



*...life is brighter*





## Welcome to the latest catalogue from Fusion Luminaires...

The New Fusion Luminaires catalogue showcases a comprehensive range of lighting fixtures for domestic, commercial, retail and industrial applications.

During our 30 year history we have been considered by many of our customers to be a consistent front runner for providing innovative, energy saving and maintenance saving solutions.

Supported with a wealth of expertise from our support teams both in the field and at the end of a phone. Whether this is for guidance, assisting in site-surveys, demonstrating products or producing a detailed Lighting Design, with over 200 years' collective experience in the lighting industry our team is happy to help.

At Fusion Luminaires we fully appreciate the importance of service, quality and availability.

From our 84,500 square foot warehousing and distribution facilities based in Doncaster, South Yorkshire we have a stock holding second to none, supported with a despatch and freight service available throughout UK and Ireland.

Fusion Luminaires are a member of the Lighting Industry Association (LIA) and are also a LIAQA (Lighting Industry Association Quality Assurance) assured company, demonstrating the quality of our products and the processes we have in place to ensure our high quality standards.



*...life is brighter*

Products offered for sale may differ from those described in this catalogue due to later production, changes in specification, components or place of manufacture.

Our policy is one of constant development and improvement. Whilst every effort is made to make the catalogue accurate at the date of printing, specification and/or appearance may be changed in the interest of continuing improvement.

Fusion Luminaires would like to acknowledge the help and support of its staff, customers and suppliers in providing information towards the publication of this catalogue. All products are subject to availability and are correct at the time of print. Errors and omissions excepted.

Fusion Luminaires reserve the right to change and/or update products and specifications without prior notice.  
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## CONTACT US...

### Technical Support

Fusion Luminares are proud to offer over 30 years experience in technical support from our internal sales team. This technical support is also backed up by dedicated Business Development Managers who specialise in lighting solutions.



### Customer Service

Fusion Luminares has a dedicated department open from 7.30am to 5.30pm, 5 days a week, Monday to Friday. All staff are continuously trained to offer the highest quality service which we have become renowned for over the last 30 years. Our customers can be confident in our continued support.



### Delivery

Our comprehensive range of Luminares is available in stock, our experienced despatch team enable products to be delivered at a rapid pace!

## Phone | Email | Web | Social



**+44 (0)1302 769 966** Our Sales & Lighting Design Team is available from 7.30am-5.30pm Monday-Friday.



**info@fusion-luminares.co.uk** For all general enquiries.  
**lightingdesign@fusion-luminares.co.uk** For lighting design requirements.



**fusion-luminares.co.uk** For up-to-date information and technical specifications, please visit our website.



**@Fusion\_LandL**



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**Fusion Lamps and Luminares**



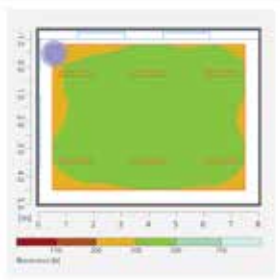
**Fusion Lamps and Luminares** Follow us on LinkedIn for all of our latest News.

Our team of professional and commercially minded lighting designers have over 80 years of experience in the lighting industry. We know the importance of good lighting design and the benefits this will bring to a project/ Our lighting design service ensures correct light levels are achieved in compliance with current regulations.



## Plans

To start commencing with a lighting design, plans or drawings are required. If these are not available our Business Development Manager's can carry out a site visit to obtain this information.



## Lux Plots

Once we have the plans / drawings, a lighting design can be produced.



## 3D Lux Plots & Representations

Upon request 3D Lux Plots and representations are available. In order to do this, photographs are useful to ensure accuracy of the design. These are ideal to make a design stand out and enable the end user to visualise the finished result.



## Referrals

If successful with the lighting design, after the installation is completed, it would be appreciated if we could put a referral together.

For any lighting design requirements, please contact your local Business Development Manager or contact the Fusion Luminares team on **01302 769 966** Alternatively email: [lightingdesign@fusion-luminares.co.uk](mailto:lightingdesign@fusion-luminares.co.uk)

# TECHNICAL INFORMATION & SYMBOLS

## 220-240V-50/60Hz Product Voltage



Class I



Class II



Class III



Conforms with all applicable UKCA directives



Conforms with all applicable CE directives



Dimmable



Non-Dimmable



Must NOT be covered with insulation



Do not dispose of product in general waste. Only discard in separate collection schemes, which cater for the recovery and recycling of materials contained within



Emergency fitting



Ingress Protection Rating (IP)



Mount a minimum of .5M away from adjacent surface



Replace broken glass



Do not look directly into light source



Safety extra low voltage



Equipment suitable for mounting in or on cabinets or furniture



External Mechanical Impact Protection Rating (IK) Degrees of protection are measured in Joules (J)

- IK00 = No protection
- IK02 = 0.2 J
- IK03 = 0.35 J
- IK05 = 0.5 J
- IK06 = 0.7 J
- IK07 = 1 J
- IK08 = 2 - 5 J
- IK09 = 10 J
- IK10 = 20 J



Warranty



NB: The 1 Year On-Site Warranty is subject to additional terms and conditions. Emergency products are excluded from the 1 Year On-Site Warranty.

## Ingress Protection (IP) Values

### First Numeral

- 0 No protection.
- 1 Protection against ingress of large solid foreign bodies.
- 2 Protection against ingress of medium sized solid foreign bodies.
- 3 Protection against ingress of small solid foreign bodies greater in thickness than 2.5mm.
- 4 Protection against ingress of small solid foreign bodies greater in thickness than 1mm.
- 5 Protection against ingress of dust in an amount sufficient to interfere with the satisfactory operation of enclosed equipment.
- 6 Complete protection against ingress of dust.

### Second Numeral

- 0 No protection.
- 1 Protection against drops of condensed water.
- 2 Protection against drops of liquid falling at any angle up to 15° from the vertical.
- 3 Protection against rain falling at any angle up to 60° from the vertical.
- 4 Protection against splashing. Liquid splashed from any direction shall have no harmful effect.
- 5 Protection against water jets projected by nozzle from any direction.
- 6 Protection against condition on ship decks.
- 7 Protection against immersion in water.
- 8 Protection against indefinite immersion in water (depth to be confirmed).

Offering quality products and services has been our goal for over 30 years. We have such confidence in our products that we offer warranties up to 5 years.



At Fusion Luminares, all 5 Year Warranty products are now supported with a 1 Year On-Site Warranty. This only applies to products purchased from 1st May 2022.



Guardian Floodlights

Shield Floodlights

Wall Packs

Bollards

Fire Rated Downlights

Nano Streetlights

Post Tops

Battens

NCFs

Klip Bulkheads

Panels

Highbays

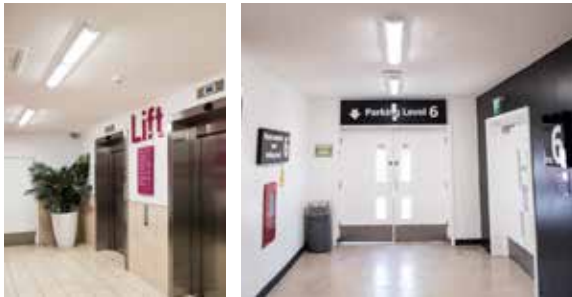
NB: The 1 Year On-site Warranty is subject to additional terms and conditions. These can be found on our website. Emergency products are excluded from the 1 Year On-site Warranty.

In the unlikely event of a product covered by the 1 year on-site warranty failing within 1 year of the purchase date Fusion Luminares will, where possible, authorise the installer to replace the failed product and they will be reimbursed what we consider to be fair and reasonable costs.



## SLIMLINE LED LINK LIGHT

David Mellor Design, Marylebone, London  
See page 15



## ATEN LED SURFACE FIXTURE

Frenchgate Shopping Centre,  
Doncaster, South Yorkshire  
See page 32



## BACK-LIT LED PANEL

Super Rod / Klein Tools, Blaenavon,  
South Wales  
See page 12



## GUARDIAN LED RGB FLOODLIGHT

Hart Village, Hartlepool  
See page 57







## LED FLEXI-FIT CIRCULAR DOWNLIGHT

The Opposition Hair Salon, Leeds

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## LED HIGHBAY

Waterco Warehouse, Faversham, Kent

See pages 36 - 37



## LED NON-CORROSIVE FITTING

Parc Golf Club Driving Range, Newport

See page 34



## SHEILD LED ASYMMETRIC FLOODLIGHT

Intu Lakeside Shopping Centre, London

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Back-Lit LED Panel | 12



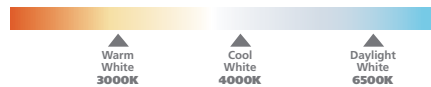
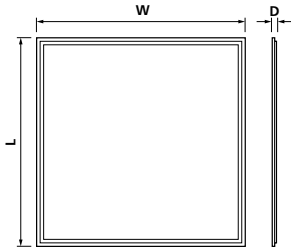
Surface Mounting Frames  
& Accessories | 13



# BACK-LIT LED Panels

## FEATURES AND BENEFITS

- TP(a) rated diffuser
- Uniform light distribution
- Quick, easy installation with plug & play driver
- Push-fit (loop-in/loop-out) driver terminal blocks
- Optional emergency pack available
- Beam Angle: 120°
- CRI: >80
- LED Lifetime: 50,000hrs (L70/B50)
- Operating Temperature: -10°C to +40°C



NB: The 1 Year On-Site Warranty is subject to additional terms and conditions.  
Emergency products are excluded from the 1 Year On-Site Warranty.

Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	L	W (mm)	D
FP66WW	36W	600x600mm Back-Lit LED Panel	3820	3000K	1.75	595	595	31
FP66CW	36W	600x600mm Back-Lit LED Panel	3820	4000K	1.75	595	595	31
FP66DW	36W	600x600mm Back-Lit LED Panel	3820	6500K	1.75	595	595	31
FP123CW	36W	1200x300mm Back-Lit LED Panel	3820	4000K	2.17	1195	295	31
FP123DW	36W	1200x300mm Back-Lit LED Panel	3820	6500K	2.17	1195	295	31
FP126CW	45W	1200x600mm Back-Lit LED Panel	4830	4000K	3.46	1195	595	31
FP126DW	45W	1200x600mm Back-Lit LED Panel	4830	6500K	3.46	1195	595	31

Emergency conversion pack available - See below, sold separately (See instructions with emergency pack for installation details)

FE3P	4.3W	Emergency Pack for LED panels	-	-	0.47	213	95	40
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## SURFACE MOUNTING FRAMES & Accessories



PANSFB



FE3P

Product Ref	Description	Weight (kg)	L	W (mm)	D
<b>PANSFB</b>	600 x 600mm Surface Mounting Frame	2.0	600	600	70
<b>PANSFB123</b>	1200 x 300mm Surface Mounting Frame	2.5	1200	300	70
<b>PANSFB126</b>	1200 x 600mm Surface Mounting Frame	3.3	1200	600	70
<b>FE3P</b>	4.3W Emergency LED Panel Conversion Kit	0.47	213	95	40

# UNDER CABINET LIGHTING & LED STRIPS

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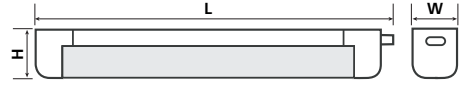
LED Strip 5m IP65 Strip Kits  
& Accessories | 16 - 18



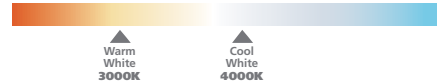
# LINK LIGHT LED

## FEATURES AND BENEFITS

- Slimline under cabinet link light
- Ideal replacement for T4 or T5 fluorescent fittings
- Integrated ON/OFF switch allowing independent control
- Simple plug & play linking
- Connections and accessories supplied
- Optional interconnecting leads - various sizes available
- Beam Angle: 180°
- CRI: >80
- LED Lifetime: 30,000 hours (L70/B50)
- Operating temperature: -5°C to +40°C



TL250LL



Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	L	W	H
						(mm)		
<b>DL4WLEDWW225</b>	4W	225mm Under Cabinet LED Link Light	340	3000K Warm White	0.074	225	23	36
<b>DL4WLED225</b>	4W	225mm Under Cabinet LED Link Light	360	4000K Cool White	0.074	225	23	36
<b>DL4WLEDWW</b>	4W	288mm Under Cabinet LED Link Light	370	3000K Warm White	0.101	288	23	36
<b>DL4WLED</b>	4W	288mm Under Cabinet LED Link Light	400	4000K Cool White	0.101	288	23	36
<b>DL7WLEDWW</b>	7W	516mm Under Cabinet LED Link Light	630	3000K Warm White	0.158	516	23	36
<b>DL7WLED</b>	7W	516mm Under Cabinet LED Link Light	700	4000K Cool White	0.158	516	23	36
<b>DL9WLEDWW</b>	9W	549mm Under Cabinet LED Link Light	800	3000K Warm White	0.162	549	23	36
<b>DL9WLED</b>	9W	549mm Under Cabinet LED Link Light	900	4000K Cool White	0.162	549	23	36
<b>DL13WLEDWW</b>	13W	849mm Under Cabinet LED Link Light	1200	3000K Warm White	0.217	849	23	36
<b>DL13WLED</b>	13W	849mm Under Cabinet LED Link Light	1300	4000K Cool White	0.217	849	23	36
<b>DL18WLEDWW</b>	18W	1149mm Under Cabinet LED Link Light	1600	3000K Warm White	0.28	1149	23	36
<b>DL18WLED</b>	18W	1149mm Under Cabinet LED Link Light	1800	4000K Cool White	0.28	1149	23	36
<b>DL22WLEDWW</b>	22W	1449mm Under Cabinet LED Link Light	1800	3000K Warm White	0.382	1449	23	36
<b>DL22WLED</b>	22W	1449mm Under Cabinet LED Link Light	2100	4000K Cool White	0.382	1449	23	36
<b>TL250LL</b>	-	250mm Link Lead for Link Lights	-	-	-	250	-	-
<b>TL500LL</b>	-	500mm Link Lead for Link Lights	-	-	-	500	-	-
<b>TL1000LL</b>	-	1000mm Link Lead for Link Lights	-	-	-	1000	-	-

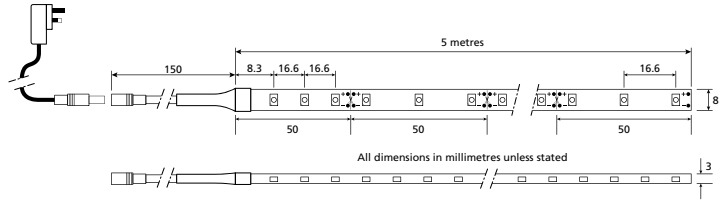
NOTE: A maximum of 10 units can be installed and linked together on any given system.



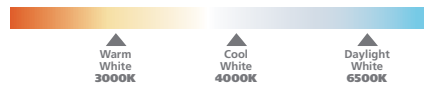
# LED STRIP 5m IP65 DIY LED Strip Kits

## FEATURES AND BENEFITS

- Ideal for domestic use such as cove lighting & under cabinet lighting
- Kit supplied c/w plug-in driver (12V)
- Input Voltage: AC 220-240V
- Operating Voltage: DC 12V
- Wattage per metre: 4.8W
- LED quantity per metre: 60
- Maximum installation length: 5m
- Cutting point: 5cm intervals
- Lumen output per metre:  $\leq 300\text{lm}$
- Beam Angle:  $120^\circ$
- CRI:  $>80$
- LED Lifetime: 30,000hrs (L70/B50)
- Operating Temperature:  $-20^\circ\text{C}$  to  $+40^\circ\text{C}$



LEDSTRIPCWBP



Product Ref	Watts	Description	Amps	CCT	Cut Interval (mm)	Length (m)
LEDSTRIPWWBP	24W	DIY LED Strip Kit, c/w 5m roll & Plug-in Driver	2A	3000K	50	5
LEDSTRIPCWBP	24W	DIY LED Strip Kit, c/w 5m roll & Plug-in Driver	2A	4000K	50	5
LEDSTRIPDWBP	24W	DIY LED Strip Kit, c/w 5m roll & Plug-in Driver	2A	6500K	50	5

**NOTE:** A maximum length of 5 metres can be operated from an individual plug-in driver. Not suitable for external use.

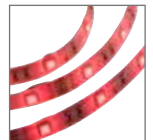
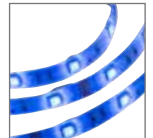
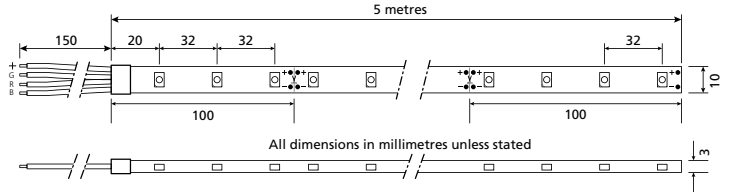




# LED STRIP 5m IP65 RGB DIY LED Strip Kit

## FEATURES AND BENEFITS

- Ideal for domestic use such as cove lighting & under cabinet lighting
- Kit supplied c/w plug-in driver (12V)
- Kit includes remote control and receiver
- Fade, flash and strobe effects with speed control
- Input Voltage: AC 220-240V
- Operating Voltage: DC 12V
- Wattage per metre: 7.2W
- LED quantity per metre: 30
- Maximum installation length: 5m
- Cutting point: 10cm intervals
- Lumen Output per metre: ≤260lm
- Beam Angle: 120°
- LED Lifetime: 30,000hrs (L70/B50)
- Operating Temperature: -20°C to +40°C



Product Ref	Watts	Description	Amps	CCT	Cut Interval (mm)	Length (m)
LEDSTRIPRGBBP	36W	RGB DIY LED Strip Kit, c/w Remote Control & Receiver	3A	RGB	100	5

**NOTE:** A maximum length of 5 metres can be operated from an individual plug-in driver.  
Not suitable for external use.

220-240V-50/60Hz

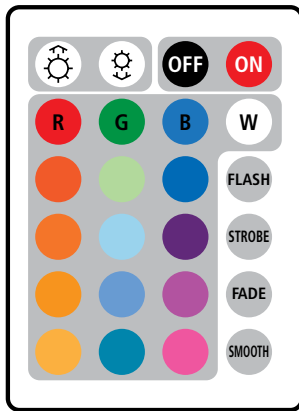
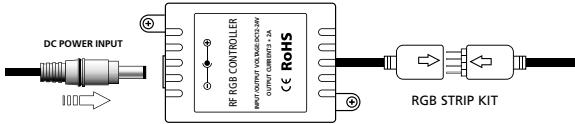
# DIY LED STRIP 5m IP65 RGB LED Strip Kit continued...

## CONTROLLER

1. The controller has 24 buttons which operate via the RF signal receiver. See the chart below for the function of each button.
2. When in an effect mode the speed is adjustable by using the Brightness buttons to increase or decrease the speed.



