



LED Bulkheads

Trojan GALAXY

Highly energy efficient



A cost-effective range of robust, vandal resistant, IP65 rated LED bulkhead luminaires.

The screwed-down polycarbonate diffuser, rigidly constructed polycarbonate base and strong symmetrical shape protect the Trojan Galaxy against abuse.



FEATURES

- Highly energy efficient backlit optical system with a life span of 30,000 hours (L70)
- IP65 – formed-in-place foam gasket protects against dust and water
- Flush fit to fixing surface ensures vandal resistance
- Retained diffuser screws
- Security screws available

APPLICATIONS

Ideal for internal and external applications, where durability and longevity are required, such as youth centres, housing association buildings, sports areas, public walkways and car parks.

TECHNICAL INFORMATION

Trojan Round Galaxy						
Product Code:	FHBL-947-090		FHBL947-160		FHBL947-210	
Base Colour	White or Black					
Diffuser Option	Clear	Opal	Clear	Opal	Clear	Opal
Lumen Output (Lumens)	925	525	1,500	850	1,780	1,020
System Power Consumption (W)	10	10	15	15	20	20
Colour Temperature (K)	4,000					
CRI (Ra)	84					
Life (L85 Hours)	30,000 (L70)					
Efficacy (Lumens Per Circuit Watt)	93	53	100	57	89	51
Specification Options:						
3hr Emergency	✓	✓	✓	✓	✓	✓
Auto Test	✓	✓	✓	✓	✓	✓
Microwave Sensor	✓	✓	✓	✓	✓	✓
Photocell	✓	✓	✓	✓	✓	✓
Dali	✓	✓	✓	✓	✓	✓
Corridor Function	✓	✓	✓	✓	✓	✓
Dimming	✓	✓	✓	✓	✓	✓
Weight (kg)	1.2					
Dimensions (mm)	296 x 95					
Mounting Type	Wall & Ceiling					

MATERIAL & FINISH

- Robust polycarbonate body in black or white
- Clear or opal polycarbonate diffuser

INSTALLATION & MOUNTING

- Hinged LED gear tray and Time-in-a-Box packaging for swift and easy installation
- BESA box fixing points for easy cable entry
- Wall or ceiling mountable
- Exterior or interior use

All standard **Light Management Options** are available, including 3h Emergency, Auto Test, Microwave Sensor, Photocell, DALI, Dimming and Corridor Function.



Rambus
Lighting Technology



SQUARE

- IP65
- IK10
- LED

TECHNICAL INFORMATION

Trojan Square Galaxy						
Product Code:	FHBL-547-090		FHBL547-160		FHBL547-210	
Base Colour	White or Black					
Diffuser Option	Clear	Opal	Clear	Opal	Clear	Opal
Lumen Output (Lumens)	950	600	1,520	980	1,800	1,180
System Power Consumption (W)	10	10	15	15	20	20
Colour Temperature (K)	4,000					
CRI (Ra)	84					
Life (L85 Hours)	30,000 (L70)					
Efficacy (Lumens Per Circuit Watt)	95	60	101	65	90	59
Specification Options:						
3hr Emergency	✓	✓	✓	✓	✓	✓
Auto Test	✓	✓	✓	✓	✓	✓
Microwave Sensor	✓	✓	✓	✓	✓	✓
Photocell	✓	✓	✓	✓	✓	✓
Dali	✓	✓	✓	✓	✓	✓
Corridor Function	✓	✓	✓	✓	✓	✓
Dimming	✓	✓	✓	✓	✓	✓
Weight (kg)	1.2					
Dimensions (mm)	254 x 254 x 95					
Mounting Type	Wall & Ceiling					



GALAXY GEARTRAY

FEATURES

- Incorporates LED chips and high efficiency LED driver
- Hinged design for swift and easy retrofit
- Upgrades any Fern-Howard bulkhead to LED

All standard **light management options** are available, including Emergency, Auto Test, Microwave Sensor, DALI, Dimming and Corridor Function.

A new one-component backlit LED Geartray that replaces both 2D lamps and control gear inside all Fern-Howard bulkheads.

Easy to clip in, the one-component hinged Galaxy backlit gear tray, optically efficient reflector and high efficiency driver for optimum light output.



