

Highways LED Lighting Solutions

- ✓ Cuts Costs
- ✓ Cuts Carbon
- ✓ Passively Safe



UPLIGHTER



SIGN LIGHTS

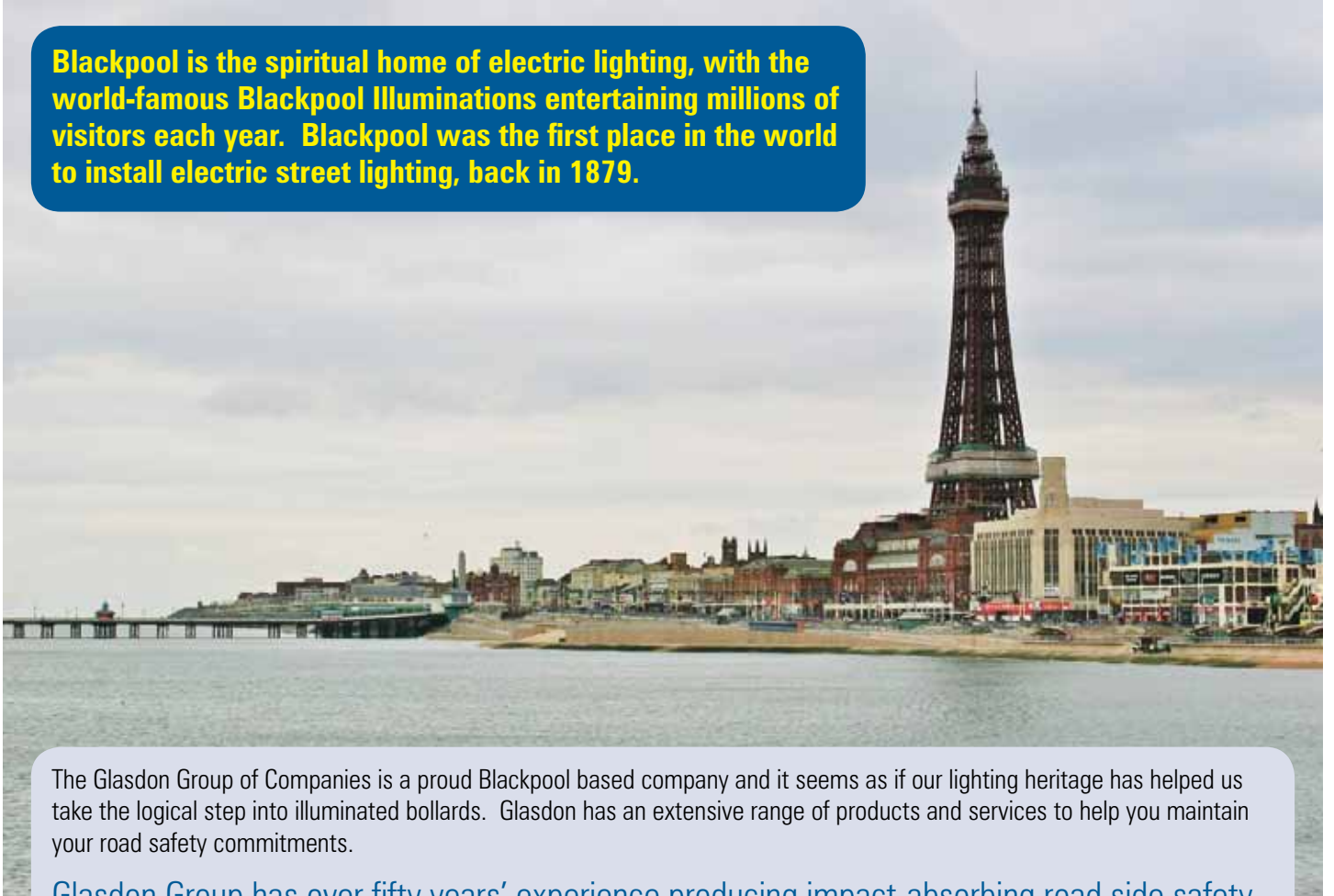


BOLLARDS



History

Blackpool is the spiritual home of electric lighting, with the world-famous Blackpool Illuminations entertaining millions of visitors each year. Blackpool was the first place in the world to install electric street lighting, back in 1879.



The Glasdon Group of Companies is a proud Blackpool based company and it seems as if our lighting heritage has helped us take the logical step into illuminated bollards. Glasdon has an extensive range of products and services to help you maintain your road safety commitments.

Glasdon Group has over fifty years' experience producing impact-absorbing road side safety products and innovative lighting solutions for highways.

With the successful launch of Rebound Signmaster in 2005, Glasdon UK found a gap in the market for a non-illuminated keep left bollard. Our dedicated team of product designers, who are always looking for new product innovation and development, saw the potential in this unique product to replace traditional, rigid keep left bollards.

With an already extensive lit bollard network across the UK, an LED conversion kit was designed to allow Authorities to upgrade their existing illuminated bollard technology to state of the art LEDs and a high performance rebound bollard, whilst keeping their existing underground lightboxes. This meant less initial costs, which is always a benefit!



The attraction of LED illuminated bollards gave additional appeal by reducing ongoing energy and maintenance costs. Compared to traditional lamps, an average saving of 80% on electricity costs can be made by switching to Glasdon LED lighting.

Once the LED Rebound Signmaster range was established, the next venture for Glasdon UK and LED illumination was sign lights. Following a similar path, a gear tray was introduced to the range in 2012 to allow customers to convert their existing sign lights to energy efficient LEDs. This technology was then added to our clever design skills and the Lumino City LED Downlighter was launched in 2013.

Glasdon will remain at the forefront in providing LED Lighting Solutions, which incorporate the latest in LED technology energy saving solutions and low power consumption. Customers will receive a 3-year warranty as standard on all LED lighting products and our LEDs are designed to last a minimum of 50,000 hours - which equates to over 10 years of use when fitted with a Photocell or CMS control device. Through development and continuous improvement Glasdon will ensure its customers receive products that Cut Costs, Cuts Carbon and are Passively Safe.

