



**Order Codes**

NiMH Batteries:

DGLCEM035CD-AU; DGLCEM070CD-AU; DGLCEM100CD-AU

Li-ion Batteries:

DGLCEM035CD1L2; DGLCEM035CD2L2; DGLCEM035CD3L2;  
DGLCEM050CD1L2;  
DGLCEM070CD1L2; DGLCEM070CD2L2; DGLCEM070CD3L2;  
DGLCEM100CD2L2; DGLCEM100CD3L2

**Overview**

The DALI Emergency LED Drivers in this family provide a constant output current, suitable for driving an emergency lighting LED or LED array. The driver operates when the mains ac power has failed or is unavailable.

These drivers can be mounted inside a luminaire, in a control gear housing, or can be used as a separate emergency driver connected to a remote emergency LED light engine.

The DALI Emergency LED drivers incorporate RAPIX Xi Extended Intelligence to provide additional features, functionality and information when connected to a RAPIX Emergency monitoring system.

A range of models are available to suit differing requirements based on:

- Battery type NiMH or Li-ion (LiFePO<sub>4</sub>)
- Battery size – number of cells (battery not included)
- Lamp running duration
- Current output
- Number of LEDs supported
- For specialised low temperature operation NiCd battery type can also be supported

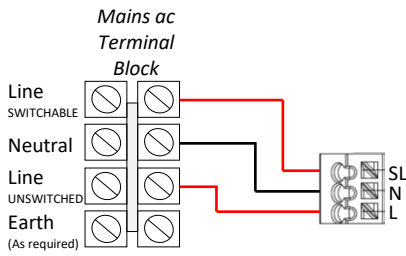
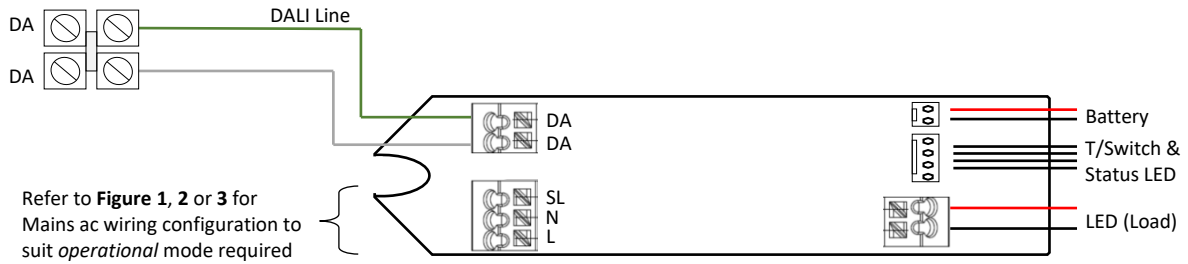
**Features**

Fully compatible with RAPIX Emergency Lighting Monitoring System.  
Rated to operate in battery mode for defined periods of time in accordance with National Standards for emergency escape lighting and exit signs for buildings.  
Can be wired to operate in Non Maintained or Maintained modes.  
Various series / parallel LED output combinations.  
Cable strain relief for Mains and DALI wiring.  
When not connected to DALI the driver operates as a stand-alone self-test unit.  
Complies with DALI standards IEC 62386-101, IEC 62386-102 and IEC 62386-202.

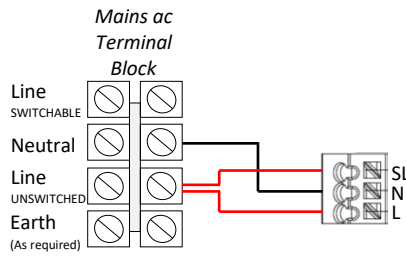
**Typical Applications**

Commercial Buildings, Hotels, Health Care facilities, Education facilities, Museums, Art Galleries, Shopping Centres, etc.

