Clearview Intelligence

PRODUCT BRIEF

SolarLite™ F Road Studs

Solar-powered surface mounted guidance and advance warning to road users day and night

The Clearview Intelligence SolarLite F Road Stud is a solar-powered surface mounted, road stud, designed to provide guidance and advance warning to road users day and night.

This is a smart, safe and sustainable solution for providing delineation and guidance to vehicle drivers, cyclists and pedestrians, while helping to reduce environmental impact, whole-life costs and ultimately, saving lives.

The SolarLite uses high brightness LEDs (Light Emitting Diodes) to provide visibility up to ten times greater than that of traditional retro-reflective studs, and unlike conventional retro-reflective road studs, the SolarLite does not rely on vehicle headlight efficiency to perform effectively.

Applications

The SolarLite advanced solar powered road studs are ideal for a variety of applications:

Highways – improved route visibility, improved safety and clear delineation of roads, roundabouts and junctions, and a viable alternative or complimentary solution to street lighting when installation is not possible for any reason or cost might be prohibitive on a certain road or scheme

Active Travel – improved route visibility and guidance for pedestrians and cyclists - clear delineation of all routes including footpaths and pathway/towpath edges.

Private Networks – improved guidance and visibility - clear delineation of lanes and crossings and other infrastructure.

SolarLite Active studs can significantly increase a driver's reaction time from 3.2 seconds to over 30 seconds at 100km/h (62mph).

Key Benefits

- 10x better visibility than traditional retro-reflective studs - up to 900m
- Visible in adverse weather
- Provide clear delineation of lanes and junctions
- 4x longer lifespan than traditional studs
- Superior solar energy harvesting & storage electronics designed to maintain light outputs throughout a full annual cycle
- Low profile of less than 4mm above the surface
- Full range of colour options including amber, red, white or green
- Performs efficiently even when partially covered by tree lines etc

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Why SolarLite?

Reducing accidents and saving lives

On average five people die every day on the road in the UK and countless more are seriously injured. Driving at night can be particularly hazardous; although only a third of journeys are made during the nightfall, this is when almost half of all serious road accidents occur.

The SolarLite Intelligent Road Stud solution has helped to reduce accident rates by over 70% on current UK installations sites.

The innovative design of the SolarLite studs make them an essential component, as they contribute greatly to reducing the number of road traffic accidents during the period of darkness. The Department for Transport (DfT) has estimated fatalities on UK roads cost over £1.9M, not to mention the dreadful personal consequences of such a tragic, and sometimes, preventable accidents.

The installation of SolarLite studs is an effective way for road authorities to reduce accident rates and, as a result, reduce road closures and congestion. The studs are particularly effective at sites where there is a high accident risk, often on sharp corners, winding roads with poor delineation; or where street lighting is either unavailable, not cost effective or environmentally not possible.

Safer driving behaviour

The Transport Research Laboratory (TRL) has carried out research proposing that the application of SolarLite road studs influences safer driving behaviour. For example, drivers are significantly less likely to cross the central white line, or to move out of lane on a dual carriageway and braking is more consistent and less erratic. Moreover, the studs reduce the use of headlight main beam thereby minimising the risk of dazzling oncoming drivers.

Key Features

- **Accident prevention –** proven to decrease night-time accidents by over 70%
- **Enhanced driver confidence –** visibility of road layout ahead is superior to retro-reflective studs
- **Increased reaction time –** allows additional reaction time to for drivers to respond to changing road layouts
- **Encourages safer driving behaviour –** reducing erratic driving behaviour and easing braking along winding roads (see below)
- **Sustainable solution –** harnesses free solar energy with minimal installation requirements while still performing effectively
- **A complementary solution –** to street lighting where it is either not feasible to install, not cost effective or environmentally not possible
- **Reliability –** performs all year round, all day and at night
- **Reduced costs –** lower whole-life costs compared to traditional road studs
- **Convenient –** long lasting solution with reduced ongoing maintenance requirements - some of our customers have reported that their studs have lasted over a decade and are still effective

Delineation at night

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All year-round operation

We use patented power management technology, to confidently assure reliable, robust and maintenance free all year-round operation. Just three hours of bright daylight will provide full charge for 10 nights operation.

SolarLite F Series embedded road studs are positioned less than 4mm above the surface of the road, pathway or cycleway, making them unobtrusive to motorists, motorcyclists, cyclists and pedestrians. They are also robust enough to withstand traffic passing over them with no adverse effects.

A sustainable technology solution

Local authorities, transport authorities and private sector organisations are constantly looking for ways to reduce costs and lower their environmental impact. SolarLite studs are a sustainable solution that helps reduce energy costs with no negative impact to the surrounding flora and fauna. This is particularly important in rural and remote locations. Several local authorities also use SolarLite studs on footpaths and cycle ways as the embedded studs are both unobtrusive and bicycle friendly

An alternative to lighting on rural roads

A study in 2020, Active Road Studs as an Alternative to Lighting on Rural Roads: Driver Safety Perception by the Transport Research Institute - Edinburgh Napier University, found that active road studs can have a significant positive effect on driver confidence where installed. This research also found that whilst demand for street lighting may remain, where possible, active road studs have a significant positive effect on driver confidence where installed and may be considered a sustainable intervention and alternative / complementary option to street lighting infrastructure, particularly in circumstances where driver safety perception is an issue.

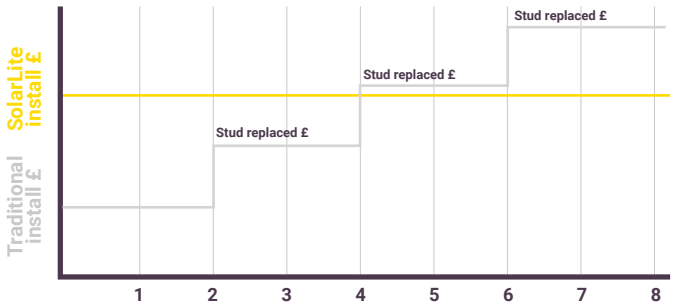
Road studs have been proven to decrease night-time accidents by over 70%

Edinburgh towpath delineation

Lower whole-life costs

The operating life of SolarLite studs is greater than the estimated road surface life expectancy, and the overall costs are substantially lower than that of traditional road studs, with a significant reduction in maintenance costs. All Clearview Intelligence products are extensively tested and are more robustly manufactured (ISO 9001:2008), proven to be at least four times more durable and reliable than conventional retroreflective road studs. All SolarLite studs have UK type approval from the Department for Transport and comply with BS EN 1463.

SolarLite lifetime costs vs traditional studs



www.clearview-intelligence.com Follow us:

t: +44 (0)1908 088008 **e:** info@clearview-intelligence.com

Head Office: Aurora House, Deltic Avenue, Rooksley, Milton Keynes, MK13 8LW

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