We are continually improving our facilities and have recently built a state of the art Innovation and Export Centre. This new structure houses our impressive Product Design team who are constantly designing and researching new products for the Glasdon range.



Passively Safe



Passively safe street furniture is designed to minimise the severity of injury to occupants of a vehicle that collides with it. The European Standard BS EN 12767 defines a universal test that establishes the performance of a passively safe roadside structure.

The performance rating is displayed in the following format:

The first number indicates the class impact speed in Km/h: 50, 70 or 100 Km/h. Tests are conducted with a small (900kg) car in a head-on, frontal impact.

The two letters represent the energy absorbed by the structure: High energy absorbing (HE) support structures slow the vehicle considerably on impact; Low energy (LE) structures measurably slow the vehicle but pose a much lower risk of injury to its occupants; Non-energy absorbing (NE) structures have negligible or nil effect on the speed of the vehicle.

The final number represents the occupant safety level and is based on the Acceleration Severity Index (ASI) and Theoretical Head Impact Velocity (THIV) scales, according to European Standard BS EN 1317-1. The available levels are 1-4, where Level 4 represents the safest and Level 1 the most dangerous.



Glasdon passively safe highways products are tested by accredited independent specialists at MIRA and TRL. Where testing has been conducted, the performance rating will be clearly shown on the page.

High Performance Materials

Glasdon lighting products are manufactured from a range of higher performance materials and undergo stringent checks to ensure durability and best value. Glasdon has ISO 9001:2008 and ISO 14001:2004 accreditation, underlining our commitment to quality.



Durapol® Material

A strong, lightweight material that offers a number of advantages over traditional materials. Durapol material is self-coloured, which means it will never need painting and scratches will not show. The material is totally corrosion-free so it will not chip or rust, is UV stable and vandal resistant.

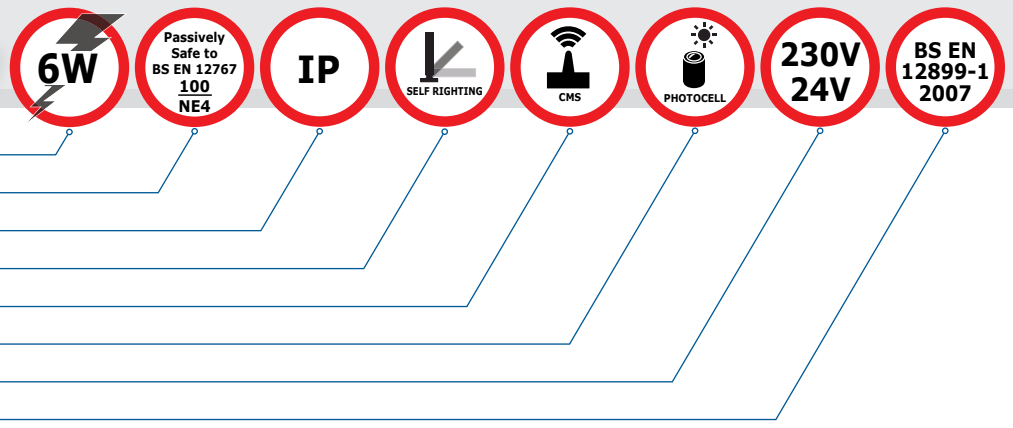
Passively Safe Impactapol® Material

A flexible material with excellent recovery performance, meaning it will return to its original shape following a drive-through collision. Impactapol products reduce maintenance costs in vulnerable locations by continuing to statutory requirements even after repeated impacts. Impactapol offers all the additional benefits of Durapol - it is self-coloured and totally corrosion-free.

Armortec® Corrosion Resistant Coating

A specially formulated coating to extend the life of Glasdon metal products and components used externally.

Quick Reference Key



Contents

Non-Illuminated Bollards

Exceptional reflectorisation whilst eliminating electricity costs.

Rebound Signmaster™ Bollard5-14

Illuminated Bollards

A range of LED illuminated options available for existing installations/light boxes or new installations.

Solar Signmaster™ LED Bollard 9

Rebound Signmaster Sublite™ LED Lighting Unit & Underground Box10-11

Rebound Signmaster™ LED 24V Flush Installation Kit 12

Sublite Pod™ IP68 LED Gear Tray & Conversion Kits..... 13

Sign Lights

A range of LED illuminated options to comply with BS EN 12899-1 for new installations or existing sign lights.

Sublite Lumino™ LED Uplighter 15

Lumino City™ LED Downlighter Range..... 16-18

Ecolumino™ LED Downlighter Gear Tray..... 19

Rebound Signmaster™ Non-Illuminated Bollard

Non-illuminated Rebound Signmaster is ideal for locations where no illumination is required. This allows for a consistent bollard installation throughout your traffic schemes, where illuminated and non-illuminated bollards are required. The retroreflective panels and signface give excellent visibility and increase safety.

Key Features

- **Passively Safe** - Achieves NE4 at 100Km/h (62mph) the highest possible rating for a self righting bollard.
- **Reduces Energy Costs** - Fully reflectorised panels provide exceptional visibility during all hours.
- **Low Maintenance** - Smooth finish and recessed reflectorised panels make it easy to clean.
- **Surface Mounting or Socketed Options** - Range of fixing options and adaptor kits for compatibility with all kinds of installation.

Design Features

Manufactured from Impactapol® Material

Double-skinned to ensure exceptional strength and durability.

