

## Clearview Intelligence SolarLite S Series Surface Mount Stud

Always read these instructions even if you are familiar with the installation process for Clearview Intelligence Road Studs.

Clearview Intelligence are the creators of the Intelligent Road Stud and have designed and developed the solar powered inset mounted, flush, road stud. These provide a flexible and innovative approach to traffic safety. Designed to provide guidance and advance warning to drivers day and night.

Under no circumstances should the stud be dismantled. Failure to comply with this or these installation instructions will invalidate the warranty. The positioning and colours of the installed studs should conform with the existing laws and regulations, where applicable, of the country of installation.

Correct installation is essential if the road markers are to achieve good adhesion to the road surface. Solarlite surface studs must only be installed in hard-aggregate surfaces such as tarmac or concrete with an approved installation compound as listed in this document. It is the responsibility of the installer to ensure that road construction and weather conditions are suitable for the installation of studs.

To maximise the effectiveness of the enhanced delineation provided by Clearview Intelligence studs, Clearview studs should commence at least 100m prior to the start and continue 100m from end of the bend in addition to the bend itself. When multiple bends are in close proximity to each other, it is also recommended that Clearview studs are installed between the bends to ensure continuity of the visual effect.

-  Do not attempt installation work if the road surface is wet, damp or when the road/surface temperature is below 0°C.
-  Ensure that the correct Personal Protection Equipment is worn at all times.
-  Always refer to the handling and usage instructions provided with the fixing materials.

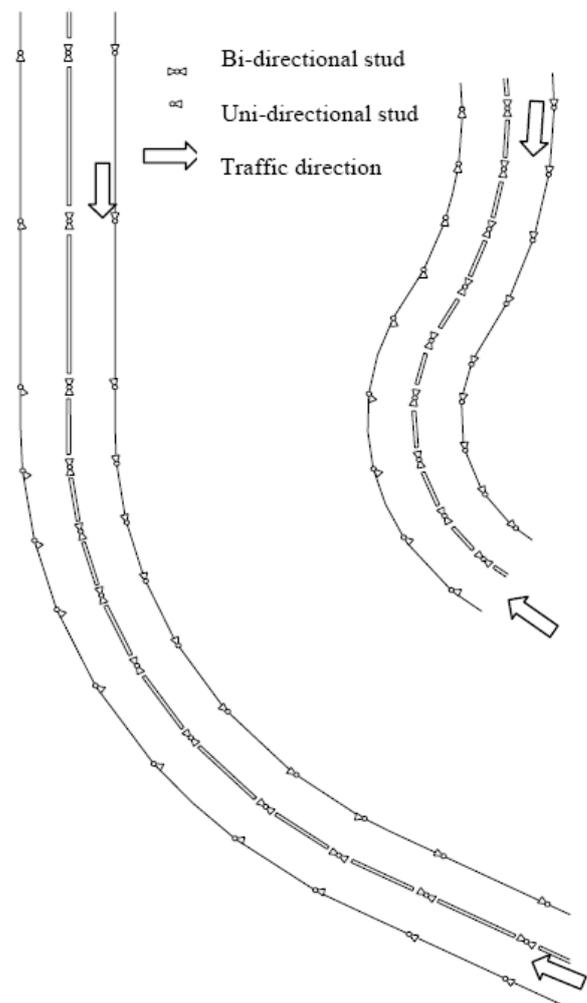
### Alignment

When locating the stud for installation, ensure that the reflective face of the stud is orientated correctly facing the traffic.

It is recommended that on curves, bi-directional studs in the centre of the road be positioned such that the light output is seen clearly and as early as possible by motorists travelling in either direction.

On tight radii bends it is good practice to align every other bi-directional stud to be optimum for one direction of travel then the other. On such tight radii bends the use of red unidirectional nearside studs is also highly recommended.

Refer to the diagram on the right for examples of typical layouts showing the direction of light output together with the direction of traffic.



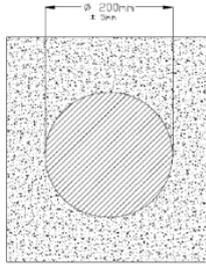
### Installation Step by Step Instructions

#### Step 1

Using chalk or an environmentally friendly aerosol spray, accurately mark on the road surface, the correct positions to locate the Surface studs. These studs **must** only be installed on the surface of a hard-aggregate surface such as tarmac or concrete.

## Step 2

At the site of each stud installation, check the road surface. If the surface has an enormously deep texture depth and is very rough, grind the surface flat to a diameter of 200mm ( $\pm 5$ mm).



## Step 3

Clean the road surface of loose debris at the points where the studs are to be placed using either compressed air or vacuum removal.



- Ensure that the correct Personal Protection Equipment (PPE) is worn and that blown debris is not directed at persons or vehicles.

## Step 4

Ensure all surfaces are clean, dry, and free from dust and debris prior to installation, if any surface shows signs of moisture; the moisture must be removed either using a compressed air lance or a propane gas torch.

- Ensure that the correct Personal Protection Equipment is worn and that any blown debris is not directed at persons or vehicles.

## Step 5

**⚠** Caution should be used when using the gas torch so as not to over heat and damage the surface. As overheating the bitumen will allow the polymer to burn off, causing the road surface to break up over a short period of time. This in turn could allow the stud to become dislodged from the road.

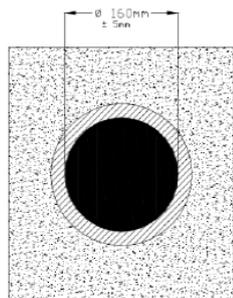
Mix an appropriate amount of fixative resin. An appropriate grade of two pack bitumen extended epoxy resin should be used, see approved resins note below: Approved installation compound for United Kingdom DfT type approval is **Triflex Ceryl R238** (referred to as resin) and must be used for any United Kingdom public highway installation.

Approved installation compound (excluding United Kingdom) is **Robnor Polyurethane Stud Sealant EL628SS** (referred to as resin).

**⚠** Always refer to the handling and usage instructions provided with the fixative resin.

## Step 6

Pour a small pool of the fixing material to a diameter of 160mm ( $\pm 5$ mm) to the position on the road where the stud is to be placed using a hand jug of no more than one litre capacity. This ensures accuracy of the poured fixing material. Sealant EL628SS (referred to as resin)

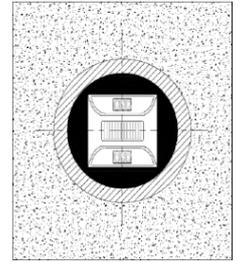


Place a very small amount of the fixative material onto the underside of the stud filling the voids in the moulding and scrape off any excess.



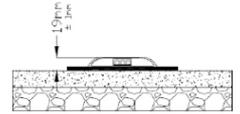
## Step 7

Immediately place the stud centred onto the pool of fixing material. The stud should be positioned with the LED's facing oncoming traffic and in accordance with the alignment shown on the site layout diagram. If the fixing material gets onto the upper surfaces of the stud wipe it off immediately



## Step 8

Make any fine adjustments necessary to the alignment. There is only a very short time (approximately one minute), in which this adjustment can be made prior to the fixing material curing.



## Step 9

Clean site after the installation and remove all debris from the carriageway.

Installation complete.

Clearview Intelligence reserve the right to change or modify product specifications.

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World wide patents coverage. .

All values are nominal.