LED headlamps may soon serve as transmitters in V2V (vehicle to vehicle) communications systems. Intel have been working on VLC (visible light communication) for vehicles since 2008. The proposal involves rapid pulses of visible light from LED headlamps to relay information from one car to another. The LED flashes would be so short as to be invisible to the human eye, but could message other cars about traffic conditions along the road, positioning, possible collisions, and could form part of an autonomous driving system.

The rate for transmitting the data from one car to another is low enough for a regular camera to receive, and existing LED headlamp hardware is capable of being used in this manner. The idea is for a cheaper option for V2V compared to radar or lasers. Although radar and laser technologies would be more effective at making cars aware of their surroundings, they are costly. This low-cost comms mesh becomes viable once about 10% of the vehicles on the road are transmitting, which is estimated to take about two years following initial deployment in new cars.

VLC relies on line-of-sight, which is a drawback compared with radar or wireless networking because adverse weather and ambient lighting conditions could interfere with the flashes from LEDs. However, the more vehicles are equipped, the shorter the average distance becomes between equipped vehicles, thus effectively increasing the likelihood of unbroken chains of line-of-sight.