360° Reflectivity

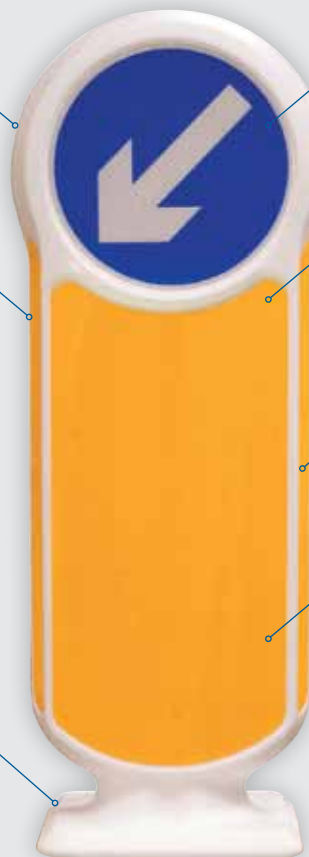
Provides excellent all-round visibility making it ideal for use at junctions.

Drive-Through Performance Proven at TRL

(Bollard meets BS EN 12767 NE4) Rebound Signmaster, Rebound Signmaster Sublite and 24V Flush Installation Kit have proven drive-through performance at 100Km/h (62mph).

Anti-Twist Design

One piece bollard with integral fixing points.



300mm Signface

Large retroreflective sign face helps increase safety.

Retroreflective

Highly visible by day and by night.

Visibility

Side patches have class-leading size and are angled for a wider side view.

Recessed Panels

Tamper, vandal and weather resistant.

Uniformity

Helps to create a co-ordinated street scene. Non-illuminated and illuminated options.

Rebound Signmaster Surface Mounting



Excellent visibility from all angles.



Exceptional retroreflective performance.





Black Rebound Signmaster, Non-Illuminated, Surface Mounted Bollard.



Black Rebound Signmaster, Non-Illuminated, Surface Mounted Bollard.



White Non-Illuminated, Socketed Rebound Signmaster Bollard.



White Non-Illuminated, Socketed Rebound Signmaster Bollard.

Passively Safe To help save a life

PASSED
at 100 Km/h (62mph)



Outperforms traditional illuminated bollards.

Rebound Signmaster Bollard, Rebound Signmaster Sublite and 24V Flush Installation Kit have been tested by TRL Ltd and passed to Performance Standard NE4/100Km/h under BS EN 12767:2007. (Passive safety of support structures for road equipment).

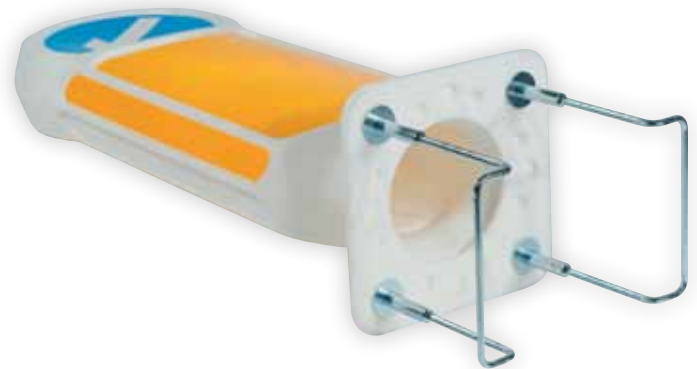
Manufactured in passively safe Impactapol material to help prevent or reduce the severity of personal injury in the event of vehicle impact. If impacted or run through, Rebound Signmaster will return to an upright position ensuring the hazard remains clearly marked, thereby saving on replacement and reinstatement cost.



All fixing options allow for quick and easy bollard removal and reinstatement.



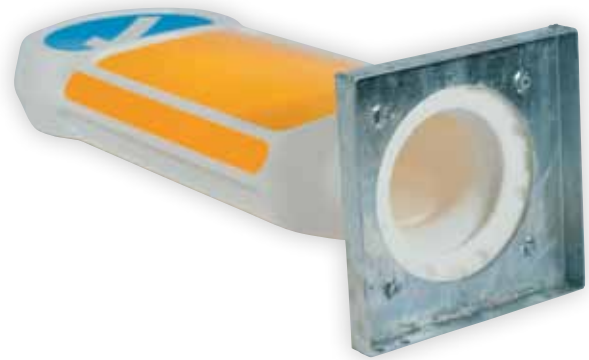
Bolt-down fixing. Fix directly into an existing or new concrete foundation.



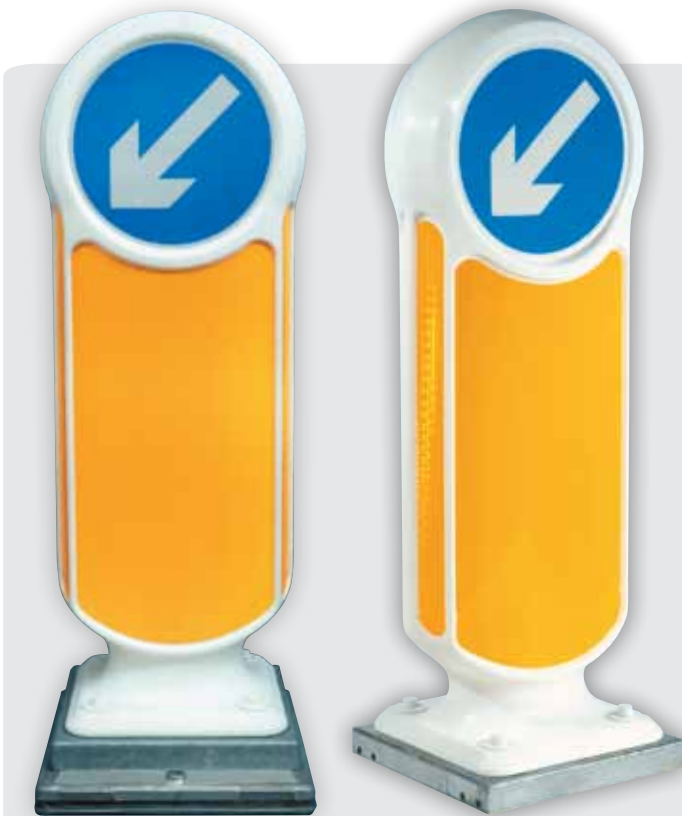
Fixed depth concrete-in anchor. Suitable for new concrete foundation.