## CONNECTING DIAGRAM



<b>Brightness +</b> (8 in all)	<b>Brightness -</b> (8 in all)	<b>OFF</b>	<b>ON</b>
<b>R</b> Static RED	<b>G</b> Static GREEN	<b>B</b> Static BLUE	<b>W</b> Static White
Static Dark Orange	Static Light Green	Static Dark Blue	<b>FLASH</b> All Fade In Fade Out Colour Dynamic Mode Speed Adjustable
Static Orange	Static Cyan	Static Purple	<b>STROBE</b> 7 Colour Dynamic Mode Speed Adjustable
Static Yellow	Static Light Blue	Static Violet	<b>FADE</b> 7 Colour Dynamic Mode Speed Adjustable
Static Light Yellow	Static Sky Blue	Static Pink	<b>SMOOTH</b> 7 Colour Dynamic Mode Speed Adjustable



# SECTION 3 DOWNLIGHTS

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Colour Select Fire Rated Downlights 5.5W LED FRD | 26



Fire Rated Downlights 5.5W LED FRD | 27



Fire Rated Downlights GU10 FRD | 28



Intumescent Fire Tents for Recessed Downlight Fittings | 29

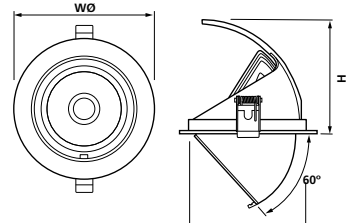


# ADJUSTABLE DOWNLIGHTS

## LED Circular Adjustable Downlights

**FEATURES AND BENEFITS**

- Die cast aluminium white powder coated body
- Pre-wired plug and play driver
- No flicker
- Instant re-strike
- Reduced heat
- CRI: >80
- LED Lifetime: 25,000 hours at (L70/B50)
- Operating Temperature: -10°C +40°C



FCAD11.5



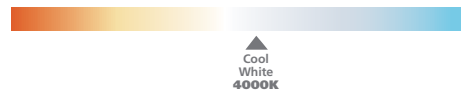
FCAD16



FCAD27



FCAD42



Product Ref	Watts	Description	Lumens	Useful Lumens	CCT	Beam Angle	Weight (kg)	W	H (mm)	Cutout Ø
			(lm)	(lm)						
<b>FCAD11.5</b>	11.5W	LED Circular Adjustable Downlight	950	850	4000K	24°	0.28	90	60	75
<b>FCAD16</b>	16W	LED Circular Adjustable Downlight	1350	1250	4000K	24°	0.37	102	80	90
<b>FCAD27</b>	27W	LED Circular Adjustable Downlight	2300	2100	4000K	38°	0.67	125	108	110
<b>FCAD42</b>	42W	LED Circular Adjustable Downlight	3800	3500	4000K	60°	1.11	160	135	145

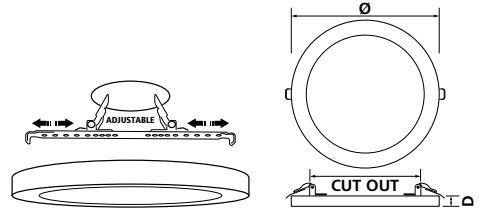
220-240V-50/60Hz



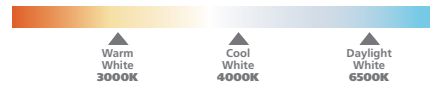
# FLEXI-FIT LED Circular Downlights

## FEATURES AND BENEFITS

- Versatile luminaire which can be used in many installations:
  - recessed mounted (cut-out adaptable from 55 to 250mm, depending on the luminaire wattage)
  - surface mounted
- CCT colour select function (WW / CW / DW)
- Optional magnetic trims available: (Satin Nickel / Chrome / Black)
- Optional emergency pack available
- 110° beam angle
- CRI: >80
- LED Lifetime: 30,000 hours (L70/B50)
- Operating Temperature: -20°C to +40°C



FE3FF



Product Ref	Watts	Description	Lumens (lm)			Weight (kg)	D	Ø	Cutout Ø
			3000K	4000K	6500K				
FFF6CC	6W	Flexi-Fit Circular Downlight, CCT, White Trim	390	420	450	0.18	15	140	55-100
FFF18CC	18W	Flexi-Fit Circular Downlight, CCT, White Trim	1500	1530	1560	0.38	15	217	55-175
FFF24CC	24W	Flexi-Fit Circular Downlight, CCT, White Trim	1980	1560	2040	0.65	15	290	60-250
<b>FFF6CC Bezels</b>									
FFFB6B	-	Flexi-Fit Matt Black Bezel	-	-	-	0.06	15	141	-
FFFB6CH	-	Flexi-Fit Chrome Bezel	-	-	-	0.06	15	141	-
FFFB6SN	-	Flexi-Fit Satin Nickel Bezel	-	-	-	0.06	15	141	-
<b>FFF18CC Bezels</b>									
FFFB18B	-	Flexi-Fit Matt Black Bezel	-	-	-	0.08	15	219	-
FFFB18CH	-	Flexi-Fit Chrome Bezel	-	-	-	0.08	15	219	-
FFFB18SN	-	Flexi-Fit Satin Nickel Bezel	-	-	-	0.08	15	219	-
<b>FFF24CC Bezels</b>									
FFFB24B	-	Flexi-Fit Matt Black Bezel	-	-	-	0.16	15	293	-
FFFB24CH	-	Flexi-Fit Chrome Bezel	-	-	-	0.16	15	293	-
FFFB24SN	-	Flexi-Fit Satin Nickel Bezel	-	-	-	0.16	15	293	-
<b>Flexi-Fit Emergency Pack</b>									
FE3FF	2W	Emergency Pack For LED Flexi-Fit Downlights	-	-	-	0.47	-	-	-

220-240V-50/60Hz **IP20**

## DOWNLIGHTS Range

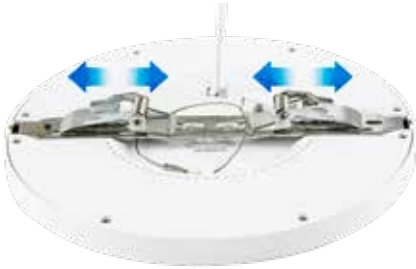
### SURFACE MOUNTED

By using the bracket, screws and wall plugs, the fitting can be surface mounted.



### RECESS MOUNTED

The spring-clips are adjustable which allows it to be used in cut-out sizes from 55mm to 250mm depending on the luminaire wattage.



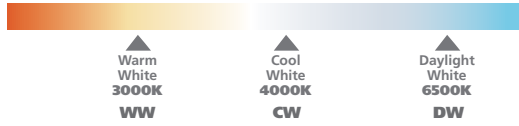
### MAGNETIC BEZELS

The Flexi-Fit trim is white as standard. Additional magnetic bezels are available separately. This allows the customer to tailor the fitting to their preferred aesthetics.



### CCT SELECTABLE

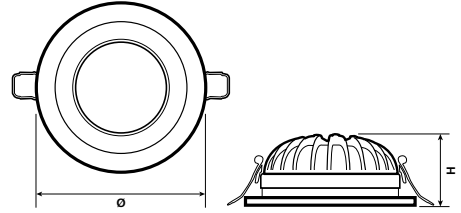
The fitting has a CCT colour select function on the rear of the fitting. This allows the customer to select their preferred colour temperature. Simply slide the switch to the colour temperature required as below:



# PROGRESSION LED Downlights

## FEATURES AND BENEFITS

- Die cast aluminium body: supplied with standard bezel and glass diffuser
- Instant start and flicker free
- Shallow recessing depth
- Pre-wired plug and play driver
- LED driver included with plug and play connector
- Additional accessories are available to transform the appearance of the downlight
- Optional Emergency Pack available
- Beam Angle: 85°
- CRI: >80
- LED Lifetime: 30,000 hours (L70/B50)
- Operating Temperature: -20°C to +40°C



DLPRO20CW  
Rear view



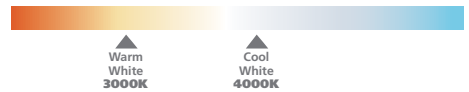
DLPROOPALDIF  
Fitted



DLPROFR  
Fitted



FE3CD



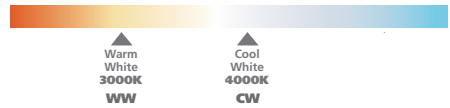
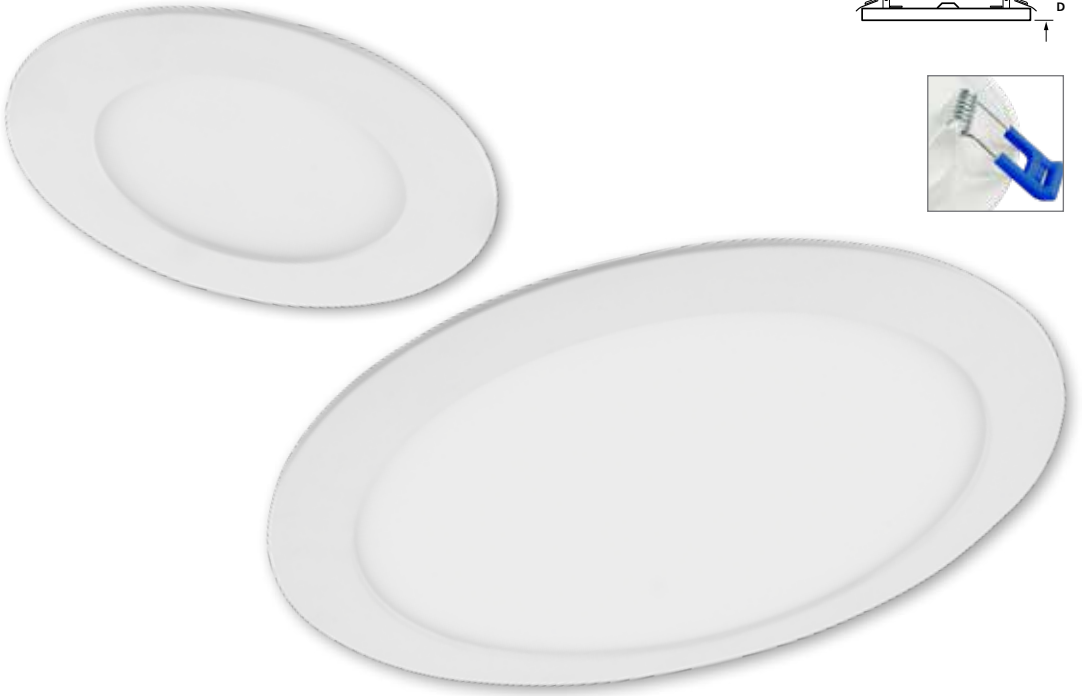
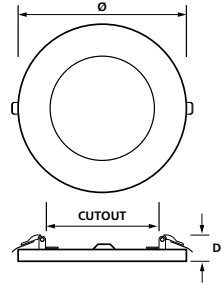
Product Ref	Watts	Description	CCT	Lumens	Weight	Dia Ø	L	W	D	Cutout Ø
				(lm)	(kg)					
<b>DLPRO20CW</b>	20W	220-240V Recessed Downlight	4000K	2200	0.95	230	-	-	82	210
<b>DLPRO30CW</b>	30W	220-240V Recessed Downlight	4000K	3300	0.95	230	-	-	82	210
<b>DLPRO30WW</b>	30W	220-240V Recessed Downlight	3000K	3200	0.95	230	-	-	82	210
<b>DLPROFR</b>	-	Optional Floating Halo Ring	-	-	-	-	-	-	-	-
<b>DLPROOPALDIF</b>	-	Optional Opal Diffuser	-	-	-	-	-	-	-	-
<b>DPROOPALFD</b>	-	Optional Opal Flat Disc	-	-	-	-	-	-	-	-
<b>FE3CD</b>	6-30W	3 Hour Emergency Pack for Fusion Downlights	-	-	-	-	213	95	40	-

220-240V-50/60Hz

# CIRCULAR DOWNLIGHTS LED Low Profile Panel

## FEATURES AND BENEFITS

- Low profile ideal for shallow ceiling voids
- Polycarbonate UV stabilized diffuser
- Pre-wired plug and play driver
- Optional emergency pack available
- 120° Beam Angle
- CRI: >80
- LED Lifetime: 25,000 hours (L70/B50)
- Operating temperature: -20°C to +40°C



Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	L	W	Ø (mm)	D	Cutout Ø
FCD6	6W	Circular Downlight, LED Low Profile Panel	500	4000K	0.13	-	-	128	27	115
FCD12	12W	Circular Downlight, LED Low Profile Panel	1200	4000K	0.22	-	-	170	27	155
FCD18	18W	Circular Downlight, LED Low Profile Panel	1850	4000K	0.34	-	-	229	27	210
FCD24	24W	Circular Downlight, LED Low Profile Panel	2500	4000K	0.55	-	-	298	27	280
FCD6WW	6W	Circular Downlight, LED Low Profile Panel	500	3000K	0.13	-	-	128	27	115
FCD12WW	12W	Circular Downlight, LED Low Profile Panel	1200	3000K	0.22	-	-	170	27	155
FCD18WW	18W	Circular Downlight, LED Low Profile Panel	1850	3000K	0.34	-	-	229	27	210
FCD24WW	24W	Circular Downlight, LED Low Profile Panel	2500	3000K	0.55	-	-	298	27	280
FE3CD	6-30W	3hr Emergency Pack for Fusion Downlights	-	-	-	213	95	-	40	-



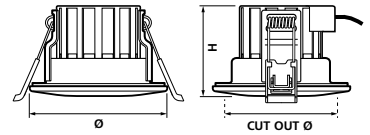


# WATTAGE & COLOUR SELECT FIRE RATED DOWNLIGHTS

## 4.5W / 5.5W / 7.5W LED FRD

### FEATURES AND BENEFITS

- CCT colour select function (WWW/CW/DL)
- Wattage select function (4.5W / 5.5W / 7.5W)
- Dimmable
- Lever push-fit (loop-in / loop-out) terminal block
- 30, 60, 90 minute fire rated
- White metal bezel included
- Optional twist & lock coloured bezels available
- 60° beam angle
- CRI: >80
- LED Lifetime: 30,000 hours (L70/B50)
- Operating temperature: -15°C to +25°C



### BEZELS:



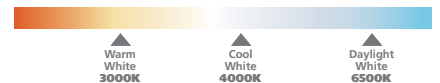
CCT COLOUR SELECT



WATTAGE SELECT



PLUG & PLAY  
CLICK CONNECTOR



Product Ref	Watts	Description	Lumens (lm)			Weight (kg)	H	Ø (mm)	Cutout Ø
			3000K	4000K	6500K				
FFRDWC	4.5W 5.5W 7.5W	LED FRD, CCT, Colour & Wattage - Select CW White Metal Bezel	400 500 630	430 550 700	400 500 630	0.225	57	87	70-75
FFRDMBA	-	Anthracite Grey Metal Bezel	-	-	-	0.03	-	87	-
FFRDMBB	-	Black Metal Bezel	-	-	-	0.03	-	87	-
FFRDMBCH	-	Chrome Metal Bezel	-	-	-	0.03	-	87	-
FFRDMBPB	-	Polished Brass Metal Bezel	-	-	-	0.03	-	87	-
FFRDMBSN	-	Satin Nickel Metal Bezel	-	-	-	0.03	-	87	-
FFRDMBWH	-	White Metal Bezel	-	-	-	0.03	-	87	-
FFRDBA	-	Anthracite Plastic Bezel	-	-	-	0.01	-	86	-
FFRDBB	-	Black Plastic Bezel	-	-	-	0.01	-	86	-
FFRDBCH	-	Chrome Plastic Bezel	-	-	-	0.01	-	86	-
FFRDBPB	-	Polished Brass Plastic Bezel	-	-	-	0.01	-	86	-
FFRDBSN	-	Satin Nickel Plastic Bezel	-	-	-	0.01	-	86	-
FFRDBWH	-	White Plastic Bezel	-	-	-	0.01	-	86	-

220-240V ~50/60Hz



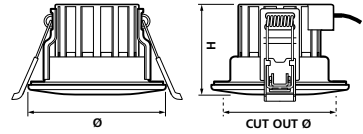
FRONT

BACK

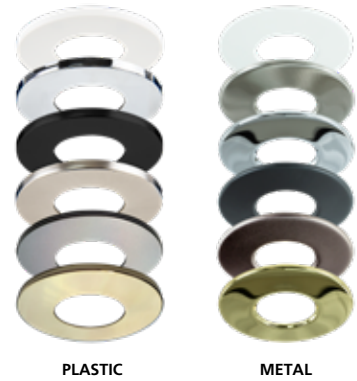
# COLOUR SELECT FIRE RATED DOWNLIGHTS 5.5W LED FRD

**FEATURES AND BENEFITS**

- CCT colour select function (WW/CW/DW)
- Lumen output: 450lm (3000K) WW, 500lm (4000K) CW, 500lm (6500K) DL
- Dimmable
- Lever Push-Fit (loop-in / loop-out) terminal block
- 30, 60, 90 minute fire rated
- White plastic bezel included
- Optional twist & lock coloured bezels available
- 60° beam angle
- CRI: >80
- LED Lifetime: 25,000 hours (L70/B50)
- Operating temperature: -15°C to +40°C



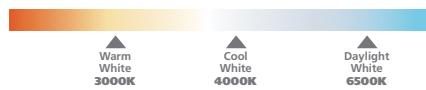
**BEZELS:**



CCT COLOUR SELECT



PLUG & PLAY CLICK CONNECTOR



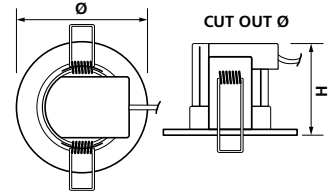
Product Ref	Watts	Description	Lumens (lm)			Weight (kg)	H	Ø (mm)	Cutout Ø
			3000K	4000K	6500K				
FFRDCCG2	5.5W	LED FRD, CCT, Colour Select CW White Plastic Bezel	450	500	500	0.23	56	87	70-75
FFRDMBA	-	Anthracite Grey Metal Bezel	-	-	-	0.03	-	87	-
FFRDMBB	-	Black Metal Bezel	-	-	-	0.03	-	87	-
FFRDMBCH	-	Chrome Metal Bezel	-	-	-	0.03	-	87	-
FFRDMBPB	-	Polished Brass Metal Bezel	-	-	-	0.03	-	87	-
FFRDMBSN	-	Satin Nickel Metal Bezel	-	-	-	0.03	-	87	-
FFRDMBWH	-	White Metal Bezel	-	-	-	0.03	-	87	-
FFRDDBA	-	Anthracite Plastic Bezel	-	-	-	0.01	-	86	-
FFRDDBB	-	Black Plastic Bezel	-	-	-	0.01	-	86	-
FFRDDBCH	-	Chrome Plastic Bezel	-	-	-	0.01	-	86	-
FFRDDBPB	-	Polished Brass Plastic Bezel	-	-	-	0.01	-	86	-
FFRDDBSN	-	Satin Nickel Plastic Bezel	-	-	-	0.01	-	86	-
FFRDDBWH	-	White Plastic Bezel	-	-	-	0.01	-	86	-



# FIRE RATED DOWNLIGHTS 5.5W LED FRD

## FEATURES AND BENEFITS

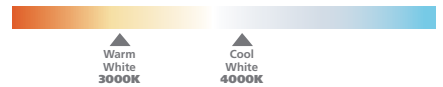
- Dimmable
- Push-fit (loop-in / loop-out) terminal block
- 30, 60, 90 minute fire rated
- Optional push-fit bezels available (White / Satin Nickel / Chrome / Black / Anthracite / Polished Brass)
- 60° beam angle
- CRI: >80
- LED Lifetime: 25,000 hours (L70/B50)
- Operating temperature: -15°C to +40°C



## BEZELS:



PLASTIC

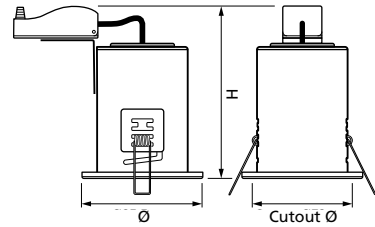


Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	H	Ø (mm)	Cutout Ø
<b>FFRDHWW</b>	5.5W	LED FRD, White	480	3000K	0.19	55	84	60-72
<b>FFRDHWCW</b>	5.5W	LED FRD, White	500	4000K	0.19	55	84	60-72
<b>FFRDSNWW</b>	5.5W	LED FRD, C/W Satin Nickel Bezel	480	3000K	0.2	55	87	60-72
<b>FFRDSNCW</b>	5.5W	LED FRD, C/W Satin Nickel Bezel	500	4000K	0.2	55	87	60-72
<b>FFRDBWH</b>	-	White Plastic FRD Bezel	-	-	0.012	-	87	-
<b>FFRDBSN</b>	-	Satin Nickel Plastic FRD Bezel	-	-	0.012	-	87	-
<b>FFRDBCH</b>	-	Chrome Plastic FRD Bezel	-	-	0.012	-	87	-
<b>FFRDBB</b>	-	Black Plastic FRD Bezel	-	-	0.012	-	87	-
<b>FFRDBA</b>	-	Anthracite Plastic Bezel	-	-	0.012	-	87	-
<b>FFRDBPB</b>	-	Polished Brass Plastic Bezel	-	-	0.012	-	87	-

# FIRE RATED DOWNLIGHTS GU10 FRD

**FEATURES AND BENEFITS**

- Push-fit (loop-in/loop-out) terminal block
  - Twist & Lock lamp retainer
  - 30, 60, 90 minute fire rated
  - Class II (with Earth provision)
  - Suitable for GU10 lamps (Max 50W)
- LAMP NOT INCLUDED - Visit [fusion-lamps.co.uk](http://fusion-lamps.co.uk)



Push-Fit (loop-in / loop-out)



Product Ref	Description	IP	Weight (kg)	H	Ø	Cutout Ø
<b>FSFRDWH</b>	220-240V GU10 Fire Rated Downlight, White	IP20	0.24	122	85.5	72
<b>FSFRDSN</b>	220-240V GU10 Fire Rated Downlight, Satin Nickel	IP20	0.24	122	85.5	72
<b>FSFRDCH</b>	220-240V GU10 Fire Rated Downlight, Chrome	IP20	0.24	122	85.5	72
<b>FSFRDTSN</b>	220-240V GU10 Tilt Fire Rated Downlight, Satin Nickel	IP20	0.30	122	96	83
<b>FSFRDTSN</b>	220-240V GU10 Tilt Fire Rated Downlight, Satin Nickel	IP20	0.30	122	96	83
<b>FSFRDTCH</b>	220-240V GU10 Tilt Fire Rated Downlight, Chrome	IP20	0.30	122	96	83
<b>FSFRDIP65WH</b>	220-240V GU10 IP65 Fire Rated Downlight, White	IP65	0.27	122	88	72
<b>FSFRDIP65SN</b>	220-240V GU10 IP65 Fire Rated Downlight, Satin Nickel	IP65	0.27	122	88	72
<b>FSFRDIP65CH</b>	220-240V GU10 IP65 Fire Rated Downlight, Chrome	IP65	0.27	122	88	72



## INTUMESCENT FIRE TENTS for Recessed Downlight Fittings

The Intumescent Fire Tents are designed to comply with Part B of the Building Regulations and the relevant British and European standards.

