



REBOUND SIGNMASTER™

Retroreflective LED illuminated and Non-illuminated
Self-Righting Bollards



Cuts Costs, Cuts Carbon, Passively Safe

Highly Visible... Rebound Signmaster™ is available as a non-

Auto Switching – Phototransistor ensures unit is only illuminated during the hours of darkness.

6.5W or 7W Power
Save energy and money with



300mm Sign Face –

Large retroreflective sign face helps increase safety.

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.

Anti-Twist Design –

One piece bollard with integral fixing points.

Lower Environmental Impact –

Low energy consumption and LEDs contain none of the harmful chemicals found in fluorescent lamps and can be disposed of without worry.



...By Day

Tel: (01253) 600411

Fax: (01253) 792558

illuminated model or an LED-illuminated model. They offer many unique benefits and features.

Consumption –
low running costs.

Low Maintenance – LEDs have a warranted life of up to 10 years.

Drive Through Performance Proven at TRL –

(Bollard meets BS EN 12767 NE4)
Both bollard and light units have proven drive through performance at 100km/h (62mph).

Retroreflective –
Highly visible by day and by night. Reflectors have a warranted life of 10 years.

360 Degree Reflectivity –
Provides excellent all-round visibility making it ideal for use at junctions.

Versatile Fixing Options –
An extensive range of fixing options.

Made from Impactapol® –
Double-skinned to ensure exceptional strength and durability.



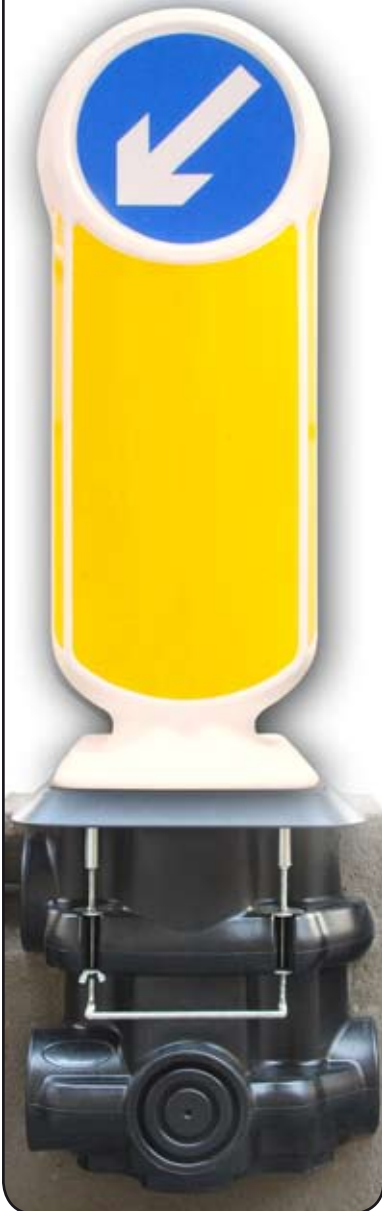
...and by Night

Web: www.safety4highways.com

Signmaster Sublite™ LED Lighting Unit

- LED housing with underground box is IP67 rated
- 24V or 240V ac power options
- 6.5W or 7W power consumption
- Power management chip
- UMSUG testing code
- Infra-red phototransistor
- Small footprint
- 100% recycled Durapol® material - Durable, robust and non conductive to withstand drive throughs.
- Choice of wiring options - Versatile gland and ducting positioning.

Signmaster Sublite™ with optional Ducting Chamber



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

Sealed LED housing -
IP67 rated. Offers excellent water and dust protection.

Four fixing points -
Ensures secure bollard installation.

Sealing gasket -
Prevents water and dirt gathering on the lens.

Concrete shelves -
Allows concrete to flow over the shelves offering anchorage.



Sealing gasket -
Prevents water ingress.

IP68 rated glands -
Prevents water entering the unit and damaging the internal components.

