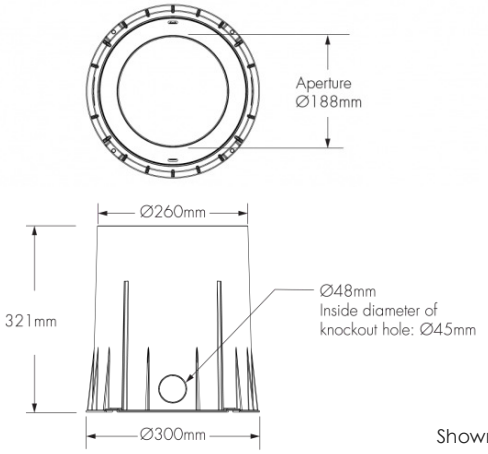
Specification Sheet

lumenbeam
Inground Large
LBIL

COLOUR CHANGING

Project Name _____ **Qty** _____

Type E **Catalog / Part Number** _____



Shown with FLN trim type

Photometric Summary

Symmetric

	Delivered output (lm)	Intensity (peak cd)
VN (6°)	1108	51,908
NS (10°)	1136	31,645
M (30°)	1073	3289
FL (40°)	971	1789
WFL (60°)	898	832

Bi-symmetric

	Delivered output (lm)	Intensity (peak cd)
6°x90°	1036	5314
90°x60°		
15°x90°	915	3108
90°x15°		
25°x90°	912	1789
90°x25°		
35°x90°	779	882
90°x35°		

Asymmetric

	Delivered output (lm)	Intensity (peak cd)
NAS	1119	17,313
WW	889	1099

Based on RGBW40K full output, DMX/RDM configuration.
Lens type: LFR lens for VN optic, SFR lens for NAS optics, SL lens for M, FL, WFL and WW optics and CL lens for all other optics.
Power consumption: 33 W for RGB, 35W for RGBW30K, RGBW40K and RGBA.
Photometric performance is measured in compliance with IESNA LM-79-08.

Description

The Lumenbeam Inground Large Colour Changing is a high-performance, ground-recessed LED projector offering RGB, RGBW, or RGBA colour mixing, as well as Legacy or Custom output modes. Designed to solve a range of inground lighting challenges with a choice of optics, trim, lenses and control options, the plug and play design simplifies installation, protecting the system from water infiltration and ensuring long-lasting performance. Built with robust, high-quality materials that are resistant to harsh environments, the Lumenbeam Inground Large delivers L70 LED lifetimes up to 79,000 hours, has a Drive-Over rating of 5000kg, IK10 glass lens, and an IP68 factory-sealed optical chamber.

Features

Construction	Walk over compliant up to 1000 kg in any type of ground, Drive over compliant up to 5000 kg in concrete
Colour and Colour Temperature	Additive RGB, Additive RGB + white 3000K, Additive RGB + white 4000K, Additive RGB + amber
Optics (nominal distribution)	VN (6°), NS (10°), M (30°), FL (40°), WFL (60°), 6° x 90°, 15° x 90°, 25° x 90°, 35° x 90°, 90° x 6°, 90° x 15°, 90° x 25°, 90° x 35°, NAS (Narrow Asymmetric), WW (Asymmetric Wallwash)
Lens	Clear lens, Small frosted ring, Large frosted ring, Softening lens, (lens type will vary according to optic, see optics and lens section)
Optical Option (factory installed)	Internal louvre
Trim Type	Flush trim with hardware, Flush trim no hardware, Bevel edge trim with hardware, Bevel edge trim no hardware
Blockout	Recessed blockout, Recessed blockout with mounting brackets
Options	Anti-slip lens
Adjustment	-3° to +15° tilt, 360° rotation
Power Consumption	33 W for RGB, 35 W for RGBW30K, RGBW40K and RGBA
Warranty	5-year limited warranty