Trojan GLACIER

No opal diffuser, no loss of light, no better LED Luminaire



ROUND

A cost-effective range of robust, vandal resistant, IP65 rated LED bulkhead luminaires.

The screwed-down polycarbonate diffuser, rigidly constructed polycarbonate base and strong symmetrical shape protect the Trojan Glacier against abuse.

The new Glacier Light Module creates pleasant and perfectly uniform light without the need for an opal diffuser to conceal harsh LED light spots.

FEATURES

- Highly energy efficient EdgeLED™ optical system with a life span of 30,000 hours (L70)
- IP65 – formed-in-place foam gasket protects against dust and water
- Flush fit to fixing surface ensures vandal resistance
- Retained diffuser screws
- Security screws available

APPLICATIONS

Ideal for internal and external applications, where durability and longevity are required, such as youth centres, housing association buildings, sports areas, public walkways and car parks.

TECHNICAL INFORMATION

Trojan Round Glacier		
Product Code:	FHML-947-080	FHML947-140
Base Colour	White or Black	
Diffuser Option	Clear	
Lumen Output (Lumens)	734	1,239
System Power Consumption (W)	11	22
Colour Temperature (K)	4,000	
CRI (Ra)	>85	
Life (Hours)	30,000 (L70)	
Efficacy (Lumens Per Circuit Watt)	67	56
Specification Options:		
3hr Emergency	✓	✓
Auto Test	✓	✓
Microwave Sensor	✓	✓
Photocell	✓	✓
Dali	✓	✓
Corridor Function	✓	✓
Dimming	✓	✓
Weight (kg)	1.2	
Dimensions (mm)	296 x 95	
Mounting Type	Wall & Ceiling	

MATERIAL & FINISH

- Robust polycarbonate body in black or white
- Clear polycarbonate diffuser

INSTALLATION & MOUNTING

- One-component hinged Light Module and Time-in-a-Box packaging for swift and easy installation
- BESA box fixing points for easy cable entry
- Wall or ceiling mountable
- Exterior or interior use

All standard **Light Management Options** are available, including 3h Emergency, Auto Test, Microwave Sensor, Photocell, DALI, Dimming and Corridor Function.



Rambus
Lighting Technology

TECHNICAL INFORMATION



SQUARE

- IP65
- IK10
- Edge LED**

Trojan Square Glacier		
Product Code:	FHML-547-080	FHML547-140
Base Colour	White or Black	
Diffuser Option	Clear	
Lumen Output (Lumens)	736	1,257
System Power Consumption (W)	11	22
Colour Temperature (K)	4,000	
CRI (Ra)	>85	
Life (Hours)	30,000 (L70)	
Efficacy (Lumens Per Circuit Watt)	67	57
Specification Options:		
3hr Emergency	✓	✓
Auto Test	✓	✓
Microwave Sensor	✓	✓
Photocell	✓	✓
Dali	✓	✓
Corridor Function	✓	✓
Dimming	✓	✓
Weight (kg)	1.2	
Dimensions (mm)	254 x 254 x 95	
Mounting Type	Wall & Ceiling	



GLACIER GEARTRAY

FEATURES

- Hinged design for swift and easy retrofit
- Quick and cost effective upgrade for any Fern-Howard bulkhead
- Highly energy efficient EdgeLED™ optical system with a life span of 30,000 hours (L70)
- Available with all standard light management options
- 5 year warranty

A retro-fit LED gear tray that can be used to convert existing Fern-Howard 2D bulkheads to LED, making them highly energy efficient and easier to maintain.

Easy to clip in, the one-component hinged Glacier backlit gear tray, optically efficient reflector and high efficiency driver for optimum light output.



EdgeLED™ – THE TECHNOLOGY

EdgeLED™ – THE GROUND-BREAKING TECHNOLOGY

All too often, LED products are disliked due to the intensity of light created by the very LED source that makes them so efficient – and most attempts at reducing this intensity have compromised their optical efficiency and light distribution by using opal diffusers – so increasing energy consumption.

The true advantages of LED are lost.

However, with EdgeLED™ technology the LEDs are arranged around the edge of a light guide, a highly engineered optical device containing thousands of micro lenses. It is these that precisely control the light from the light guide and channel it to exactly where it is required. Although new to the lighting market, the technology itself is well proven and reliable and can already be found in TVs, tablets, and mobile phones.

