



Clevertronics

**THE LITTLE BLACK BOOK
OF SPECIALS**

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About The Little Black Book of Specials

This book is an inspirational guide for lighting designers who need specialised exit and emergency lighting solutions converted from general luminaires to meet specific aesthetics, mechanical protection, or environmental conditions. The book contains luminaires from Clevertronics and other manufacturers that Clevertronics have previously been asked by designers to retrofit with our market-leading lithium battery packs, tested in accordance with AS/NZS2293.3.

Luminaires shown on these pages are supplied to the market via the nominated brand's channel. Clevertronics performs retrofits on customer-owned goods and is not a reseller of these products. Contact your local office with any enquiries or to request an evaluation of a luminaire.



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Architectural

Designed emergency lighting



Emergency lighting is an essential aspect of building design, providing illumination when normal lighting fails due to power outages or other emergencies. Incorporating emergency lighting into architectural lighting can enhance the functionality and aesthetic appeal of a space without compromising safety. Incorporating emergency lighting into the architectural lighting design, architects can create a safer, more visually appealing environment for occupants in the event of an emergency.

These luminaires are examples of front of house applications using recessed fixtures, concealed lighting, or surface-mounted fixtures that match the style and colour of the other lighting elements in the building.

Need to look at different luminaires? Clevertronics offers designers advice and technical evaluation services on integrating emergency lighting into these high-end spaces.



Architectural

Designed emergency lighting

CLEVERTRONICS

LIFELIGHT- PRO RAL

Mode	Non-maintained
IB / Remote	Integral Recessed
Emergency Lumens	444 lm
Emergency Classification*	C0-D80, C90-D80
Luminaire Dimensions (Ø x H)	60mm/95mm x 50mm
IP	20

CLEVERTRONICS

LIFELIGHT-PRO SPOT RAL

Mode	Non-maintained
IB / Remote	Remote
Emergency Lumens	444 lm
Emergency Classification*	C0-D80 (downwards), C90-D80
Luminaire Dimensions (Ø x H)	60mm x 100mm
IP	20



These products are available in multiple RAL colours.



Architectural

Designed emergency lighting

CLEVERTRONICS

ULTRABLADE RECESSED LUBPRO-RAL

Mode	Maintained
IB / Remote	Clevertronics L10 integral
Emergency Lumens	35 lm
Emergency Classification*	C0-E6.3, C90-E6.3
Luminaire Dimensions (LxWxH)	317mm x 157mm x 9mm
IP	20



†Ceiling trim available in multiple RAL colours.

CLEVERTRONICS

LIFELIGHT TRACK MOUNT

Mode	Non Maintained
IB / Remote	Clevertronics L10 integral
Emergency Lumens	180 lm
Emergency Classification*	D40
Luminaire Dimensions (LxWxH)	230mm x 100mm x 70mm
IP	20



Surface Mount options available



Track supplied by others

Architectural

Designed emergency lighting

DOT

9900 SERIES 99108SP4DIDL

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	508 lm
Emergency Classification*	C0-C25 / C90-C25
Luminaire Dimensions (Ø x H)	194mm x 231mm
IP	20

FAGERHULT

PLEIAD G4 125

Mode	Switched Sustained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	735 lm
Emergency Classification*	C0-D32 / C90-D25
Luminaire Dimensions (Ø x H)	143 x 98
IP	20



Architectural

Designed emergency lighting

IGUZZINI

BLADE R DOWNLIGHT QS45

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	499 lm
Emergency Classification*	No AS2293 Classification Use Clevertronics IES file for AS2293 illuminance calcs
Luminaire Dimensions (Ø x H)	180mm x 44mm
IP	20

IGUZZINI

LASER FIXED DOWNLIGHT P343

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	347 lm
Emergency Classification*	C0-A4 / C90-A4 Or Use Clevertronics IES file for AS2293 illuminance calcs
Luminaire Dimensions (Ø x H)	83mm x 75mm
IP	65 (Below ceiling)