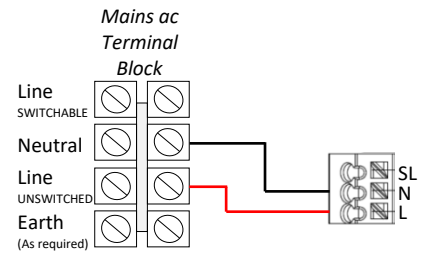
**Driver Connections**



**Figure 1** – Wiring to permit switching of ‘Maintained’ lamp using Mains ac



**Figure 2** – Wiring for permanently ‘Maintained’ operation such as Exit Signs



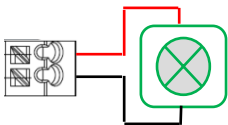
**Figure 3** – Wiring for ‘Non Maintained’ operation such as Emergency luminaires

**LED Configuration**

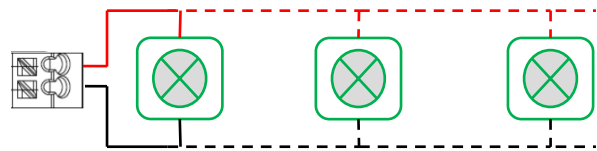
Below are some examples of the possible configurations of the emergency LED(s) or load.

The 350 / 500 / 700 / 1000 mA drivers allow for a single LED to be connected in SERIES with the Driver as shown in Figure A, or for multiple single LEDs in parallel as shown in Figure B.

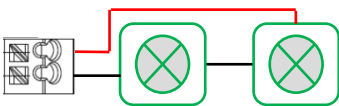
The 350 / 500 mA drivers allow for one or two LEDs to be connected in SERIES as shown in Figure C. Multiple LEDs can be connected in PARALLEL as shown in Figure D.



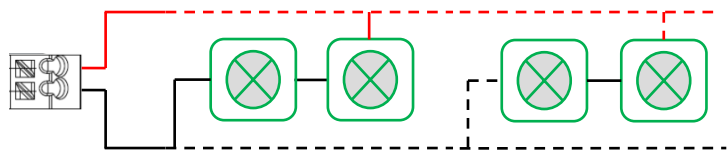
**Figure A** – Single LED – all variants



**Figure B** – Multiple Single LED in PARALLEL – all variants



**Figure C** – Two LED in SERIES – 350 / 500 mA ONLY



**Figure D** – Multiple Two LED in PARALLEL – 350 / 500 mA ONLY

**Accessories**

Supplied with test switch & bi-colour green/red status indicator with 300mm leads.

Battery mounting clips available.

**Status Indicator**

The operational status and / or the result of the last test is displayed using the bi-coloured LED Status Indicator supplied with each device as shown below:

Indicator Colour	Outcome	Meaning
Green Solid	Device OK	All OK, ac power is present, Battery is connected & charging
Green fast flash (0.1 s on, 0.1 s off)	Function Test in Progress	Ac power is present, functional test in progress
Green slow flash (1 s on, 1 s off)	Duration Test in Progress	Ac power is present, discharge test in progress
Green very slow flash (4 s on, 1 s off)	Automatic Duration Test Passed	Ac power is present, Automatic discharge test has completed within the last 7 days and was OK
Red Solid	Emergency LED Fault	Emergency LED is open circuit, short circuit or has otherwise failed in some way. Fault can indicate the live status or the result of a test
Red fast flash (0.1 s on, 0.1 s off)	LED Driver Fault	Unit unable to deliver current to Emergency LED. Fault can indicate the live status or the result of a test
Red slow flash (1 s on, 1 s off)	Battery Fault	Battery failure (Battery failed the duration or functional test, battery appears to be defective, battery has incorrect voltage). Fault can indicate the live status or the result of a test
Red/green alternating	Red/green alternating	The unit is in Unit Identification Mode; or The unit is in RAPIX Identification Mode
Red & Green off	Red & Green off	Ac power is lost, unit is in Emergency Mode

**Special Notes**

Do not cover the driver.

Maintain a clearance of at least 25 mm from insulation or combustible material.

Do not exceed the maximum recommended ambient operating temperature and maximum recommended case temperature.