### FEATURES AND BENEFITS

- 66 minutes fire rating
- Prevents fire from penetrating the ceiling void and retains ceilings fire protection integrity
- Ventilated to reduce heat build-up



Product Ref	Description	D (mm)	H (mm)
<b>DLBF2</b>	Fire Tent up to 150mm diameter	150	150
<b>DLBF4</b>	Fire Tent up to 200mm diameter	200	200

SECTION  
**4**

# LINEAR SYSTEMS & HIGHBAYS

## Contents



LED Battens | 31



Aten LED Surface Fixtures | 32



Aten2 LED Colour Select  
Surface Fixtures | 33



Non-Corrosive LED Fittings | 34



Vapour Proof LED Linear | 35



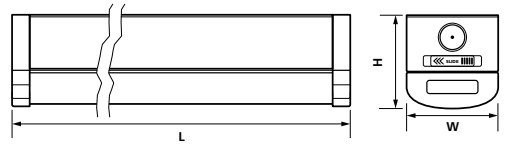
Highbay LED, Microwave Sensor  
& Accessories | 36 - 37



# BATTENS LED 2ft-6ft Battens

## FEATURES AND BENEFITS

- New modern design
- Polycarbonate UV stabilised diffuser
- Steel body with powder coated finish
- Quick release access system
- Supplied with safety cords to LED tray
- CCT colour select function:
  - 3000K (WW)
  - 4000K (CW)
  - 6500K (DW)
- Push-fit (loop-in/loop-out) terminal blocks
- Maintained emergency (3hr/180mins)
- Beam angle: 120°
- CRI: >80
- LED Lifetime: 50,000 hours (L70/B50)
- Operating temperature: -20°C to +40°C



Quick release



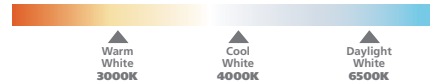
Safety cord



CCT switch



NB: The 1 Year On-Site Warranty is subject to additional terms and conditions.  
Emergency products are excluded from 1 Year On-Site Warranty.



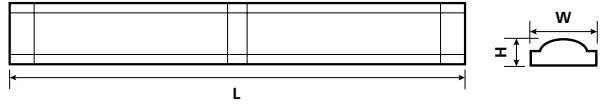
Product Ref	Watts	Description	Lumens (WW/CW/DW)	Weight	L	W	H (inc. Clip)	A Fixing Centres
			(lm)	(kg)				
<b>FBAT2CC</b>	10W	2ft LED Batten	1200	0.85	600	72	72.5	432
<b>FBAT4CC</b>	20W	4ft LED Batten	2400	1.40	1200	72	72.5	926
<b>FBAT4CCE3</b>	20W	4ft LED Emergency Batten	2400	1.68	1200	72	72.5	926
<b>FBAT4HOCC</b>	40W	4ft LED High Output Batten	4800	1.40	1200	72	72.5	926
<b>FBAT4HOCCE3</b>	40W	4ft LED High Output Emergency Batten	4800	1.68	1200	72	72.5	926
<b>FBAT5CC</b>	30W	5ft LED Batten	3600	1.90	1500	72	72.5	1056
<b>FBAT5CCE3</b>	30W	5ft LED Emergency Batten	3600	2.20	1500	72	72.5	1056
<b>FBAT5CCS</b>	30W	5ft LED Sensor Batten	3600	2.00	1500	72	72.5	1056
<b>FBAT5CCSE3</b>	30W	5ft LED Sensor Emergency Batten	3600	2.30	1500	72	72.5	1056
<b>FBAT5HOCC</b>	60W	5ft LED High Output Batten	7200	1.90	1500	72	72.5	1056
<b>FBAT5HOCCS</b>	60W	5ft LED High Output Sensor Batten	7200	2.00	1500	72	72.5	1056
<b>FBAT5HOCCE3</b>	60W	5ft LED High Output Emergency Batten	7200	2.20	1500	72	72.5	1056
<b>FBAT5HOCCSE3</b>	60W	5ft LED High Output Sensor Emergency Batten	7200	2.30	1500	72	72.5	1056
<b>FBAT6CC</b>	40W	6ft LED Batten	4800	2.50	1800	72	72.5	1466
<b>FBAT6CCE3</b>	40W	6ft LED Emergency Batten	4800	2.80	1800	72	72.5	1466
<b>FBAT6HOCC</b>	67W	6ft LED High Output Batten	8040	2.50	1800	72	72.5	1466
<b>FBAT6HOCCE3</b>	67W	6ft LED High Output Emergency Batten	8040	2.80	1800	72	72.5	1466



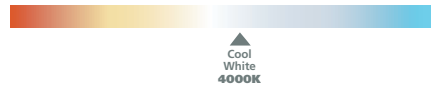
# ATEN LED Surface Fixtures

**FEATURES AND BENEFITS**

- Low profile fitting
- Ideal replacement for T5 or T8 fluorescent fittings
- Polycarbonate end caps with locking screws
- Central and single end terminal block access (2ft at one end only)
- Beam Angle: 110°
- CRI: >80
- LED Lifetime: 30,000 hours (L70/B50)
- Operating temperature: -5°C to +40°C



Central terminal area on 4ft and 5ft options



Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	L (mm)	W (mm)	H (mm)
<b>DLEDSM600</b>	25W	2ft Single Colour Linear Fixture	2000	4000K	0.74	594	133	45
<b>DLEDSM1200</b>	48W	4ft Single Colour Linear Fixture	4300	4000K	1.4	1194	133	45
<b>DLEDSM1500</b>	48W	5ft Single Colour Linear Fixture	4800	4000K	1.7	1494	133	45

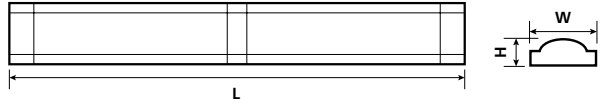




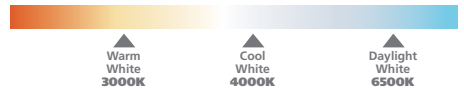
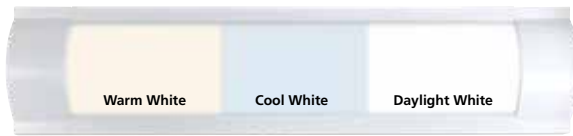
# ATEN2 LED Colour Select Surface Fixtures

## FEATURES AND BENEFITS

- CCT colour select function (WW/CW/DW) by utilising a wall switch
- Low profile fitting
- Ideal replacement for T5 or T8 fluorescent fittings
- Polycarbonate end caps with locking screws
- Central and single end terminal block access (2ft at one end only)
- Beam Angle: 110°
- CRI: >80
- LED Lifetime: 30,000 hours (L70/B50)
- Operating temperature: -5°C to +40°C



Central terminal area on 4ft and 5ft options



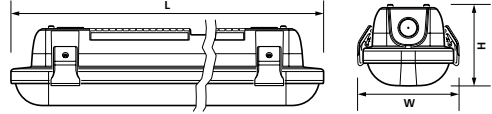
Product Ref	Watts	Description	Lumens (lm)			Weight (kg)	L	W	H
			3000K	4000K	6000K				
<b>DLLEDSM600CC</b>	25W	2ft Aten LED Colour Changing Surface Linear Fixture	1900	2200	2100	0.74	594	133	45
<b>DLLEDSM1200CC</b>	48W	4ft Aten LED Colour Changing Surface Linear Fixture	3600	4000	3800	1.40	1194	133	45
<b>DLLEDSM1500CC</b>	48W	5ft Aten LED Colour Changing Surface Linear Fixture	4100	4700	4500	1.70	1494	133	45

220-240V-50/60Hz

# NON-CORROSIVE FITTINGS LED 2ft - 6ft NCF

**FEATURES AND BENEFITS**

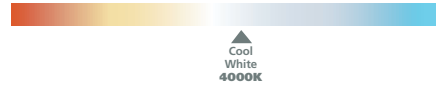
- Manufactured from self-extinguishing V2 polycarbonate
- Polycarbonate UV stabilised diffuser
- Stainless steel diffuser clips
- Gear tray suspension cords included
- Surface and suspension mounting options (accessories supplied)
- Push fit (loop-in/loop-out) terminal blocks
- Maintained emergency (3hr/180mins)
- Beam angle: 120°
- CRI: >80
- LED Lifetime: 50,000 hours (L70/B50)
- Operating temperature -20°C to +40°C



**5YEAR  
WARRANTY**

**1YEAR  
ON-SITE  
WARRANTY**

**2YEAR  
WARRANTY  
EMERGENCY**



NB: The 1 Year On-Site Warranty is subject to additional terms and conditions.

Emergency products are excluded from 1 Year On-Site Warranty.

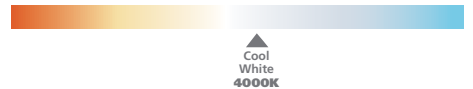
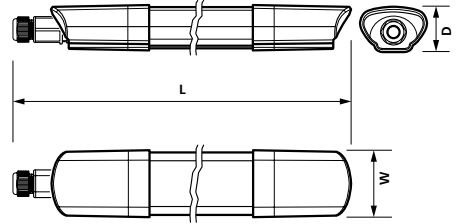
Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	L	W	H	A Fixing Centres (Fig.1)
								(mm)	
<b>FNCF2</b>	9W	2ft LED NCF	1100	4000K	0.80	600	96	79	340
<b>FNCF2HO</b>	18W	2ft LED High Output NCF	2200	4000K	0.80	600	96	79	340
<b>FNCF4</b>	18W	4ft LED NCF	2200	4000K	1.58	1200	96	79	840
<b>FNCF4E3</b>	18W	4ft LED Emergency NCF	2200	4000K	1.88	1200	96	79	840
<b>FNCF4HO</b>	40W	4ft LED High Output NCF	4800	4000K	1.58	1200	96	79	840
<b>FNCF4HOE3</b>	40W	4ft LED High Output Emergency NCF	4800	4000K	1.88	1200	96	79	840
<b>FNCF5</b>	23W	5ft LED NCF	2800	4000K	1.83	1500	96	79	1040
<b>FNCF5E3</b>	23W	5ft LED Emergency NCF	2800	4000K	2.12	1500	96	79	1040
<b>FNCF5S</b>	23W	5ft LED Sensor NCF	2800	4000K	1.83	1500	96	79	1040
<b>FNCF5SE3</b>	23W	5ft LED Sensor Emergency NCF	2800	4000K	2.12	1500	96	79	1040
<b>FNCF5HO</b>	48W	5ft LED High Output NCF	5800	4000K	1.83	1500	96	79	1040
<b>FNCF5HOE3</b>	48W	5ft LED High Output Emergency NCF	5800	4000K	2.45	1500	96	79	1040
<b>FNCF5HOS</b>	48W	5ft LED High Output Sensor NCF	5800	4000K	1.83	1500	96	79	1040
<b>FNCF5HOSE3</b>	48W	5ft LED High Output Sensor Emergency NCF	5800	4000K	2.45	1500	96	79	1040
<b>FNCF6</b>	27W	6ft LED NCF	3200	4000K	2.30	1800	96	83	1355
<b>FNCF6E3</b>	27W	6ft LED Emergency NCF	3200	4000K	2.56	1800	96	83	1355
<b>FNCF6HO</b>	55W	6ft LED High Output NCF	6600	4000K	2.30	1800	96	83	1355
<b>FNCF6HOE3</b>	55W	6ft LED High Output Emergency NCF	6600	4000K	2.56	1800	96	83	1355

220-240V-50/60Hz

# VAPOUR PROOF LED Linear

## FEATURES AND BENEFITS

- IP65 rated
- Slimline design
- Extruded single piece polycarbonate body & diffuser
- Stainless steel mounting brackets supplied
- Quick-fit terminal with gland
- Beam angle: 120°
- CRI: >80
- LED Lifetime: 25,000 hours (L70/B50)
- Operating temperature: -20°C to +40°C



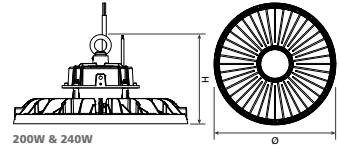
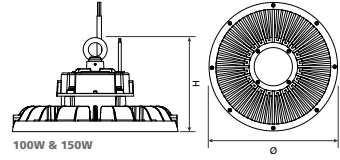
Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	L	W (mm)	D
FVP4FT	36W	4ft Vapour Proof Linear LED IP65	3600	4000K	0.35	1261	53	35
FVP5FT	45W	5ft Vapour Proof Linear LED IP65	4500	4000K	0.38	1541	53	35
FVP6FT	60W	6ft Vapour Proof Linear LED IP65	6000	4000K	0.47	1841	53	35



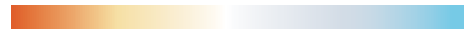
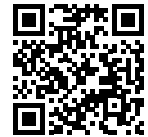
# HIGHBAY IP65 LED Highbays

## FEATURES AND BENEFITS

- Die cast aluminium black powder coated body
- Polycarbonate UV stabilised diffuser
- Pre-wired with 1m power cable & 0.2m dimming cable
- 1-10V dimming capability
- Optional microwave sensor accessory available
- Optional 90° lens and reflectors available
- Beam Angle: 120°
- CRI: >80
- LED Lifetime: 50,000hrs (L70/B50)
- Operating Temperature: -20°C to +40°C



Shown with Reflector in place



Cool White  
4000K

Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	Ø (mm)	H (mm)
FHB100G2	100W	Highbay LED, 120° 3-in-1 dimming, c/w PC Lens	14000	4000K	2.06	280	159
FHB150G2	150W	Highbay LED, 120° 3-in-1 dimming, c/w PC Lens	21000	4000K	2.09	280	159
FHB200G2	200W	Highbay LED, 120° 3-in-1 dimming, c/w PC Lens	28000	4000K	2.84	330	169
FHB240G2	240W	Highbay LED, 120° 3-in-1 dimming, c/w PC Lens	33600	4000K	2.95	330	169
FHBSLG2	-	90° Lens for 100W & 150W fitting	-	-	0.25	-	12.5
FHBLLG2	-	90° Lens for 200W & 240W fitting	-	-	0.26	-	13.6
FHBSRG2	-	90° Aluminium Reflector for 100W & 150W fitting	-	-	0.36	422	121
FHBLRG2	-	90° Aluminium Reflector for 200W & 240W fitting	-	-	0.63	550	150
FHBSPCRG2	-	PC Reflector for 100W & 150W fitting	-	-	0.29	309	102
FHBLPCR2	-	PC Reflector for 200W & 240W fitting	-	-	0.46	412	126
FHBSBG2	-	Bracket for 100W & 150W fitting	-	-	0.28	283	158
FHBLBG2	-	Bracket for 200W & 240W fitting	-	-	0.32	331	168
FHBMSG2	-	Highbay Microwave Sensor	-	-	0.11	50	32
FHBR	-	Highbay Microwave Sensor Remote Programmer	-	-	0.10	56	174

220-240V-50/60Hz



# HIGHBAY LED Highbay Microwave Sensor & Accessories

## Microwave Sensor

Ref: **FHBM5G2**

### FEATURES AND BENEFITS

- 12V DC input
- 0 - 10V dimming
- Small compact design
- Sensor parameters can be conveniently set by a remote control
- Mounting height up to 15M maximum
- Automatic dimming with use of the 1-10V dimmable control gear
- Programmable timed operation, through remote control (Sold separately)



## Aluminium Reflectors

Ref: **FHBSRG2**  
**FHBLRG2**

90° Aluminium Reflectors can be utilised to narrow the beam angle.



FHBSRG2



Reflector installed

## Polycarbonate Reflectors

Ref: **FHBSPCRG2**  
**FHBLPCRG2**

Polycarbonate reflectors to refract light and reduce glare.



FHBLPCRG2



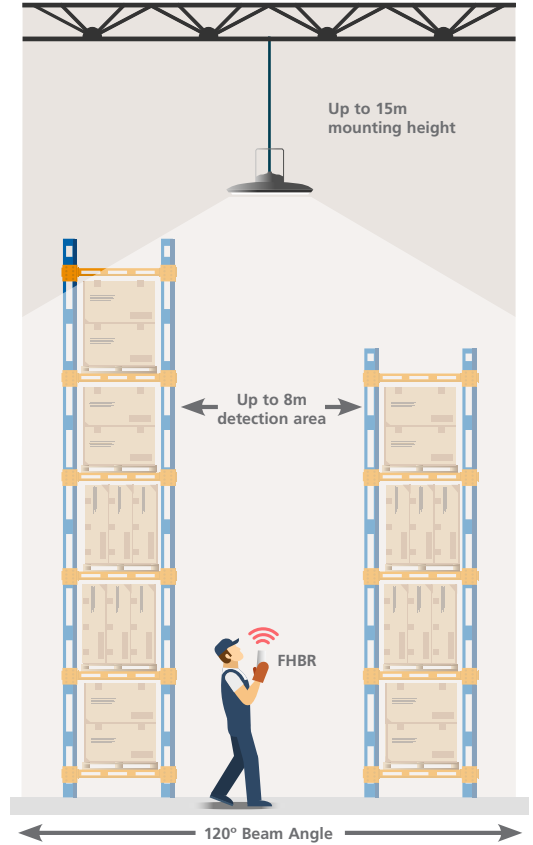
FHBSPCRG2



Reflector installed



Reflector installed



## Remote Control

Ref: **FHBR**

Remote Control / Programmer for the LED Highbay Microwave Sensor. This additional accessory enables the user to programme the Microwave Sensor much easier and allows a wider degree of programming options.



FHBR



# SECTION 5 BULKHEADS

## Contents



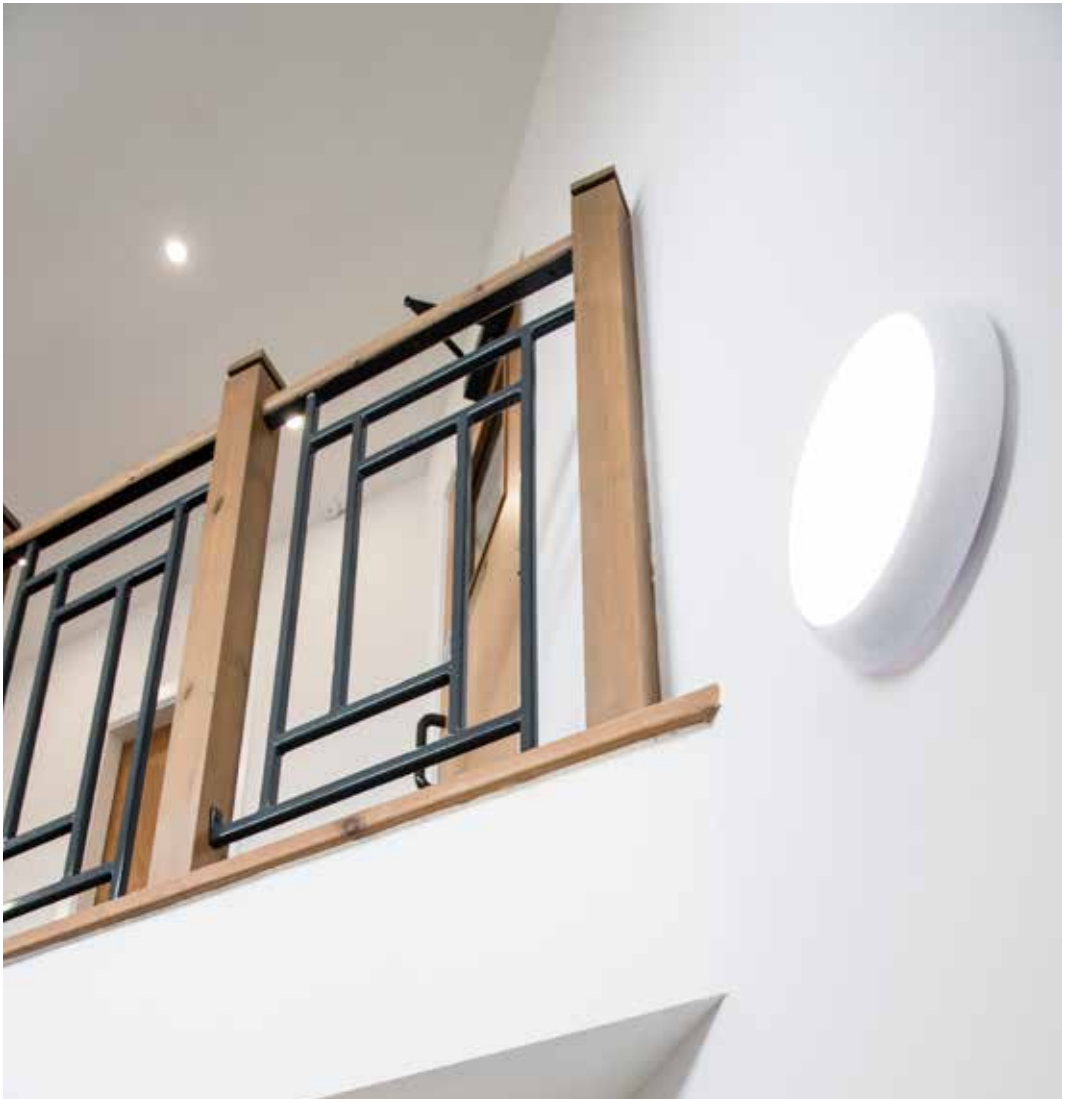
KLIP LED Bulkheads | 40 - 41



Dome LED Bulkheads | 42



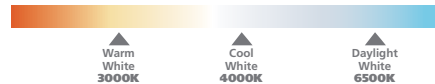
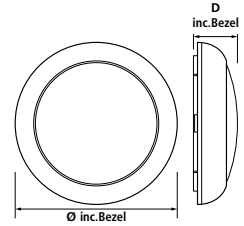
Orbit LED Bulkheads | 43 - 45



# KLIP LED Bulkheads

## FEATURES AND BENEFITS

- Housing: Polycarbonate body and diffuser
- Wattage select function 12W/16W
- CCT Colour Select Function (WW/CW/DW)
- Push-fit (loop in/loop-out) terminal block
- X6 20mm cable entry points
- Screw down polycarbonate diffuser
- Built-in microwave sensor (Optional)
- Emergency output: 80lm
- Maintained emergency (3hr / 180mins) (Optional)
- Optional clip-on bezels available:  
Black, White & Chrome Bezels  
Black & White Eyelid Bezels  
Black & White Grill Bezels
- Beam angle: 115°
- CRI: >80
- LED Lifetime: 30,000 hours (L70/B50)
- Operating temperature: -20°C to +40°C



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Emergency products are excluded from 1 Year On-Site Warranty.