Architectural

Designed emergency lighting

KOPA – JADECROSS

AT160

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	652 lm
Emergency Classification*	C0-D32 / C90-D32
Luminaire Dimensions (Ø x H)	160mm x 115mm
IP	65

3S

LONG 80 SURFACE DOWNLIGHT

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	209 lm
Emergency Classification*	No AS2293 classification Use Clevertronics IES file for AS2293 illuminance calcs
Luminaire Dimensions (Ø x H)	80mm x 300mm
IP	44



Architectural

Designed emergency lighting

3S

STAR-80

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	212 lm
Emergency Classification*	No AS2293 Classification Use Clevertronics IES file for AS2293 illuminance calcs
Luminaire Dimensions (Ø x H)	80mm x 136mm
IP	65

DOT

9700 SERIES 9758SX4D1DXDL 9900 SERIES 99108SP4D1DL

	9700 SERIES	9900 SERIES
Mode	Switched Maintained	
IB / Remote	Clevertronics LP in remote enclosure	
Emergency Lumens	424 lm	508 lm
Emergency Classification*	C0-C25 / C90-C25	
Luminaire Dimensions (Ø x H)	155mm x 146mm	
IP	20	



Architectural

Designed emergency lighting

LIMELITE

D-WM-900 WALL LIGHT

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral
Emergency Lumens	367 lm
Emergency Classification*	C0-D12.5 / C90-D63 Or Use Clevertronics IES file for AS2293 illuminance calcs
Luminaire Dimensions (LxWxH)	875mm x 120mm x 70mm
IP	20

3S

LED LINEAR 805100 LED LINEAR 805192

	805100	805192
Mode	Switched Maintained	
IB / Remote	Clevertronics LP integral (subject to internal space)	
Emergency Lumens	277 lm	639 lm
Emergency Classification*	C0-D32 / C90-D32	C0-D50 / C90-D63
Luminaire Dimensions (LxWxH)	1200mm x 60mm x 70mm	
IP	20	



Architectural

Designed emergency lighting



Images courtesy of mLight

Extrusion Lighting

The wide variations of extrusion lighting enable designers to utilise its minimalist form to deliver unique luminaires for all sorts of applications. However, due to the custom nature of these stylish luminaires, a functional and long-life emergency lighting solution can be challenging to achieve.

Clevertronics offers several methods of integrating emergency luminaires or battery kits into extrusion luminaires, including non-maintained single-point emergency luminaires or an integral kit powering a section of the main luminaire.

A Lifelight Pro installed into a blank section of the luminaire body requires a 60mm cut out and up to 550mm length, shorter if there is adequate space to position components side by side. Choose either trim less, round or square fascia in various RAL colours to match the luminaire.

An integral emergency kit is installed into the luminaire to provide a switched-maintained function of an illuminated section that is usually between 1000mm to 1500mm long. Generally suits extrusion with a cross-section size of 80mm x 80mm. A remote enclosure housing the battery kit may be required for smaller profile extrusion luminaires with limited space. The configuration of an emergency lighting solution will depend on the available space inside the luminaire's body, its temperature performance during AS/NZS2293.3 thermal tests, light distribution and mounting lumen output.

In some applications, a separate emergency Lifelight installed into a blank section may deliver the best balance of cost and performance. At the same time, other extrusion profiles may have space to include an integral backup of a section of the general LED array.

Contact Clevertronics if you need advice on selecting a possible extrusion luminaire from your preferred manufacturer. We will assist you with options to integrate an AS/NZS 2293 solution.