Adjustable depth concrete-in anchor. Flexibility for avoiding services or other underground impediments in new concrete foundations.



Adaptor plates. For attaching to pre-existing redundant base boxes. Range of adaptor plates offered to suit most leading industry light boxes.



Galvanised Adaptor Plates

Six different adaptor plates all in Galvanised finish for corrosion resistance and to match the finish of light boxes.



Adaptor Plates available for fitting to:

- Forest City
- Haldo (Domed lens)
- Haldo (Flat lens)
- Haldo Halo
- John Wilkinson
- Morrison
- Pearce Gowshall
- Pudsey Diamond Traffic
- Signature Blbase 12
- Signature Blbase 51
- Signature Budget
- Signature Citybase

- Signature Elite MKIII
- Signature Premium
- Signature Quick Access
- Signature Quick Release
- Signature Safebase
- Signature Superbase
- Signature Superior
- Signature Surebase
- Simmons signs Global
- Simmons signs Global Plus
- Truesigns

Design Features



Small Footprint

Ideal for smaller traffic islands.

Moulded Round Stem

Provides excellent drive-through performance from all angles.

Socket Manufactured from Durapol® Material

Corrosion-resistant and impact-resistant material.



Socketed Rebound Signmaster



Quick and Easy Bollard Replacement

Anchor Peg

Secures the bollard into the socket. The peg engages with a lock mechanism to prevent the bollard being removed without the specially designed key. The lock remains operational following a drive-through impact for ease of bollard replacement.



Concrete Shelf

Allows concrete to flow over the shelf of the socket offering anchorage.

Flat Based Socket

For ease of installation.



Keyed Quick Release Mechanism

Allows replacement bollard to be installed in seconds.

Durapol Socket Plug

Allows for easy replacement if a bollard is damaged, secures the bollard into the socket and prevents debris entering the socket.

New Solar Signmaster™



The smart 'zero energy' highway solution has arrived.

Solar Signmaster™ is the ideal solution for new and existing traffic island schemes, offering increased visibility at night without the direct mains electricity costs.



During daylight hours, the solar panel charges the large capacity batteries which are housed in the sealed (IP67 rated) below ground chamber.



The large 300mm LED sign face is operated by LDR for night-time illumination. Powered by a smart 'Eco Mode' LED circuit when battery voltage is below 6V (50%) to maximise the run-time of the LED.

New Solar Signmaster™

- Zero Direct Energy Costs
- Smart Power
- IP Rated Protection
- High Visibility
- Versatile
- Passively Safe

Rebound Signmaster Sublite™ LED Lighting Unit & Underground Box

Illumination is still required by law for many bollard installations. Sublite LED Lighting Unit features low power consumption and an infrared phototransistor that ensures the unit is only lit during the hours of darkness, significantly reducing energy costs compared to traditional alternatives.

Key Features

- **Low Power Consumption** - From as low as 5W.
- **Available in 230V ac or 24V ac** - Low voltage option.
- **Remains Illuminated following a Vehicle Collision** - Concrete anchoring system secures the base box into the ground. Proven at 100Km/h (62mph).
- **Water Ingress Protected (IP67)** - Reduce maintenance resource and associated costs caused by water ingress.
- **Built-in Phototransistor and CMS Equipment Compatibility** - Minimises power consumption and maximises LED lifetime.



Design Features

Infrared Phototransistor

Ensures the unit is only illuminated during the hours of darkness. Set to remain illuminated for an average of 2 hours per day longer than street lighting.

50,000 hour minimum LED Lifetime

When used with a phototransistor or a CMS device this equates to over 10 years of use.

Low Power Consumption, High Power Factor LED Circuit

Includes a resettable fuse.

Integrated Fixing Points

Four fixing points ensure a secure bollard attachment.

Sealed LED Housing and Lens

IP67 rated offering excellent water and dust protection. The domed polycarbonate lens protects the LED in the event of a drive-over.

Sealing Gasket

Prevents water and dirt gathering on the lens.

Concrete-in Bars

Provides additional anchorage offering excellent drive-through performance.

Concrete Shelf

Provides anchorage when installed into concrete.



Optional Extras



Ducting Chamber

Allows 230V cable to be laid at the legal requirement depth. Multiple boxes can be stacked to add more depth if required.



Installation Lid

Prevents concrete getting inside the unit during installation.



Phototransistor Cover Cap

For 24 hour illumination (regardless of external light levels).



230V ac to 24V ac Transformer

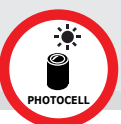
Transformer for 24V model available.



Ducting Splitter

Allows 2 ducts to be connected to the unit.

PASSED
at 100 Km/h (62mph)



Compared to traditional lamps, an average of 80% saving on electricity costs can be made by switching to Rebound Signmaster LED Lighting.

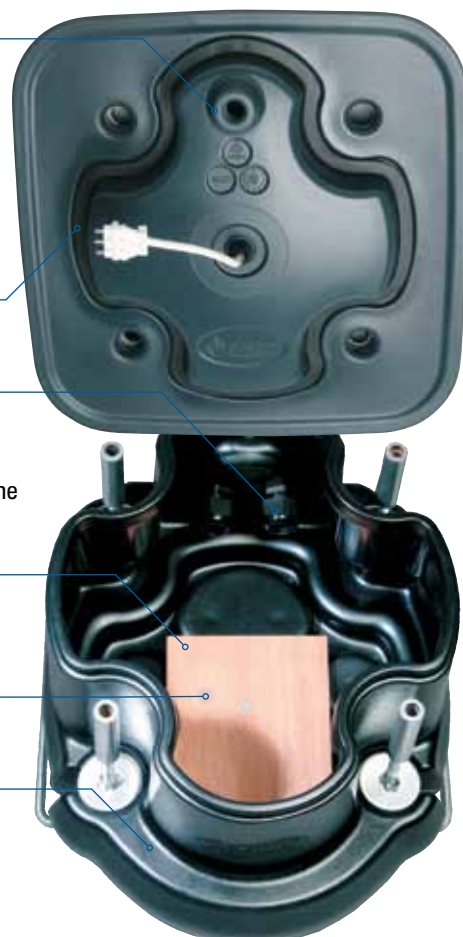


White Mini Ensign™ Illuminated rebound bollard is available with Sublite LED Lighting unit and underground box. Ideal for cycle lane delineation.