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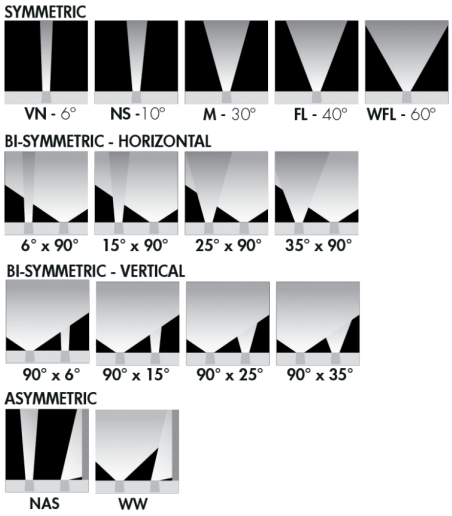
lumenbeam

Inground Large
LBIL

COLOUR CHANGING

Optics



Colours and Colour Temperatures

RGB Red Green Blue

30K RGBW Red Green Blue White

40K RGBW Red Green Blue White

RGBA Red Green Blue Amber

Controls

DMXrdm DALI T8

Construction

WO - Walk over

DO - Drive over

Trim Finishes

SSB - Brushed Stainless Steel

SSP - Polished Stainless Steel

Options

Anti-slip lens

Ratings

IP68 IK10

Certifications

Performance

Maximum Delivered Output	943 lm (RGB full output, NS 10°, CL lens, DMX/RDM), 1,113 lm (RGBW30K full output, NS 10°, CL lens, DMX/RDM), 1,136 lm (RGBW40K full output, NS 10°, CL lens, DMX/RDM), 911 lm (RGBA full output, NS 10°, CL lens, DMX/RDM)
Maximum Delivered Intensity	43,105 cd at nadir (RGB full output, VN 6°, LFR lens, DMX/RDM), 50,870 cd at nadir (RGBW30K full output, VN 6°, LFR lens, DMX/RDM), 51,908 cd at nadir (RGBW40K full output, VN 6°, LFR lens, DMX/RDM), 41,642 cd at nadir (RGBA full output, VN 6°, LFR lens, DMX/RDM)
Illuminance at Distance	Minimum 1 fc at 63.4 m (RGB full output, VN 6°, LFR lens, DMX/RDM), Minimum 1 fc at 68.9 m (RGBW30K full output, VN 6°, LFR lens, DMX/RDM), Minimum 1 fc at 69.5 m (RGBW40K full output, VN 6°, LFR lens, DMX/RDM), Minimum 1 fc at 62.5 m (RGBA full output, VN 6°, LFR lens, DMX/RDM)
Lumen Maintenance	L70 79,000 hrs (Ta 25 °C), L70 77,000 hrs (Ta 40 °C)

Physical

Optical Chamber Material	Brass for walk-over and drive-over construction in harsh environments
Blockout Material	Fibreglass reinforced polymer
Lens Material	Tempered glass
Hardware Material	Stainless steel
Gasket Material	Silicone
Trim Finish	Brushed stainless steel, Polished stainless steel
Weight	10.43 kg

Electrical and control

Voltage	120-277 volts, 220-240 volts
Leader Cable Conductor	6C #14-3/ #24-3
Leader Cable Connector	IP68 6-pin push-lock
Control	DMX/RDM enabled, DALI-2 dimming Type 8
Resolution (DMX/RDM)	Per fixture, 8-bit or 16-bit, 3 channels (RGB) or 4 channels (RGBW30K, RGBW40K and RGBA)
RGB Colour Mixing	12 LEDs (4x Red, 4x Green, 4x Blue)
RGBW30K Colour Mixing	12 LEDs (3x Red, 3x Green, 3x Blue, 3x White 3000K)
RGBW40K Colour Mixing	12 LEDs (3x Red, 3x Green, 3x Blue, 3x White 4000K)
RGBA Colour Mixing	12 LEDs (3x Red, 3x Green, 3x Blue, 3x Amber)

Environmental

Storage Temperature	-40 °C to 85 °C (device must reach start-up temperature value before operating)
Start-up Temperature	-25 °C to 40 °C
Operating Temperature	-40 °C to 40 °C, Consult factory for -40 °C to 50 °C temperature range

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Ingress Protection Rating	IP68 (submerged up to 1 m for up to 24 hours), not suitable for permanent immersion applications
Impact Resistance Rating	IK10
Environment	Wet location

Accessories (order separately)