Images courtesy of mLight



Images courtesy of mLight

Architectural

Designed emergency lighting

AUSTUBE

GREENSTAR-80

Contact Clevertronics or manufacturer for advice about other possible profile sizes

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral
Emergency Lumens	502 lm
Emergency Classification*	C0-D50 / C90-D50
Luminaire Dimensions (LxWxH)	1200mm x 84mm x 83mm
IP	20

FAGERHULT

NOTOR

Contact Clevertronics or manufacturer for advice about other possible profile sizes

Mode	Non-Maintained (LED Point)
IB / Remote	Clevertronics LP Integral - Lifelight pro
Emergency Lumens	347 lm
Emergency Classification*	C0-D32 / C90-D32
Luminaire Dimensions (LxWxH)	100mm x 65mm x 65mm
IP	20



Architectural

Designed emergency lighting

LIGHT CULTURE

DOWNHILL DAN 30

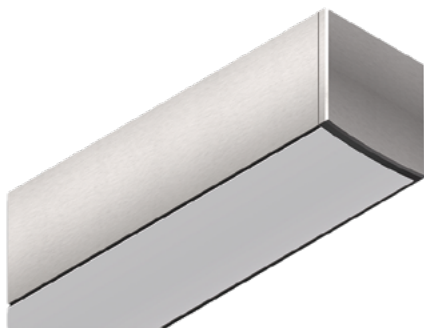
Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	662 lm
Emergency Classification*	C0-D80 / C90-D80
Luminaire Dimensions (LxWxH)	300mm x 30mm x 30mm
IP	20

XERO LIGHTING

XTA/XTI 3.0 SQUARE

Contact Clevertronics or manufacturer for advice about other possible profile sizes

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral (subject to internal space)
Emergency Lumens	486 lm
Emergency Classification*	C0-D50 / C90-D50
Luminaire Dimensions (LxWxH)	1200mm x 80mm x 80mm
IP	20



Architectural

Designed emergency lighting

ZUMTOBEL

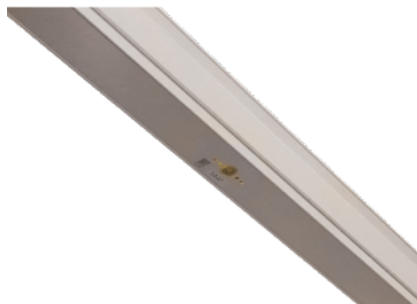
TECTON

Mode	Non-Maintained
IB / Remote	Clevertronics LP or L10 integral
Emergency Lumens	418 lm
Emergency Classification*	C0-D50 / C90-D32
Luminaire Dimensions (LxWxH)	1200mm x 60mm x 70mm
IP	20

ZUMTOBEL

PERLUCE L620

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral
Emergency Lumens	556 lm
Emergency Classification*	C0-D63 / C90-D40
Luminaire Dimensions (LxWxH)	620mm x 120mm x 91mm
IP	20



Architectural

Designed emergency lighting

EAGLE LIGHTING

VERTEX

Mode	Switched Maintained
IB / Remote	Clevertronics LP Integral
Emergency Lumens	N/A refer to manufacturer
Emergency Classification*	Contact manufacturer for advice
Luminaire Dimensions (LxWxH)	1193mm x 293mm x 65mm
IP	44



Outdoor
Designed emergency lighting



Rooftop bars and restaurants are a wonderful place to hang out and enjoy the beautiful city views. The lighting design and luminaire selection play an important role in creating the perfect ambience while also being able to withstand the outdoor environment.

The emergency lighting used in these spaces needs to meet not only the aesthetic standards but also the safety criteria in the event of an evacuation. Clevertronics has collaborated with leading architectural lighting companies to integrate their revolutionary emergency solutions into various styles of architectural luminaires. This makes sure that the integrated solutions are not only visually appealing but also compliant with AS/NZS2293 standards.