Compatible with CMS Telemetry Equipment

Equipment stored safely within the IP67 chamber, attached to the underside of the sealed lid.



Sealing Gasket
Helps seal the unit to IP67 rating.

IP68 Rated Glands
Prevents water entering the chamber and damaging the internal components. Can be sited at the rear of underneath the unit (please specify at point of order).

Spacious Internal Area
Able to house almost any brand of cut out and a transformer if required.

Equipment Mounting Board
Can be specified in 2 positions.

Highly Resilient
100% recycled Durapol® Material (chamber only).



50/100mm Ducting Connector

Prevent exposed wires by connecting ducting to the chamber.

Technical Specifications

	230V ac	24V ac
Power Use (ON)	5.0W	6.5W
Power Use (STANDBY)	0.33W	1.5W
UMSUG Code (ON)	40 0005 0012 100	40 0005 0000 100
UMSUG Code (STANDBY)	96 0001 0003 100	96 0002 0000 100
Power Factor	0.91	0.48

(24V ac Transformer is IP68 rated and will run up to 3 Bollards)



LED 24V Flush Installation Kit

The LED 24V Flush Installation Kit is designed without a light box for quick installation into concrete, it can accommodate 50mm or 100mm ducting to suit your requirements.



Key Features

- **Low Power Consumption** - 6.5W.
- **Quick and Easy Installation** - Slot-cut a low-voltage cable supply without costly carriageway closures.
- **Flush Installation** - Added safety as no hazard is created if the bollard is removed.
- **Remains Illuminated Following a Vehicle Collision** - Proven at 100km/h (62mph).



Rebound Signmaster LED 24V Flush Installation Kit with optional 100mm Bend.

Design Features

Stainless Steel LED Housing Cover

Will not rust or corrode.

Infrared Phototransistor

Ensures the unit is only illuminated during the hours of darkness. Set to remain illuminated for an average of 2 hours per day longer than street lighting.

50,000 hour minimum LED Lifetime

When used with a phototransistor or a CMS device this equates to over 10 years of use.

IP67 Rated LED Housing

Offers excellent water and dust protection.

Integrated Fixing Points

Ensures secure bollard installation.

Sealing Gasket

Prevents water and dirt gathering on the lens.

Aluminium Chamber

Reduces the risk of corrosion.

Passive Safety tested at TRL

The LED 24V Flush Installation Kit remained illuminated after drive-through at 100km/h (62mph).

Ducting Compatibility

Aluminium funnel fits both 50mm and 100mm Ducting.



Zinc Coated Mild Steel Concrete-in Bars

Provides anchorage into the ground offering excellent drive-through performance.



50mm or 100mm Ducting

Optional Extras



Phototransistor Cover Cap
For 24 hour illumination (regardless of external light levels).

100mm Bend (see above)



230V ac to 24V ac Transformer
Transformer for 24V model available.



Installation Lid
Protects the unit and fixing points during installation.

Technical Specifications

	24V ac
Power Use (ON)	6.5W
Power Use (STANDBY)	1.5W
UMSUG Code (ON)	40 0005 0000 100
UMSUG Code (STANDBY)	96 0002 0000 100
Power Factor	0.48

(24V ac Transformer is IP68 rated and will run up to 3 Bollards)

IP68 LED Gear Tray & Conversion Kits

Upgrade your existing installations to low-energy illumination and a high-performance Signmaster bollard with a Glasdon LED Gear Tray and Conversion Kit. Our LED Gear Trays are available for the majority of underground light boxes in use in the UK.

3
YEAR
WARRANTY

Key Features

- **IP68 (Ingress Protection) Rated Pod** - Protects the LED circuit in case of ingress protection failure of the chamber it is housed in.
- **Interchangeable Gear Tray Plates** - Compatible with more than 20 industry-leading light chambers.
- **Low Power Consumption** - From 5W (230V). Low voltage (24V) version also available.
- **Snap-Fit Gear Tray Plates** - Trays can be fitted during installation to ensure compatibility with the chamber and reduces the risk of wasted call-outs.

Design Features

Low Power Consumption, High Power Factor LED Circuit

Includes a resettable fuse.

50,000 hour minimum LED Lifetime

When used with a phototransistor or a CMS device this equates to over 10 years of use.



Infrared Phototransistor

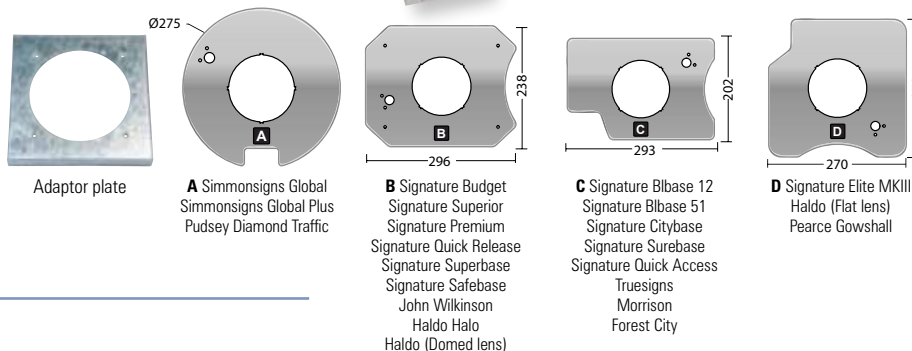
Ensures the bollard is only lit during the hours of darkness. Set to remain illuminated for an average of 2 hours per day longer than street lighting.

