Intelligent Low Beam Assist – User Guide / FAQs

Will this product be right for me?

The Intelligent Low Beam Assist (i-LBA) feature provides extra illumination when switching from high beams to low beams. It intelligently identifies the location of oncoming cars and reduces lighting in those directions, while maintaining extra illumination on the verge-side of the road to assist in identifying obstacles, cyclists, pedestrians etc. This patent-pending technology helps the eyes to adjust during the transition from High beam to low beam, however, it's important to be aware that the technology won't operate during town driving, or during driving when the high beams haven't been activated for more than 3 seconds. If you regularly drive on fast and wide, unlit rural roads then the additional lighting provided by the i-LBA products will improve the safety and comfort of your driving experience. If you are driving in an area with a lot of road signs or through road works, it is likely that you will want to deactivate the i-LBA feature using the switch supplied with the wiring kit, to prevent it flashing on and off too often. We recommend watching our videos before ordering the product, so that the benefits and limitations of the technology are understood.

How do I connect my Intelligent Low Beam Assist LED driving light?

Every lamp includes its own dedicated wiring harness kit. The connections are as per the wiring diagram provided with the instructions included with your lamp (also available on the corresponding product page on the Lazer Lamps website). The Low Beam Assist isolator switch (with BLUE LED) is recommended to be mounted on the vehicle dashboard in an easily accessible location, as there will be scenarios where it is best to disable the function (i.e. on a rural road with lots of road signs, or during town driving). There is also a master on/off switch for the whole lamp, in case there are times when you prefer to use your vehicle high beams without activating the Lazer auxiliary light at the same time. It is important that the yellow wire from this master switch is connected to the vehicle's ignition feed, as opposed to a 12V battery supply, to ensure the lamp doesn't remain active (battery drain risk) when the vehicle is parked.

When does Intelligent Low Beam Assist mode activate?

The Intelligent Low Beam Assist mode only activates after the high beam has been on for >3s. Each time the vehicle ignition is turned off, or when the lamp master on/off switch has been toggled, the lamp resets and requires the 3s activation period again. Thereafter, the lamp enters Low Beam Assist mode, each time the high beam is deactivated.

Why does my light keep flashing on/off when the vehicle is parked (with the engine off)?

If the “ignition” signal wire has been connected to a 12V battery, feed or to an ignition feed that remains on for several minutes after the vehicle has been parked, then the lamp will still be receiving power after the car has been parked. This may cause the lamp to still be “active” thetreby causing it to flash on/off. In this instance, we would recommend to attach the ignition signal wire to an ignition feed which drops to 0V after the car has been parked/locked.

Why does my light keep flashing on/off when the vehicle is stationary (with the engine running)?

Once the i-LBA mode has been activated, there may be occasions where the lamp will brighten and dim every 4 seconds, despite the vehicle being stationary. For example, if the vehicle is stationary behind a dimly lit obstacle, such as a truck trailer, then the lamp may brighten, but then the reflections coming back from the obstacle will cause the lamp to dim again rapidly. This will cycle every four seconds, and we would recommend switching off the i-LBA mode in this scenario. Alternatively, the lamp will rectify itself when taken outside to a dark area without obstacles in front of the vehicle.

My light won’t go into Intelligent Low Beam Assist mode?

We would recommend checking the Intelligent Low Beam Assist isolator switch first. Ensuring the lamp is clear and free from excess dirt/snow/ice will ensure no impairment to the lamps function. The optimum mounting position for the Intelligent Low Beam Assist products is <1m, far above this and the sensors performance can progressively reduce which may affect responsiveness. Finally, it is recommended to check the orientation and angle of the lamp, which we recommend to be pointed parallel to the ground (aimed at the horizon).

My lights seem to be too sensitive towards road signs, is that correct?

The lamps will deactivate on the verge side of the road when they see reflections coming back from road signs. This is a function intended to reduce glare from road signs, and there is no way to adjust the sensitivity of the product under these conditions. A secondary switch is supplied with the wiring kit, which enables the driver to deactivate the i-LBA function when driving on roads which have a lot of road signs.

Can I adjust the sensitivity of the sensors and when Intelligent Low Beam Assist activates/reactivates?

No. The sensors have been carefully optimised considering a wide-range of different driving conditions and environments. Each lamp has self-learning capability that means the sensitivity to oncoming traffic and obstacles will adjust over time, depending on which side of the road you are driving on. When driving in urban environments, depending on the volume of street lighting, road signs, houses etc it is suggested to deactivate the Low Beam Assist function to avoid too much brightening and dimming of the i-LBA LEDs.

Does the Low Beam Assist work when driving behind another car?

Yes, the beam pattern of the i-LBA has been designed such that it is giving extra illumination at the sides of the road and on the roadway in the first 30 meters. The lamp doesn't cause glare to a car which might be driving in front of the i-LBA fitted vehicle. Hence, the i-LBA mode will still operate correctly for cars passing on the other side of the road, despite the fact that the i-LBA fitted vehicle might be driving in convoy with other vehicles on the same side of the road.

Can I install two or more lamps together?