Cables	3 Conductor Power and 3 Conductor Data Leader Cable with Connector, 3 Conductor Power and 3 Conductor Data Cable
Electrical Accessories	Large Junction Box for Lumenbeam Inground
Control Boxes	DMX/RDM enabled (daisy chain or star configuration), Ethernet enabled (daisy chain or star configuration)
Control Systems	Lumentone™ 2, Pharos® kit
Diagnostic and Addressing Tools	LumenID

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Construction details

	WO - Walk over compliant up to 1000kg		**DO - Drive over** compliant up to 5000kg
Trim type	All trim options are suitable (FLH, FLN, BVH and BVN)	**Trim type**	Only trim options with visible hardware are suitable (FLH and BVH)
Ground type	Installed in sand, soft soil, compacted soil, pavement or concrete	**Ground type**	Installed in concrete

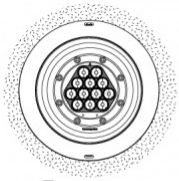
Optics and lens options

Optics / Lens	Clear	Small frosted ring	Large frosted ring	Softening	Anti-slip
VN			✔	Optional	Optional (can be combined with all lenses and optics)
NS	✔				
M/FL/WFL				✔	
6° /15°/25°/35° x 90°	✔			Optional	
NAS		✔			
WW				✔	

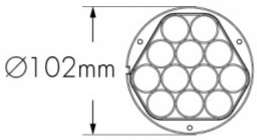
✔ Recommended for optimal performance, may be replaced by a softening lens. A softening lens will affect beam distribution and output. Consult factory for application support.

Optical accessories (factory installed)

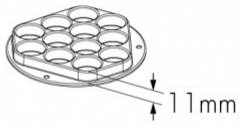
INTL - Internal louvre



Top view
(as installed)



Top view



- The interal louvre is factory installed and not adjustable in the field.
- Not available for NAS, WW optics.
- The addition of an internal louvre will affect beam distribution, consult factory for application support.

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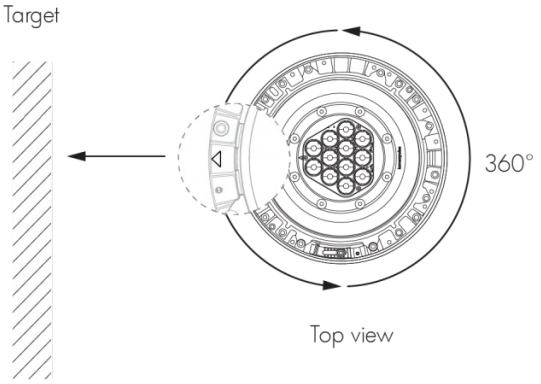
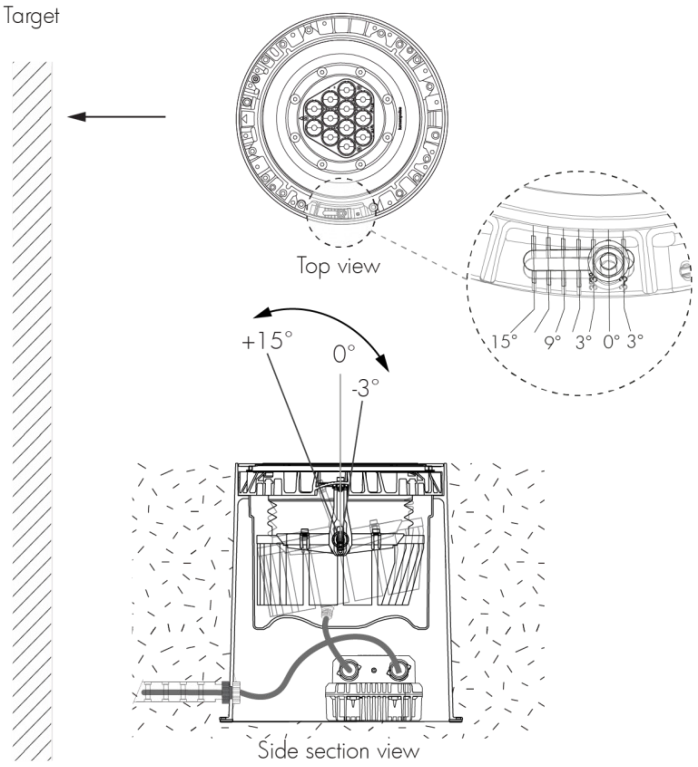
Adjustment

360° Orientation



The optical chamber can be rotated until the arrow faces the target.
Refer to the installation instructions for details.