The result is a pleasing and uniform light output with optimised distribution that in no way compromises the inherent efficiency of LED. Not only is the light output homogenous, it also reduces the number of luminaires required to illuminate a given area, and allows new, inherently attractive, designs to be developed.



PRODUCT OVERVIEW

Designed for public utilities, the IP65 rated EdgeLED™ P5 combines outstanding efficiency with a slim and robust aluminium-bodied luminaire, and shows just how versatile Fern-Howard's new EdgeLED™ technology can be.

As with all EdgeLED™ luminaires, the P5 produces an exceptionally uniform and pleasing light distribution. Rambus' patented MicroLens® optics achieve high optical efficiency with exact light control; and because the maximum light is extracted and directed precisely, less energy is required.

The EdgeLED™ P5 is the perfect solution for local authorities, education, public utilities and housing associations.

PRODUCT FEATURES

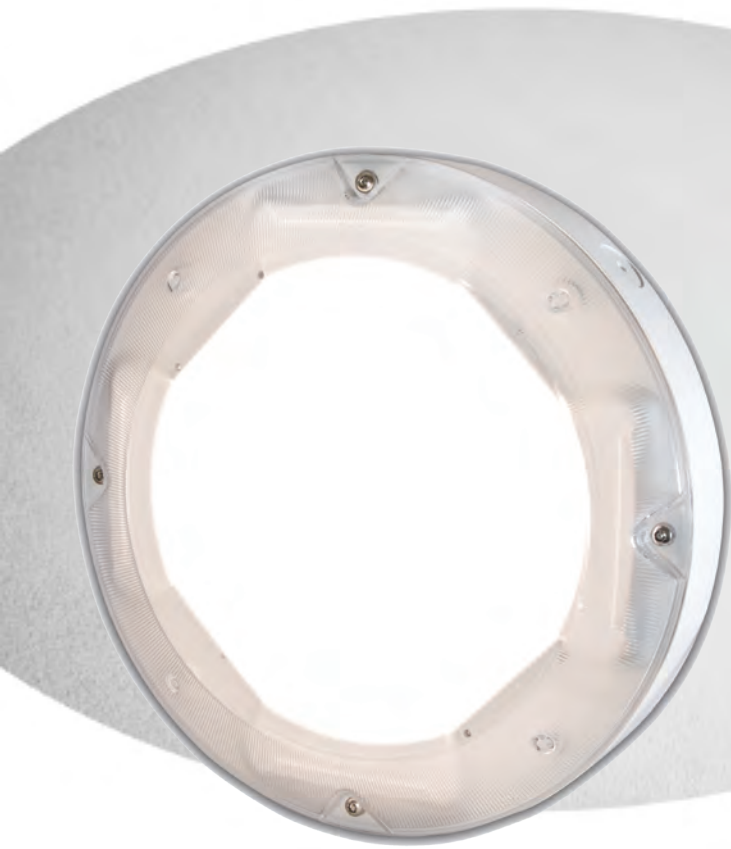
- Robust die-cast aluminium body in black or white
- Optically designed EdgeLED™ light guide
- One-component heat sink incorporating both EdgeLED™ light guide and driver for swift and easy installation
- Highly energy efficient EdgeLED™ optical system with a life span of 50,000 hours (L85)
- Low maintenance costs – no annual lamp replacements required

TECHNICAL INFORMATION

EdgeLED™ P5			
Product Code:	EDGE-P5-090	EDGE-P5-160	EDGE-P5-240
Lumen Output (Lumens)	900	1,600	2,400
System Power Consumption (W)	12	20	32
Colour Temperature (K)	4,000		
CRI (Ra)	>83		
Life (L85 Hours)	50,000		
Efficacy (Lumens Per Circuit Watt)	81	78	77
Specification Options:			
3hr Emergency	✓	✓	✓
Auto Test	✓	✓	✓
Microwave Sensor	✓	✓	✓
Photocell	✓	✓	✓
Dali	✓	✓	✓
Corridor Function	✓	✓	✓
Dimming	✓	✓	✓
Weight (kg)	1.8		
Dimensions (mm)	246 x 246 x 65		
Mounting Type	Wall & Ceiling		



Our EdgeLED™ products are the result of a unique collaboration with Rambus Inc. a US based technology leader in the field of LED Edge lighting application. All EdgeLED™ products are manufactured at our state-of-the-art injection moulding and assembly facility in the UK and are based on Rambus' impressive portfolio of LED Edge lighting patents covering lens design, LED coupling and Lens replication. This unique partnership brings our customers innovative products with market leading performance and appearance – designed and manufactured using world class, patented, technology



PRODUCT OVERVIEW

Fern-Howard's unique EdgeLED™ technology means the aluminium bodied P7 can combine rugged performance, IP65 rating and outstanding efficiency in a slim rounded and elegant luminaire.