Outdoor

Designed emergency lighting

ACDC

GALAXY 1060M

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	131 lm
Emergency Classification*	No AS2293 Classification Use Clevertronics IES file for AS2293 illuminance calcs
Luminaire Dimensions (LxWxH)	143mm x 33mm x 55mm
IP	65

KLIK / PLANET / UNIOS / VISION / UNILAMP

HANDRAIL "BUTTON" LIGHT

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	Refer to luminaire supplier's own photometric data
Emergency Classification*	No AS2293 Classification Use Manufacturers IES file for AS2293 illuminance calcs
Luminaire Dimensions (Ø x H)	40mm x 40mm
IK	10
IP	66



Outdoor

Designed emergency lighting

THORN LIGHTING

D-CO LED BOLLARD 1000

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	382 lm
Emergency Classification*	CO-D5 / C90-D5 Classification applies above 2.1m height Use Clevertronics IES file for lower heights
Luminaire Dimensions (Ø x H)	150mm x 1000mm
IK	10
IP	65

DESIGNPLAN UK – EAGLE LIGHTING AUS

QUAD EVO QTR 2600NW

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	443 lm
Emergency Classification*	CO-D50 / C90-D50 C180-D50 / C270-D50
Luminaire Dimensions (LxWxH)	312mm x 312mm x 90mm
IK	14
IP	65



Outdoor

Designed emergency lighting

FAGERHULT/ EAGLE LIGHTING - AUS

DISCOVERY EVO

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	929 lm
Emergency Classification*	C0-D100 / C90-D100
Luminaire Dimensions (Ø x H)	359mm x 94mm
IK	07
IP	44

MEGABAY

ACCENTO ADJUSTABLE WALL LIGHT

	MLE-A8-M- CE -40K <i>(Elliptical Beam)</i>	MLE-A8-M- CX -40K <i>(Flood Beam)</i>
Mode	Switched Maintained	
IB / Remote	Clevertronics LP in remote enclosure	
Emergency Lumens	470 lm	313lm
Emergency Classification*	C0-B40 / C90-E20	C0-C32 / C90-E10
	When pointed straight down. Use Clevertronics IES file when aiming	
Luminaire Dimensions (Ø x H)	143mm x 72mm	
IP	67	



Outdoor

Designed emergency lighting

SIMES / EAGLE LIGHTING

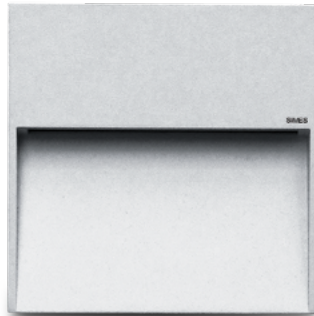
SKILL 6255N WALL

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	242 lm
Emergency Classification*	No AS2293 Classification Use Clevertronics IES file for AS2293 illuminance calcs
Luminaire Dimensions (LxWxH)	270mm x 270mm x 38mm
IK	08
IP	65

VERSALUX

ARES HYPERION 527013 WALL

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	283 lm
Emergency Classification*	No AS2293 Classification Use Clevertronics IES file for AS2293 illuminance calcs
Luminaire Dimensions (LxWxH)	230mm x 160mm x 30mm
IK	09
IP	65



Outdoor

Designed emergency lighting

WE-EF

QLS410 WALL

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	524 lm
Emergency Classification*	C0-A10 / C90-E12.5 C180-A12.5 / C270-E12.5 Or Use Clevertronics IES file for AS2293 illuminance calcs
Luminaire Dimensions (LxWxH)	160mm x 160mm x 90mm
IK	07
IP	66

HUBBELL

LNC3-24L4K

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	792lm
Emergency Classification*	C0-D100 / C90-D100 Or Use Clevertronics IES file for AS2293 illuminance calcs
Luminaire Dimensions (LxWxH)	330mm x 265mm x 210mm
IP	65



Outdoor

Designed emergency lighting

THORN LIGHTING

PIAZZA II LED BULKHEAD 96666265 2700-840

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	537 lm
Emergency Classification*	C0-D5 / C90-D5 C180-D40 / C270-D63 Or Use Clevertronics IES file for AS2293 illuminance calcs
Luminaire Dimensions (LxWxH)	381mm x 196mm x 305mm
IK	10
IP	65