Product Ref	Watts	Description	Lumens (lm)			Weight (kg)	Ø (inc. Bezel) (mm)	D (inc. Bezel) (mm)
			3000K	4000K	6500K			
FKLIPCC	12W 16W	Klip IP65 LED Bulkhead CCT, c/w White Bezel	1200 1600	1300 1700	1200 1600	0.80	340	95
FKLIPCCE3	12W 16W	Klip IP65 LED Bulkhead CCT, c/w White Bezel & E3	1200 1600	1300 1700	1200 1600	0.89	340	95
FKLIPCCS	12W 16W	Klip IP65 LED Bulkhead CCT, c/w White Bezel & Sensor	1200 1600	1300 1700	1200 1600	0.81	340	95
FKLIPCCE3	12W 16W	Klip IP65 LED Bulkhead CCT, c/w White Bezel & Sensor E3	1200 1600	1300 1700	1200 1600	0.91	340	95
FKLIPA	-	Klip Bulkhead Anthracite Bezel	-	-	-	-	-	-
FKLIPB	-	Klip Bulkhead Black Bezel	-	-	-	-	-	-
FKLIPWH	-	Klip Bulkhead White Bezel	-	-	-	-	-	-
FKLIPCH	-	Klip Bulkhead Chrome Bezel	-	-	-	-	-	-
FKLIPEA	-	Klip Bulkhead Anthracite Eyelid Bezel	-	-	-	-	-	-
FKLIPEB	-	Klip Bulkhead Black Eyelid Bezel	-	-	-	-	-	-
FKLIPEWH	-	Klip Bulkhead White Eyelid Bezel	-	-	-	-	-	-
FKLIPGB	-	Klip Bulkhead Black Grill Bezel	-	-	-	-	-	-
FKLIPGWH	-	Klip Bulkhead White Grill Bezel	-	-	-	-	-	-
FKLIPATS	-	Klip Anti-Tamper Screws & Tool	-	-	-	-	-	-







FKLIPCC (Without Bezel Fitted)



FKLIPCC (With Bezel Fitted)

**OPTIONAL BEZELS**



FKLIPEWH

FKLIPEB

FKLIPGWH

FKLIPGB

FKLIPWH

FKLIPB

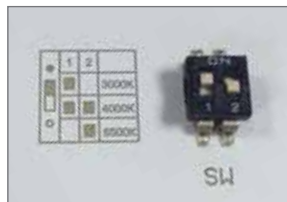
FKLIPCH

FKLIPPB

FKLIPA

**CCT SELECTABLE**

CCT Colour Select Function (WW / CW / DW)



**CLIP-ON BEZELS**

- X7 Clip-on bezels available (white Bezel included)
- Conduit knockouts on bezel
- Bezels cover screw holes when installed



**WIRING**

Push-fit (loop-in / loop-out) terminal block



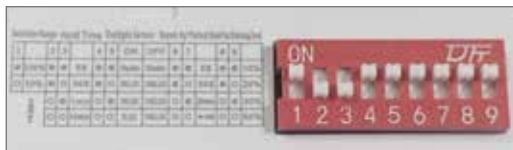
**ACCESS**

- Self-retaining screws with side knockouts
- Tool-free hinged gear tray



**MICROWAVE SENSOR**

DIP Switch programmable Microwave Sensor with corridor function



**MOUNTING & FIXING**

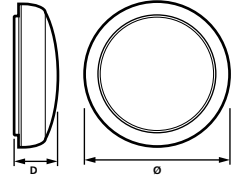
- X4 20mm conduit entry points
- X2 rear cable entry points (central and offset)
- Space for wiring on rear of base with side knockouts
- 55mm BESA conduit box mounting
- X12 surface mount screw points with pilot holes



# DOME LED Bulkheads

**FEATURES AND BENEFITS**

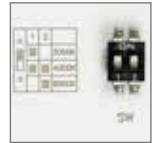
- Polycarbonate body and diffuser
- Wattage Selectable 12W/16W
- CCT Colour Select Function (WW/CW/DW)
- Push-fit (loop-in/loop out) terminal block
- Screwless "Twist & Lock" cover
- Maintained emergency (3hr / 180mins) (Optional)
- Built-in Microwave Sensor (Optional)
- Optional chrome & brass bezels available
- Beam angle: 115°
- CRI: >80
- LED Lifetime: 30,000 hours (L70/B50)
- Operating Temperature: -20°C - +40°C



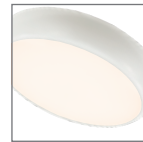
Push-fit terminal block



Twist & Lock feature



Dip-switches for colour change



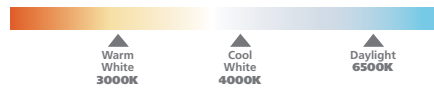
Warm White



Cool White



Daylight White



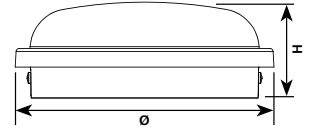
Product Ref	Watts	Description	Lumens (lm)			Weight (kg)	Ø (mm)	H (mm)
			3000K	4000K	6500K			
FDOMECC	12W	Dome IP65 LED Bulkhead, CCT, Colour & Wattage - Select C/W White Bezel	1200	1300	1200	0.58	320	82.5
	16W		1600	1700	1600			
FDOMECC3	12W	Dome IP65 LED Bulkhead, CCT, Colour & Wattage - Select C/W White Bezel & Emerg	1200	1300	1200	0.95	320	82.5
	16W		1600	1700	1600			
FDOMECCS	12W	Dome IP65 LED Bulkhead, CCT, Colour & Wattage - Select C/W White Bezel & Sensor	1200	1300	1200	0.90	320	82.5
	16W		1600	1700	1600			
FDOMECC3E3	12W	Dome IP65 LED Bulkhead, CCT, Colour & Wattage - Select C/W White Bezel, Sensor & Emerg	1200	1300	1200	1.00	320	82.5
	16W		1600	1700	1600			
FDOMECH	-	Dome Bulkhead Chrome Bezel	-	-	-	-	-	-
FDOMEPB	-	Dome Bulkhead Polished Brass Bezel	-	-	-	-	-	-



# ORBIT LED Bulkheads

## FEATURES AND BENEFITS

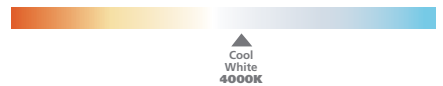
- Polycarbonate body and diffuser
- Quick easy installation with surface mounting bracket
- Pre-wired with 30cm cable
- Optional clip-on bezels available
- Beam Angle: 120°
- CRI: 80
- LED Lifetime: 25,000hrs (L70/B50)
- Operating Temperature: -20°C - +45°C



MINI & CIRCULAR



FORBITB    FORBITSN    FORBITBR    FORBITEB



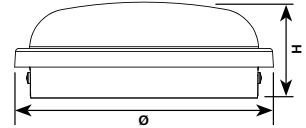
Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	Ø	W	H	L
						(mm)			
FORBIT	12W	Orbit LED Bulkhead, White	1200	4000K	0.42	221	-	72	-
FORBITB	-	Orbit Black Bezel	-	-	-	-	-	-	-
FORBITSN	-	Orbit Satin Nickel Bezel	-	-	-	-	-	-	-
FORBITBR	-	Orbit Brass Bezel	-	-	-	-	-	-	-
FORBITEB	-	Orbit Black Eyelid Bezel	-	-	-	-	-	-	-



# MINI ORBIT LED Bulkheads

## FEATURES AND BENEFITS

- Polycarbonate body and diffuser
- Quick easy installation with surface mounting bracket
- Pre-wired with 30cm cable
- Optional clip-on bezels available
- Beam Angle: 120°
- CRI: 80
- LED Lifetime: 25,000hrs (L70/B50)
- Operating Temperature: -20°C - +45°C



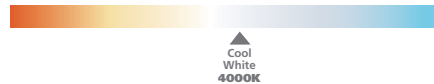
MINI & CIRCULAR



## OPTIONAL BEZELS



FMORBITB FMORBITSN FMORBITEB



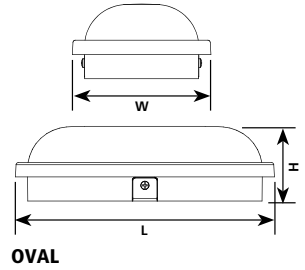
Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	Ø	W (mm)	H (mm)	L
<b>FMORBIT</b>	6W	Mini Orbit LED Bulkhead, White	600	4000K	0.26	167	-	62	-
<b>FMORBITB</b>	-	Mini Orbit Black Bezel	-	-	-	-	-	-	-
<b>FMORBITEB</b>	-	Mini Orbit Black Eyelid Bezel	-	-	-	-	-	-	-
<b>FMORBITSN</b>	-	Mini Orbit Satin Nickel Bezel	-	-	-	-	-	-	-



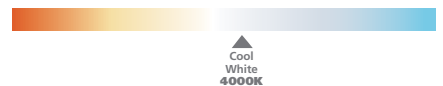
# OVAL ORBIT LED Bulkheads

## FEATURES AND BENEFITS

- Polycarbonate body and diffuser
- Quick easy installation with surface mounting bracket
- Pre-wired with 30cm cable
- Optional clip-on bezels available
- Beam Angle: 120°
- CRI: 80
- LED Lifetime: 25,000hrs (L70/B50)
- Operating Temperature: -20°C - +45°C



FOORBITGB



Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	Ø	W (mm)	H (mm)	L (mm)
FOORBIT	10W	Oval Orbit LED Bulkhead, Black	1000	4000K	0.29	-	115	62	215
FOORBITGB	-	Oval Orbit Black Grille Bezel	-	-	-	-	-	-	-

220-240V-50/60Hz **IP65**

SECTION  
**6**

# WALL LIGHTS, FESTOONS & GROUND SPIKES

## Contents



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Half Lanterns LED | 48



Wall Lanterns LED | 49



Wall Lights GU10 | 50 - 52



Ground Spikes GU10 | 53



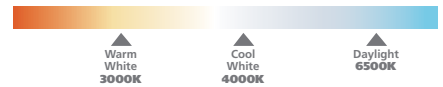
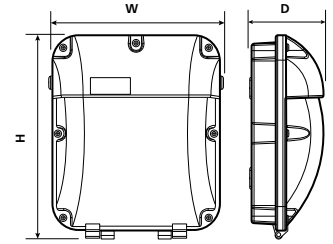
Festoons | 54



## WALL PACKS LED Tri-colour

### FEATURES AND BENEFITS

- CCT Colour Select Function (WW/CW/DW)
- Die cast aluminium black powder coated body and polycarbonate diffuser
- Push-fit (loop-in/loop-out) terminal block
- X2 M16 cable entry points
- Photocell option available
- Beam angle: 115°
- CRI: >80
- LED Lifetime: 50,000 hours (L70/B50)
- Operating temperature: -10°C to +40°C



NB: The 1 Year On-Site Warranty is subject to additional terms and conditions.  
Emergency products are excluded from 1 Year On-Site Warranty.

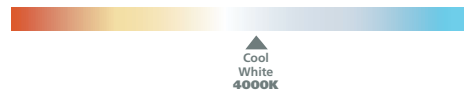
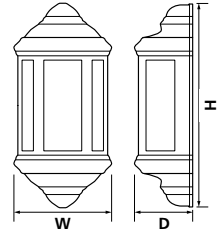
Product Ref	Watts	Description	Lumens (lm)			Weight (kg)	W	H	D
			3000K	4000K	6500K				
<b>FWPCC</b>	20W	LED Tri-Colour Wall Pack	1500	1600	1550	0.83	207	221	82
<b>FWPCCPC</b>	20W	LED Tri-Colour Wall Pack C/W Photocell	1500	1600	1550	0.87	207	221	82

220-240V-50/60Hz      

## HALF LANTERNS LED

### FEATURES AND BENEFITS

- ABS body with PC diffusers
- Reduced maintenance - No lamp replacements
- PIR option
- Beam angle: 120°
- CRI: >80
- LED Lifetime: 30,000 hours (L70/B50)
- Operating temperature: -10°C to +40°C



Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	H	W (mm)	D (mm)
FHL	7W	LED Black Half Lantern	600	4000K	0.55	362	176	98
FHLPIR	7W	LED Black Half Lantern, C/W PIR	600	4000K	0.57	362	176	98

220-240V~50/60Hz

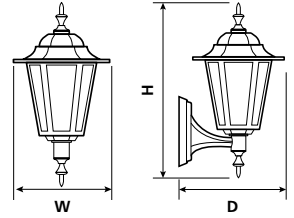




## WALL LANTERNS LED

### FEATURES AND BENEFITS

- ABS body with PC diffusers
- Reduced maintenance - No lamp replacements
- PIR option
- Beam angle: 120°
- CRI: >80
- LED Lifetime: 30,000 hours (L70/B50)
- Operating temperature: -10°C to +40°C



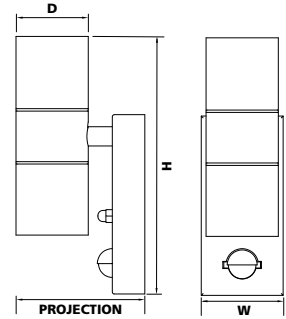
Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	H	W	D
								(mm)
FL	7W	LED Black Lantern	600	4000K	0.52	383	227	165
FLPIR	7W	LED Black Lantern, C/W PIR	600	4000K	0.54	383	227	165

220-240V-50/60Hz **IP44** UK CA CE

## WALL LIGHTS GU10 Up/Down PIR/Photocell

### TECHNICAL FEATURES

- Aluminium body with black, Stainless Steel or Anthracite finish
- Suitable for GU10 Lamps (Max 35W)
- LAMPS NOT INCLUDED: Visit [fusion-lamps.co.uk](http://fusion-lamps.co.uk) if lamps are required.



Product Ref	Watts	Description	Weight (kg)	Projection	W	H (mm)	D
<b>FWLUDAPIR</b>	35W	GU10 Up/Down Wall Light Anthracite c/w PIR	0.487	106	69	222	60
<b>FWLUDBPIR</b>	35W	GU10 Up/Down Wall Light Black c/w PIR	0.487	106	69	222	60
<b>FWLUDSSPIR</b>	35W	GU10 Up/Down Wall Light Stainless Steel c/w PIR	0.737	106	69	222	60
<b>FWLUDAPC</b>	35W	GU10 Up/Down Wall Light Anthracite c/w Photocell	0.48	106	69	222	60
<b>FWLUDBPC</b>	35W	GU10 Up/Down Wall Light Black / Aluminium c/w Photocell	0.48	106	69	222	60
<b>FWLUDSSPC</b>	35W	GU10 Up/Down Wall Light c/w Photo Cell	0.75	106	69	222	60

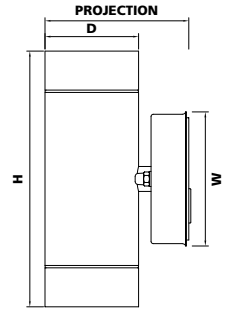
220-240V-50/60Hz



## WALL LIGHTS GU10 Up/Down

### TECHNICAL FEATURES

- Aluminium body with black, Stainless Steel or Anthracite body / finish
- Suitable for GU10 lamps (Max 35W)
- PIR and PC options also available in Up / Down versions
- LAMPS NOT INCLUDED: Visit [fusion-lamps.co.uk](http://fusion-lamps.co.uk) if lamps are required.



Product Ref	Watts	Description	Weight (kg)	Projection	W	H (mm)	D
<b>FWLUDA</b>	35W	GU10 Up/Down Wall Light Anthracite	0.36	92	86	164	60
<b>FWLUDB</b>	35W	GU10 Up/Down Wall Light Black	0.35	92	86	164	60
<b>FWLUDSS</b>	35W	GU10 Up/Down Wall Light Stainless Steel	0.61	92	86	164	60

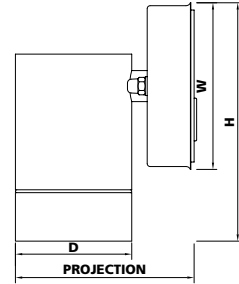
220-240V~50/60Hz



## WALL LIGHTS GU10 Down

### TECHNICAL FEATURES

- Aluminium body with black, Stainless Steel or Anthracite finish
- Suitable for GU10 Lamps (Max 35W)
- PIR and PC options also available in Up / Down versions
- LAMPS NOT INCLUDED: Visit [fusion-lamps.co.uk](http://fusion-lamps.co.uk) if lamps are required.



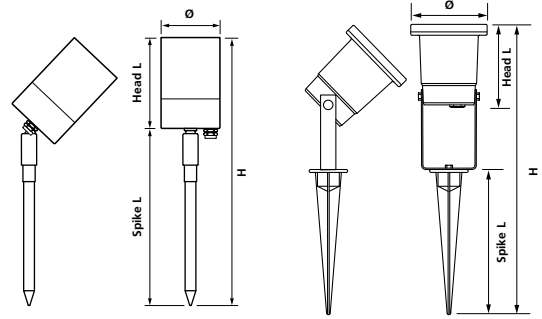
Product Ref	Watts	Description	Weight (kg)	Projection	W	H (mm)	D
<b>FWLDA</b>	35W	GU10 Wall Light Anthracite	0.26	92	86	123	60
<b>FWLDB</b>	35W	GU10 Wall Light Black	0.26	92	86	123	60
<b>FWLSS</b>	35W	GU10 Wall Light Stainless Steel	0.42	92	86	123	60

220-240V-50/60Hz **IP44**

## GROUND SPIKE GU10

### FEATURES AND BENEFITS

- **FGSB**: Aluminium body with black finish
- **FGSSS**: Stainless steel body / finish
- **FGSBG2**: Aluminium body with black finish
- Suitable for GU10 Lamps (Max 35W)
- LAMPS NOT INCLUDED: Visit [fusion-lamps.co.uk](http://fusion-lamps.co.uk) if lamps are required.



FGSBG2



Product Ref	GU10 Max. Watts	Description	Weight (kg)	Spike L	Head L (mm)	H (mm)	Ø
<b>FGSB</b>	X1 GU10 (MAX 35W)	GU10 Ground Spike, Black	0.473	175	83	263	63.5
<b>FGSBG2</b>	X1 GU10 (MAX 35W)	GU10 Ground Spike G2, Black	0.520	160	95	315	98
<b>FGSSS</b>	X1 GU10 (MAX 35W)	GU10 Ground Spike, Stainless Steel	0.60	174	91	265	60

220-240V-50/60Hz



## 5M FESTOONS Pendants & Accessories

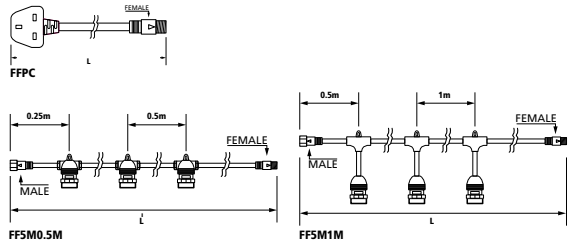
### TECHNICAL FEATURES

- 5m length
- Available with either 1m or 0.5m spacing between lamp holders
- Max individual lamp wattage 25W
- E27 lamp holders
- Power cable and suspension accessories available (sold separately)
- Each 5m length can be joined to make a longer continuous run
- Max 20 5m lengths can be joined together (100M - Max 500W)

**Do not** exceed more than 500W in any single run from one plug!

**NOTE:** plug supplied for indoor use only!!

- LAMPS NOT INCLUDED: Visit [fusion-lamps.co.uk](http://fusion-lamps.co.uk) if lamps are required



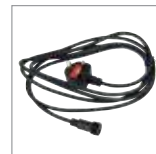
FF5M1M



FF5M0.5M



FFPC



FFGWKIT



Product Ref	Description	Lamp Holder Spacing (m)	Max Lamp Holder Wattage	Max Extended String (m)	Max Extended String Wattage	Weight (kg)	L (m)
FF5M0.5M	5m In-line Pendant Festoon, Black	0.5	25W	100	500W	0.770	5
FF5M1M	5m Drop Pendant Festoon, Black	1	25W	100	500W	0.710	5
FFPC	3m Festoon Mains Power Cable	-	-	-	-	0.305	3
FFGWKIT	Festoon Catenary Guide Wire Kit	-	-	-	-	0.440	-

# SECTION 7

# FLOODLIGHTS & ACCESSORIES

## Contents



Guardian LED Floodlights | 56 - 57



Protector LED Floodlights | 58



Shield Asymmetric LED Floodlights | 59



Nema Photocell Kit  
& Photocell Accessories | 60 - 61



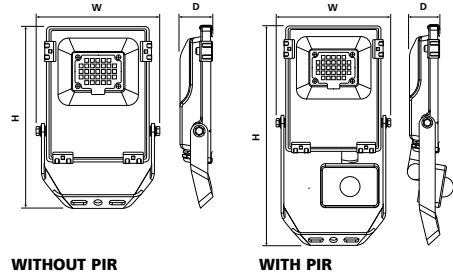
Night Owl  
Photo Electric Lighting Control | 62



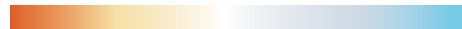
# GUARDIAN LED Floodlights

## FEATURES AND BENEFITS

- High Lumen output
- Die cast aluminium black powder coated body
- Pre-wired with 1m cable
- Can be installed without removing the bracket
- PIR options available
- Beam angle: 120°
- CRI: >80
- LED Lifetime: 50,000hrs (L70/B50)
- Operating Temperature: -20°C to +40°C



PIR Option Available



Cool White  
4000K



NB: The 1 Year On-Site Warranty is subject to additional terms and conditions. Emergency products are excluded from 1 Year On-Site Warranty.

