

LED LIGHTING





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LED LIGHTING EXPLAINED

LIGHT COLOUR

Expressed in Degrees Kelvin (K), light colours are the key to determining the mood of a room.

	DEGREES	2700-3000K
WARM WHITE	DESCRIPTION	SOFTER, WARMER LIGHT Comparable to traditional incandescent lighting. Preferred in cooler climates
	ROOM	Bedroom, living room, bathroom, kitchen
	DEGREES	4000K
COOL WHITE	DESCRIPTION	NEUTRAL LIGHT Used for task lighting and preferred in warmer, tropical climates
	ROOM	Laundry, garage, study, bathroom, kitchen

AVERAGE LAMP LIFE







DURABILITY: LEDs are very long-lasting compared to other lighting technologies, with an average 30,000 hours life expectancy. We use quality components which make our lamps even more durable, being laboratory tested and assessed at 30,000 hours life expectancy. That represents approximately 20 years based on 3 to 4 hours usage per day.

DIMMING COMPATIBILITY

Critical to a successful installation is an understanding of LED compatibility with dimmers.

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HPM is one of the only major brands on the market to deliver a full solution from dimmers to drivers and LED fixtures. Choose the winning combination of HPM LED fixtures and HPM or Legrand dimmers to ensure superior performance including smooth dimming with no flickering, reliability and long life.



LIGHT PERFORMANCE

LIGHT OUTPUT	INCANDESCENT	HALOGEN	CFL	L
220 lm	25W	18W	5-7W	
420 lm	40W	28W	7-8W	4
720 lm	60W	42W	11-12W	6-
930 lm	75W	52W	13-18W	9-
1300 lm	100W	70W	18-23W	16-

LUMINOUS EFFICACY (lm/W)

Picking a lamp fixture based only on wattage or physical size could result in the wrong choice: Wattage (measured in W) represents the power consumed by the luminaire. The actual output of a lamp is measured in lumens (lm): the more lumens, the more light emitted by the luminaire. A smart criteria for determining the efficiency of a light fixture is its lumens/Watt ratio, which represents how much light the fixture delivers versus what it consumes to perform. This value is called luminous efficacy, and proves LED lights are more efficient than other light technologies.

COLOUR RENDERING INDEX (CRI)

CRI measures how well a lamp makes colours appear. CRI scores light sources from 1 – 100: a high CRI means that the eye can pick up slight variations in colour, making details in an interior appear sharper and more vibrant. For outstanding colour rendering, opt for our Dalia series which boasts a very high 92 index.

Our downlights range from 80 to 92, to enhance skin tones, hues and textures in rooms.

BEAM ANGLE

The light effect from a luminaire is determined by its beam angle, That is the shape and direction of light generated by the lamp. Most conventional fixtures deliver a focused light distribution at 35-60° beam angle, but LED technology can go well above those values, while still maintaining a fair pool of light.

Our lights deliver beam angles ranging from 80 to 120° to ensure a beautiful light is spread throughout a room.



OUR QUALITY PROMISE



DIMMING COMPATIBILITY

Many of our lights are capable of being dimmed effectively. For optimum dimming performance and to reduce flickering, use HPM or Legrand dimmers. See pages 102-103 for more details.



INSULATION RATING

All recessed luminaires included in this brochure have an insulation rating of IC, IC-F, IC-4, CA80 and CA90. This means insulation may abut or cover the LED luminaire.



NATA ACCREDITED LABORATORY

To ensure the highest possible quality assurance standards all HPM lighting fixtures and lamps are tested in our NATA accredited laboratory in Sydney.



IP RATING

All our products are assured against insects and moisture, with IP ratings ranging from IP42 to IP65. See IP chart on page 105 for more information.

