



L80 IP68 6W - MDD4 LVDC



PREMIUM indoor LED driver with four dimming protocol from DALI, 0/1-10V, Phase and resistor. Configurable output up to 6 Watts. Eye response dimming curve with deep & smooth down to 5%. Smooth ON/OFF.

PRODUCT FEATURES

- Multiple Dimming (DALI, 0/1-10V, Phase and Resistor)
- 6 Watts
- Dimming to 5%
- Smooth On/Off
- Eye response dimming
- Low Standby Power < 0.5W
- High Power factor (>0.95)
- MTBF >100K hours
- IP68

FUNCTIONS

- Configurable Output Power
- Overload protection
- Short-circuit protection
- No-load protection
- Internal Thermal Protection
- LED engine NTC thermal protection
- