise consumers not to.

After a vehicle is tested on the track, IIHS engineers compare its visibility and glare measurements to those of a hypothetical ideal headlight system and use a scheme of demerits to determine the rating. Results for low beams are weighted more heavily than high beams because they are used more often. The readings on the straightaway are

weighted more heavily than those on the curves because more crashes occur on straight sections of road.

Vehicles equipped with high-beam assist, which automatically switches between high beams and low beams depending on the presence of other vehicles, may earn back some points taken off for less-than-ideal low beam visibility. This credit is given only for approaches on which the glare threshold isn't exceeded and on which the high beams provide additional visibility compared with the low beams.

A vehicle with excessive glare on any of the approaches can't earn a rating above marginal.

One good rating out of 82

Vehicles can be equipped with different headlights, so there are a total of 82 headlight ratings for 2016 models even though there are only 31 vehicles. The Institute is rating every possible headlight combination as it becomes available from dealers.

The Prius v earns a good rating when equipped with LED lights

and high-beam assist. To get those headlights, consumers must purchase the advanced technology package, which is only available on the highest trim level. When equipped with regular halogen lights and without high-beam assist, the Prius v earns a poor rating.

"The Prius v's LED low beams should give a driver traveling straight at 70 mph enough time to identify an obstacle on the right side of the road, where the light is best, and brake to a stop," says Matthew Brumbelow, an IIHS senior

Headlight ratings for 2016 midsize cars <i>Best available headlight system for each model</i>	
For trim and package specifications for the listed ratings and for ratings of other systems available on these models, visit iihs.org/ratings .	
Good	
Toyota Prius v	
Acceptable	
Audi A3	Nissan Maxima
Honda Accord 4-door	Subaru Outback (built after Nov. 2015)
Infiniti Q50	Volkswagen CC
Lexus ES	Volkswagen Jetta
Lexus IS	Volvo S60
Mazda 6	
Marginal	
Acura TLX	Ford Fusion
Audi A4	Lincoln MKZ
BMW 2 series	Subaru Legacy
BMW 3 series	Toyota Camry
Chrysler 200	
Poor	
Buick Verano	Kia Optima
Cadillac ATS	Mercedes-Benz C-Class
Chevrolet Malibu	Mercedes-Benz CLA
Chevrolet Malibu Limited (fleet model)	Nissan Altima
Hyundai Sonata	Volkswagen Passat

research engineer. “In contrast, someone with the halogen lights would need to drive 20 mph slower in order to avoid a crash.”

Among the 44 headlight systems earning a poor rating, the halogen lights on the BMW 3 series are the worst. A driver with those headlights would have to be going 35 mph or slower to stop in time for an obstacle in the travel lane. A better choice for the same car is an LED curve-adaptive system with high-beam assist, a combination that rates marginal.

Curve-adaptive systems don't always lead to better ratings. The Cadillac ATS, Kia Optima and Mercedes-Benz C-Class all earn poor ratings even when equipped with adaptive low and high beams.

In the case of the Optima, a big problem is glare. Its curve-adaptive system provides better visibility than its non-adaptive lights, but produces excessive glare for oncoming vehicles on all five low beam approaches.

One of the best headlight systems evaluated has none of the new technology. The basic halogen lights on the Honda Accord 4-door earn an acceptable rating, while an LED system with high-beam assist available on the Accord earns only a marginal.

For more information, go to iihs.org

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