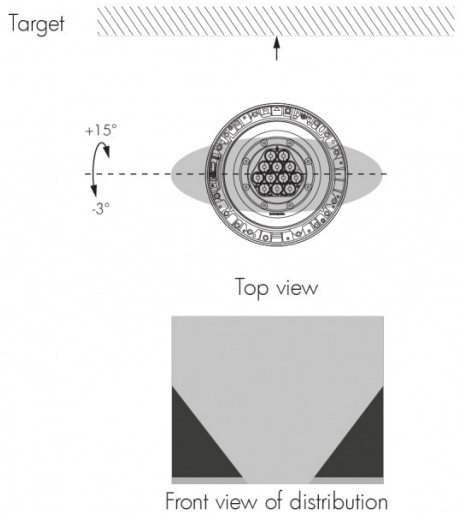
-3° to +15° Tilt adjustment



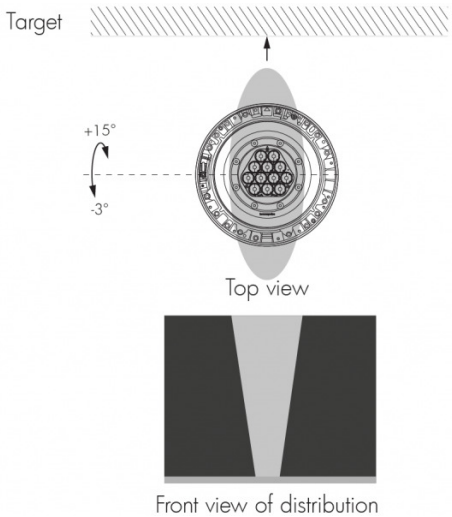
- Tilt can be adjusted on site without opening the factory sealed optical chamber.
- **Asymmetrical optics**: Tilt set in factory for optimal results (WW at 5° and NAS at 3°).

Bi-symmetrical distributions

Horizontal distribution : 6°x90°, 15°x90°, 25°x90°, 35°x90°



Vertical distribution : 90°x6°, 90°x15°, 90°x25°, 90°x35°



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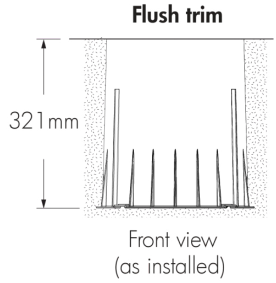
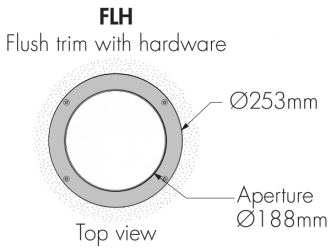
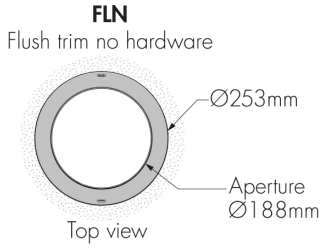
Trim type

Flush trim

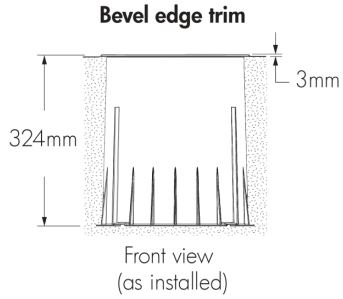


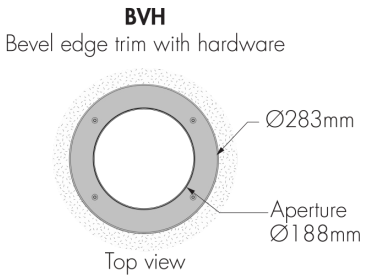


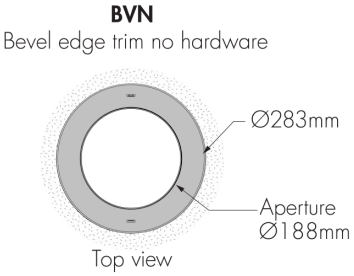


Only trims with hardware are drive-over compliant.