Product Ref	Watts	Description	Lumens	CCT	Weight	Ø	W	H	L	D
			(lm)							
FGF15	15W	Guardian LED Floodlight	1950	4000K	0.5	-	129	198	-	34
FGF15PIR	15W	Guardian LED PIR Floodlight	1950	4000K	0.6	-	129	250	-	51
FGF30	30W	Guardian LED Floodlight	3900	4000K	1.0	-	173	246	-	42
FGF30PIR	30W	Guardian LED PIR Floodlight	3900	4000K	1.1	-	173	303	-	53
FGF50	50W	Guardian LED Floodlight	6500	4000K	1.2	-	188	255	-	42
FGF50PIR	50W	Guardian LED PIR Floodlight	6500	4000K	1.3	-	188	315	-	54
FGF80	80W	Guardian LED Floodlight	10400	4000K	2.5	-	250	302	-	52
FGF100	100W	Guardian LED Floodlight	13000	4000K	3.1	-	279	358	-	57
FGF150	150W	Guardian LED Floodlight	19500	4000K	4.0	-	329	405	-	62
FGF250	250W	Guardian LED Floodlight	32500	4000K	6.0	-	401	471	-	62
FGFS	-	Ground Spike For Guardian / Protector LED Floodlights (Max 50w)	-	-	-	50	-	212	-	-
FGFEA	-	Extension Arm For Guardian / Protector LED Floodlights (Max 50w)	-	-	-	-	75	-	514	65

220-240V-50/60Hz

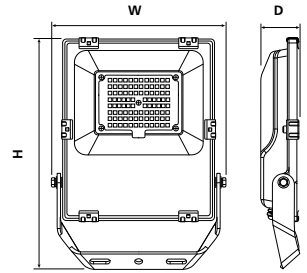




# GUARDIAN LED RGB Floodlights

## FEATURES AND BENEFITS

- RGB LED Floodlight with multi-colour select function
- Fade & Strobe effects with speed control
- Dimmable via the supplied remote control
- Die cast aluminium black powder coated body
- Pre-wired with 1m cable
- Can be installed without removing the bracket
- Beam angle: 120°
- LED Lifetime: 35,000hrs (L70/B50)
- Operating Temperature: -20°C to +40°C



Supplied Remote Control



Product Ref	Watts	Description	Lumens (lm)			CCT	Weight (kg)	Ø	W	H	L	D
			RED	GREEN	BLUE							
FGF45RGB	45W	Guardian LED RGB Floodlight	650	1000	150	RGB	1.30	-	188	255	-	42
FGFS	-	Ground Spike For Guardian / Protector LED Floodlights (Max 50w)	-	-	-	-	-	50	-	212	-	-
FGFEA	-	Extension Arm For Guardian / Protector LED Floodlights (Max 50w)	-	-	-	-	-	75	-	514	65	-

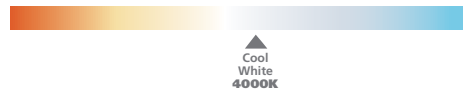
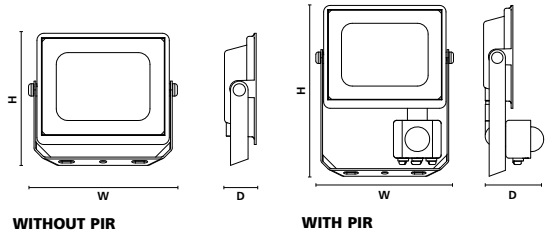
220-240V-50/60Hz



# PROTECTOR LED Floodlights

## FEATURES AND BENEFITS

- Die cast aluminium black powder coated body
- Pre-wired with 1m cable
- Can be installed without removing the bracket
- PIR options available
- Photocell option available
- Beam angle: 120°
- CRI: 80
- LED Lifetime: 25,000hrs (L70/B50)
- Operating temperature: -20°C to +40°C



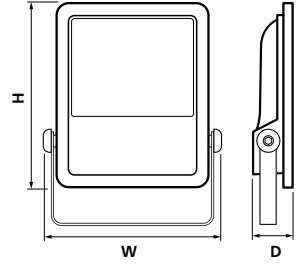
Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	Ø	Dimensions (mm)			
							W	H	L	D
FPF10	10W	Protector LED Floodlight	1000	4000K	0.26	-	127	113	-	27
FPF10PIR	10W	Protector LED PIR Floodlight	1000	4000K	0.30	-	127	158	-	56
FPF20	20W	Protector LED Floodlight	2000	4000K	0.33	-	127	113	-	27
FPF20PIR	20W	Protector LED PIR Floodlight	2000	4000K	0.37	-	127	158	-	56
FPF30	30W	Protector LED Floodlight	3000	4000K	0.43	-	153	124	-	27
FPF30PIR	30W	Protector LED PIR Floodlight	3000	4000K	0.47	-	153	169	-	56
FPF30PC	30W	Protector LED Photocell Floodlight	3000	4000K	0.47	-	153	174	-	47
FPF50	50W	Protector LED Floodlight	5000	4000K	0.69	-	209	168	-	32
FPF50PIR	50W	Protector LED PIR Floodlight	5000	4000K	0.73	-	209	208	-	61
FGFS	-	Ground Spike for Protector / Guardian LED Floodlights, up to a maximum wattage of 50W	-	-	-	50	-	212	-	-
FGFEA	-	Extension Arm for Protector / Guardian LED Floodlights, up to a maximum wattage of 50W	-	-	-	-	75	-	514	65



# SHIELD Asymmetric LED Floodlights

## FEATURES AND BENEFITS

- Die cast aluminium black powder coated body
- Pre-wired with 2m cable
- Asymmetric distribution
- 0-60° precision angling bracket
- CRI: >80
- LED Lifetime: 50,000hrs (L70/B50)
- Operating Temperature: -20°C to +40°C



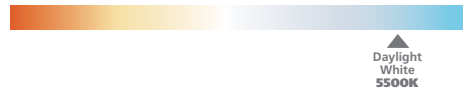
Cooling Fins on the reverse side



0 - 60° Bracket angle



All our Asymmetric Shields have Philips Chips & Driver



NB: The 1 Year On-Site Warranty is subject to additional terms and conditions.

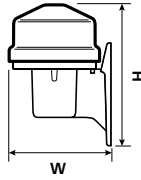
Product Ref	Watts	Description	Lumens (lm)	CCT	Weight (kg)	W	H (mm)	D
<b>DLSHIELD80</b>	80W	Shield Asymmetric LED Floodlight	9600	5500K Daylight White	5.0	296	355	72
<b>DLSHIELD120</b>	120W	Shield Asymmetric LED Floodlight	14400	5500K Daylight White	5.0	296	355	72
<b>DLSHIELD165</b>	165W	Shield Asymmetric LED Floodlight	21450	5500K Daylight White	7.2	352	422	78
<b>DLSHIELD210</b>	210W	Shield Asymmetric LED Floodlight	27300	5500K Daylight White	7.2	352	422	78



## NEMA Photocell Kit

### FEATURES AND BENEFITS

- This unit is of Class II construction and does not require an Earth
- IP65 rated - suitable for external applications
- Suitable for LED or Compact Fluorescent loads



DL4061



DL4050 - replacement head for DL4061 only

Product Ref	Load	Description	Sensor	Diffuser	On/Off Levels	H (mm)	W (mm)
DL4061	10A	Outdoor Photocell Kit, 2000W Tungsten 2 x 400W HPS, 2.2A/ 600W/ LED or 1800Va	Photodiode	Frosted	10-16Lux / 65Lux	133	87
DL4050	10A	Replacement Photocell for DL4061 only, 2000W Tungsten 2 x 400W HPS, 2.2A/ 600W/ LED or 1800Va	Photodiode	Frosted	10-16Lux / 65Lux	80	65

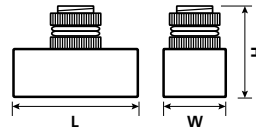
120-277V~50/60Hz    

## MINIATURE PHOTOCELL UNIT

### 240V 2000W Thermal Photocell

### FEATURES AND BENEFITS

- Sensor: Photodiode
- Capacity: 1100VA (max)
- ON/OFF Levels: 10-16Lux/65Lux
- Typical Load: 2000W Tungsten or 1A/200W/230V LED



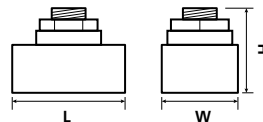
Product Ref	Watts	Description	Sensor	H (mm)	W (mm)	L (mm)
DLNPC	10A	Miniature Photocell Unit, 2000W Tungsten 1A/ 200W/ LED	Photodiode	41	29	52

230-240V~50/60Hz    

## PHOTO CONTROL UNIT

### 240V 250W Industrial Electronic Photo Control Unit

HL4/M miniature solid state industrial electronic photo control unit, 5 Amp rated, includes CDS photocell.



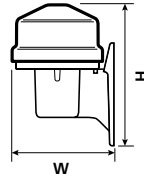
Product Ref	Max Capacity	Description	Sensor	Switch	Diffuser	Supply	On/Off Levels	W (mm)	H (mm)	L (mm)
SS14	5A/60uF	Photo Control Unit, includes CDS Photocell. 2 x 250W HPS or 200W LED	Photo IC	Triac	-	-	70 LUX (1:1.5 + VE)	36	39	54

120-240V~50/60Hz    

## OUTDOOR PHOTOCELL KIT & Replacement Head

### FEATURES AND BENEFITS

- Outdoor photo electric cell made from UV stabilised polycarbonate
- Operating temperature of -20°C + 80°C
- Approval to EN 50081-1 (Emissions)
- Includes SS4 photocell, base holder, bracket, socket, gasket, screws and wall plugs
- Suitable for LED or Compact Fluorescent loads



3061



3050

Product Ref	Max Capacity	Description	Sensor	Switch	Diffuser	Supply	On/Off Levels	W H	
								(mm)	
3061	5A	Outdoor Photocell Kit. 2 x 250W HPS or 250W LED	Photodiode	EM Relay	Opal	198 - 264 VAC	170/105 LUX (1:1.5 + VE)	87	124
3050	5A	Replacement Photocell for 3061	Photodiode	EM Relay	Opal	198 - 264 VAC	170/105 LUX (1:1.5 + VE)	80	50

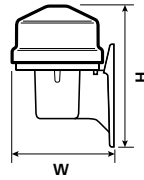
198-264V-50/60Hz



## INDUSTRIAL PHOTOCELL KIT & Replacement Head

### FEATURES AND BENEFITS

- SS4E industrial electronic photo control kit
- 5 Amp rated
- Includes SS4E photocell, base holder, bracket, socket, gasket, screws and wall plugs



3063



3052

Product Ref	Max Capacity	Description	Sensor	Switch	Diffuser	Supply	On/Off Levels	W H	
								(mm)	
3063	5A/60mF	Photocell Kit. 2 x 250W HPS or 250W LED	Photodiode	EM Relay	Clear	198 - 264 VAC	70/105 LUX (1:1.5 + VE)	87	124
3052	5A/60mF	Replacement Photocell for 3063	Photodiode	EM Relay	Clear	198 - 264 VAC	70/105 LUX (1:1.5 + VE)	80	50

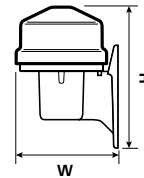
198-264V-50/60Hz



## HEAVY DUTY INDUSTRIAL PHOTOCELL KIT

### FEATURES AND BENEFITS

- SS8 heavy duty industrial electronic photo control kit
- 7 Amp rated
- Includes SS8 photocell, base holder, bracket, socket, gasket, screws and wall plugs



3062

Product Ref	Max Capacity	Description	Sensor	Switch	Diffuser	Supply	On/Off Levels	W H	
								(mm)	
3062	10A/120mF	Photocell Kit. 600W LED	Photodiode	EM Relay	Clear	198 - 264 VAC	70/35 LUX (1:1.5 + VE)	87	124

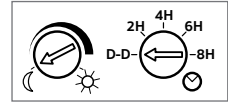
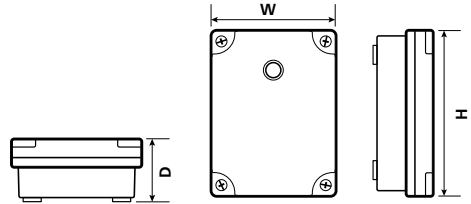
198-264V-50/60Hz



# NIGHT OWL Photo Electric Lighting Control

**FEATURES AND BENEFITS**

- 1000W Incandescent / 500W Fluorescent for 240V AC input
- Heavy duty terminals
- 2 to 8 hour delay timer
- Settings: D-D (Dusk-Dawn), 2H, 4H, 6H & 8H remain ON time after dusk according to LUX Control setting
- LUX Control & Memory: 3LUX - 1000LUX
- Max Load: 1000W (resistive load)  
500W (inductive load)
- Consumption: <1.8W
- Recommended Installation Height: ≥1m



Integrated Safety Cord



Product Ref	Max Capacity	Description	Twilight Settings	Switching Delay	W	H	D
					(mm)		
<b>WDF5000</b>	10A	Fully adjustable Electronic Photo Controller. 250W LED 1000W Incandescent & 500W Fluorescent	3 - 1000 LUX	30 seconds approximately	79	105	36

220-240V-50/60Hz





SECTION  
**8**

# STREETLIGHTS, POST TOPS & BOLLARDS

## Contents



Opera LED Post Top | 65



Victorian LED Post Top | 66



Cappello LED Post Top | 67



NANO LED Streetlights | 68



LED Bollard | 69

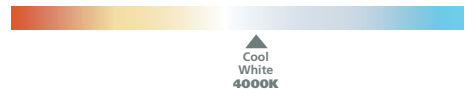
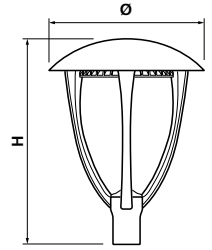




# OPERA LED Post Top

## FEATURES AND BENEFITS

- Die cast aluminium powder coated body
- Tempered glass
- Pre-wired with cable
- To be installed on a 76mm diameter pole
- CRI: >70
- LED Lifetime 50,000hrs (L70/B50)
- Operating Temperature: -20°C to +40°C



NB: The 1 Year On-Site Warranty is subject to additional terms and conditions.

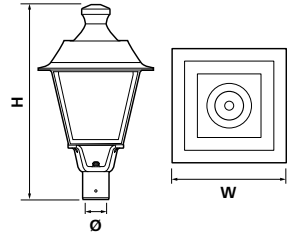
Product Ref	Watts	Description	Lumens (lm)	CCT	Mounting Spigot	Weight (kg)	H (mm)	Ø (mm)
FOPERA45	45W	Opera LED Post Top	4950	4000K	76mm Pole	9.2	681	514



## VICTORIAN LED Post Top

### FEATURES AND BENEFITS

- Die cast aluminium powder coated body and PC Cover
- Pre-wired with cable
- To be installed on a 76mm diameter pole
- CRI: >70
- LED Lifetime 50,000hrs (L70/B50)
- Operating Temperature: -20°C to +40°C



NB: The 1 Year On-Site Warranty is subject to additional terms and conditions.

Product Ref	Watts	Description	Lumens (lm)	CCT	Mounting Spigot	Weight (kg)	H (mm)	Ø (mm)
FVIC30	30W	Victorian LED Post Top	3750	4000K	76mm Pole	7.4	750	420

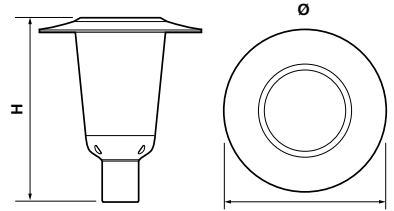
100-277V-50/60Hz



# CAPPELLO LED Post Top

## FEATURES AND BENEFITS

- Die cast aluminium powder coated body and PC Cover
- Pre-wired with cable
- To be installed on a 76mm diameter pole
- CRI: >70
- LED Lifetime 50,000hrs (L70/B50)
- Operating Temperature: -20°C to +40°C



NB: The 1 Year On-Site Warranty is subject to additional terms and conditions.

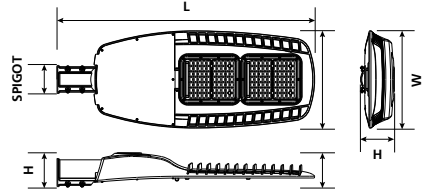
Product Ref	Watts	Description	Lumens (lm)	CCT	Mounting Spigot	Weight (kg)	H (mm)	Ø (mm)
FCAP25	25W	Cappello LED Post Top	2750	4000K	76mm Pole	4.3	487	430



# NANO LED Streetlights

## FEATURES AND BENEFITS

- Die-cast aluminium body with polycarbonate lenses
- Surge protection as standard
- Supplied with 1m of flex
- Side entry
- Type II Distribution
- Optional photocell on the 40W and 60W models, standard on the 80W and 120W
- CRI: >70
- LED Lifetime: 50,000 hours (L70/B50)
- Operating Temperature: -40°C to +45°C



## ADDITIONAL OPTIONS

- If the NEMA Photocell is not required on the 80W or 120W versions, a blanking unit is available - DLNEMABLANK. This blanking unit simply replaces the NEMA unit and removes the photocell operation.



DLNEMABLANK



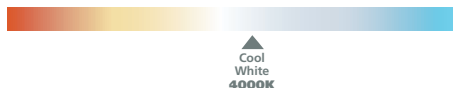
DLNANO120NEMA



SOR300/60/76



DOR300/60/76



NB: The 1 Year On-Site Warranty is subject to additional terms and conditions. Emergency products are excluded from 1 Year On-Site Warranty.

Product Ref	Watts	Description	Lumens (lm)	CCT	Mounting Spigot	Weight	L (mm)	W (mm)	H (mm)
DLNANO40	40W	Standard version	5200	4000K	60mm Entry	2kg	490	176	86
DLNANO40NEMA	40W	c/w NEMA Photocell	5200	4000K	60mm Entry	2kg	490	176	86
DLNANO60	60W	Standard version	7800	4000K	60mm Entry	2.1kg	490	176	86
DLNANO60NEMA	60W	c/w NEMA Photocell	7800	4000K	60mm Entry	2.1kg	490	176	86
DLNANO80NEMA	80W	c/w NEMA Photocell	10400	4000K	60mm Entry	3.7kg	605	240	89
DLNANO120NEMA	120W	c/w NEMA Photocell	15600	4000K	60mm Entry	4.3kg	715	270	94
DLNEMABLANK	-	Nano NEMA Blanking Unit	-	-	-	62g	Ø80mm x H 55mm		
Product Ref	Description				Outreach	Entry	Mounting Spigot		
SOR300/60/76	Single Outreach Arm				300mm	60mm	76mm		
DOR300/60/76	Double Outreach Arm				300mm	60mm	76mm		



# BOLLARD ES & 20W/24W LED Bollard

## FEATURES AND BENEFITS

- Aluminium black powder coated body
- E27 lamp holder or LED option
- (LED OPTION ONLY) Wattage select function (20W/24W)
- (LED OPTION ONLY) Lumen Output: 1200lm (20W)/1500lm (24W)
- Supplied with X3 "J" bolts and fixing
- Pre-wired with 1 flex cable
- (LED OPTION ONLY) CRI: > 80
- LED Lifetime: 50,000 hours (L70/B50)
- Operating Temperature: -20°C to +40°C

The LED in this product has a light source of Energy rating Class <E>

(E27 BOLLARD ONLY)

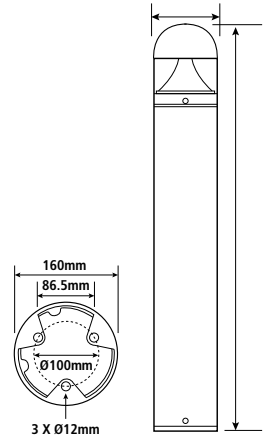
LAMPS NOT INCLUDED: Visit [fusion-lampes.co.uk](http://fusion-lampes.co.uk) if lamps are required.