Yes, two lamps will work side-by-side without issue. Despite each lamp effectively running its own program, the sensitivity of the lamp(s) is consistent across all products, so activation/deactivation times for all lamps should be the same. It is important that both lamps are pointing in exactly the same orientation, and not angled outwards at all. I-LBA lamps must always be set to point in a straight ahead orientation, pointing at the horizon.

What is the optimum position for mounting Intelligent Low Beam Assist lamps?

The Intelligent Low Beam Assist lamps work best mounted at a height of <2m. The performance of the photoelectric sensors might start to decrease above this height, so while the lamps can still be mounted higher, the reactiveness of the Low Beam Assist function towards oncoming vehicles, will diminish.

Do I need to use a CAN interface when installing the lights?

Not specifically. In the same way any auxiliary LED light would rely on a 12V high beam signal, so does the range of Intelligent Low Beam Assist products. This is to say that if there is a >12V signal for the vehicle high beam at the back of the headlamp, the signal wire for the high beam function can be spliced directly in. If not, then the expectation that the electrical connection to the vehicle would need to be made using our CAN Interface (Dual-Output).

Will the lights work with the Auto High Beam on my vehicle?

Yes. The activation/deactivation of the high beam function of the Lazer product occurs in parallel with the high beams on your vehicle regardless if this dimming is an automatic or manual process. When the high beams have turned off, the Intelligent Low Beam Assist function activates and automatically adjusts depending on oncoming traffic/obstacles.

My vehicle already has 'Matrix' headlights, what benefit will I get from the Intelligent Low Beam Assist?

The standard of 'Matrix' headlights on different vehicles varies from one to the next, so it is difficult to draw specific comparisons. Regardless of vehicle, we can with absolute confidence advise that the high beam performance of each of our Intelligent Low Beam Assist products, both in respect of distance and spread illumination is superior to the level of visibility provided by standard vehicle high beam driving lights. Not least, the superior lighting power that comes from operation each of the lamps in 'E-Boost' mode which increases light output above the ECE Regulation limit (see below). In Low Beam Assist mode, the increased visibility at the sides of the road is superior both in distance, height, and spread.

Will the lights work with Matrix headlights that are already on my vehicle?

Yes. When the Matrix headlights on the vehicle are in FULL BEAM mode (i.e. no oncoming cars), then a signal is given to the Lazer system to indicate that the Lazer products should operate in High beam mode. Conversely, when the matrix headlight is forming a shadow around an oncoming car, the Lazer product enters Intelligent low-beam assist mode, and the Lazer product is then also determining the position of the oncoming car (using it's own onboard sensors), and it too will decrease brightness in the zone where the oncoming car is located. Hence, the Lazer lamp will complement a vehicle which is also running matrix headlights. Please check with Lazer or CANM8 (our preferred CAN interface partner) if the matrix lights your vehicle have been confirmed to work OK in the way described above (Mercedes VITO and Landrover Defender are currently work in progress to get the function working as described above).

Are the Intelligent Low Beam Assist products road legal?

The lamps are UNECE certified to Regulation 112 as Class B high beam driving lights, and they come with a copy of the ECE certificates, which may be kept inside the vehicle when driving to countries such as Switzerland or Germany, where the authorities may ask for proof of certification. The lamps feature dual-output E-Boost technology which enables the

output of the lamp to be increased above ECE Reg 112 levels when driving in countries which don't specify upper limits on the peak intensity of auxiliary driving lights (such as UK, Sweden, Australia etc). The lights do not provide a low beam lighting pattern and should not be considered as "low beam" lights, especially considering the laws in most countries do not allow for the fitment of additional low beams to a vehicle. The "low-beam assist" function merely aids the driver with improved visibility during the transition from high beams to low beams. Intelligent Low Beam Assist is a new, patent-pending technology, as such there are no laws prescribing its use. The forementioned secondary switch allows deactivation of the function where the laws of the country specifically don't allow use.

Will dirt/snow/ice covering the sensors affect performance?

Each time the lamps high beam function is activated the sensors on the lamp recalibrate. This ensures that the sensitivity and reactiveness of the sensors to oncoming traffic and obstacles, is adjusted constantly considering any accumulation of dirt etc on the lens. For continued optimal sensor and lighting performance, we would however recommend cleaning of the lamp before each journey. During fog and snow, it is recommended to deactivate the i-LBA function since the lamp will find it more difficult to identify oncoming vehicles and respond accordingly.

Does the Intelligent Low Beam Assist function work in heavy rain?

The i-LBA function works in heavy rain, however, road spray from other vehicles may cause the lamps to deactivate and activate zones despite there being no oncoming car. This overly sensitive response is to be expected considering the sensor technology used within the lamp, and we would recommend that the driver deactivates the i-LBA function, if the driving conditions are causing the lamps to not operate at their best, from a detection perspective.

Does the Intelligent Low Beam Assist function work during fog or snowfall?

Foggy conditions or while heavy snow is falling will have an effect on the response of the i-LBA sensors, and the lamp is likely to dim and re-brighten regularly despite there being no oncoming car. During these adverse conditions, we would recommend that the driver deactivates the i-LBA function, using the switch which is included with the wiring harness. With lying snow on, and at the sides of the road, the sensors in the lamp calibrate to the higher levels of reflection, ensuring the i-LBA function continues to work effectively.