Bevel edge trim

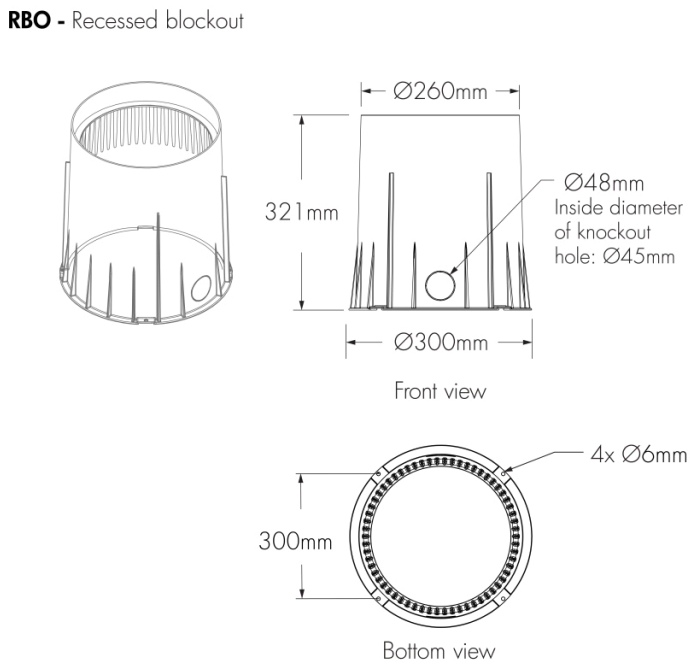




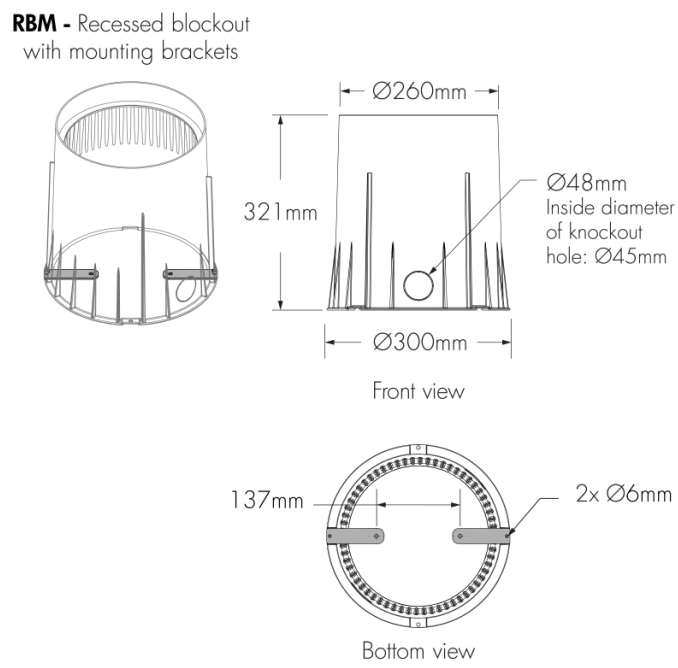


Blockout

RBO - Recessed Blockout



RBM - Recessed Blockout with Mounting Brackets



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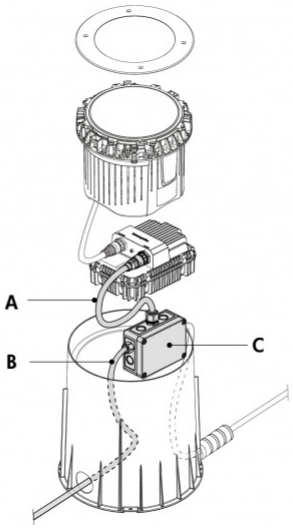
Overview - cables and accessories



A - 3P3DLC: 3 Conductor Power and 3 Conductor Data Leader Cable with Connector

B - 3P3DC: 3 Conductor Power and 3 Conductor Data Cable

C - LBI-JBOX-L: Large Junction Box for Lumenbeam Inground (required for continuous runs and DMX/RDM daisy chain layouts)

Refer to typical wiring diagrams for details.