Connection Plug

Choice of 3-pin plug or supplied without a plug for wiring directly into an IP rated cut out. IP68 rated plug available as an optional extra.

Four Standard Gear Tray Conversion Kits Available

Most leading industry light boxes can be converted to Rebound Signmaster LED. Check with our Sales Office for compatibility if your adaptor plate model is not listed here.



Rebound Signmaster with Sublite Pod Conversion Kit

Optional Extras



Phototransistor Cover Cap

For 24 hour illumination (regardless of external light levels).



230V ac to 24V ac Transformer

Transformer for 24V model available.



IP68 Rated Plug

Offers an IP68 rated plug connection to the cut out.

Technical Specifications

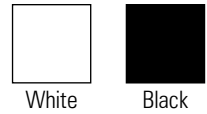
	230V ac	24V ac
Power Use (ON)	5.0W	6.5W
Power Use (STANDBY)	0.33W	1.5W
UMSUG Code (ON)	40 0005 0012 100	40 0005 0000 100
UMSUG Code (STANDBY)	96 0001 0003 100	96 0002 0000 100
Power Factor	0.91	0.48

(24V ac Transformer is IP68 rated and will run up to 3 Bollards)

Rebound Signmaster™ Bollard Specifications

Dimensions

	Surface Mounting	Socketed
Overall Height	1046mm	1074mm
Max. Bollard Width	398mm	398mm
Max. Bollard Depth	200mm	152mm
Bolt-down Foot Detail	328 x 328mm	-
Fixing Centres	228 x 228mm	-
Socket Width	-	209mm
Socket Length	-	237mm
Socket Depth	-	306mm
Sign Face	300mm diameter	300mm diameter
Front/Rear Patch True Visibility Area	165,183mm ²	151,475mm ²
Side Patch Area	26,820mm ² per patch	20,784mm ² per patch
Total Side Patch Area	53,640mm ²	41,568mm ²
Weight of Bollard	6kg	6.9kg



(LED Illuminated Rebound Signmaster available in White only.)

Retroreflective Patch Options



1 x Fluorescent Yellow retroreflective front panel.
2 x Fluorescent Yellow retroreflective side panels.
1 x 300mm Signface.



1 x Fluorescent Yellow retroreflective front panel.
1 x Fluorescent Yellow retroreflective back panel.
4 x Fluorescent Yellow retroreflective side panels.
1 x 300mm Signface.



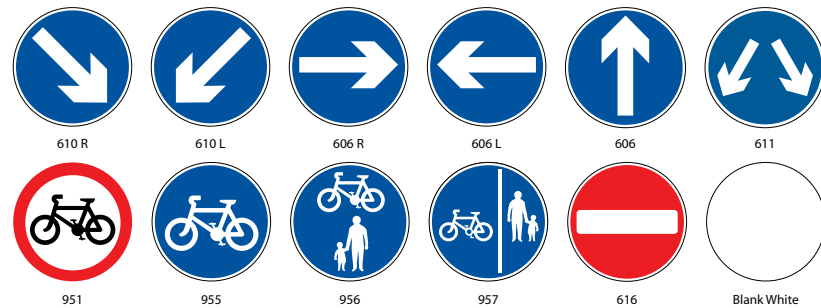
1 x Fluorescent Yellow retroreflective front panel.
4 x Fluorescent Yellow retroreflective side panels.
1 x 300mm Signface.



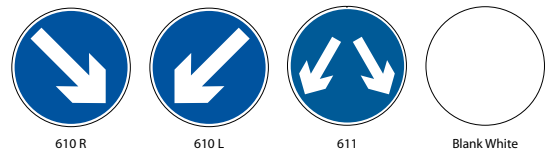
1 x Fluorescent Yellow retroreflective front panel.
1 x Fluorescent Yellow retroreflective back panel.
4 x Fluorescent Yellow retroreflective side panels.
2 x 300mm Signfaces.

Sign Options

Rebound Signmaster has the option to carry one or two signs.
Rebound Signmaster LED Legal Sign Options (for use on highways).



Rebound Signmaster Legal Sign Options (for use on highways).



Other Sign Options are available on request.
Please contact our Sales Office for details.

Materials

Bollard: Impactapol® Material
Socket: Durapol® Material
Fixings: Stainless Steel
Sublite: Underground Box, Ducting Chamber and Splitter: 100% Recycled Durapol

LED Lighting Unit: Durapol
Concrete-in Bars: Mild Steel BZP
Installation Lid: 100% Recycled ABS
Retroreflective Sign/Patches: Avery Dennison Fluorescent Yellow and Translucent White

LED Uplighter

Lighting the Diagram 606 sign face on a Roundabout chevron installation is a legal requirement. Sublite Lumino LED Uplighter is designed to provide excellent levels of illumination while retaining the passive safety features of our Chevroflex Ultra™ Sign System.



Key Features

- **Improves Road Safety** - Flush installation means no need for posts to mount luminaires to - reducing the hazard severity.
- **Low Power Consumption** - 11W.
- **Water Ingress Protected (IP67)** - Reduce maintenance resource and associated costs caused by water ingress.

Design Features

Infrared Phototransistor

Ensures the unit is only illuminated during the hours of darkness.

IP67 Rated LED Housing

Offers excellent water and dust protection for the light unit.

Concrete Shelf

Provides anchorage when installed into concrete.

Versatile Configurations

Multiple ducting options and optional extension chambers can be used to adapt the Sublite Lumino to meet your requirements (see Optional Extras).

Highly Resilient

100% recycled Durapol® Material (chamber only).