Spacious internal area -
Able to house almost any brand of cut-out and a transformer if required.



and Underground Box



Zinc coated mild steel concrete-in bars - Provides anchorage into the ground offering excellent drive through performance.



50/100mm ducting connector - To prevent exposed wires ducting can be connected up to the unit.

Optional Extras

Ducting Chamber

The legal requirement for the depth of 240V ac cabling is 450mm, with the ducting chamber extension box this can be achieved. The extension box also enables ducting to be connected right up to the box offering full protection to the cables. Multiple boxes can be stacked on top of each other to add more depth if required.

- 100% recycled Durapol® material - Durable, robust and non conductive to withstand drive throughs.
- Snap fit
- Drill points
- Ducting grooves
- Concrete shelves
- 50mm or 100mm Ducting connectors
- Stackable
- Multiple wiring options



Ducting Splitter

For applications where two ducts are required the Splitter enables both ducts to be connected to the Underground Box. This gives complete protection to the cable, as it is never exposed.

- 100% recycled Durapol® material - Durable, robust and non conductive to withstand drive throughs.
- 50mm or 100mm Ducting
- Connects into Sublite
- Snap fit ducting connectors



240V ac to 24V ac Transformer

Phototransistor Cover Cap

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

Installation Lid

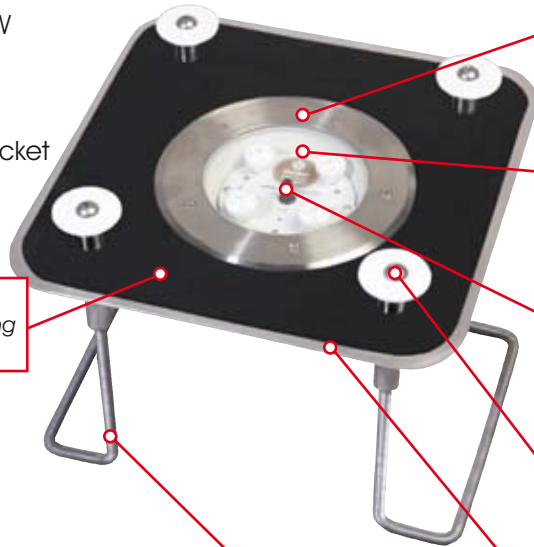
Prevents concrete getting inside the box and damaging the internal components or bollard fixing points, therefore making installation easier. This option also ensures the unit is installed flush and level helping to avoid an uneven installation.



Signmaster LED 24V Installation Kit

- Low running costs - 6.5W power consumption
- UMSUG testing code
- IP68 Rated plug and socket
- Flush with the ground
- Small footprint

Sealing gasket - Prevents water and dirt gathering on the lens.



Stainless steel - Will not rust or corrode.

IP67 Rated LED housing - Offers excellent water and dust protection.

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

Four fixing points - Ensures secure bollard installation.

Aluminium plate - Helps reduce corrosion.

Zinc coated mild steel concrete-in bars - Provides anchorage into the ground offering excellent drive through performance.



Signmaster 24V Installation Kit with optional 100mm Bend



50mm or 100mm Ducting



Optional Extras

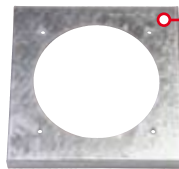
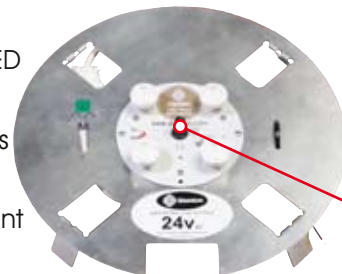
Phototransistor Cover Cap | 100mm Bend