As all EdgeLED™ luminaires, the P5 produces an exceptionally uniform and pleasant light. Rambus' patented MicroLens® optics achieve high optical efficiency and exact light control. And because the maximum light is extracted and directed precisely, less energy is required.

Perfect for public utilities and social housing, the EdgeLED™ P7 is just as suited to education and housing associations – anywhere a good-looking efficient luminaire with low maintenance and running costs is essential.

PRODUCT FEATURES

- Robust die-cast aluminium body in black or white
- Clear polycarbonate diffuser with a stylised prismatic edge
- Optically designed EdgeLED™ light guide
- One-component heat sink incorporating both light guide and high-efficiency driver
- Highly energy efficient EdgeLED™ optical system with a life span of 50,000 hours (L85)
- Low maintenance costs – no annual lamp replacements required
- Qualifying for ECA support

TECHNICAL INFORMATION

EdgeLED™ P7			
Product Code:	EDGE-P7-090	EDGE-P7-160	EDGE-P7-210
Lumen Output (Lumens)	900	1,600	2,400
System Power Consumption (W)	13	22	35
Colour Temperature (K)	4,000		
CRI (Ra)	>83		
Life (L85 Hours)	50,000		
Efficacy (Lumens Per Circuit Watt)	70	72	68
Specification Options:			
3hr Emergency	✓	✓	✓
Auto Test	✓	✓	✓
Microwave Sensor	✓	✓	✓
Photocell	✓	✓	✓
Dali	✓	✓	✓
Corridor Function	✓	✓	✓
Dimming	✓	✓	✓
Weight (kg)	1.8		
Dimensions (mm)	300 x 66mm		
Mounting Type	Wall & Ceiling		



All products are designed & manufactured in the UK. Luminaires are manufactured and tested in accordance with BS EN60598. Incorporated control gear and components comply with BS/VDE standards. Luminaires are tested in accordance with IES LM-79-08.



MATERIAL & FINISH

- Robust polycarbonate body in black or white
- Clip-on fascia in black, white or chrome
- Clear polycarbonate lens cover
- Slim profile

INSTALLATION & MOUNTING

- Base with integral high-efficiency driver
- Plug-in optical module for swift installation
- BESA box fixing points for easy cable entry
- Security screws available
- Wall mountable
- Exterior or interior use

All standard **Light Management Options** are available, including 3h Emergency, Auto Test, Microwave Sensor, Photocell, DALI, Dimming and Corridor Function.



PRODUCT OVERVIEW

This highly energy efficient exterior wall luminaire distributes light exactly where it is needed with a combination of high optical efficiency and precise ray angle controlled output.

Rambus' patented MicroLens® technology creates pleasant and uniform light, whilst ray angle control directs light exactly where it is required – light spillages and light pollution are avoided and spaces come to life; all with minimal energy consumption.

PRODUCT FEATURES

- Highly energy efficient EdgeLED™ optical system with a life span of 50,000 hours (L85)
- Fewer luminaires are required to light the same area, drastically reducing installation and operating costs
- Delivering exceptionally uniform and pleasant light
- IP65 – formed-in-place foam gasket protects against dust and water

APPLICATIONS

Wall mounted, robust and vandal proof the EdgeLED™ A1 has been designed specifically for areas where controlling illumination is paramount, such as walkways, external landing areas and corridors.