Compatible with CMS Telemetry Equipment

Equipment stored safely within the IP67 chamber attached to the underside of the sealed lid.

Please contact our Sales Office for details.



Flush Ground Uplighter

Removes the potential impact hazard created by a traditional post mounted downlighter.

Hinged LED Plate

Allows adjustment of the light direction after installation.

11W Power Consumption

Low energy and low maintenance.

IP67 Rated Chamber

Spacious internal cavity provides storage space for protecting equipment stored below ground.



Ideal for use with Chevroflex Ultra Sign System

Optional Extras



Installation Lid

Ducting Splitter

Ducting Chamber

Phototransistor Cover Cap

Overgrowth Restricting Surround

Technical Specifications

	Sublite Lumino 230V ac		
	600	900	1200
Compatible Sign Sizes (mm)	600	900	1200
Mean Illuminance	E3		E2
Uniformity of Luminance	UE3		UE1
Power Use (ON)	11W		
Power Use (STANDBY)	0.66W		
UMSUG Code (ON)	40 0011 0002 100		
UMSUG Code (STANDBY)	96 0001 0004 100		
Power Factor	0.91		

Lumino City™ LED Downlighter Range

Lumino City offers reduced power consumption (as low as 3W) without compromising on luminance performance. Available in two sizes for signs from 600mm to 1500mm diameter, Lumino City is manufactured from our impact absorbing Impactapol® Material to withstand vehicle impacts and improve longevity.



Key Features

- **Low Power Consumption** - From as low as 3W.
- **Remains Operational Following a Vehicle Sideswipe Collision** - Flexible housing manufactured from impact absorbent Impactapol.
- **Water Ingress Protected (IP66)** - To reduce maintenance time, resource and associated costs.
- **Range of Mounting Options** - Brackets available to fit a variety of post diameters, top or mid point of post and single or double sided.
- **Innovative 4 in 1 Fixing Bracket Option available** - see page 18 for details.

Can Absorb Vehicle Sideswipe



Impactapol material housing will flex if impacted by a vehicle and return to its normal position afterwards.



Lumino City 750



Lumino City 1500

Optional Extras



Infrared Photocell 0.25W

Ensures the unit is only active during the hours of darkness. UMSUG Code 94 0001 1000 100

Photocell Options

Model (lux): 70 55

Please contact our Sales Office for details.



Central Management System (CMS) Internal Cradle

CMS devices can be installed inside the housing. The telecell is completely enclosed for maximum protection, reducing the risk of vandalism or damage and ensuring interference-free operation of the telecell.

Please contact our Sales Office for details on compatible equipment.



Power Options

230V
Mains Powered



Lumino City 750

Lumino City 1500

Best For: Increased reliability, simple installation and long lifespan.

24V
(Lumino City 750) with Driver & Transformer



Lumino City 750



Optional 230V ac to 24V ac Transformer available - or use your own

Best For: Improved safety in case of a drive-through collision and low power consumption.

Technical Specifications

	Lumino City 750				Lumino City 1500		
	230V ac		24V ac (with transformer)		230V ac		
Compatible Sign Sizes (mm)	600	750	600	750	900	1200	1500
Mean Illuminance	E2		E2		E2		
Uniformity of Luminance	UE3	UE2	UE3	UE2	UE3	UE3	UE2
Power Use (ON)	3.6W		3.0W		8.0W		
UMSUG Code (ON)	40 0003 0008 100		40 0002 0002 100		40 0008 0021 100		
Power Factor	0.91		0.82		0.92		

Design Features



High Grade Aluminium Bracket - Manufactured from durable and robust Armortec® coated aluminium.

Energy Efficient Mains Powered LED - Reduces energy costs, maintenance and carbon footprint.

State of the Art LEDs - Provide a minimum expected lifespan of 50,000 hours when used with a phototransistor or CMS device this equates to over 10 years of use.

Resettable Fuse - Protects the circuit.

High Performance Optics - Optimal light spread and uniformity using the fewest LEDs possible for better reliability and lower power usage.

Aluminium Heatsink - Regulates the heat output from the LEDs to maximise the life span of the LEDs.

Lightweight - Easier and safer handling during overhead installation.

Complies with BS EN 12899-1:2007 - Class UE2 for uniformity of illuminance, and Class E2 for mean illuminance.

Specifications

Weights (with brackets)	750	1500
Single Unit:	2.5kg	3.3kg
Double Unit:	4.6kg	6.2kg
Universal Single Unit:	2.1kg	2.9kg
Conformity to BS EN 12899-1:2007		
Mean Illuminance Class	E2	E2
Uniformity of Illuminance Class	UE3/UE2*	UE3/UE2*

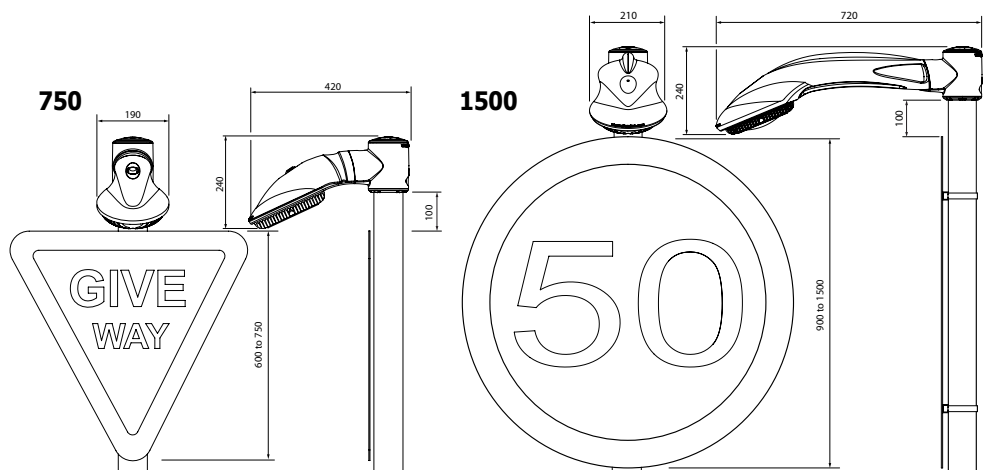
Materials

Signlight Arm: Impactapol® Material
 Brackets and Heatsink: High Grade Aluminium
 Cap and Conversion Collar: Impactapol
 All Fixings: Stainless Steel

Colours

Aircraft Grey, Black.

