Denver iD Bollard
LED STREET & AREA LUMINAIRE

Advanced LIGHTING TECHNOLOGIES | HOLOPHANE

FEATURES

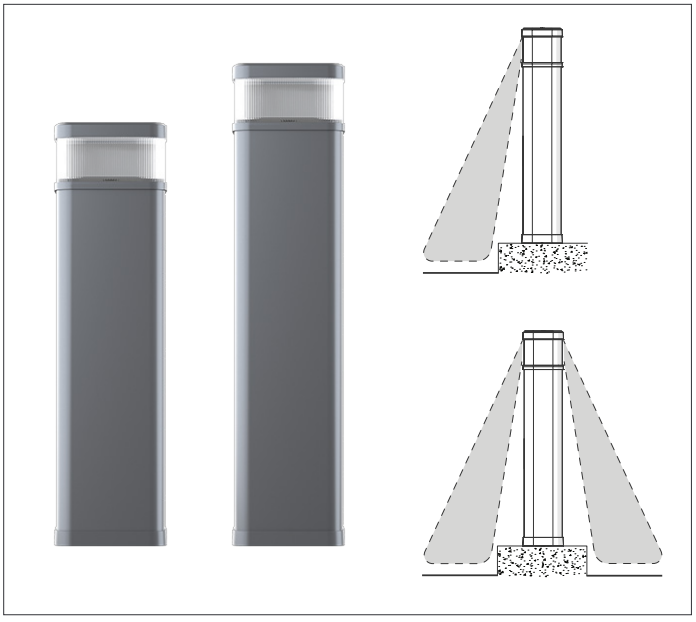
- Available in lumen packages of 1000 to 3000 (nominal delivered).
- 2 optimised optical distributions including **single** or **double-sided** optics.
- 2700K, 3000K & 4000K options available.
- CRI > 70.
- Integrated presence detector, controls and emergency options *(c.300 lm in emergency mode).*
- Optional internal light shield available
- Enhanced vandal resistance.
- Complies with EN60598.
- IP65 and IK10.
- -20˚C to +45˚C.
- 5-year warranty.

TYPICAL LUMINAIRE PERFORMANCE

Configuration	Delivered Lumens	Circuit Power (W)	Driver Output Current (mA)	Total No. Of LEDs	Efficacy (lm/w)
DBD.LA01X.SU	c.500	6	270	5	85
DBD.LA01X.DO	c.1,000	11	265	10	110
DBD.LA02X.SU	c.1,000	12	585	5	90
DBD.LA02X.DO	c.1,500	16	425	10	106
DBD.LA02X.SU	c.1,500	18	1000	5	85
DBD.LA02X.DO	c.2,000	23	600	10	101
DBD.LA03X.DO	c.3,000	28	850	10	96

Lumen data is considered to be representative of the configuration shown, and may vary, with a Tolerance on flux of +/- 7% (typical of LED manufacturers data) and luminaire power of +/- 5%.

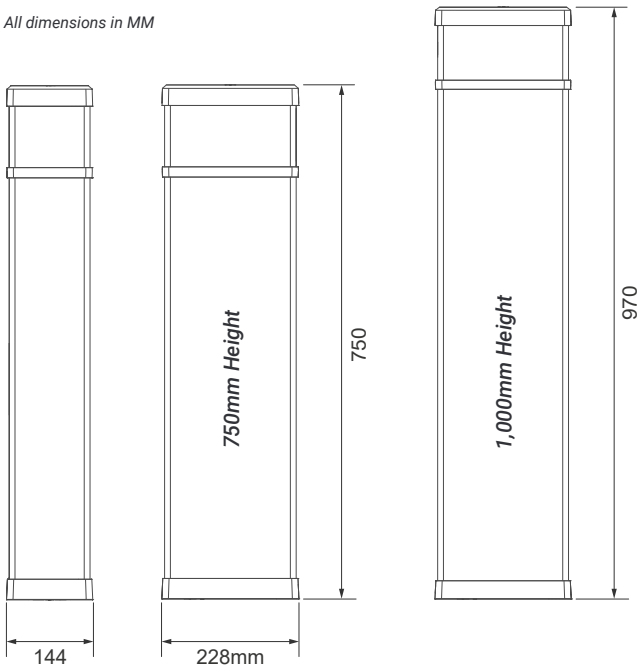
VARIANTS

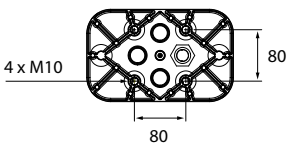


Available in 750mm (.H75) & 1000mm (.H100) heights or with Single (.SU) & Double (.DO) Optics