LIGMAN

TANGO 29

	31861-T4	31861-T3
Mode	Switched Maintained	
IB / Remote	Clevertronics LP in remote enclosure	
Emergency Lumens	709 lm	707 lm
Emergency Classification*	C0-D200 / C90-D40 C180-D200 / C270-D16	C0-D40 / C90-D80 C180-D32 / C270-D32
	Or Use Clevertronics IES file for AS2293 illuminance calcs	
Luminaire Dimensions (Ø x H)	186mm x 294mm	
IK	08	
IP	65	



Outdoor

Designed emergency lighting

CLEVERTRONICS

LIFELIGHT PRO LWPLIFE-PRO WALL OR CEILING

Mode	Non Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	709 lm
Emergency Classification*	C0=D50, C90=D50
Luminaire Dimensions (Ø x H)	186mm x 294mm
IK	10
IP	65

ERCO

GECKO 10 34147 000

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	645 lm
Emergency Classification*	C0-B100 / C90-E4 When pointed straight down. Use Clevertronics IES file when aiming
Luminaire Dimensions (LxWxH)	160mm x 209mm x 256mm
IP	65



Health and Custodial

Designed emergency lighting



When it comes to Healthcare and Correctional Facilities, the lighting design and installation have to be done in a way that promotes hygiene and safety for everyone involved. The areas where procedures or research are conducted require lighting that minimises the risk of contamination and helps prevent the spread of infections.

Additionally, high-security correctional and medical facilities require robust luminaires that cannot be tampered with or opened, which may pose a risk to the safety of inmates, staff, and visitors. Exit and emergency lighting must be installed in a way that meets specific physical needs and provides the best protection and longevity for the end-users.

Clevertronics' collaboration with leading architectural lighting companies ensures that their emergency solutions are not only visually appealing but also compliant with the necessary standards.



Health and Custodial

Designed emergency lighting

CLEVERTRONICS

LIFELIGHT PRO LLIFE-PRO-RECWP-TP

Mode	Non- Maintained
IB / Remote	Clevertronics L10 integral gear
Emergency Lumens	337 lm
Emergency Classification*	C0-D50 / C90-D50
Luminaire Dimensions (Ø x H)	120mm x 120mm
IK	10
IP	65

CLEVERTRONICS

TAMPERPROOF BLADE EXIT

Mode	Maintained
IB / Remote	Clevertronics L10 integral gear
Emergency Lumens	N/A
Emergency Classification*	C0-D2.5 / C90-E1.6
Luminaire Dimensions (LxWxH)	510mm x 100mm x 170mm
IK	10 (Base Assembly)
IP	40



Anti-self harm soft exit sign in recessed IK10 base

Health and Custodial

Designed emergency lighting

KOPA – JADECROSS

K1235	AT160-3K-12W	FRI40-4K-16W	AT160-60-PC-3K-22W
Mode	Switched Maintained		
IB / Remote	Clevertronics LP in remote enclosure		
Emergency Lumens	685 lm	652 lm	744 lm
Emergency Classification*	C0-D32 / C90-D32	C0-D32 / C90-D32	C0-A40 / C90-A40
Luminaire Dimensions (Ø x H)	160mm x 115mm		
IK	10		
IP	65 (Below Ceiling)		

DESIGNPLAN UK – EAGLE LIGHTING AUS

TUSCAN 88 D880/2/3000NW/XW TUSCAN 88 D880/4/4000NW/XW

	D880/2/3000NW/XW	D880/4/4000NW/XW
Mode	Switched Maintained	
IB / Remote	Clevertronics LP integral gear	
Emergency Lumens	365 lm	352 lm
Emergency Classification*	C0-D50 / C90-D40	C0-D80 / C90-D63
Luminaire Dimensions (LxWxH)	700mm x 200mm x 102mm	
IK	16	
IP	65	



Health and Custodial

Designed emergency lighting

DESIGNPLAN UK – EAGLE LIGHTING AUS

BASILICA_2200NW-XC30

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	850 lm
Emergency Classification*	C0-D100 / C90-D100
Luminaire Dimensions (Ø x H)	455mm x 115mm
IK	20
IP	66