*Uniformity value varies based upon sign size and shape.



Lumino City™ Fixing Options

1. Single Top and Mid Post Fixing Kit



Single Sided Closed Top
- 76mm or 89mm posts.

OR



Single Sided Open Top
- 76mm or 89mm posts.
- Without cap for mounting the light part way down the post.

2. Double Top and Mid Post Fixing Kit



Double Sided Closed Top
For mounting two sign lights back-to-back.
- 76mm or 89mm posts.
- Complete with cap for mounting the light onto the top of the post.

OR



Double Sided Open Top
For mounting two sign lights back-to-back.
- 76mm or 89mm posts.
- Without cap for mounting the light part way down the post.

3. Universal Bracket for Post Fixing Kit



Universal Bracket
For larger diameter posts (114mm, 140mm, 168mm), and lamp posts.
Fitted with Tamtorque banding.

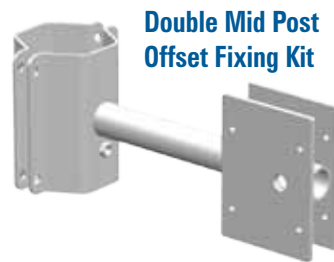
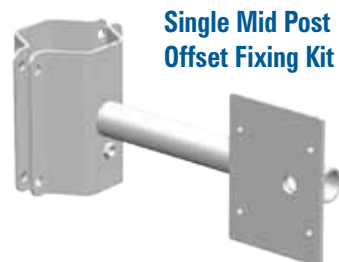
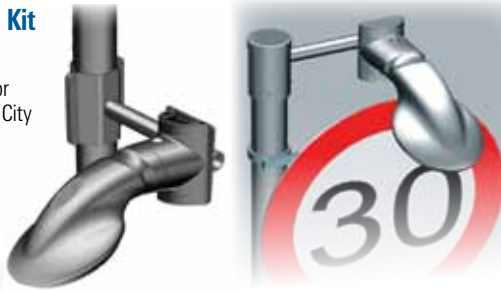
4. Universal Bracket for Wall Fixing Kit



Universal Bracket
For wall mounting.

5. Offset Bracket Fixing Kit

- 76mm posts only.
- Requires a Universal Bracket for post fixing kit to attach Lumino City to the Offset Bracket.



6. Clamp Bracket

- For fitting without Tamtorque banding.
- Requires a Universal Bracket for Post Fixing Kit to attach Lumino City to the Clamp Bracket.



Single Mid Post 76mm Fixing Kit



Double Mid Post 76mm Fixing Kit



Single Mid Post 114mm Fixing Kit



Double Mid Post 114mm Fixing Kit



LED Downlighter Gear Tray

Upgrade your existing sign light housings to LED illumination with Ecolumino retrofit gear trays.

Key Features



- **Low Power Consumption** - From as low as 2.8W.
- **Low cost route to Energy Efficiency** - Upgrade existing sign light housings to the latest energy efficient LEDs.
- **Easy Installation** - Compatible with most common types of sign light housing.
- **Two models available** - Minimise power consumption on a range of signs from 600mm to 1500mm diameter.

Ecolumino 750



To illuminate signs up to 750mm

Type 1 - To fit Signature Exlite LA/Exlite Titan*/Forest City/Pearce Gowshall

Type 2 - To fit Signature Delta

Type 3 - To fit Simmonsigns LUA

* Requires an additional conversion fixing kit.

Ecolumino 1500



To illuminate signs up to 1500mm

Type 1 - To fit Signature Majorlite T8 (L8) Type B

Type 2 - To fit Signature Majorlite LD3 Type D/Majorlite LB Type B/Forest City

Type 3 - To fit Simmonsigns LUB MKT

Type 4 - To fit Simmonsigns LUB

Design Features

Low Power Consumption Circuit and Driver

2.8W for Ecolumino 750 and 4.2W for 1500.

State of the Art LEDs

Provide a minimum expected lifespan of 50,000 hours when used with a phototransistor this equates to over 10 years of use.

State of the Art Optics

Use the minimum number of LEDs to distribute light evenly over the sign, to fully comply with regulations at maximum energy efficiency.

Complies with BS EN 12899-1: 2007

Ecolumino will externally illuminate a sign to a mean luminance level between 100-400 LUX, as described in Table 22, Class E2.



Standard Downlighter Gear Tray



Ecolumino Downlighter Gear Tray

Optional Extras

Infrared Photocell 0.25W

Ensures the unit is only active during the hours of darkness.

UMSUG Code 94 0001 1000 100

Photocell Options

Model (lux): 70 55

Please contact our Sales Office for details.

Technical Specifications

	Ecolumino 750		Ecolumino 1500		
	230V ac		230V ac		
Compatible Sign Sizes (mm)	600	750	900	1200	1500
Mean Illuminance	E2		E2		E1
Uniformity of Luminance	UE3		UE3		UE2
Power Use (ON)	2.8W		4.2W		
UMSUG Code (ON)	40 0003 0006 100		40 0004 0010 100		
Power Factor	0.41		0.53		

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Visit our website to see our full range of passively safe, low-maintenance road safety products including illuminated and non-illuminated bollards, verge marker posts and chevron sign systems.

Individual model specification sheets are available on most Glasdon Bollards and Traffic Safety Products. Please phone 01253 600411 for details.



Telephone
01253 600411



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