FBOLLARDES



FBOLLARD



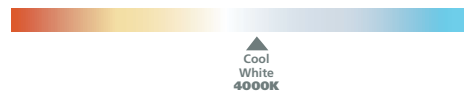
FBOLLARDES



FBOLLARD



LED Option:



NB: The 1 Year On-Site Warranty is subject to additional terms and conditions.

Product Ref	Wattage (Selectable)	Description	CCT	Lumens (lm)	Colour	Weight (kg)	H (mm)	Ø (mm)
FBOLLARD	20W 24W	LED Bollard Black Dome Head, c/w 1m of cable	4000K	1200lm 1500lm	4000K	5.90	1000	160
FBOLLARDES	-	Bollard E27, c/w 1m of cable	-	-	-	4.5	1015	160





# SECTION 9 EMERGENCY

## Contents



Emergency Twinspot LED  
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5-in-1 LED Emergency Exit Sign | 73



3.5W LED Emergency Exit Box | 74



Emergency Bulkheads LED  
Maintained & Non-maintained | 75



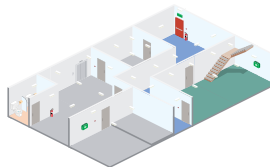
1W Emergency Downlight | 76



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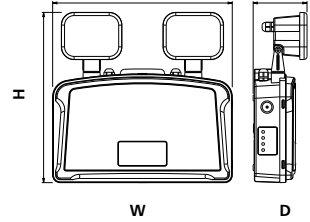
Emergency Lighting Guide | 80 - 81



# EMERGENCY TWINSPOOT LED Non-maintained

**FEATURES AND BENEFITS**

- Polycarbonate body and adjustable heads
- 180° head tilt
- Non-Maintained operation
- X2 20mm cable entry points
- Power consumption (full charge): 0.5W
- Automatic self-test function (optional)
- Charge time: 24 hours
- Emergency duration (3hrs / 180mins)
- Battery: LiFePO4 3.2V 5500mAh
- LED Lifetime: 30,000hrs (L70/B50)
- Operating temperature: 0°C to +40°C



Daylight  
6500K

Product Ref	Watts	Description	Lumen Output Battery (lm)	CCT	Weight (kg)	W	D	H
						(mm)		
FE3TS	3W	Emergency LED Twinspot	297	6500K	0.91	297	89	281
FE3TS/ST	3W	Emergency LED Twinspot c/w Self-Test	297	6500K	0.91	297	89	281

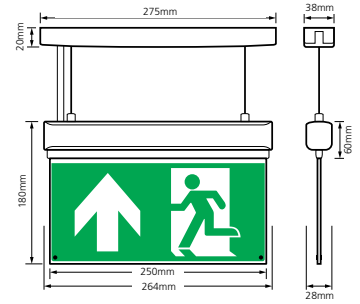




# 5-IN-1 LED Emergency Exit Sign

## FEATURES AND BENEFITS

- 5 installation methods: ceiling, suspended, recessed, side and wall mounted
- Dual technology: suitable for maintained / non-maintained operation
- Polycarbonate housing
- Intergrated test button
- Supplied with Up Legends
- Alternative Legends available
- Automatic self-test function (optional)
- Charge time: 24 hours
- Emergency duration: (3hrs/ 180mins)
- Battery: Ni-Cd AA 3.6V 800mAh
- LED Lifetime: 30,000hrs (L70/B50)
- Operating temperature: -0°C to +40°C



5-in-1 Kit - suspended



5-in-1 Kit - side mounted



5-in-1 Kit - wall installation



5-in-1 Kit - recess mounted



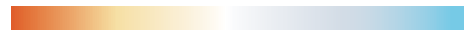
FE3/5IN1ALR



FE3/5IN1AD



5-in-1 Kit. Showing all parts supplied



Daylight  
6500K

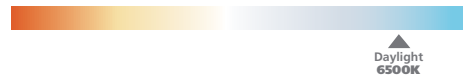
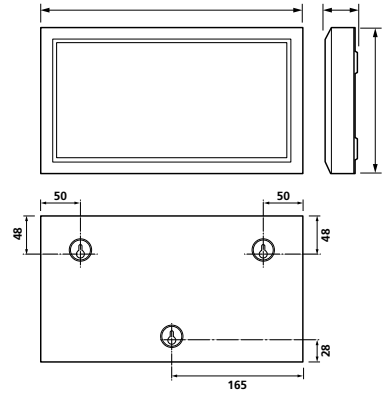
Product Ref	Watts	Description	Lumen Output Battery (lm)	Lumen Output Mains (lm)	CCT	Weight (kg)	Cut Out (mm)
FE3/5IN1	2.7W	5-in-1 Emergency Exit Sign, c/w Arrow Up Legends	23	14	6500K	0.43	282 x 46
FE3/5IN1/ST	2.7W	5-in-1 Emergency Exit Sign, c/w Self-Test Arrow Up Legends	23	14	6500K	0.43	282 x 46
FE3/5IN1ALR	-	Arrow Left & Right Legends for FE3/5IN1	-	-	-	-	-
FE3/5IN1AD	-	Arrow Down Legends for FE3/5IN1	-	-	-	-	-

220-240V-50/60Hz

## 3.5W LED Emergency Exit Box

### FEATURES AND BENEFITS

- Dual technology: Suitable for maintained or non-maintained operation
- Polycarbonate body and diffuser
- Supplied with Up Legend
- Alternative Legends available
- Maintained operation
- Automatic self-test function (Optional)
- Charge time: 24 hours
- Emergency duration (3hrs / 180mins)
- Battery: Li-FePo4 18650 3.2V 1500mAh
- LED Lifetime: 30,000hrs (L70/B50)
- Operating temperature: 0°C to +40°C



Product Ref	Watts	Description	Lumen Output Battery (lm)	Lumen Output Mains (lm)	CCT	Weight (kg)	H (mm)	D (mm)	L (mm)
FE3EB	3.5W	LED Emergency Wall Mounted Exit Box	20	35	6500K	0.657	185	39	330
FE3EB/ST	3.5W	LED Emergency Wall Mounted Exit Box Self Test	20	35	6500K	0.657	185	39	330
FE3EBAD	-	Arrow Down Legend for FE3EB and FE3EB/ST	-	-	-	-	-	-	-
FE3EBAL	-	Arrow Left Legend for FE3EB and FE3EB/ST	-	-	-	-	-	-	-
FE3EBAR	-	Arrow Right Legend for FE3EB and FE3EB/ST	-	-	-	-	-	-	-

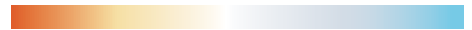
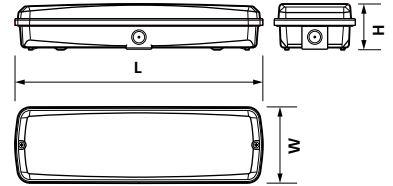
220-240V-50/60Hz



## EMERGENCY BULKHEADS LED Maintained & Non-maintained

### FEATURES AND BENEFITS

- Non-Maintained operation
- Polycarbonate body and diffuser
- Hinged gear tray
- 5 x 20mm gland entry points
- Automatic self-test function (Optional)
- Charge time: 24 hours
- Emergency duration (3hr / 180mins)
- Battery: Ni-Cd AA 3.6V 800 mAh
- LED Lifetime: 30,000hrs (L70/B50)
- Operating temperature: 0°C - 40°C



Daylight  
6500K

Product Ref	Watts	Description	Lumen Output Battery (lm)	Lumen Output Mains (lm)	CCT	Weight (kg)	L	W	H
								(mm)	
FE3NMB	1W	1W LED Non-maintained Emergency IP65 Bulkhead 6500K, c/w Legends	95	-	6500K	0.52	349	107	63
FE3MB	6W	6W LED Maintained Emergency IP65 Bulkhead 6500K, c/w Legends (Dual Technology)	95	305	6500K	0.52	349	107	63
FE3MB/ST	2.8W	LED Maintained Emergency IP65 Bulkhead c/w Self-Test and Legends	130	180	6500K	0.52	349	107	63

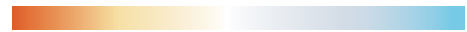
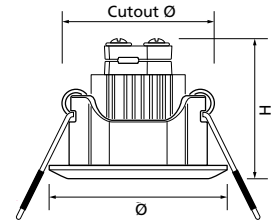
220-240V-50/60Hz    

# 1W EMERGENCY DOWNLIGHT

## LED Non-maintained Downlight

### FEATURES AND BENEFITS

- Non-Maintained operation
- Automatic self-test function (Optional)
- Charge time: 24 hours
- Emergency duration (3hrs / 180 mins)
- Battery: Li-FePo4 3.2V 1500mAh
- LED Lifetime: 30,000hrs (L70/B50)
- Operating temperature: 0°C to +40°C



Daylight  
6500K

Product Ref	Watts	Description	Lumen Output Battery (lm)	Beam Angle	CCT	Weight (kg)	H	Ø	Cutout Ø
								(mm)	(mm)
FE3D1	1W	Emergency Downlight	121	120	6500K	0.21	39	50	45
FE3D1/ST	1W	Emergency Downlight c/w Self-Test	121	120	6500K	0.21	39	50	45
FE3D1CL	-	Corridor Lens Only (Available Separately)	102	170	-	-	-	-	-
FE3D1NSL	-	Narrow Spot Lens Only (Available Separately)	124	45	-	-	-	-	-

220-240V-50/60Hz

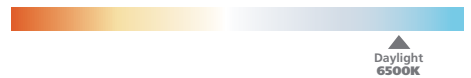
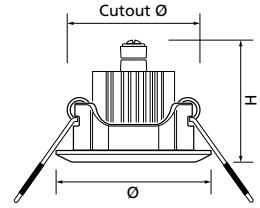


# 3W EMERGENCY DOWNLIGHT

## LED Downlight

### FEATURES AND BENEFITS

- Dual Technology: Suitable for maintained / non-maintained operation
- White body and trim
- Interchangeable lenses available (corridor or narrow spot)
- Charge time: 24 hours
- Emergency duration (3hrs / 180 mins)
- Battery: Li-FePo4 3.2V 1500mAh
- LED Lifetime: 30,000hrs (L70/B50)
- Operating temperature: 0°C to +40°C



Product Ref	Watts	Description	Lumens in mains (lm)	Lumens in Emerg. (lm)	Beam Angle	CCT	Weight (kg)	H	Ø	Cutout Ø
FE3D3	3W	3W Emergency Downlight	171	152	120	6500K	0.31	49	70	60
FE3D3CL	-	3W Emergency Downlight, Corridor Lens Only	155	135	170	-	-	51	-	-
FE3D3NSL	-	3W Emergency Downlight, Narrow Spot Lens Only	175	155	45	-	-	55	-	-

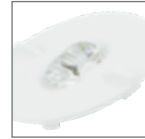
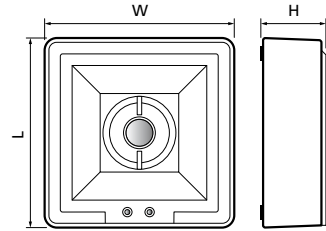
220-240V-50/60Hz     

# SURFACE EMERGENCY DOWNLIGHT

## LED Non-Maintained Downlight

**FEATURES AND BENEFITS**

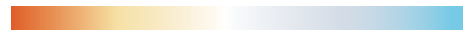
- Polycarbonate base and lenses
- Non-maintained operation
- Test button charge indicator LED
- Optional Corridor Lens giving a 2m x 12m light spread (must be ordered separately)
- c/w 20mm Gland for cable entry
- Charge time: 24 hours
- Emergency duration (3hrs)
- Battery Type: 3.6V 2000mAh Nickel-Cadmium
- LED Lifetime: 30,000hrs (L70/B50)
- Operating temperature: 0°C to +40°C



DL3WSLXE3CL



Surface box showing both available lenses (Corridor Lens must be ordered separately)



Daylight 6500K

Product Ref	Watts	Description	Lumen Output Battery (lm)	CCT	Weight (kg)	W	L	D	H
						(mm)			
DL3WSLCE3	3W	Surface Mounted Emergency Downlight Circular Distribution	137	6500K	0.387	130	130	45	-
DL3WSLXE3CL	-	Corridor LX Lens only, for DL3WSLCE3	-	-	-	-	-	-	50

220-240V-50/60Hz





## EMERGENCY LIGHTING GUIDE

Emergency lighting is an important lifeline for people trying to get out of a building if there's a power cut and/or the main lights fail, or even more importantly in the event of a fire.

If there are 5 or more employees an employer is required by law, under the Regulatory Reform Order (fire safety) to carry out a fire safety risk assessment and keep a written record of this assessment. The legislation exists to ensure that the correct emergency lighting is installed to cover any identifiable risks and that any emergency lighting will operate correctly in the event of a mains power loss. The code of practice BS5266 is for emergency lighting of premises and provides information on the correct lighting for the safety of people, along with BS EN 1838; this code highlights areas that need emergency lighting. Failure to comply not only puts lives at risk, but can also invalidate insurances and lead to possible prosecution.

Considering long term costs, buying high quality emergency lighting may initially seem to cost more, but consider the larger picture.

Good quality products may have a higher output which intern have a better spacing performance; resulting in less units needed to reach the correct level of illumination.

LED emergency lighting uses less power than their fluorescent counterparts, so have reduced running costs and require less maintenance having an average working life expectancy of up to 50,000 hours.

Positioning emergency lighting is crucial. Key locations should be along escape routes, at every change of direction, adjacent to any step, trip hazard or change of level.

Under the regulations, a 1 LUX minimum of luminance is required on the centre of an escape route and at least 40:1 uniformity - this illuminance must be for the entire duration and life of the system, 50% within 5 seconds and 100% within 60 seconds of any supply failure.

However in a open core area (anti-panic) - an area larger than 60m<sup>2</sup> with an escape route through it requires emergency lighting and must have a 0.5 LUX minimum (always check current standards).

Emergency signage is an important addition to emergency lighting which needs to be considered.


To ensure all escape routes are clearly identified and defined, be aware of the viewing distances when selecting a product, an exit sign is calculated by multiplying the height of the sign by a factor of 200 (for internally illuminated signs); a factor of 100 (for externally illuminated signs) and all must have a minimum 5 LUX at any point of the sign in emergency conditions. A photo-luminescent exit sign is an alternative option (it is important to remember that the photo-luminescent signs have a membrane that needs ambient light to charge).

---

Mandatory points to locate luminaires - site points must comply with BS EN 60598-2-22.

- At each exit door
- All safety exit signs
- Outside the final exits and to highlight a place of safety
- Near stairs so that each tread receives direct light
- At each change of direction
- Near each first aid point
- Near any change in floor level
- At each intersection of corridors
- Near each piece of fire fighting equipment and call point

Exit signs should be the correct size and format. Old BS and European standard signs are now obsolete and should have been replaced.

In 2011 the ISO 7010  single pictogram format was adopted by BSI (BS 5266-1:2011) and is considered as the "de-facto" emergency lighting standard.



## Stages of Emergency Lighting Design

**Stage 1** - Points of emphasis luminaires need to be located on escape routes (ensure that escape routes meet 1 LUX minimum).

- 1) At each exit door
- 2) To illuminate exit and safety signs
- 3) Near call points (some covered by 1)
- 4) Near each staircase
- 5) Change of direction (some covered by 2)
- 6) Near fire fighting equipment (some covered by 1)
- 7) Change of floor level
- 8) Near intersection of escape routes
- 9) Outside final exits
- 10) Near first aid points

**Stage 2** - Stage 1 covers exit sign locations, checking that the maximum viewing distances are not exceeded, and that the normal lighting is dimmed.

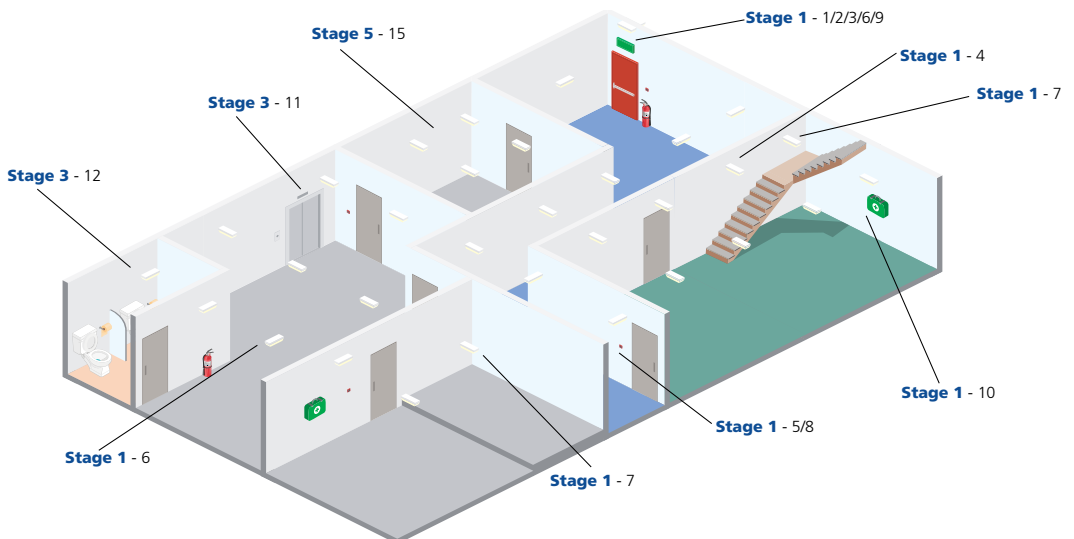
**Stage 3** - Emergency lighting required in areas not on a escape route.

- 11) Elevators
- 12) Toilets (more than 8m<sup>2</sup> floor area)
- 13) Escalators
- 14) Plant room(s)

**Stage 4** - Minimum illuminance levels on the escape routes need to be checked. The spacing of suitable luminaires need to provide a minimum 1 LUX on the centre line of the escape routes.

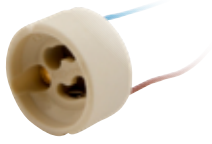
**Stage 5** - Open core (anti-panic) areas 15, apply to any area over 60m<sup>2</sup> of floor area, and/or have an escape route passing through them.

- a) Office(s) over 60m<sup>2</sup> - 3 x micropoint 2
- b) Office(s) under 60m<sup>2</sup> - no requirement
- c) Under 60m<sup>2</sup> - but part of escape route from an office  
2 x micropoint 2 fittings, either as compartment of escape route or an open panic area
- d) Workshop 4m high - 3 x IP65 + maintained LED unit





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Intumescent Fire Hoods | 84



Surface Mounting Boxes | 85



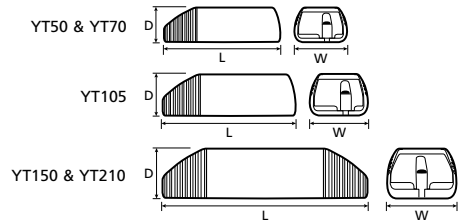
Emergency Packs | 85

# TRANSFORMERS

## Electronic Low Voltage Transformers

### FEATURES AND BENEFITS

- Short circuit survival (to insure against clumsy installation)
- Auto-resetting overload, surge protection and over - temperature protection
- Soft start for extended lamp life
- Any loading up to the maximum will work. Can be loaded from 0 (i.e.: total lamp failure) to its maximum rating
- Dim up to 10 transformers in parallel per intelligent dimmer module (only 5 when other transformers are used) up to maximum load of dimmer module
- For dimming, load is measured by the rating of the lamps (not by the transformer rating as with other transformers)
- Captive screws for easy installation in tight spaces
- Designed in consultation with electricians for ease of cable termination and fitting
- Ultra-cool running, fully tested and certified



As a major distributor of transformers, Fusion Luminaires are only too aware of the problems associated with dimming low voltage lighting systems. To bring an end to the uncertainty of compatibility, Fusion Luminaires have introduced a top-quality dimmable transformer range at a realistic price.

The transformer range is available in YT50, YT70, YT105, YT150 and YT210 options.

These transformers are fully compatible with Varilight® dimmers including their touch and touch/remote control dimmers. In addition to this, they are packed with many other innovative features.