LED

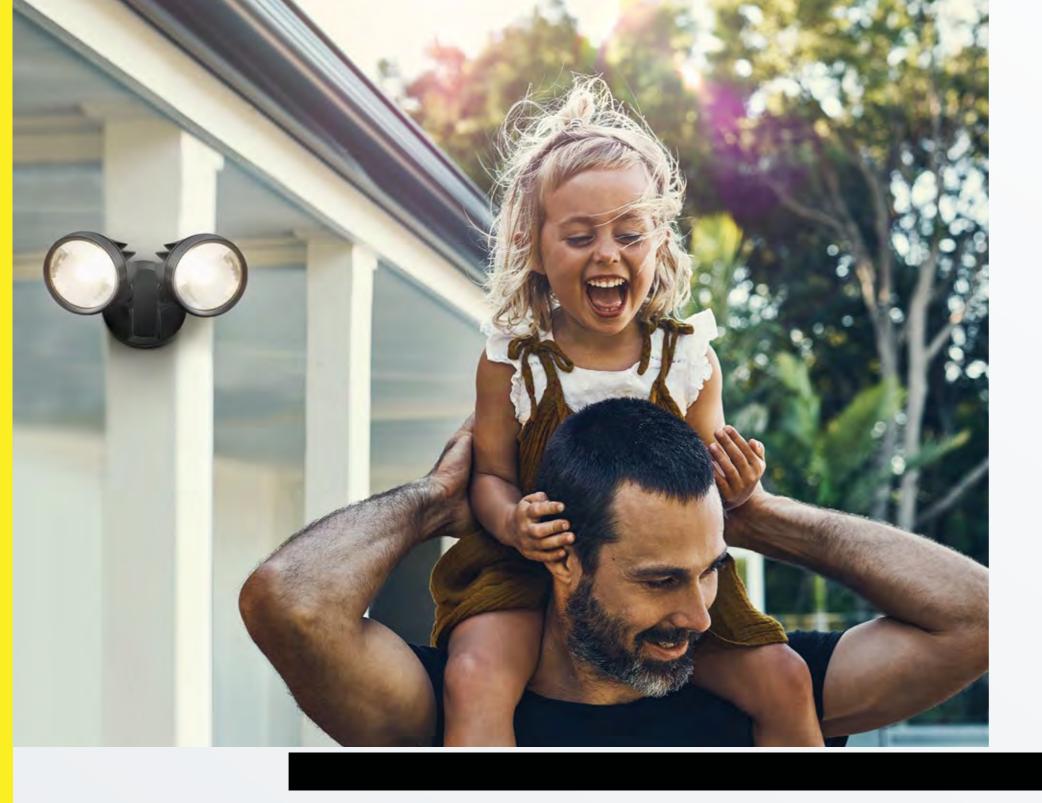
ЗW

-5W

-8W

-13W

-20W



LED LIGHTING FIXTURES



LED LIGHTING FIXTURES | BROCHURE | 7



Brighten up a work space on site, at home, in the garage or workshop with a high performing Forta LED worklight. Increase visibility and safety indoors or outdoors with this IP44 weatherproof rated range.



Power

Lumen output

Cool White



	10W	20W	30W	2 x 10W	2 x 20W
	730 lm	1,615 lm	2,250 lm	2 x 730 lm	2 x 1,615 lm
	73 lm/W	80 lm/W	75 lm/W	73 lm/W	80 lm/W
					4,000K
ini	um				
w	ith flex and	d plug			

LED FIXTURE RANGE	DIMMER TYPE	DIMMERS COMPATIBILITY	MAXIMUM LIGHTS PER DIMMER	DIMMING RANGE
		400A3P	16	100%-1%
		400A2P	16	89%-7%
DI 170 Deventionte	Tasilia a adam sala	250T	11	100%-7%
DLI70 Downlights	Trailing edge only	400T	16	94%-8%
	• •	700T	28	100%-15%
		1000T	40	100%-18%
	- - -	400A3P	12	100%-1%
AZA+ Downlights	• • •	400A2P	12	97%-9%
DLI90, DLI110,	Trailing edge only	250T	8	100%-7%
DLI125 & DLI150		400T	12	100%-7%
Downlights		700T	21	100%-13%
		1000T	30	100%-16%
Dalia Downlights	Trailing edge &	400A3P	8	100%-5%
Azalea Downlights		400A2P	8	100%-10%
Freesia Downlights		250T / 250L	5	100%-10%
Luna Panel Lights	leading edge	400T / 400L	8	100%-10%
Calla Step Lights		700T / 700L	14	100%-25%
Zinnia Starlights		1000T / 1000L	20	100%-25%
	-	400A3P	8	100%-10%
		400A2P	8	100%-10%
	T 10 1 1	250T	5	100%-10%
DLS Downlights	Trailing edge only	400T	8	100%-10%
		700T	14	100%-25%
		1000T	20	100%-25%

Note: Not all LED lights are dimmable, refer to product details to confirm suitability for dimming.





LEGRAND ARTEOR™

AR400A3P (3 wire)

AR400A2P (2 wire)

mechanism

AR400A2PMWE

AR400A3PMMGN

AR400A2PMMGN

Magnesium:

Arteor 400VA all load 2 & 3

White: AR400A3PMWE

LEGRAND EXCEL LIFE[™]





EM400A3P (3 wire) EM400A2P (2 wire)

Excel Life 400VA all load 2 & 3 wire electronic push-button wire push-button dimmer dimmer mechanism White: EM400A3PWE EM400A2PWE Urban Grey: EM400A3PUG EM400A2PUG



EM250T* Excel Life 250VA 2 wire trailing edge rotary dimmer mechanism White: EM250TRWE Urban Grey: EM250TRUG



AR400T / AR400L* Arteor 400VA 2 wire rotary dimmer mechanism White: AR400TMWE AR400LMWE Magnesium: AR400TMMGN AR400LMMGN



EM400T* Excel Life 400VA 2 wire trailing edge rotary dimmer mechanism White: EM400TRWE Urban Grey: EM400TRUG

*T = Trailing Edge, L = Leading Edge







HPM LINEA[™] AND EXCEL





400A2P (2 wire) Excel or Linea and 400VA (2 wire) electronic push-button dimmer mechanism White: 400A2PWE



250T / 250L* Excel or Linea 250VA 2 wire rotary dimmer mechanism White: 250LMWE 250TMWE Also available in black & cream



400T / 400L* Excel or Linea 400VA 2 wire rotary dimmer mechanism White: 400TMWE 400LMWE Also available in black & cream