Cables (order separately)

3P3DLC - 3 Conductor Power and 3 Conductor Data Leader Cable with Connector

CERTIFICATION: UL or CE
LENGTH: 3 m, 7.6 m or 15.2 m

- Sealing endcap is mandatory for all unused connectors. One (1) included with every leader cable.
- Consult 3P3DLC specification sheet for details.

3P3DC - 3 Conductor Power and 3 Conductor Data Cable

CERTIFICATION: UL or CE
LENGTH: 15.2 m, 30.5 m, 45.7 m, 61 m or complete spool of cable 76.2 m

Electrical accessories (order separately)

LBI-JBOX-L - Large Junction Box for Lumenbeam Inground (required for continuous runs and DMX/RDM daisy chain layouts)

Included

1x Junction box with 406 mm 3P3DLC cable whip
4x Strain reliefs
1x IP68 insulating resin
1x Sealing cap

Refer to LBI-JBOX-L installation instructions for details.

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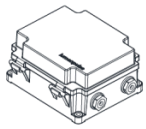
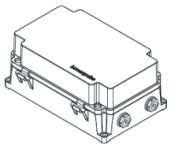
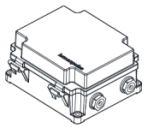
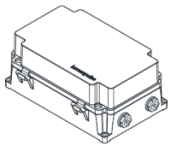
Control boxes (order separately)

CBX-DMX/RDM - DMX/RDM enabled (daisy chain or star configuration)

DMX/RDM control box. Up to six power and data outputs to fixtures or fixture runs. Consult CBX specification sheet and installation instructions for details. Lumenterminators provided with CBX (2x for daisy chain configuration, 6x for star configuration), consult factory to order spares.

CBX-ENET - Ethernet enabled (daisy chain or star configuration)

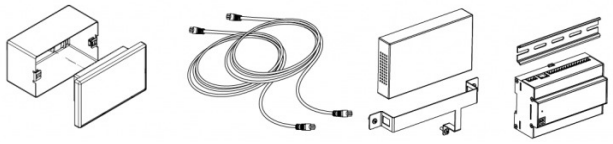
Ethernet control box. Up to four power and data outputs to fixture or fixture runs. Consult Ethernet CBX specification sheet and installation instructions for details.

Control systems (order separately)

LTN2 - Lumentone™ 2

Lumentone 2 is a simple pre-programmed DMX 512 controller with a push button rotary dial and live feedback.

PHAROS - Pharos® kit



The Pharos kit, available for 1 or 2 DMX universes, allows for complete control of large lighting installations. 2 DMX universes kit shown.

Diagnostic and addressing tools (order separately)

LID - LumenID

LumenID is a diagnostic and addressing DMX/RDM tool. It must be specified on all DMX applications. Consult LID specification sheet for details.

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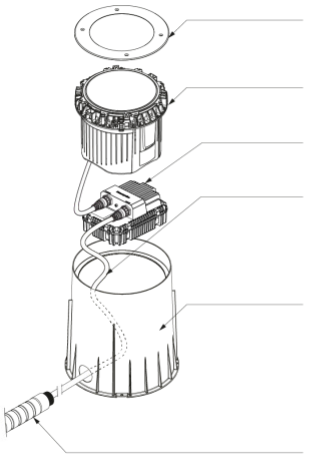
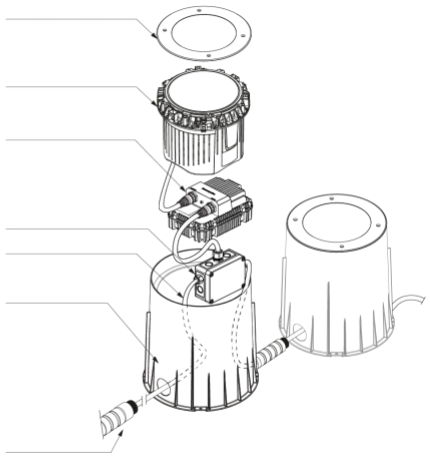
Typical wiring diagrams

Typical Installation with Leader Cable



Single unit

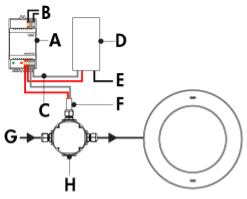
Typical Installation with LBI-JBOX-L Accessory