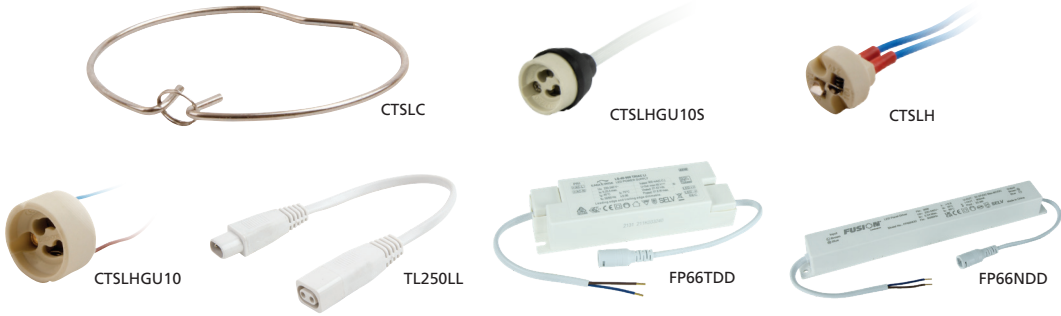
Product Ref	Description
<b>YT50</b>	0 - 50W Low Voltage transformer, c/w trailing leads
<b>YT70</b>	0 - 70W Low Voltage transformer, c/w trailing leads
<b>YT105</b>	0 - 105W Low Voltage transformer, c/w terminals
<b>YT150</b>	0 - 150W Low Voltage transformer, c/w terminals
<b>YT210</b>	0 - 210W Low Voltage transformer, c/w terminals

Product Ref	VA Rating	Input Voltage	Input Current	Power Range	Output Voltage	Power Factor	Ambient Temp.	Insulation Class	Quantity Input Terminals	Quantity Output Terminals	Weight (kg)	D	L	W
												(mm)		
<b>YT50</b>	0-50VA	230AC +/- 10%; 50Hz	0.22A	0-50W	4.3A	> 0.99	0 - 40°C	II	2 Leads	2 Leads	0.110	27.5	95	41.5
<b>YT70</b>	0-70VA	230AC +/- 10%; 50Hz	0.32A	0-70W	6.0A	> 0.99	0 - 40°C	II	2 / 2 Leads	2 / 2 Leads	0.115	27.5	95	41.5
<b>YT105</b>	0-105VA	230AC +/- 10%; 50Hz	0.46A	0-105W	9.1A	> 0.99	0 - 40°C	II	2	4	0.120	33	108	44
<b>YT150</b>	0-150VA	230AC +/- 10%; 50Hz	0.65A	0-150W	13A	> 0.99	0 - 40°C	II	4	6	0.215	38.5	167	52.5
<b>YT210</b>	0-210VA	230AC +/- 10%; 50Hz	0.93A	0-210W	18.2A	> 0.99	0 - 40°C	II	4	6	0.230	38.5	167	52.5



## ACCESSORIES

### Lamp Holders, Lamps Clips, Link Leads & Drivers



Product Ref	Description
CTSLH	Spare Lampholder for L/V, GX5.3
CTSLHGU10	Spare Lampholder for GU10
CTSLHGU10S	GU10 Lamp Holder C/W 24cm Silicon Cable
CTSLC	Standard Lamp Spring Clip
TL250LL	Link lead, 250mm Length
TL500LL	Link lead, 500mm Length
TL1000LL	Link lead, 1000mm Length
FP66NDD	Driver for FP66 + FP123 Panels
FP66TDD	Trial driver for FP66 + FP123 Panels
FP126NDD	Driver for FP126 Panels
FP126TDD	Trial Driver for FP126 Panels

## ACCESSORIES

### Fire Hoods

#### INTUMESCENT FIRE HOODS FOR ALL DOWNLIGHT FITTINGS

The Fusion Luminaires range of intumescent fire hoods and downlight covers, designed to comply with Part B of the Building Regulations and the relevant British and European standards.

Ideally suited for low voltage and GU10 luminaire offerings.

#### FEATURES AND BENEFITS

- 66 minutes fire rating
- Covers a wide range of mains and low voltage downlights
- Prevents fire from penetrating the ceiling void and retains ceilings fire protection integrity
- Ventilated to reduce heat build-up



Product Ref	Description	W	L	H	
				(mm)	
DLBF2	Intumescent Fire Hood for all Downlight fittings, Fire Rating 66 mins	-	-	150	150
DLBF4	Intumescent Fire Hood for all Downlight fittings, Fire Rating 66 mins	-	-	200	200



## ACCESSORIES

### Ceiling Panels & Downlight Accessories



PANSFB



PANSFB123



FE3P



FE3CD

Product Ref	Description
<b>PANSFB</b>	600 x 600mm Surface mounting box for LED Ceiling Panels
<b>PANSFB123</b>	1200 x 300mm Surface mounting box for LED Ceiling Panels
<b>PANSFB126</b>	1200 x 600mm Surface mounting box for LED Ceiling Panels
<b>FE3P</b>	Emergency Pack for Fusion Panels
<b>FE3CD</b>	6W - 30W 3hr Emergency Pack for Fusion Downlights
<b>FE3FF</b>	Emergency Pack for LED Flexi-Fit Downlights



## FLUORESCENT Technical Comparison Charts

Fluorescent Tubes	Fluorescent Type	Fluorescent Wattage	Circuit Watts S/S	Circuit Watts H/F
<b>2FT</b>	T8	18	24	19
	T8	2X18	44	37
	T8	4X18	88	70
	T5	14	-	18
	T5	2X14	-	32
	T5	4X14	-	62
<b>3FT</b>	T5	24	-	28
	T5	21	-	25
<b>4FT</b>	T5	39	-	45
	T5	28	-	33
	T5	2X28	-	62
	T8	36	42	37
	T8	2X36	80	70
	T5	54	-	61
<b>5FT</b>	T5	35	-	40
	T5	49	-	56
	T8	58	66	57
	T8	2X58	142	110
	T5	80	-	88
<b>6FT</b>	T8	70	78	68
<b>8FT</b>	T12	100	115	-

Fluorescent Type	Fluorescent Wattage	Circuit Watts	HID	Circuit Watts
<b>Single Compact</b>	5W	11	<b>50W MBFU</b>	63
	7W	12	<b>80W MBFU</b>	96
	9W	14	<b>125W MBFU</b>	145
	11W	16	<b>250W MBFU</b>	280
<b>Double Compact</b>	10W	13	<b>400W MBFU</b>	435
	13W	16	<b>50W SON</b>	65
	18W	24	<b>70W SON</b>	86
	26W	32	<b>100W SON</b>	123
<b>Triple Compact</b>	18W	24	<b>150W SON</b>	175
	26W	32	<b>250W SON</b>	285
	32W	36	<b>400W SON</b>	445
	42W	47	<b>600W SON</b>	691
<b>Long Compact</b>	18W	20	<b>1000W SON</b>	1085
	24W	26	<b>70W HQI</b>	86
	36W	39	<b>150W HQI</b>	175
	40W	45	<b>250W HQI</b>	275
	55W	58	<b>400W HQI</b>	430
	80W	84	<b>250W HPIT</b>	285
<b>2D</b>	16W	22	<b>400W HPIT</b>	445
	28W	34	<b>35W CMH</b>	46
	38W	48	<b>70W CMH</b>	86
			<b>150W CMH</b>	165

**PLEASE NOTE THESE ARE FOR GUIDANCE PURPOSES ONLY !!**  
THE ABOVE VALUES ARE AVERAGE - SPECIFIC MANUFACTURER DATA MAY VARY

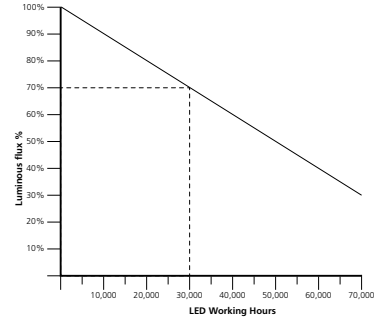
# LED Specification

## LED

### LED life expectancy

LED life expectancy can be defined as the operational time period during which a LED will maintain a certain percentage of its original luminous flux.

Normally after 30,000 hours of working life the LEDs flux will decrease and is represented by the chart opposite - which means the flux is kept up to 70% after 30,000 hours. The degree of decay can vary between manufacturers and will be influenced by the environment it is operated in.



### LED Light Depreciation

Light depreciation and service life for LED luminaires have traditionally been presented as LXXBXX.

The L-value defines the percentage of Lumen compared with the initial Lumens as a %. The B-value represents the failure data as a %.

For example, L70B50 means at the end of its lifespan 30,000hrs its Lumen level will be 70% of the original specified Lumen at new, with 50% of the fixtures expected to achieve this level.

### LED - The influence of heat

A LEDs working life largely depends on their inner temperature. Excessive temperatures affects the correct function of LED lights and reduces their working life.

The values concerning lamp life are regarded as reliable after determining the effect of heat on LED sources. Overheated LEDs are more likely to be affected by malfunction and have a shorter life cycle.

For LEDs to operate properly, guaranteeing long life and naturally degrading the luminous flux, they must be designed to evenly dissipate the heat they produce. The nominal performance of LEDs is respected only if their working temperature is not exceeded.

## Lighting Terminology

### Accent Lighting

Lighting that is used to accentuate a particular object or feature, should be approximately four or five times the level of ambient light within the space.

### Ambient Lighting

Uniform background lighting of a space without providing for any localised directional lighting requirements.

### Beam Angle

The angle between the opposed points either side of the beam axis where the luminous intensity reaches a value of 50% that of the peak beam intensity.

### Candela (cd)

The measure of luminous intensity of a light source in a given direction.

### Colour Rendering Index (CRI) or Ra (rendering average).

The ability of a light source to render colours accurately and is measured by the Colour Rendering Index on a scale of 0 - 100. The higher the number the more accurately the light source can render colour.

### Colour Temperature

The measure of the colour appearance of a light source which describes the apparent warmth or coolness of that light source.

Generally, light sources are described as 2700K (extra warm white), 3000K (warm white), 4000K (cool white), 6000K (daylight white).

The letter "K" refers to Kelvin.

The term can also be referred to as Correlated Colour Temperature (CCT).



### Emergency Lighting

Lighting used in the event of power failure for whatever reason.

Luminaire types are usually either stand alone Non-maintained (emergency use only) or mains converted maintained operation (mains + emergency use).

### Fire Rated

A recessed fitting that maintains the integrity of a fire rated ceiling in compliance of the building regulations - part B on Fire Safety.

### Indirect Lighting

Lighting in which the greater part of the flux reaches the surface (usually the working plane) only after reflection at other surfaces and particularly at the roof or ceiling. Luminaires with a flux fraction ratio greater than 10 are usually regarded as indirect.

### Average Illuminance

Illuminance averaged over the specified area. Unit: lux.

### Average Luminance

Luminance averaged over the specified area or solid angle. Unit: candela per square metre.

### Disability Glare

Glare that impairs the vision of objects without causing discomfort.

Note : Disability glare may be produced directly or by reflection.

### LED

LED is the abbreviation of **Light Emitting Diode**, a component that emits monochromatic light with the flow of electric current.

LEDs are semiconductor devices which convert electricity into visible light.

### Light Output Ratio (LOR)

The ratio of the total light output of a luminaire under stated practical conditions. For the luminaire, the output is usually measured in the designated operating position at 25°C ambient temperature with control gear of the type usually supplied in a luminaire and operated at its normal voltage. For the lamp the output is measured at 25°C ambient temperature and with control gear of standard properties. This is a practical basis for evaluating the total light output to expected under service conditions.

### Luminaire Maintenance Factor

Light output ratio of a luminaire at a given time when compared to the initial light output.

### Luminance

The physical measure of the stimulus which produces the sensation of brightness measured by the luminous intensity of the light emitted or reflected in a given direction from a surface element, divided by the area of the element in the same direction. The SI unit of luminance is the candela per square metre, the relationship between luminance and illuminance is given by the equation

$$\text{Luminance} = \frac{\text{Illuminance} \times \text{reflective factor}}{\pi}$$

This equation applies to a matt surface. For a non-matt surface, the reflectance is replaced by the luminance factor.

### Spacing to Height Ratio

This ratio describes the distance between luminaire centres in relation to their height above the working plane. For a regular square arrangement of luminaires, it is the distance between adjacent luminaires divided by their height above the working plane.

### Stroboscopic Effect

An illusion caused by oscillation in luminous flux, that makes a moving object appear as stationary or is moving in a manner different from that in which it is truly moving.

## NCF Corrosive Agents

The chemical products listed below are just a small part of existing compounds and their possible compositions. Depending on concentration and temperature, compatibility between materials and chemical products can be observed.

**Important:** All internal parts, housings, lit fixtures and optics can be cleaned regularly. Clean with soap and water or very diluted solution of common detergents. Avoid any solvent type cleaners like: trichloroethylene or perchloroethylene.

**Key to chart:**

Resistant = ✓ | Non resistant = ✗ | Partially resistant = ●

Chemical Compound	Methacrylate	Polycarbonate	Polyamide	PVC	Aluminium	Steel
Acetone	✗	●	●	●	✓	✓
Citric Acid 20%	✓	✓	✓	✓	●	●
Hydrochloric Acid 10%	✓	✓	✗	✓	✗	●
Chromic Acid	●	●	●	✓	●	●
Chloric Acid	✓	✓	✗	✓	✗	✗
Nitric Acid 20%	●	●	✗	✓	✗	✗
Sulphuric Acid up to 30%	✓	✓	✗	✓	✗	✗
Salt Water	✓	✓	●	●	●	✓
Ethyl Alcohol	✗	✓	✓	✓	✓	✓
Ammonia	✓	✗	✓	●	✓	●
High Grade Fuel	✓	✗	✗	●	✓	✓
Diesel Fuel	●	●	●	✓	✓	✓
Liquid Chlorine (vapours)	✗	✗		✗	✓	✗
Phenols	✗	✗	✗		●	✓
Caustic Soda	✓	✗	✓	✓	✗	✗
Carbon Tetrachloride	✗	✗	✓	✗	✓	✓
Toluene	✗	●	●	✗	✓	✓
Trichlorethlene	✗	✗	✓	★	✓	✓

★ **IMPORTANT NOTE:** Must Avoid at all COSTS - **DO NOT** use with this product !



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# FUSION LUMINAIRES WARRANTY

### Warranty Periods

At Fusion Luminaires we offer product warranties, the warranty period can vary from 1 – 5 years.

The warranty period commences from the date the product was purchased and proof of purchase will be required to redeem the warranty. This purchase must have been made from a Fusion Luminaires authorised wholesaler and not procured second hand at an auction or by any other means.

### Standard Warranty Terms And Conditions

Fusion Luminaires will repair or replace a faulty or defective product within the warranty period. A product is deemed faulty or defective if it fails to illuminate or alternatively if the lumen output falls outside of the stated lumen maintenance. This can vary from product to product so please refer to the instructions or website. If the product has been discontinued or is no longer available, we will provide a product with the closest available specification but Fusion Luminaires is not responsible for any miss match with any other products on site.

The warranty does not cover damage due to misuse or negligence, accidental damage, acts of god, water damage, general wear & tear and installations in violation of any applicable standard code (eg.BS 7671) or instructions.

The warranty only covers products applied within "intended" or "normal use" as defined below:

- The operating conditions are in accordance with the information supplied on the packaging, instructions or Fusion Luminaires website.
- The warranty is based on a maximum operating period of 14 hours per day.
- The ambient temperature never exceeds the operating temperature range stated in the instructions or website.
- The relative humidity in the installation doesn't exceed 80% RH, or exceed the IP rating of the lamp / luminaire.
- The electrical installation in which the lamp or luminaire operates is not subjected to voltage fluctuations exceeding 230V +10% or -6%.

Fusion Luminaires are not liable for any consequential costs such as labour, transport, loss of profit and access equipment in relation to this warranty.

At Fusion Luminaires' request, access shall be given to the installation to carry out further investigations and applicability of the warranty.

In the event of a failure or defect occurring, the product shall be returned to Fusion Luminaires, Unit 2 Railway Court, Ten Pound Walk, Doncaster, South Yorkshire, United Kingdom, DN4 5FB. The carriage cost to return the product shall be covered by the customer. Upon receiving the product Fusion Luminaires will be allowed time to investigate the source of the problem.

If it is concluded that the issue is due to manufacturing or material defect, Fusion Luminaires will repair or replace the product, the carriage cost for the replacement will be covered by Fusion Luminaires. NB. Only faulty or defective products will be replaced.

Fusion Luminaires reserves the right to make the final decision on the validity of the claim.

### On-Site Warranty

At Fusion Luminaires all 5 year warranty products are supported with a 1 year on-site warranty. This only applies to products purchased since 1st May 2022 and are subject to the below additional On-Site Warranty Terms And Conditions.

The On-Site Warranty period commences from the date the product was purchased and proof of purchase will be required to make a claim.

### On-Site Warranty Terms And Conditions

The Fusion Luminaires On-Site Warranty Terms And Conditions apply in addition to the Standard Warranty Terms And Conditions.

In the event that a Fusion Luminaires product covered by the 1 year on-site warranty is deemed to be faulty or defective and sits within the first year of the purchase date, Fusion Luminaires will where possible authorise the installer to replace the faulty or defective product and reimburse fair and reasonable costs. In the event that an agreement can't be reached Fusion Luminaires approved technicians or authorised agent will carry out the required work.

On-Site Warranty Exclusions:

- Emergency products are not included.
- Non-compliance with installation and safety regulations given in the installation instructions and BS 7671.

In order to make an On-Site Warranty claim the following documents will be required prior to any replacement works commencing:

- On-Site Warranty Claim Form Completed (Contact Fusion Luminaires for a form).
- Proof of purchase from a Fusion Luminaires authorised wholesaler.
- Electrical installation Certificate, as per BS 7671.
- Electrical Installation Condition Report, as per BS 7671.
- Quotation for replacement work.

Fusion Luminaires reserves the right to make the final decision on the validity of the claim.

# TERMS & CONDITIONS

## 1. Interpretation

- (a) In these Conditions, the following words shall have the following meanings:  
Buyer means the person, firm or company who places an Order with the Seller;  
Customer Agreement means the Credit Account Application overleaf and any and all agreements made between the Buyer and the Seller for the supply of Goods.  
Goods means any goods (or instalment or part thereof) howsoever ordered by the Buyer from the Seller;  
Guarantee means the guarantee embedded in the Seller's Credit Account Application.  
Guarantor means the person who enters into the Guarantee embedded in the Seller's Credit Account Application.  
Order means any order sent to the Seller by the Buyer for the supply of Goods and/or Services;  
Seller means Lancaster Holdings Ltd (CRN:11089637) whose registered office is at Georgina Mackie House, 141 Farmer Ward Road, Kenilworth, Warwickshire CV8 2SU;  
Services means any services (or instalment or part thereof) howsoever ordered by the Buyer from the Seller.
- (b) A reference to a particular law is a reference to it as it is in force for the time being taking account of any amendment, extension, application or re-enactment and includes any subordinate legislation for the time being in force made under it.

## 2. Basis of Sale

- (a) An Order shall be accepted entirely at the discretion of the Seller and if accepted will only be accepted on the basis of these Conditions which shall (together with such conditions as may be expressly incorporated by reference herein or as may be agreed in writing by the Buyer and the Seller) form the entire agreement between the Buyer and Seller to the exclusion of any other conditions (including any terms or conditions which the Buyer purports to apply under any purchase order, confirmation of order, specification or other document).
- (b) Each Order which the Seller accepts (by way only of issue of the Seller's standard order acknowledgement form or on delivery of the Goods and/or performance of the Services (as the case may be) to the Buyer's address shown in the Order) shall constitute a separate legally binding contract between the Seller and the Buyer.
- (c) No addition, variation or substitution of these Conditions shall bind the Seller or form any part of any contract unless expressly accepted in writing by an authorised representative of the Seller.
- (d) The Seller's employees or agents are not authorised to make any representations with regard to the subject matter of any contract between the Seller and the Buyer. In entering into a contract with the Seller, the Buyer acknowledges that if it relies on any representation, advice or recommendation given by the Seller, its employees or agents to the Buyer as to the Goods and/or the Services (as the case may be) it does so entirely at the Buyer's own risk.

## 3. Specification

- (a) The Buyer shall be responsible to the Seller for ensuring the accuracy of the terms of any Order and specification submitted by the Buyer and for checking and ensuring the accuracy of any order acknowledgement form issued by the Seller.
- (b) The Buyer shall not be entitled to rely on any typographical, clerical or other error or omission in any sales literature, quotations, price-list, acceptance of offer, invoice or other document or information issued by the Seller which the Buyer acknowledges shall not form part of or be incorporated by reference into any contract between the Seller and the Buyer. Any such error or omission shall be subject to correction without any liability on the part of the Seller.
- (c) The Seller reserves the right to make changes in the specification of the Goods and/or the Services (as the case may be) which are required to conform with any applicable statutory or regulatory requirements and which do not materially affect quality or performance.
- (d) If the Goods are to be manufactured or any process is to be applied to the Goods by the Seller in accordance with a specification submitted by the Buyer, the Buyer shall indemnify the Seller against all loss, damages costs and expenses awarded against or incurred by the Seller in settlement of any claim for infringement of any patent, copyright, design, trade mark or other industrial or intellectual property rights of any other person which result from the Seller's use of the Buyer's specification.