700T / 700L* Excel or Linea 700VA 2 wire rotary dimmer mechanism White: 700TMWE 700LMWE



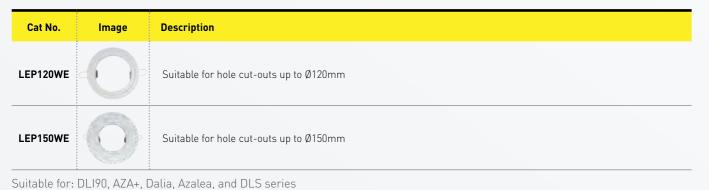
1000T / 1000L* Excel or Linea 1000VA 2 wire rotary dimmer mechanism White: 1000TMWE 1000LMWE



EVM400A3* (3 wire) EVM400A2* (2 wire) VIVO 400VA all load 2 & 3 wire electronic push button dimmer mechanism White: EVM400A3WE, EVM400A2WE Grey: EVM400A3GR, EVM400A2GR

ACCESSORIES

DOWNLIGHT EXTENSION PLATES



LIGHTING SENSORS

Passive infrared (PIR) sensor

Sensitive to a person's skin temperature through emitted body radiation, in contrast to background objects at room temperature. HPM range of sensors is suitable for both indoor and outdoor for various locations throughout the house including corridors, wardrobes, secluded walkways and garages.

Whether used for extra safety around the house or for convenience indoors, these deliver great energy savings all year round.

Cat No.	Image	Description	Finish	Manual override	IP Rating	Application	Mounting type	Detection range	Detection angle	Time delay
630S01BL	P	180° PIR Sensor	Black	No	IP44	Indoor/Outdoor	Wall Surface Mounted	12m	180°	8s to 7min
630501WE		180° PIR Sensor	White	No	IP44	Indoor/Outdoor	Wall Surface Mounted	12m	180°	8s to 7min
630SM01BL		180° PIR Sensor	Black	Yes	IP44	Indoor/Outdoor	Wall Surface Mounted	12m	180°	8s to 7min
630SM01WE	D	180° PIR Sensor	White	Yes	IP44	Indoor/Outdoor	Wall Surface Mounted	12m	180°	8s to 7min
630S02WE		360° PIR Sensor	White	No	IP20	Indoor	Ceiling Surface mouted	8m	360°	10s to 10min
630R02WE	0	360° PIR Sensor	White	No	IP41	Indoor	Ceiling Surface mounted	8m	360°	10s to 10min
630R01WE))	360° PIR Sensor	White	No	IP20	Indoor	Ceiling surface mounted	6m	360°	10s to 15min
488TRI3W	Ē	Triscan 3-Wire Pir Sensor	White	Yes	IP66	Outdoor	Wall Surface Mounted	8m	120°	8s to 15min

INDEX OF PROTECTION

1. Protection against solid bodies and liquids: IP index of protection

Degrees of protection for enclosures of electrical equipment according to standards: IEC 60529, BS EN 60529 and NF EN 60529

First digit:

Protection against solid bodies (See AS 1939, Clause 5)

IP	Tests		IP
0		No protection	0 0 0 0 0 0 0 0
1	Ø 50 mm	Protected against solid bodies larger than 50 mm (e.g. accidental contact with the hand)	Α
2	Ø 12.5 mm	Protected against solid bodies larger than 12.5 mm (e.g. finger)	В
3	Ø 2.5 mm	Protected against solid bodies larger than 2.5 mm (e.g. tools, wires)	C
4	0 <u>Ø1</u> mm	Protected against solid bodies larger than 1 mm (e.g. fine tools and small wires)	2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 200 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2000 2
5	\bigcirc	Protected against dust (no harmful deposit)	D
6	\bigcirc	Completely protected against dust	- - - - - - - - - - - - - -

2. Protection IK, against mechanical impact.

According to standards: IEC 62262, BS EN 62262 and NF EN 62262

к	Tests	Impact energy (in Joules)
IK 00		0
IK 01	0.2 kg 75 mm	0.15
IK 02	0.2 kg 100 mm	0.2
IK 03	0.2 kg 175 mm	0.35
IK 04	0.2 kg 250 mm	0.5
IK 05	0.2 kg 350 mm	0.7



Second digit: Protection of equipment against ingress of harmful liquids (See AS 1939, Clause 6)

IP	Tests	
0		No protection
1	\bigcirc	Protected against vertically-falling drops of water (condensation)
2		Protected against drops of water falling at up to 15° from the vertical
3	*0//	Protected against drops of rain water at up to 60° from the vertical
4	Q	Protected against projections of water from all directions
5		Protected against jets of water (from all directions)
6		Protected against jets of water of similar force to heavy seas
7	alia alia	Protected against the effects of immersion
8	E	Protected against prolonged effects of immersion

к	Tests	Impact energy (in Joules)
IK 06	0.5 kg 200 mm	1
IK 07	0.5 kg 400 mm	2
IK 08	1.7 kg 295 mm	5
IK 09	200 mm	10
IK 10	400 mm	20

• This table can be used to ascertain the resistance of a product to an impact given in Joules from the IK code (graduated from 00 to 10)





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