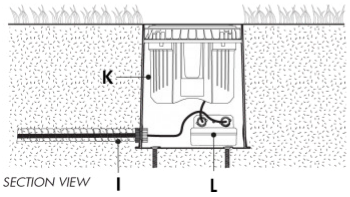
Continuous run

A - Trim
B - Optical chamber (LBILC)
C - Power and Control Box (PCBX)
D - 3 Conductor Power and 3 Conductor Data Leader Cable with Connector (3P3DLC)
E - Large Junction Box for Lumenbeam Inground (LBI-JBOX-L)
F - 3 Conductor Power and 3 Conductor Data Cable (3P3DC) from Lumenpulse or cable by others
G - Blockout (RBO or RBM)
H - Conduit (by others)

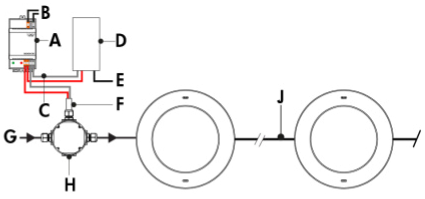
DALI-2 dimming Type 8 (DALIT8)



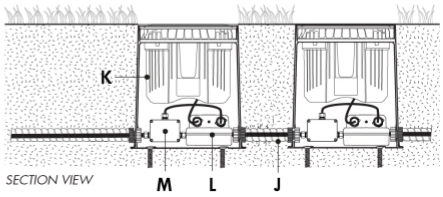
TOP VIEW



SECTION VIEW



TOP VIEW



SECTION VIEW

A - DALI bus power supply (by others)
B - Power input for DALI bus power supply (wiring by others)
C - To DALI controller (by others)
D - DALI controller (by others)
E - Power input for DALI controller (if required, wiring by others)
F - Data output to fixture
G - Power input (120-277V, wiring by others)
H - Junction box (by others)
I - 3 Conductor Power and 3 Conductor Data Leader Cable with Connector (3P3DLC)
J - 3 Conductor Power and 3 Conductor Data Cable (3P3DC) from Lumenpulse or cable by others
K - Optical chamber (LBILC)
L - Power and Control Box (PCBX)
M - Large Junction Box for Lumenbeam Inground (LBI-JBOX-L)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Maximum of 64 DALI fixtures per DALI loop.
- The Lumenbeam Inground Large responds to RGBWAF controls.
- Commissioning may be required based on the selection of 3rd party DALI controller. Controller and commissioning provided by others.
- Refer to Photometric Summary table for wattage information.

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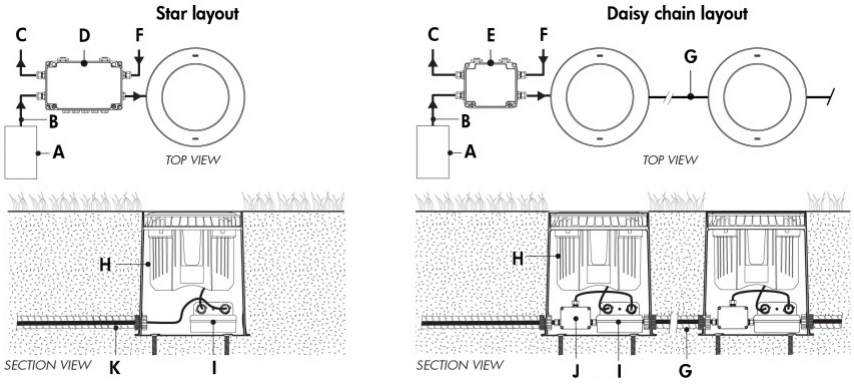
DMX/RDM enabled (DMX/RDM)



A - DMX/RDM controller (order separately from Lumenpulse, or by others)
B - Data input (Belden 9841 or equivalent, by others)
C - Data output to next CBX (optional, not isolated/not boosted)
D - CBX-ST
E - CBX-DS
F - Power input (120-277V, wiring by others)
G - 3 Conductor Power and 3 Conductor Data Cable (3P3DC) from Lumenpulse or cable by others
H - Optical chamber (LBILC)
I - Power and Control Box (PCBX)
J - Large Junction Box for Lumenbeam Inground (LBI-JBOX-L)
K - 3 Conductor Power and 3 Conductor Data Leader Cable with Connector (3P3DLC)

Maximum fixture count

Configuration/Voltage	120V	208V	240V	277V
LBIL (Maximum number of fixtures per run)	28	32	32	32

Based on15A maximum, 14AWG cable, fixtures spaced 3 m on centre, first fixture 50ft from CBX.