### General Specifications

Parameter	Specification
Input Voltage / Frequency	220 – 250 V ac / 50 ~ 60 Hz
Input Current – Idle	8 mA @ 240 V Idle
Input Current – Trickle Charging	9 mA @ 240 V
Input PF	0.6 typical
Input Power – Idle	0.5 W @ 240 V
Input Power – Trickle Charging	0.6 W @ 240 V
Maximum Open Circuit LED Voltage	8 V
LED Output Current	350 / 500 / 700 / 1000 mA Custom LED current available upon request
Battery Detection	Auto Detection
DALI Line Current Draw	≤ 2 mA
DALI Dimming	NOT DIMMABLE on Mains ac or Emergency
DALI Operational Modes	Type D – Non Maintained / Maintained – Switchable Type C – Maintained – Permanent Type B – Switched Maintained Non-dimmable available upon request Type A – Switched Maintained Dimmable available upon request
Isolation	≥ 3.75 kV ac Line to SELV terminals ≥ 1.5 kV ac Line to DALI terminals
Load Protection	Open Circuit / Short Circuit / Overload / Thermal
Short Circuit	Auto Recovery
Mains Terminals	1 x 1.5 mm <sup>2</sup> solid / stranded per tunnel (3 tunnels)
DALI Terminals	1 x 1.5 mm <sup>2</sup> solid / stranded per tunnel (2 tunnels)
Emergency LED Terminals	1 x 1.5 mm <sup>2</sup> solid / stranded per tunnel (2 tunnels)
Lead Length – Remote Head	Maximum 2 metres between the Driver & the remote LED Head
Fixing	1 x 4mm diameter fixing hole plus 1 x 4mm diameter slot
Weight	90 g
System Rated Life (Driver)	100 000 Hours
Ambient Operating Temperature Range	0 - 50° C
Maximum Case Temp t <sub>c</sub>	85° C (@ Ta = 50° C)
Operating Humidity Range	0% to 95% RH non condensing
Housing Material Type	Flame retardant polycarbonate, UL 94V-0
IP Rating	IP20
Rated Duration	120 / 90 minute (Australian compliant to AS 2293) 1 / 2 / 3 / 4 hour available upon request

### Specific Technical Data (Model Specifications)

Parameter Order Code	Battery Chemistry	LED Current (mA)	# of Series LEDs	Non-Maintained Input Current / Power		Maintained Input Current / Power		Battery Voltage (V)	Charge Current (mA)	Recommended Battery
				Idle	Charging	Idle	Charging			
DGLCEM035CD-AU	NiMH	350	1	8 mA / 0.5 W	24 mA / 3.1 W	18 mA / 2.2 W	33 mA / 4.5 W	4.8 or 7.2	210	4.8 V 2100 mAh
	NiMH	350	2	8 mA / 0.5 W	27 mA / 3.5 W	27 mA / 3.6 W	45 mA / 6.7 W	7.2	210	7.2 V 2100 mAh
DGLCEM070CD-AU	NiMH	700	1	8 mA / 0.5 W	24 mA / 3.1 W	29 mA / 3.9 W	45 mA / 6.7 W	4.8 or 7.2	210	4.8 V 2100 mAh
DGLCEM100CD-AU	NiMH	1000	1	8 mA / 0.5 W	27 mA / 3.5 W	43 mA / 6.3 W	57 mA / 9.0 W	7.2	210	7.2 V 2100 mAh
DGLCEM035CD1L2	Li-ion	350	1	8 mA / 0.5 W	20 mA / 2.3 W	20 mA / 2.4 W	30 mA / 4.2 W	3.2	300	3.2 V 1500 mAh
	Li-ion	350	2	8 mA / 0.5 W	20 mA / 2.3 W	28 mA / 3.8 W	39 mA / 5.7 W	3.2	300	3.2 V 3200 mAh
DGLCEM035CD2L2	Li-ion	350	1	8 mA / 0.5 W	23 mA / 3.2 W	19 mA / 2.5 W	33 mA / 5.0 W	6.4	210	6.4 V 1500 mAh
DGLCEM035CD3L2	Li-ion	350	1	8 mA / 0.5 W	26 mA / 3.9 W	19 mA / 2.5 W	36 mA / 5.7 W	9.6	210	9.6 V 1500 mAh
	Li-ion	350	2	8 mA / 0.5 W	26 mA / 3.9 W	25 mA / 3.6 W	44 mA / 7.0 W	9.6	210	9.6 V 1500 mAh
DGLCEM050CD1L2	Li-ion	500	1	8 mA / 0.5 W	20 mA / 2.3 W	24 mA / 3.1 W	35 mA / 4.9 W	3.2	300	3.2 V 3200 mAh
	Li-ion	500	2	8 mA / 0.5 W	20 mA / 2.3 W	36 mA / 5.1 W	48 mA / 7.2 W	3.2	300	3.2 V 4500 mAh
DGLCEM070CD1L2	Li-ion	700	1	8 mA / 0.5 W	20 mA / 2.3 W	31 mA / 4.2 W	42 mA / 6.1 W	3.2	300	3.2 V 3200 mAh
DGLCEM070CD2L2	Li-ion	700	1	8 mA / 0.5 W	23 mA / 3.2 W	29 mA / 4.0 W	44 mA / 6.6 W	6.4	210	6.4 V 1500 mAh
DGLCEM070CD3L2	Li-ion	700	1	8 mA / 0.5 W	26 mA / 3.9 W	26 mA / 3.9 W	45 mA / 7.2 W	9.6	210	9.6 V 1500 mAh
	Li-ion	700	2*	8 mA / 0.5 W	26 mA / 3.9 W	n/a	n/a	9.6	210	9.6 V 1500 mAh
DGLCEM100CD2L2	Li-ion	1000	1	8 mA / 0.5 W	23 mA / 3.2 W	40 mA / 6.2 W	52 mA / 8.6 W	6.4	210	6.4 V 3200 mAh
DGLCEM100CD3L2	Li-ion	1000	1	8 mA / 0.5 W	26 mA / 3.9 W	40 mA / 6.2 W	55 mA / 9.3 W	9.6	210	9.6 V 1500 mAh