VERSALUX

PROTECTALUX F920

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	791 lm
Emergency Classification*	C0-D125 / C90-D50
Luminaire Dimensions (LxWxH)	820mm x 380mm x 155mm
IK	10
IP	65



Health and Custodial

Designed emergency lighting

VERSALUX

ENDURALUX S FLED

Mode	Switched Maintained
IB / Remote	Clevertronics LP in remote enclosure
Emergency Lumens	528 lm
Emergency Classification*	C0-D50 / C90-D50
Luminaire Dimensions (LxWxH)	355mm x 355mm x 110mm
IK	10
IP	54

DESIGNPLAN UK – EAGLE LIGHTING AUS

ABBY

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	720 lm
Emergency Classification*	C0-D125 / C90-D50, C180-D125 / C270-D50
Luminaire Dimensions (LxWxH)	1302mm x 188mm x 86mm
IK	14
IP	44



Health and Custodial

Designed emergency lighting

EAGLE LIGHTING

VANGUARD CV824L-T104

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	584 lm
Emergency Classification*	C0-D63 / C90-D40
Luminaire Dimensions (LxWxH)	1275mm x 210mm x 85mm
IK	10
IP	44

PIERLITE

VANDAGUARD 600 VOFLED322E4X2

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	583 lm
Emergency Classification*	C0-D63 / C90-D50
Luminaire Dimensions (LxWxH)	698mm x 138mm x 83mm
IK	10
IP	66



Health and Custodial

Designed emergency lighting

PIERLITE

VANDAGUARD 1200 CLEAR VGCLS4D4TX

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	875 lm
Emergency Classification*	C0-D125 / C90-D63
Luminaire Dimensions (LxWxH)	1308mm x 138mm x 83mm
IK	10
IP	66

VERSALUX

ENDURALUX 675/1275

Mode	Switched Maintained	
IB / Remote	Clevertronics LP integral gear	
Emergency Lumens	796 lm	782 lm
Emergency Classification*	C0-D125 / C90-D40	
Luminaire Dimensions (LxWxH)	675mm x 200mm x 90mm	1275mm x 200mm x 90mm
IK	10	
IP	54	



Health and Custodial

Designed emergency lighting

EAGLE LIGHTING

SECURE ROOM EL-SR65L-1171

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	563 lm
Emergency Classification*	C0-D25 / C90-D25
Luminaire Dimensions (LxWxH)	1220mm x 347mm x 108mm
IK	10
IP	65

EAGLE LIGHTING

PROTEKT PRO-1100

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	611 lm
Emergency Classification*	C0-D50 / C90-D40
Luminaire Dimensions (LxWxH)	1297mm x 280mm x 100mm
IK	13
IP	65



Health and Custodial

Designed emergency lighting

HEALTH

CLEVERTRONICS

ULTRABLADE INVISIBLADE

High care dementia facilities requiring reduced visual stimulus

Mode	Non-Maintained
IB / Remote	Clevertronics L10 integral gear
Emergency Lumens	N/A
Emergency Classification*	N/A – this is an alternative way finding sign
Luminaire Dimensions (LxWxH)	317mm x 157mm x 9mm
IK	04
IP	20

HEALTH

EAGLE LIGHTING

CLEAN ROOM CR65L-1103

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	530 lm
Emergency Classification*	C0-D25 / C90-C80
Luminaire Dimensions (LxWxH)	1220mm x 347mm x 108mm
IK	08
IP	65



Normal mode Blank white screen
Emergency mode Green Pictogram



Health and Custodial

Designed emergency lighting

HEALTH

EAGLE LIGHTING

OPERATING THEATRE OPSL-1200

Mode	Switched Maintained
IB / Remote	Clevertronics LP integral gear
Emergency Lumens	Refer to manufacturer
Emergency Classification*	Subject to selected optic - contact manufacturer for advice
Luminaire Dimensions (LxWxH)	1251mm x 381mm x 105mm
IK	08
IP	65



We are Emergency Lighting.