## 4. Price of Goods and Services

- (a) The price for the Goods and/or the Services (as the case may be) shall be:  
(i) the Seller's price set out in the Seller's quotation issued to the Buyer; or  
(ii) in the absence of any such quotation, the Seller's standard price for the Goods or Services (subject to any discount in accordance with clause 4(g)).  
Any prices quoted are valid for only 30 days from the date of quotation or until earlier acceptance by the Buyer, after which they may be altered by the Seller without giving notice to the Buyer.
- (b) Any quotation or estimate given by the Seller is an indication given in good faith and shall not become binding upon the Seller unless subsequently confirmed by the Seller in writing.
- (c) All prices quoted are based on information available at the date of quotation and the Seller reserves the right to vary prices at any time without notice prior to the date of issue of the relevant invoice and the price payable by the Buyer shall be the price applicable at the date of the invoice.
- (d) Unless otherwise stated, the price of the Goods and/or the Services (as the case may be) is exclusive of VAT and any other taxes and the cost of carriage and any other matters all of which the Buyer shall pay to the Seller in addition.
- (e) In the event of any increase in cost to the Seller which is beyond the control of the Seller (including (without limitation) any increases imposed upon the Seller by its own suppliers) and/or any variation or suspension of the work which is agreed to by the Seller upon the Buyer's request, or if the Buyer's instructions are incorrect or insufficient, the Seller shall be entitled to adjust the price of the Goods and/or the Services (as the case may be) to reflect the costs involved, and to adjust delivery dates as appropriate.
- (f) The Seller shall be entitled to bring an action for the price of the Goods and/or the Services (as the case may be) or part thereof notwithstanding that delivery and/or performance may not have taken place and/or that ownership in the Goods has not passed to the Buyer.
- (g) The Seller at its absolute discretion may decide to apply a discount in such amount as it may think fit to the price for the Goods and/or Services. The amount of any discount shall be recorded in the invoice issued to the Buyer.

## 5. Payment

- (a) The Seller shall be entitled to invoice the Buyer for the price of the Goods and/or the Services (as the case may be) at any time prior, on or following delivery of the Goods and/or performance of the Services (as the case may be) unless the Buyer wrongfully fails to take delivery of the Goods in which event the Seller shall be entitled to invoice the Buyer for the full amount at any time after the Seller has notified the Buyer that the Goods are ready for collection or (as the case may be) the Seller has tendered delivery of the Goods.
- (b) Until a Credit Account has been opened by the Seller in favour of the Buyer, the Buyer shall pay the price for the Goods and/or the Services (as the case may be) on or prior to delivery and (where applicable) upon receipt of the Seller's invoice.
- (c) The time of payment of the price shall be of the essence of any contract between the Seller and the

Buyer.

- (d) A Buyer in whose favour a Credit Account has been opened shall, unless otherwise agreed in writing by the Seller, pay the price for the Goods and/or the Services (as the case may be) on or before the 28th day (or the next working day if the 28th day of a particular month is a Saturday or a Sunday) of the month following the date of the Seller's invoice.
- (e) No payment shall be deemed to have been received until the Seller has received cleared funds. All payments payable to the Seller under the contract between the Seller and the Buyer shall become due immediately on its termination despite any other provision.
- (f) Where payment is not made by the due date, regardless of its other remedies, the Seller shall be entitled to (i) cancel the contract between the Seller and the Buyer or suspend any further deliveries to the Buyer; and (ii) claim interest and/or compensation for reasonable debt recovery costs under the Late Payment of Commercial Debts (Interest) Act 1998 as amended and supplemented by the Late Payment of Commercial Debts Regulations 2002.
- (g) In the event that the Seller is, for whatever reason, unable to claim interest and/or compensation under the Late Payment of Commercial Debts (Interest) Act 1998 as amended and supplemented by the Late Payment of Commercial Debts Regulations 2002, the Seller reserves the right to charge the Buyer interest (both before and after any judgment) on the amount unpaid at the rate of 4% (four per cent) per annum above the base rate from time to time of the Bank of England, accruing on a daily basis until payment is made in full, and for such purposes, the Buyer and the Seller agree that such rate is reasonable and reflects a genuine pre-estimate of the loss that the Seller would incur as a result of any default by the Buyer to make payment on the due date.
- (h) If any payment is dishonoured or countermanded by the Buyer, the Seller shall have the right to charge the Buyer an administration fee of £25.00 (or such other fee as may be notified to the Buyer from time to time).
- (i) Any claim by the Buyer that an invoice rendered by the Seller is in the incorrect amount or contains any other error must be notified to the Seller in writing within 7 days of the date of the invoice. If the Buyer does not notify the Seller accordingly, the Buyer shall not be entitled to claim that the invoice is incorrect or contains any other error whatsoever.

## 6. Delivery

- (a) Delivery of the Goods shall be made by the Buyer collecting the Goods at the Seller's premises or, if some other place for delivery is agreed by the Seller, by the Seller delivering the Goods to that place.
- (b) Any delivery date quoted is given in good faith, but the Seller shall not be responsible for any delay in delivery of the Goods and/or the performance of the Services (as the case may be) howsoever caused. Time for delivery shall not be of the essence of the contract between the Seller and the Buyer and the Seller shall not be liable for any delay in delivery howsoever caused.
- (c) The Seller shall be entitled to make delivery by instalments (in which case each delivery shall constitute a separate contract), and to invoice the Buyer separately for each instalment. Failure by the Seller to deliver any one or more of the instalments in accordance with these Conditions or any claim by the Buyer in respect of any one or more instalments shall not entitle the Buyer to treat the contract as a whole between the Seller and the Buyer as repudiated.
- (d) Except in the case of delivery at the Seller's premises, the Buyer shall at its own expense use all reasonable endeavours to ensure that the Seller is able to freely access and make any deliveries to any other place for delivery at such time(s) as may be specified by the Seller. Any failure by the Buyer to comply with the provisions of this condition or to otherwise accept delivery (save upon such grounds for rejection as are specified in the law relating to the Sale of Goods) shall be deemed to be a breach of contract. Any additional costs incurred by the Seller in re-delivering the Goods (either to the originally agreed place for delivery or to such other place as may be reasonably requested by the Buyer) will be charged to the Buyer.
- (e) The quantity of any consignment of Goods as recorded by the Seller upon despatch from the Seller's premises shall be conclusive evidence of the quantity received by the Buyer on delivery unless the Buyer can provide conclusive evidence proving the contrary.
- (f) Notwithstanding the provisions of condition 8(e), the Seller shall not be liable for any under-delivery of Goods in whole or in part (even if caused by the Seller's negligence) unless the Buyer gives written notice to the Seller of the under-delivery within 48 hours of the date when the Goods are delivered to the Buyer (as recorded by the Seller) or, if there is no such record, when the Goods would in the ordinary course of events have been received. Any liability of the Seller for under-delivery of the Goods shall be limited to replacing the Goods within a reasonable time or issuing a credit note at the pro rata contract rate against any invoice raised for such Goods.

## 7. Risk and Title

- (a) Risk of damage to or loss of the Goods shall pass to the Buyer at the time of delivery.
- (b) Notwithstanding delivery and the passing of risk in the Goods, or any other provisions in these Conditions, ownership of the Goods shall not pass to the Buyer until the Seller has received in full (in cash or cleared funds) all sums due to it in respect of the Goods and all other sums which are or which become due to the Seller from the Buyer on any account.
- (c) Until ownership of the Goods has passed to the Buyer in accordance with these Conditions, the Buyer shall:  
(i) hold the Goods on a fiduciary basis as the Seller's bailee;  
(ii) store the Goods (at no cost to the Seller) separately from all other Goods of the Buyer or any third party in such a way that they remain readily identifiable as the Seller's property;  
(iii) not destroy, deface or obscure any identifying mark or packaging on or relating to the Goods;  
(iv) maintain the Goods in satisfactory condition insured on the Seller's behalf for their full price against all risks to the reasonable satisfaction of the Seller (and produce the policy of insurance to the Seller on request); and  
(v) hold the proceeds of the insurance referred to in condition 7(c) (iv) on trust for the Seller and not mix them with any other money, nor pay the proceeds into an overdraft bank account.
- (d) The Buyer may resell the Goods before ownership has passed to it solely on the following conditions:  
(i) any sale shall be effected in the ordinary course of the Buyer's business at full market value and the Buyer shall hold such part of the proceeds of sale as represent the amount owed by the Buyer to the Seller on behalf of the Seller and the Buyer shall immediately account to the Seller accordingly; and  
(ii) any such sale shall be a sale of the Seller's property on the Buyer's own behalf and the Buyer shall deal as principal when making such a sale.
- (e) The Buyer's right to possession of the Goods shall terminate immediately if:  
(i) the Buyer has a bankruptcy order made against him or makes an arrangement or composition with his creditors, or otherwise takes the benefit of any statutory provision for the time being in force for the relief of insolvent debtors, or (being a body corporate) convenes a meeting of creditors (whether formal or informal), or enters into liquidation (whether voluntary or compulsory) except a solvent voluntary liquidation for the purpose only of reconstruction or amalgamation, or has a receiver and/or manager, administrator or administrative receiver appointed of its undertaking or any part thereof, or documents are filed with the court for the appointment of an administrator of the Buyer or notice of intention to appoint an administrator is given by the Buyer or its directors or by a qualifying floating charge holder (as defined in paragraph 14 of Schedule B1 to the Insolvency Act 1986), or a resolution is passed or a petition presented to any court for the winding-up of the Buyer or for the granting of an administration order in respect of the Buyer, or any proceedings are commenced relating to the insolvency or possible insolvency of the Buyer; or  
(ii) the Buyer suffers or allows any execution, whether legal or equitable, to be levied on his/its property or obtained against him/it, or fails to observe or perform any of his/its obligations under the Contract

# TERMS & CONDITIONS

- or any other contract between the Seller and the Buyer, or is unable to pay its debts within the meaning of section 123 of the Insolvency Act 1986 or the Buyer ceases to trade; or
- (iii) The Buyer encumbers or in any way charges any of the Goods.
  - (f) The Buyer grants the Seller, its agents and employees an irrevocable licence at any time to enter any premises where the Goods are or may be stored in order to inspect them, or, where the Buyer's right to possession has terminated, to recover them.
  - (g) Where the Seller is unable to determine whether any Goods are the goods in respect of which the Buyer's right to possession has terminated, the Buyer shall be deemed to have sold all goods of the kind sold by the Company to the Buyer in the order in which they were invoiced to the Buyer.
  - (h) On termination of the contract between the Seller and the Buyer, howsoever caused, the Seller's (but not the Buyer's) rights contained in this condition 7 shall remain in effect.
- (i) Following the transfer of ownership of the Goods to the Buyer in accordance with these Conditions, the Buyer shall (where applicable) (i) be responsible for financing the collection, treatment, recovery and environmentally sound disposal of all WEEE (as hereinafter defined) arising or deriving from the Goods; and all WEEE arising or deriving from goods placed on the market prior to 13 August 2005 where such goods are to be replaced by the Goods and the Goods are of an equivalent type or are fulfilling the same function as that of such goods; (ii) comply with all additional obligations placed upon the Buyer by the Waste Electrical and Electronic Equipment Regulations 2006 ("the WEEE Regulations") by virtue of the Buyer accepting the responsibility set out in section (i) above; (iii) provide the Buyer's WEEE compliance scheme operator with such data, documents, information and other assistance as such compliance scheme operator may from time to time reasonably require to enable such compliance scheme operator to satisfy the obligations assumed by it as a result of the Buyer's membership of such scheme; and (iv) be responsible for all costs and expenses arising from and relating to its obligations set out in this paragraph (except in respect of Goods which constitute gas discharge lamps, in which case an upfront and 'visible' charge will have been levied at the outset and the Buyer undertakes to contact the compliance scheme operator of the gas discharge lamp branded manufacturer to arrange compliance with the WEEE Regulations on that basis). Terms used in this Condition shall have the meaning ascribed thereto in the WEEE Regulations.

## 8. Additional Terms of Guarantee

- (a) All sums of money which may not be recoverable from the Guarantor on the footing of the guarantee whether by reason of legal limitation on the Buyer or any other circumstance shall nevertheless be recoverable from the Guarantor as principal debtor and shall be paid on demand.
- (b) A demand for payment or any other notice to the Guarantor may be made by any authorised officer of the Seller by letter addressed to the Guarantor and delivered to its registered office or residential address and if sent by post shall be deemed to have been made at noon the following day after the letter was posted.
- (c) This Guarantee shall be a continuing security and the Guarantor shall remain liable for all sums due by the Buyer notwithstanding any event which absolves the Buyer from liability. The Guarantor shall remain liable notwithstanding any alteration to the Customer Agreement or any terms applying thereto, which may be agreed between the Seller and the Buyer.
- (d) Until payment in full by the Guarantor of all sums due to the Seller by the Buyer, the Guarantor shall not be entitled to participate in any security held or money received by the Seller on account of such balance.
- (e) This Guarantee may be terminated and the Guarantor's liability shall be fixed at the expiration of one calendar month after receipt by the Seller from the Guarantor of notice in writing to terminate it. It shall be lawful for the Seller to continue the account with the Buyer notwithstanding such termination and the Guarantor shall remain liable for any amount due at the date of termination of this Guarantee.
- (f) The Guarantor may be released absolutely from the Guarantee upon written application to the Seller. Any such release shall be at the Seller's absolute discretion and shall be on such terms including as to the date of release that the Seller may specify. Any settlement discharge or release between the Guarantor and the Seller shall be conditional upon no security or payment to the Seller by the Buyer or any other person being avoided or reduced due to insolvency laws or otherwise.
- (g) The Seller may at any time without giving notice to or obtaining the consent of the Guarantor refuse or grant further credit to the Buyer for any period and compound with give time for payment grant other indulgence or make any other arrangements with the Buyer, give up modify exchange or abstain from perfecting or taking advantage of or enforcing any security guarantee and discharge any parties thereto and realise any securities in such manner as the Seller may think expedient.
- (h) All costs charges and expenses incurred by the Seller in obtaining payment of the moneys secured under this guarantee (and so that any taxation of the Seller's costs charges and expenses shall be on a full indemnity basis) shall be recoverable from the Guarantor as a debt.

## 9. Warranties and Liability

- (a) The Seller warrants that, except in relation to intellectual property rights of third parties, it has good title to the Goods and (subject to the conditions set out below) the Goods shall correspond with their written specification (if any) at the time of delivery and will be free from material defects in materials and workmanship for a period of 12 months or separately stated period from delivery, provided that the Seller shall be under no liability:
  - (i) in respect of any defect arising from any drawing, design, specification or stipulation of the Buyer; or
  - (ii) in respect of any defect or lack of performance arising from fair wear and tear, wilful damage, negligence, abnormal working conditions, failure to follow Seller's instructions, or misuse, alteration or repair of the Goods without the Seller's approval; or
  - (iii) in respect of parts or materials not manufactured by the Seller, in respect of which the Buyer shall only be entitled to the benefit of any warranty or guarantee which is given by the manufacturer to the Seller; or
  - (iv) if the full price for the Goods has not been paid by the due date for payment.
- (b) The Seller warrants that the Services will be provided using reasonable care and skill and, as far as reasonably possible, in accordance with the contract between the Seller and the Buyer.
- (c) Subject as expressly provided in these Conditions, and except where the Goods and/or Services (as the case may be) are supplied to a person dealing as a consumer (within the meaning of the Unfair Contract Terms Act 1977), all warranties, conditions or other terms implied by statute or common law are excluded to the fullest extent permitted by law.
- (d) Where the Goods and/or the Services (as the case may be) are supplied under a consumer transaction (as defined by the Consumer Transactions (Restrictions on Statements) Order 1976) the statutory rights of the Buyer are not affected by these Conditions.
- (e) Any claim by the Buyer arising from any defect in the quality or condition of the Goods or their failure to correspond with the agreed specification shall (whether or not delivery is refused by the Buyer) be notified to the Seller in writing within 7 days of delivery or (where the defect or failure was not apparent on reasonable inspection) within a reasonable time of the defect or failure becoming apparent. If delivery is not refused, and the Buyer does not notify the Seller accordingly, the Buyer shall not be entitled to reject the Goods and the Seller shall have no liability for such defect or failure, and the Buyer shall be bound to pay the contract price as if the Goods had been delivered in accordance with the contract between the Seller and the Buyer.
- (f) Where the Seller accepts a claim made by the Buyer in respect of the Goods made in accordance with these Conditions, the Buyer's right shall be to a full or partial credit note (in relation to Goods purchased on credit account) full or partial refund (in relation to Goods purchased by cash) or

- replacement of the Goods (or the part(s) in question), at the Seller's option, but the Seller shall have no further liability to the Buyer.
- (g) Except in respect of death or personal injury caused by the Seller's negligence, the Seller shall not be liable to the Buyer by reason of any representation (unless fraudulent), or any implied warranty, condition, or other term, or any tortious act (including negligence) or any duty at common law, or under the express terms of the contract between the Seller and the Buyer, or in any manner whatsoever:
  - (i) for any indirect, special or consequential loss or damage;
  - (ii) for any economic loss including loss of profits, loss of business, depletion of goodwill and/or similar losses, loss of anticipated savings, loss of goods, loss of contract, loss of use; or loss of or for corruption of data or information, howsoever caused and even if foreseeable by the Seller; which in either case may arise out of, or in connection with the supply of the Goods and/or the Services or their use or resale by the Buyer (and whether caused by the negligence of the Seller, its employees or agents or otherwise) save as may be expressly provided in these Conditions.
- (h) The entire liability of the Seller under or in connection with the contract between the Seller and the Buyer shall not exceed the price of the Goods and/or the Services (as the case may be) save as expressly provided in these Conditions.
- (i) Any repair, replacement or refund of any monies made by the Seller to the Buyer shall not under any circumstances be deemed to be an admission of any liability on the part of the Seller to the Buyer (or any third party), and shall be without prejudice to the rights of the Seller which the Seller hereby reserves in full should it make any such repairs, replacements or refunds of monies.
- (j) The Seller shall not be liable to the Buyer, or be deemed to be in breach of contract by reason of any delay in performing, or any failure to perform any of the Seller's obligations in relation to any Goods and/or Services (as the case may be) if the delay or failure is due to any cause beyond the Seller's reasonable control.

## 10. Design and Drawings

- (a) All figures, statements, advice, recommendations, drawings, designs, suggestions and specifications contained or referred to in any documents supplied by the Seller to the Buyer are given in good faith, but shall be approximate only, and shall not (unless the Seller specifically warrants the same in writing) be warranted to be accurate. All such matters should be checked and verified for accuracy and suitability by the Buyer, and accordingly the Seller accepts no liability or responsibility whatsoever in relation to such matters unless specifically warranted in writing in the manner referred to above.
- (b) The Seller will make available information required in relation to the design, construction and testing of the Goods as is reasonably necessary for the Buyer to take appropriate steps to see that the Goods will be, when installed, safe and not constitute a risk to the health of any person provided always that the Buyer shall indemnify, and keep indemnified, the Seller against all claims, costs, actions, damages or liabilities resulting directly or indirectly (including economic and consequential loss) for any claim brought against the Seller arising out of the use of the Goods.

## 11. Termination/Suspension

- (a) The Buyer shall not be entitled to cancel the contract between the Seller and the Buyer and if the Buyer purports to do so it shall indemnify the Seller for all losses, costs and expenses incurred by the Seller in relation to the contract.
- (b) Without prejudice to any other right or remedy, the Seller shall be entitled to suspend forthwith further performance and/or terminate contractual relations with the Buyer without any liability to the Buyer if the Buyer:
  - (i) is in breach of any of these Conditions or (in the absolute opinion of the Seller) is likely to breach any Condition herein; or
  - (ii) becomes insolvent, has a receiver appointed over the whole or any part of its assets, enters into any compound with creditors, or has an order made or resolution passed for it to be wound up (otherwise than in furtherance of a scheme for amalgamation or reconstruction) or if the ownership or control of it shall pass into the hands of any other legal person, or an event analogous occurs in respect of the Buyer in any jurisdiction to which the Buyer is subject.

## 12. General

- (a) The Seller is a member of a group of companies and accordingly the Seller may perform any of its obligations or exercise any of its rights hereunder by itself or through any other member of its group.
- (b) The Seller shall be entitled to subcontract the whole or any part of its obligations under the contract between the Seller and the Buyer to any third party which it may at its absolute discretion determine but any subcontract shall not relieve the Seller of its obligations hereunder.
- (c) Any notice required or permitted to be given by either party to the other under these Conditions shall be given in writing and addressed to the other party at its registered office, principal place of business or at such other address as may be notified to the other party from time to time.
- (d) No waiver by the Seller of any breach of contract by the Buyer shall be considered a waiver of any subsequent breach of the same or any other provision.
- (e) If any term of these Conditions prove illegal or unenforceable in whole or part, such term shall be deemed excised from these conditions without effect upon the validity of the remainder of these Conditions.
- (f) A person who is not a party to the contract between the Seller and the Buyer has no right under the Contracts (Rights of Third Parties) Act 1999 to enforce or enjoy the benefit of any term of such contract.
- (g) In addition to these Conditions of Sale, Orders placed via the Seller's website shall be subject to any legal terms and notices published there by the Seller.
- (h) These Conditions and the contract between the Buyer and Seller shall be governed by the laws of England, and the English Courts shall have exclusive jurisdiction.

Products offered for sale may differ from those described in this catalogue due to later production, changes in specification, components or place of manufacture.

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**FUSION**<sup>®</sup>  
Luminaires

Unit 2, Railway Court, Ten Pound Walk,  
Doncaster, South Yorkshire DN4 5FB  
Tel: +44 (0)1302 769 966



[fusion-luminaires.co.uk](http://fusion-luminaires.co.uk)



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