\* 2 LEDs on DGLCEM070CD3L2 recommended for non-maintained operation only

### Standards & Compliance

#### EMC and Electrical Safety Frameworks and Standards

Regulation	Standard	Title
EMC	IEC/EN 55015	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment – Home Sensors, actuators and alarms
	AS/NZS CISPR 15:2011	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
Electrical Safety	IEC 61347-1	Lamp Control Gear – Part 1: General and safety requirements
	IEC 61347-2-7	Lamp Control Gear – Part 2-7: Particular requirements for battery supplied electronic control gear for emergency lighting (self-contained)
	IEC 61347-2-13	Lamp Control Gear – Part 2-13: Particular requirements for dc or ac supplied electronic control gear for LED modules – edition 1.0 (2006)
	AS/NZ 61347.1:2002	Lamp Control Gear – General and safety requirements (IEC 61347-1:2000, MOD)

#### Other International Directives and Standards

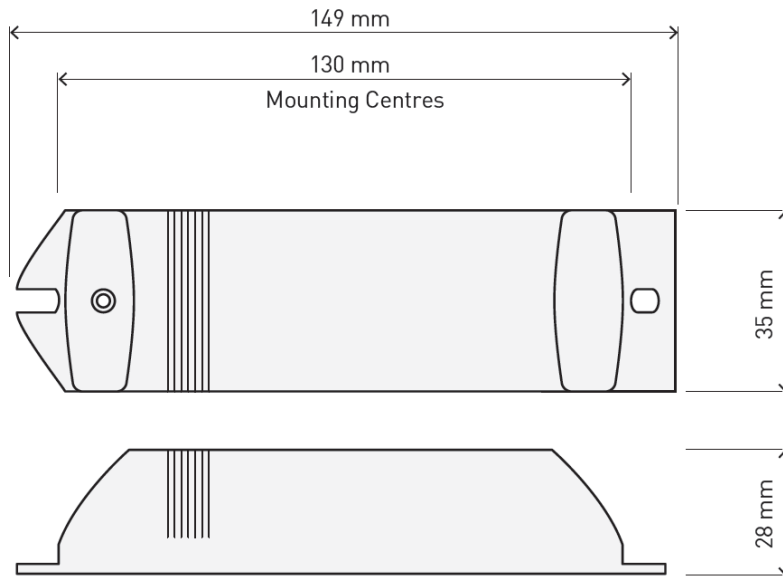
Regulation	Standard	Title
Digital Addressable Lighting Interface (DALI)	IEC 62386-101	Digital Addressable Lighting Interface – Part 101: General Requirements – System
	IEC 62386-102	Digital Addressable Lighting Interface – Part 102: General Requirements – Control Gear
	IEC 62386-202	Digital Addressable Lighting Interface – Part 202: Particular Requirements for Control Gear – Self Contained Emergency Lighting (Device Type 1)



IP20



**Dimensions**



**Contact Information**

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