We make emergency lighting easy by designing world-class products and systems that are supported with unrivalled expertise and customer service.

Clevertronics has extensive experience to assist with delivering an integrated solution to suit various applications and industries. Whether you require architectural, weatherproof, low temperature, or a custom luminaire for a specific requirement, we are here to support you. All our retrofit and custom luminaires are tested and comply with AS/NZS2293 standards.

Clevertronics has in-house thermal and photometric testing facilities which enables us to test and evaluate custom products and retrofit conversions prior to any formal certification. Clevertronics can help manage the overall compliance testing for third party luminaire retrofits as required.



Ranges

LP LITHIUM IRON PHOSPHATE

PREMIUM

- Australia's No1 selling emergency lighting range
- Over 50% maintenance savings vs NiCd
- Standard Clevertest Plus

The LP range is the proven project performer that combines Lithium Iron Phosphate battery technology with premium electronics and LED technology. Available with Zoneworks® and DALI® testing options.

L10 LITHIUM NANOPHOSPHATE®

OPTIMUM

- Lowest total ownership cost
- 50% longer battery life vs any other lithium product
- 60% maintenance savings vs any other lithium product
- Over 80% maintenance savings vs NiCd
- Standard Clevertest Plus

Nothing else competes with L10 Nanophosphate®, due to the structure of the Nanophosphate chemistry enabling higher power, increased abuse tolerance and longer life compared to other Lithium Iron Phosphate offerings. Available with Zoneworks® and DALI® testing options.

LP

(8 Years +)

L10

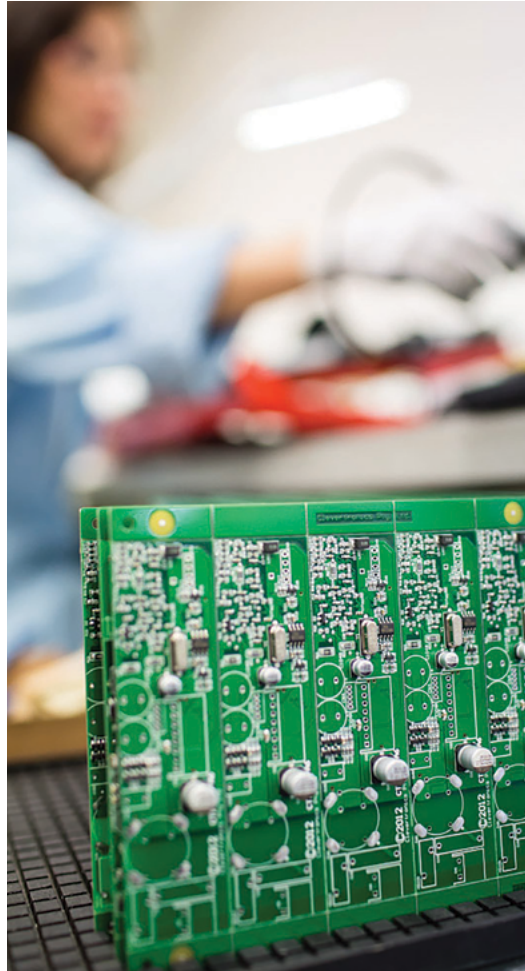
(12 Years +)

Evaluation and Testing of third-party luminaires.

Integrating an emergency lighting solution into luminaires requires a detailed technical evaluation assessment as emergency lighting is required to meet performance criteria above that of general luminaires. Sometimes lighting designers need to understand if a selected light fitting has potential to be converted with an emergency lighting function before an assessment can take place. Our customer service team will be able to help with estimates concerning likely performance and configuration.

If a selected third-party luminaire looks promising, then a typical assessment will be carried out including but not always limited to.