DIMENSIONS

All dimensions in MM





Baseplate

MADE IN BRITAIN

ida DARK SKY APPROVED by the International Dark-Sky Association darksky.org

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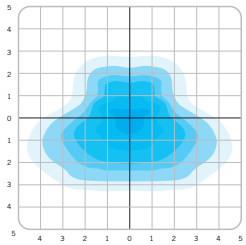
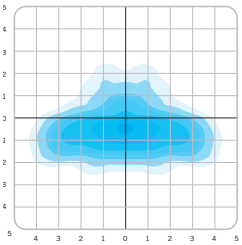
DISTRIBUTIONS



Asymmetric (.AY)



Long & Narrow (.NR)

ELECTRICAL

	LA01X SU	LA02X SU	LA01X DO	LA02X DO
Drive Current From Driver	285mA	618mA	304mA	487mA
Power	6W	12W	11W	16W
Fitting Current	0.03A	0.05A	0.05A	0.07A
Power Factor	0.96	0.97	0.96	0.96
Fitting Inrush	15A-0.36ms	15A-0.36ms	15A-0.295ms	15A-0.295ms
Number of Drivers	1	1	1	1
Max Drivers per 16A Type B MCB	23	23	29	29
Total Number of LEDs	5	5	10	10
Minimum Dim Level	25%	11%	17%	11%
THDi	13.2	9.4	8.2	8.6

MAINTENANCE

Installation
Denver iD: Bollard has been designed to facilitate easy installation. With only two nuts needed to remove the bollard LED module and combined gear, this makes it easy to quickly remove the bollard head to access the mounting base of the luminaire. Installation is achieved either using the standard base or in conjunction with a root spike. The base has 4 x mounting holes to ensure stability.

Maintenanability
In the unlikely situation when an LED module has become damaged or prematurely failed the LED module can be easily removed and replaced in situ. Additionally, emergency packs are easily accessed via the gear compartment.

Upgradability
As LED technology ever improves and LEDs become more efficient the LED modules also have the ability to be upgraded in situ. This enables the luminaire to be future proof and can take advantage of any performance gains.

Sustainability
The ability to replace major components means that the Denver iD: Bollard can deliver a longer, more sustainable luminaire system life. Using recyclable components such as Glass and Aluminium means that a large percentage of Denver iD: Bollard may be recycled via e-waste recycling centres (check with local authorities).

View Installation Guide

SPECIFICATION

Holophane Denver iD: Bollard Denver consists of LM6 extruded Aluminium body and a removable LED module manufactured from LM6 marine grade die-cast aluminium with integrated thermal management properties. The LED module optical arrangement consists of LEDs with individual PMMA optical lenses surrounded by a patented white Transition Zone to reduce perceived glare and up light. This is sealed behind high-transparency clear Polycarbonate extrusion. Both luminaire body and LED module are sealed to IP65 and rated IK10. Drivers and LED are mounted separately from each other to promote low operating temperatures and long system life. Mounting of the luminaire is facilitated by using the mounting base of the bollard through specifically drilled points. Cable entry and termination to the luminaire is via an IP65 cable gland. Access to the luminaire is via 2 x nuts.

LLMF

Configuration	Wattage	CCT	Optic	Depreciation @ 50K Hours	Depreciation @ 100K Hours
DBD.1.LA013.SU.AY.H100.C6.W006	6W	3000K	FW	L99B50	L99B50
DBD.1.LA013.DO.AY.H100.C6.W011	11W	3000K	FW	L99B50	L99B50
		AVERAGE (ROUNDED)		L99B50	L99B50

Note: Ta: 25°. Approximate LLMF data provided as a guide only. LLMF for other configurations may be different. For reference purposes, the data may extrapolate beyond the recommended 6x LM-80 data in IESNA TM-21, which these calculations are based on. Contact ADLT for more information.

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CONTROLS - ZD4i

Holophane's ZD4i architecture provides a future-proof foundation that enables users to build on whenever their site/project is ready to opt into new advances in technology. It is designed to work with industry-recognised, future-proof drivers and sensors that have the potential to increase energy efficiency. By having **Denver iD Wall** ZD4i-ready, customers can upgrade / adjust the controllability of their lighting and gather valuable data whenever they are ready.

BENEFITS

Increased Energy Savings: Sensors and devices can be used to optimise luminaires to give greater energy savings and provide light only when it is required.

Flexibility: The ZD4i architecture enables the interchanging and upgrading of sensor and device options if and when the end-user pleases.