TECHNICAL INFORMATION

EdgeLED™ A1		
Product Code:	EDGE-A1-110	EDGE-A1-190
Base Colour	Black, White or Chrome	
Diffuser Option	Clear Lens Cover	
Lumen Output (Lumens)	1,100	1,900
System Power Consumption (W)	13	25
Colour Temperature (K)	4,000	
CRI (Ra)	>83	
Life (L85 Hours)	50,000 (L85)	
Efficacy (Lumens Per Circuit Watt)	85	76
Specification Options:		
3hr Emergency	✓	✓
Auto Test	✓	✓
Microwave Sensor	✓	✓
Photocell	✓	✓
Dali	✓	✓
Corridor Function	✓	✓
Dimming	✓	✓
Weight (kg)	2.0	
Dimensions (mm)	350 x 45	
Mounting Type	Wall	



Thinner, brighter and highly energy efficient, the new R3 produces the same exceptionally uniform and pleasant light common to all EdgeLED™ luminaires.

Rambus' patented MicroLens® optics achieve high optical efficiency through controlled light distribution; and because the maximum light is extracted, less energy is required.



FEATURES

- Highly energy efficient EdgeLED™ optical system with a life span of 50,000 hours (L85)
- Reduced running and maintenance costs
- Delivering exceptionally uniform and pleasant light
- IP65 – formed-in-place foam gasket protects against dust and water

APPLICATIONS

Elegant and stylish, the EdgeLED™ R3 is ideally suited for applications where aesthetics are as important as performance, in reception areas, hallways and staircases as well as commercial spaces.

TECHNICAL INFORMATION

EdgeLED™ R3			
Product Code:	EDGE-R3-180HE	EDGE-R3-250HE	EDGE-R3-340
Base Colour	Black, White or Chrome		
Diffuser option	Clear Lens Cover		
Lumen Output (Lumens)	1,800	2,500	3,400
System Power Consumption (W)	18	27	39
Colour Temperature (K)	4,000		
CRI (Ra)	84		
Life (L85 Hours)	50,000		
Efficacy (Lumens Per Circuit Watt)	100	93	88
Specification Options:			
3hr Emergency	✓	✓	OUTDOOR USE ONLY
Auto Test	✓	✓	
Microwave Sensor	✓	✓	✓
Photocell			
Dali	✓	✓	✓
Corridor Function	✓	✓	✓
Dimming	✓	✓	✓
Weight (kg)	2.0		
Dimensions (mm)	Ø 350 x 45		
Mounting Type	Wall & Ceiling		

MATERIAL & FINISH

- Robust Polycarbonate body
- Clip-on fascia in black, white or chrome
- Clear Polycarbonate lens cover
- Slim profile

INSTALLATION & MOUNTING

- Base with integral high-efficiency driver
- Plug-in optical module for swift installation
- BESA box fixing points for easy cable entry
- Security screws available
- Wall or ceiling mountable
- Exterior or interior use

All standard Light Management Options are available, including 3h Emergency, Auto Test, Microwave Sensor, DALI, Dimming and Corridor Function.



Product Codes

TROJAN ROUND GALAXY

FHBL-947-090-W (white)
FHBL-947-090-B (black)
FHBL-947-160-W (white)
FHBL-947-160-B (black)
FHBL-947-210-W (white)
FHBL-947-210-B (black)

Diffuser option for above add CL (clear) or OP (opal)

TROJAN SQUARE GALAXY

FHBL-547-090-W (white)
FHBL-547-090-B (black)
FHBL-547-160-W (white)
FHBL-547-160-B (black)
FHBL-547-210-W (white)
FHBL-547-210-B (black)

Diffuser option for above add CL (clear) or OP (opal)

TROJAN GALAXY GEARTRAY ONLY

FHBL-090-GT 900 LUMEN GEARTRAY
FHBL-090-GT EM
FHBL-160-GT 1600 LUMEN GEARTRAY
FHBL-160-GT-EM
FHBL-2100-GT 2000 LUMEN GEARTRAY
FHBL-2100-GT 2000-EM

TROJAN ROUND GLACIER

FHML-947-080-W (white)-CL
FHML-947-080-B (black)-CL
FHML-947-140-W (white)-CL
FHML-947-140-B (black)-CL

TROJAN SQUARE GLACIER

FHML-547-080-W (white)-CL
FHML-547-080-B (black)-CL
FHML-547-140-W (white)-CL
FHML-547-140-B (black)-CL