- Arranging for a working sample to be delivered to Clevertronics along with applicable data sheets and luminaire compliance documentation. (Contact Clevertronics beforehand for shipping details)
- The sample is opened, and records of its component configuration are taken, including power measurements of the LED light source, driver, and mains.
- The likely configuration of the retrofit will be advised to the customer.
- A sample is then built incorporating Clevertronics emergency kit or remote pack into the fitting.
- The sample undergoes AS/NZS2293.3 testing including thermal duration cycles and photometry producing both mains mode and emergency mode IES files with AS/NZS2293.1 Classification where applicable.
- If Clevertronics are going to undertake the retrofit service, the sample is also subjected to EMC tests.
- Test results are shared with the customer to aid their design process and records.
- Datasheets specific for the assessed luminaire are available post procedure.
- The sample is returned back to the customer in original working order, or as retrofitted if required.
- Clevertronics can help arrange testing at independent facilities if required.



Subject to the technical specs of the fitting being assessed, some of the activities listed may not be required. The evaluation process takes a minimum of several weeks to complete so it is advised to start this process as early as possible.

Glossary Emergency Lighting Modes of Operation

The following table outlines the different modes that exit and emergency lighting fittings can operate in. Contact us if you would like some assistance in selecting the right mode for your application.

Emergency Operating Modes

Maintained

An emergency luminaire or exit sign in which the lamp is energised at all times. The un-switched lamp is ON when there is power present and is ON during a power failure.

EXAMPLES: Maintained mode; Exit signs and single lamp luminaires used as constant general lighting and emergency lighting. Switched Maintained mode; single lamp luminaires used for switched general lighting as well as emergency, such as a downlight or bulkhead.



POWER ON



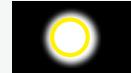
POWER OFF



SWITCHABLE



POWER OFF



Non-Maintained

An emergency luminaire in which the lamp(s) are only in operation during a power fail.

EXAMPLE: Single lamp: Lifelight emergency luminaires.



POWER ON



POWER OFF



Sustained

An emergency luminaire typically containing two lamps, one of which is in operation while there is power present, and the other "non-maintained" lamp only energised during a power fail. Also known as Combined Non-Maintained.

EXAMPLE 1: LED TUBE or LED strip batten with separate dedicated LED emergency pod.



EXAMPLE 2: LED Strip batten with dedicated separate internal LED's with emergency battery back up.



POWER ON



POWER OFF



Product Assessment and Configurations

The luminaire configuration of the emergency additional components will depend on several key criteria.

- LED array and driver's output is under 60Vdc [SELV]
- Sufficient space inside luminaire house to accommodate battery and emergency kit.
- Thermal performance of luminaire is able to keep all components under their designed limits, specifically during the AS/NZS2293.3 Thermal tests at Ta40°C
- A luminaire evaluation by Clevertronics is required on a working sample before the final configuration can be decided.

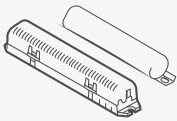
Clevertronics design emergency lighting retrofit solutions in the following configurations.*

1. Integral battery and emergency kit located inside the luminaire's housing.
2. Remote pack** containing the fitting's mains driver, battery, and emergency kit.
3. Remote pack** containing the battery and emergency kit connected to a separate LED light source inside fitting's body. Useful if the remote pack needs to be positioned greater than 2m from the luminaire.

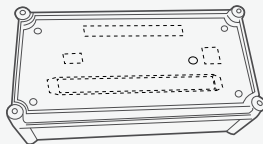
* Final configuration subject to luminaire size and results of AS/NZS2293.3 tests

** Connection between luminaire and remote pack required by installer using a suitable cable in accordance with AS/NZS2293.1 Use Class WS4X (fire rated) cable if the connection is greater than 10m or traverses more than one fire compartment of a building.

Remote Pack Configurations



Emergency Kit
235mm x 42mm x 42mm
Battery
35mm Dia x 170mm



IP66 Remote enclosure
380mm x 190mm x 130mm



IP20 Remote enclosure
610mm x 111mm x 55mm

Drawings are representative and may not show all detail and/or additional connection leads