Installation Lid | 240V ac to 24V ac Transformer

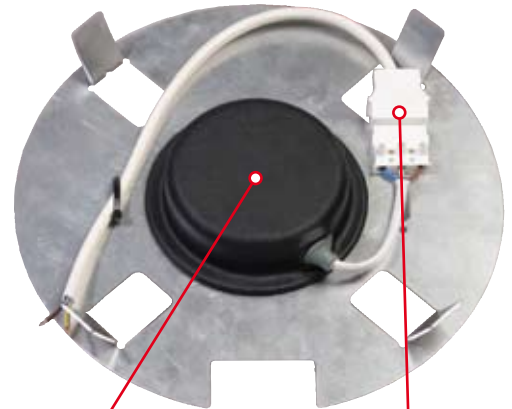
Conversion Kits

- Flexibility to convert all existing light boxes to LED Signmaster Bollard
- Gear tray only upgrades also available
- Reduces carbon footprint
- No excavation required



Universal adapter plate

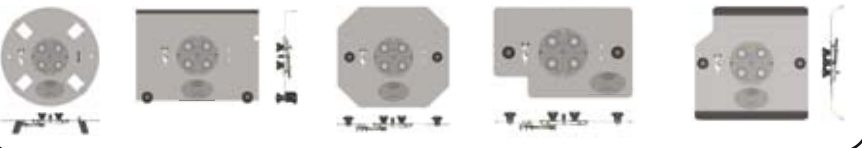
Phototransistor - Ensures the unit is only illuminated during the hours of darkness.



Covered component board

Universal plug and socket

Light Box Conversion Plates



Non-illuminated Fixing Options



Standard bolt-down fixing



Adjustable concrete-in anchor fixing



Concrete-in anchor fixing



Concrete-in fixing plate for redundant light boxes



Adapter plate for redundant light boxes

Passively Safe To help save a life

Rebound Signmaster Bollard and both lighting options 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 Impactapoli® material, to help prevent or reduce the severity of personal injury, in the event of vehicle impact. If impacted on run-through, Rebound Signmaster will self-return to an upright position, ensuring the hazard remains clearly marked, thereby saving on replacement and reinstatement cost.



Save energy and maintenance costs

How can Rebound Signmaster LED reduce our costs?

Rebound Signmaster LED features low powered lighting rated at 7 watts (240V ac) or 6.5 watts (24V ac) by UMSUG, representing a reduction in electricity use of over 75% compared with standard illuminated designs. Rebound Signmaster requires far less frequent inspection and maintenance, further reducing your operating costs.

The tables below show how Rebound Signmaster LED can save on energy and maintenance costs.

Rebound Signmaster LED 240V ac Energy Saving Costs

Calculations based on energy costs of X pence/kW hour and the annual Energy Consumption = Watt x Energy Cost x Hours of Operation

	24 Hour (8,760 hours per annum) 11 pence	13.5 Hours (4,900 hours per annum) 11 pence	24 Hour (8,760 hours per annum) 9 pence	13.5 Hours (4,900 hours per annum) 9 pence	24 Hour (8,760 hours per annum) 7 pence	13.5 Hours (4,900 hours per annum) 7 pence
2 x 11W (36W Unit)	£34.69	£19.51*	£28.38	£15.96*	£22.07	£12.42*
32W LED Unit	£30.84	£17.34*	£25.23	£14.19*	£19.62	£11.04*
38W LED Unit	£36.62	£20.59*	£29.96	£16.85*	£23.30	£13.11*
Rebound Signmaster LED 240V ac	£6.75	£5.48	£5.52	£4.48	£4.29	£3.49
Rebound Signmaster LED 24V ac	£6.27	£4.15	£5.12	£3.40	£3.99	£2.64

*Extra power consumption for photocell not included

Rebound Signmaster LED 240V ac Energy and Maintenance Saving Costs

Cost Saving Example - Standard 2 x 11 Watt @ 24 Hour v Glasdon 7 Watt LED Photocell @ 13.5 Hour average

	Per Year	10 Years
2 x 11W (36W) Energy Cost	£29.21	£292.10
Savings		
Maintenance Cost Savings	£60.00	£678.80*
TOTAL SAVINGS	£89.21	£970.90

*Maintenance Costs estimated at 3% increase per annum
 Payback period to recover cost of double sided bollard = 3.64 years
 Replacing the lamps and cleaning a light box has been calculated at £71.00 per annum (TfL).
 Cleaning Signmaster £11.00 per annum.