TROJAN GLACIER GEARTRAY ONLY

FHML-080-LM 800 LED
FHML-080-LM-EM 800 LED
FHML-140-LM 1400 LED
FHML-140-LM-EM 1400 LED

EDGELED P5

EDGE-P5-090-W (white)
EDGE-P5-090-B (black)
EDGE-P5-160-W (white)
EDGE-P5-160-B (black)
EDGE-P5-240-W (white) or -B (black)
EDGE-P5-240-B (black)

EDGELED P7

EDGE-P7-090-W (white)
EDGE-P7-090-B (black)
EDGE-P7-160-W (white)
EDGE-P7-160-B (black)
EDGE-P7-240-W (white)
EDGE-P7-240-B (black)

EDGELED A1

EDGE-A1-110-W-CL
EDGE-A1-110-B-CL
EDGE-A1-190-W-CL
EDGE-A1-190-B-CL

EDGELED R3

EDGE-R3-180-W-CL
EDGE-R3-180-B-CL
EDGE-R3-250-W-CL
EDGE-R3-250-B-CL
EDGE-R3-340-W-CL
EDGE-R3-340-B-CL

To order the additional options please add the following codes:

Please refer to Product Technical Information for available options.

MS = Microwave Sensor

EM = Emergency

CF = Corridor Function

CFEM = Corridor Function Emergency

DA = Dali

PH = Photocell

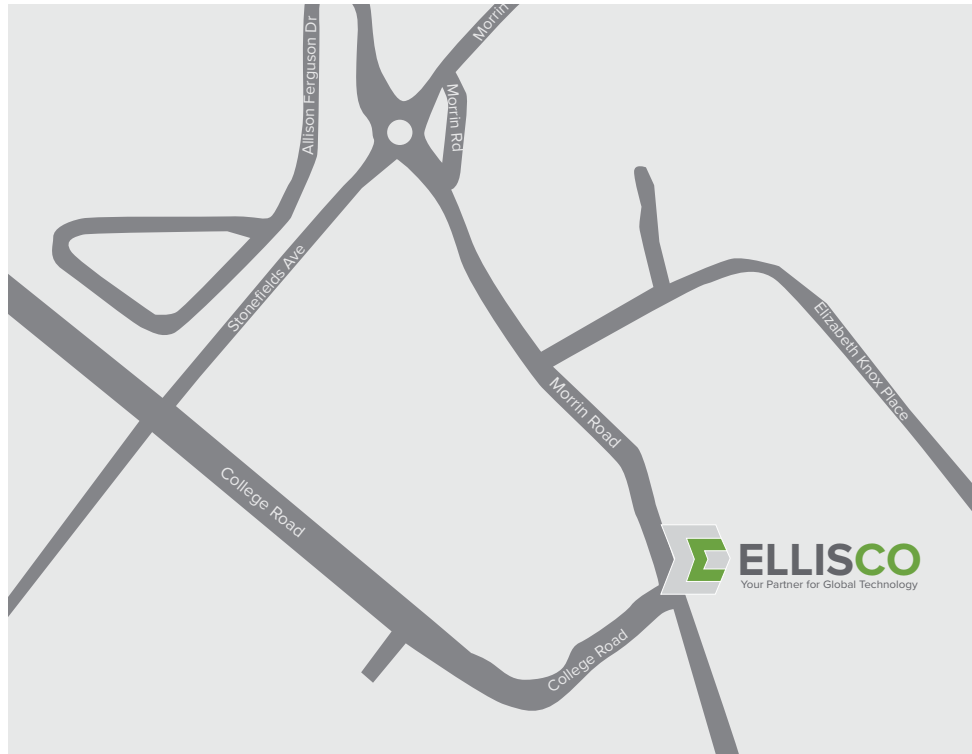
Non-standard Indent items are non-returnable.

Important Warranty Information

Fern Howard luminaires marked with a **5 year warranty** label. A one year warranty applies from the date of purchase from an authorised Fern Howard distributor. An extended warranty of a further 4 years is available by registering the installation within 6 months of purchase. Email ellis@ellis.co.nz for a registration sheet.

Fern Howard luminaires marked with a **7 year warranty** label. A two year warranty applies from the date of purchase from an authorised Fern Howard distributor. An extended warranty of a further 5 years is available by registering the installation within 6 months of purchase. Email ellis@ellis.co.nz for a registration sheet.

AVAILABLE FROM YOUR WHOLESALER:



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