Future Proof: End-users have access to an ever expanding eco-system of devices and sensors through 3rd-party suppliers. The ZD4i architecture is an industry recognised platform.

Note: Please ensure that the selected IoT device is compatible and suitable for the respective luminaire. All installation should be completed in compliance with the respective devices installation instructions (and limitations). Holophane cannot be held responsible for the operation of its luminaires with third party devices.

CONTROL ACCESSORIES

IOT.TZ.CA
For use with TZ01

CONTROLUX AIR is a wireless technology that offers intelligent lighting with reductions in energy consumption of up to 80%. It optimises energy savings thanks to the individual control of light sources. It controls, monitors and manages street lighting, reporting consumptions, operating hours or system faults.

Internal Controlux Air Node (Optional)
The Holophane Denver iD: Bollard is available with an internally mounted Controlux Air Node to enable full connectivity and luminaire control.

CONTROLS - INTEGRATED PRESENCE SENSORS

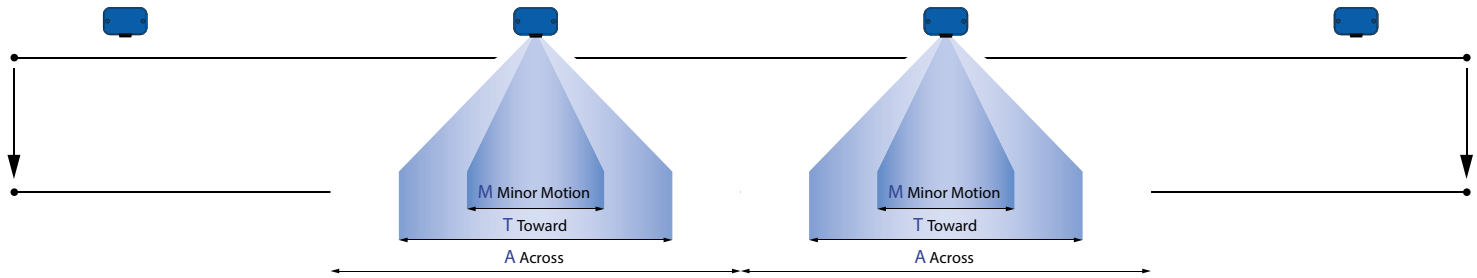
Denver iD: Bollard is available with a range of integrated controls and PIR options to suit project requirements. These range from simple on/off detection on one side of the bollard to double sided detection with pre-set dim levels.

.PL1 Option
Integrated PIR, suitable up to 4m. Dims to 30% after 10 minutes of inactivity - switches off after further 10 minutes. Remotely re-programmable with accessory HEL.PRG (purchased separately).

.PL2 Option
Groupable Integrated PIR. Dims to 30% after 10 minutes of inactivity - switches off after further 10 minutes. Remotely re-programmable with accessory HEL.PRG.G (purchased separately).

.2PL2 Option
Dual Groupable Integrated PIR. Dims to 30% after 10 minutes of inactivity - switches off after further 10 minutes. Remotely re-programmable with accessory HEL.PRG.G (purchased separately).

.CA Option
Wireless lighting node (integrated) for use with Holophane Controlux Air System. (Includes subscription package for two years)



Distance From Bollard (m)	2.4	3.0	3.6	6.0
M	1.0	2.0	3.0	-
T	3.0	4.0	5.0	6.0
A	5.0	6.0	7.0	9.0

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STANDARD COLOURS

- C1 Smooth White (RAL9016)
- C4 Smooth Graphite (RAL7011)
- C6 Smooth Grey (RAL7035)
- C7 Textured Black (RAL9005)
- C9 Metallic Silver (RAL9006)

CUSTOM COLOURS

RAL**** Customer Specified Colour

**Choosing a custom colour may increase cost and lead time.*

ADDITIONAL PHOTOS

THE DENVER iD RANGE

Holophane's Denver iD Series consists of wall, pole and bollard luminaires which combine clean styling, visual comfort and unrivalled system performance to meet the unique requirements of pedestrian-friendly amenity spaces.

Coupled with the latest LED technologies, optional smart controls integration and class-leading optical performance, the Denver iD Series combines form with a feature-rich luminaire system.

Click the images to view the other members of the Denver iD Series on adlt.com.au!

