

C5033 Led emergency-Technical specifications



Lite-Plan's NED emergency lighting conversion modules have been specifically designed to convert a wide range of LED types with just two stock items. The standard three cell NED/3 will be the natural choice for converting most standard LED luminaires and arrays, containing from 2 to 20 LEDs in series (6 to 55 Volts) whilst the NED/3/80 extends the range, converting from 2 to 30 LEDs in series (6 to 80 Volts).

The NED range automatically adjusts the output LED current to provide the best match between the battery and the load, providing maximum illumination whilst ensuring full battery duration. The NED range is compatible with a wide range of lighting LEDs such as Philips Fortimo DLM, SLM and LLM ranges, Bridgelux LS/ES/RS ranges, Citizen 4-41W ranges, GE Infusion, Xicato and many others.

The NED range is designed to be installed by breaking into the low voltage connection between the mains LED Driver and the LEDs and allows the LEDs to be operated as normal under mains healthy conditions and operated at reduced light output in an emergency.

The converter/charger module is housed in our standard HRN sized case and comes complete with 8 way and 4 way terminal blocks. The eight way block allows connection of unswitched 240V supply, irreversible battery connector, charge indicator LED and additional relay terminals to isolate the supply to the associated mains LED driver, whilst the four way block allows connection of two leads in from the maintaining LED driver and two out to the LEDs themselves. The NED range can be supplied as a kit complete with a range of high temperature Nickel Cadmium (NiCd) battery packs, or in a range of remote boxes to suit various applications.

The current (in mA) from the NED emergency pack will depend on the voltage of the connected LEDs, which in turn will depend on the number of LEDs. Standard outputs for various numbers of white LEDs are as follows:

No. of LEDs	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
C5033	310	250	200	170	145	125	110	100	90	80	75	70	65	60	
No. of LEDs	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
C5033	55	50	47	45	43										

Note: Due to high O/C voltages from the NED/3/80, the NED/3 is the preferred choice for most loads unless the higher voltage is required

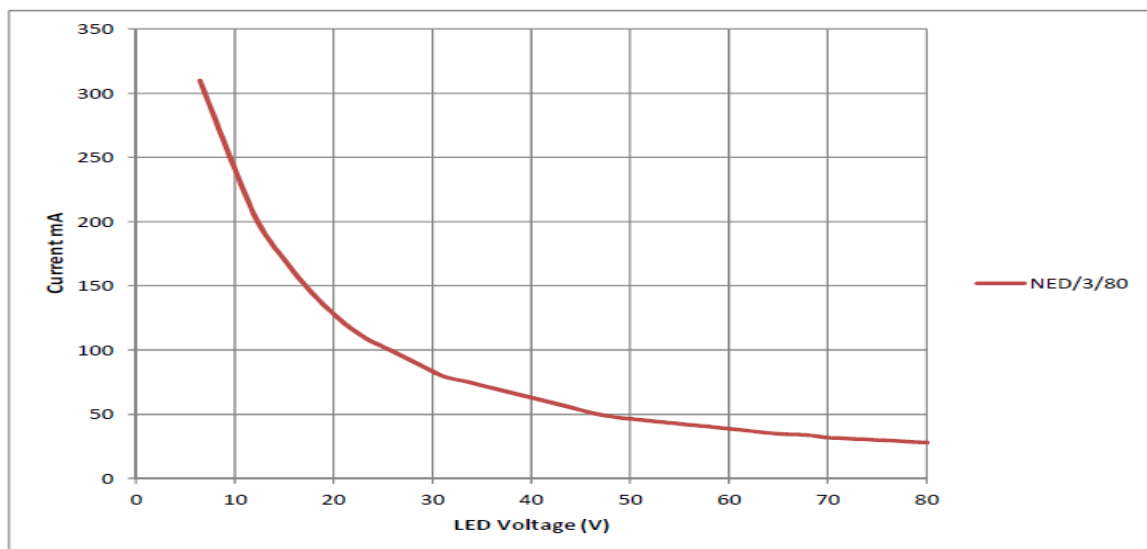
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Typical Ballast Lumen Factors

The ballast lumen factor (BLF) can be calculated by dividing the current in emergency (see above) by the normal running current. E.g. for 3 LEDs normally run at 700mA the BLF with the NED/3 will be $250\text{mA} \div 700\text{mA} = 36\%$. Alternatively the Ballast Lumen factor in emergency can be approximated by dividing the number of Cells by the luminaire wattage. E.g. for a 20W LED luminaire with the NED/3 the BLF will be $3 \div 20 = 15\%$. On most current luminaires this gives a slightly lower answer than would be measured, which errs on the side of safety. Typical values are also given in the table below:

Luminaire Power	5W	7W	10W	12W	15W	20W	25W	30W	35W	40W	45W	50W
C5033	60%	43%	30%	25%	20%	15%	12%	10%	9%	8%	7%	6%

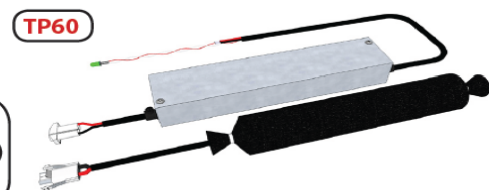
Relationship between LED current and LED voltage



NED Remote Packs

To suit the main application of most ceiling recessed LED luminaires, Liteplan offer a range of remote conversion packs to suit the conditions. We also manufacturer bespoke units to suit the specification of the LED manufacturer with the necessary plug/socket connections with the mains driver.

Order Code	Description
NED/3/RCE	Single ABS Enclosure
NED/3/80/RCE	Single ABS Enclosure
NED/3/R/TP60	Two Part to suit 60mm Cut Out
NED/3/80/R/TP60	Two Part to suit 60mm Cut Out
NED/3/R/DLM	Single ABS Enclosure. DLM Plug/Socket
NED/3/80/R/DLM	Single ABS Enclosure. DLM Plug/Socket



RCE - Dims. 240 x 81 x 73mm (100mm Ø)
TP60 - Dims. (Case) 235 x 52 x 31mm + (Batt) 230 x 40 x 40mm (To Suit 60mm Ø)
DLM - Dims. 240 x 81 x 73mm (100mm Ø)

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Typical Specifications

	C5033	
LED Voltage Range	6 – 55 Volts	
No. of LEDs in series	2 - 20	
Ballast Lumen Factor (%)	See above	
LED Current Limit	320mA	
Led Voltage Limit	55 Volts	
Battery Current Limit	1100mA	
Mains Supply Voltage	220-240 Volts AC 50/60 Hz	
Power Rating Watts	5 Watts	
Power factor	0.9	
Charge Current	200mA Nominal	
Recharge Period	24 hours	
Battery Pack	3 x 4.5Ah D Cell Ni-Cd (NiMH on request)	
Battery Cut Off voltage	3.0 Volts	
Module size (L x W x H)	165mm x 45mm x 29mm FC = 155mm	
Battery Size (L x H x D)	221mm x 37mm x 37mm FC = 205mm	

Typical Wiring Diagram