- Refer to CBX installation instructions for additional wiring details.
- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- The DMX/RDM protocol states a maximum of 32 DMX/RDM enabled fixtures on any single run. Maximum of 4 DMX/RDM repeaters/CBX cascading in line. Each fixture requires 1 DMX address. Maximum of 1 output per CBX-DS. Maximum of 6 outputs per CBX-ST.
- Refer to Photometric Summary table for wattage information.
- DMX terminator is required at the end of each run to maintain data integrity. (2x) DMX lumenterminators included per CBX-DS, (6x) included per CBX-ST. See installation instructions for details.

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How to order

Housing [1]	Construction	Voltage	Colour and Colour Temperature	Optics	Lens [7]	Optical Options	Control	Trim Type	Trim Finish	Blockout	Options
LBIL Lumenbeam Inground Large	**WO** Walk over **DO** Drive over [2]	**120/277** 120-277 volts [3] **220/240** 220-240 volts [4]	**RGB** Additive RGB **RGBW30K** Additive RGB + white 3000K [5] **RGBW40K** Additive RGB + white 4000K [5] **RGBA** Additive RGB + amber	**VN** Very Narrow 6° [6] **NS** Narrow Spot 10° [6] **M** Medium 30° [6] **FL** Flood 40° [6] **WFL** Wide Flood 60° [6] **6x90** 6° vertical x 90° horizontal [6] **15x90** 15° vertical x 90° horizontal [6] **25x90** 25° vertical x 90° horizontal [6] **35x90** 35° vertical x 90° horizontal [6] **90x6** 90° vertical x 6° horizontal [6] **90x15** 90° vertical x 15° horizontal [6] **90x25** 90° vertical x 25° horizontal [6] **90x35** 90° vertical x 35° horizontal [6] **NAS** Narrow Asymmetric [6] **WW** Asymmetric Wallwash [6]	**CL** Clear lens [8] **SFR** Small frosted ring [9] **LFR** Large frosted ring [10] **SL** Softening lens [11]	**INTL** Internal louvre [12]	**DMX/RDM** DMX/RDM enabled [13] **DALIT8** DALI-2 dimming Type 8 [14]	**FLH** Flush trim with hardware **FLN** Flush trim no hardware [15] **BVH** Bevel edge trim with hardware **BVN** Bevel edge trim no hardware [15]	**SSB** Brushed stainless steel **SSP** Polished stainless steel	**RBO** Recessed blockout **RBM** Recessed blockout with mounting brackets	**ASL** Anti-slip lens

Notes:

1. A Lumenbeam Inground fixture includes one optical chamber (LBILC), one Power and Control Box (PCBX), one recessed blockout with temporary blockout cover (RBO or RBM) and one trim (FLH, FLN, BVH or BVN). The LBILC and PCBX are provided according to the optic and control configuration.
2. A trim option with hardware (FLH or BVH) must be specified for DO construction.
3. Available for UL certification only.
4. Available for CE certification only.
5. 2700K, 3500K and Royal Blue available, consult factory. Longer lead times apply.
6. Factory installed, not interchangeable on site.
7. Consult Optics and Lens Options section for details.
8. Available for all optics except for VN, M, FL, WFL, NAS and WW.
9. Available for NAS optic only.
10. Available for VN optic only.
11. Standard lens for M, FL, WFL and WW optics. Available as an alternate lens choice for all other optics. A softening lens will affect beam distribution and output. Consult factory for application support.
12. Not available for NAS and WW optics.
13. A control box (CBX) and LumenID (LID) must be specified.
14. DALI-2 Type 8 controller required, provided by others.
15. Not available for DO construction.

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How to order

Environment	Certification
HRS Standard brass material suitable for harsh environments	**UL** UL compliant **CE** CE compliant (16)

Notes:

16. Consult European specification sheet and installation instructions for CE wiring information.

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