Denver iD Wall

Denver iD Pole

Denver iD Bollard

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ORDERING INFORMATION

Code	**Luminaire** (required)
DBD	Denver iD Bollard

Code	**Series** (required)
.1	Series 1

Code	**Lamp Type** (required)
.LA012	LED light engine producing c.1,000 lm with a nominal 2700K colour temperature
.LA022	LED light engine producing c.2,000 lm with a nominal 2700K colour temperature
.LA013	LED light engine producing c.1,000 lm with a nominal 3000K colour temperature
.LA023	LED light engine producing c.2,000 lm with a nominal 3000K colour temperature
.LA014	LED light engine producing c.1,000 lm with a nominal 4000K colour temperature
.LA024	LED light engine producing c.2,000 lm with a nominal 4000K colour temperature

Code	**Optical Enclosure** (required)
.SU	Single Sided (5LEDs)
.DO	Double sided (10LEDs)

Code	**Distribution** (required)
.AY	Asymmetric
.NR	Long and Narrow light distribution

Code	**Head Height** (option)
.H75	750mm high
.H100	1000mm high

Code	**Colour** (required)
.C1	Smooth White (RAL9016)
.C4	Graphite (RAL 7011)
.C6	Smooth Grey (RAL7035)
.C7	Black (RAL9005)
.C9	Metallic Silver (RAL9006)
.RAL****	RAL Colour (Customer choice)

Code	**Shields** (option)
.LS	Internal light shield

Code	**Paint Finish** (option)
.C	Enhanced Paint Finish

Code	**Voltage Electrical Class** (option)
.CII	Class II

Code	**Photocell** (option)
.TSZ	Complete with miniature 70 lux factory fitted photocell

Code	**Controls** (option)
.PL1	Integrated PIR, suitable up to 4m. Dims to 30% after 10 minutes of inactivity - switches off after further 10 minutes. Remotely re-programmable with accessory HEL.PRG (purchased separately).
.PL2	Groupable Integrated PIR. Dims to 30% after 10 minutes of inactivity - switches off after further 10 minutes. Remotely re-programmable with accessory HEL.PRG.G (purchased separately).
.2PL2	Dual Groupable Integrated PIR. Dims to 30% after 10 minutes of inactivity - switches off after further 10 minutes. Remotely re-programmable with accessory HEL.PRG.G (purchased separately).
.CA	Wireless lighting node (integrated) for use with Holophane Controlux Air System. (Includes subscription package for two years)

Code	**Emergency** (option)
.EM1	1hr maintained integrated emergency. Self-test
.EM3	3hr maintained integrated emergency. Self-test

Code	**Cut Out** (option)
.MCB	Mini Circuit Breaker

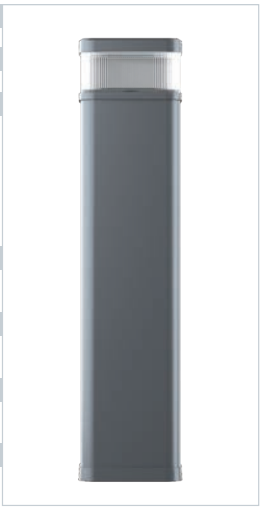
Code	**Dimming Outputs** (option)
.LRD	LED Regulable Dali
.LRT******	Customer specified pre-set dimming

Code	**Control Gear** - 4 (option)
.CL7	Programmed to deliver 70% of the initial lumens over the life of the luminaire
.CL8	Programmed to deliver 80% of the initial lumens over the life of the luminaire
.CL9	Programmed to deliver 90% of the initial lumens over the life of the luminaire

Code	**Auxiliary Circuits** - 14 (option)
.TW	Through Wiring

Code	**Screws** - 21 (option)
.V1	Vandal-resistant screws

Example										
DBD	.LA012	.SU	.AY	.H75	.C1	.LS	.C	.CII	.TSZ	.CA



ACCESSORIES

Code	
DBD.VK	Vandal Key
DBD.ROOT	Root Mounting Spike to fit Flange Base Denver iD Bollard. Includes set of 2 Bolts M10 x 100mm
DBD.FT	Set of 4 Bolts M10 x 100mm for Flange Base Fixing

Note: *The specifications of the Holophane luminaire, all descriptions, illustrations, drawings and specifications in the Holophane catalogue and website represent only general particulars of the goods to which they apply and shall not form part of any contract. The company reserves the right to change specifications at its discretion without prior notification or public announcement.*

DENVER™ iD BOLLARD

REGISTERED EUROPEAN DESIGN
PATENTED DESIGN

DENVER iD BOLLARD

MADE IN BRITAIN

Advanced LIGHTING TECHNOLOGIES | HOLOPHANE

ADVANCED LIGHTING TECHNOLOGIES

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