(Calculations based on energy costs of 11 pence/kW hour and the annual Energy Consumption = Watt x Energy Cost x Hours of Operation)

“What the Customer Says

“The City and County of Swansea like many local authorities are always looking for innovative ways to reduce road casualties. We are currently using various products and initiatives to enhance road safety but at the same time keep life-long costs to a minimum. The Glasdon Signmaster bollard has proven to be an all-round 'best value for road safety and best value for money product'.”

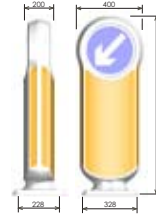
Jeff Green, County Road Safety Officer at City and Council of Swansea.

Specifications

Dimensions

Overall Height: 1036mm
 Max. Bollard Depth: 200mm
 Fixing Centres: 228 x 228mm
 Front/Rear Patch True Visibility Area: 161,701mm²
 Weight of Bollard: 6kg

Max. Bollard Width: 400mm
 Bolt-down Foot Detail: 328 x 328mm
 Sign Face: 300mm diameter
 Side Patch Area: 24,255mm² per patch
 Total Side Patch Area: 48,510mm²



Colours

White Black Aircraft Grey

(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.
 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.

LED Lighting

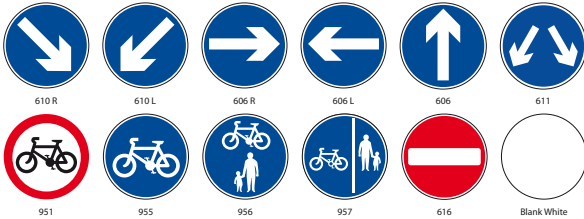
UMSUG 240V ac LED 40 0003 0000 100 3 Watts
 Photocell 96 0004 0000 100 4 Watts = **7 Watts Totals**
 (24V ac Transformer is IP68 rated and will run up to 3 Bollards)

UMSUG 24V ac LED 40 0005 0000 100 5 Watts
 Photocell 96 0002 0000 100 1.5 Watts = **6.5 Watts Totals**

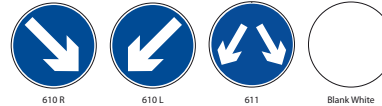
Sign Options

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 further information.

Materials

Bollard: Impactapol®* material.

Fixings: Stainless Steel.

Signmaster Sublight: Underground Box, Ducting Chamber and Splitter: 100% Recycled Durapol®** material.

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.

* Impactapol® material is a polymer specially developed with enhanced flexibility and extensibility properties offering good recovery performance after vehicular impact. Impactapol material has abrasion resistance, will not chip or rust and never needs painting.

** Durapol® material is a polymer formulated to withstand extremes of temperatures and is impact-tested in our Quality Assurance Laboratory as part of our BS EN ISO 9001:2000 test procedure. Durapol will not chip or rust, is easy to clean and never needs painting.

www.safety4highways.com

Visit our new website to see our full range of Passively Safe products, including bollards, hazard & verge markers and our Advanced Chevreflex™ Flexible Sign System. Downloadable product literature, case studies and video clips are also available



Glasdon Range

For more information on the full range of Glasdon products, please telephone 01253 600411.



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



Glasdon

Glasdon U.K. Limited
 Local Government
 Highways and Safety Division
 Preston New Road
 BLACKPOOL
 Lancashire
 FY4 4UL
 Tel: (01253) 600411
 Fax: (01253) 792558
 e-mail: hs@glasdon-uk.co.uk
 web: www.glasdon.com



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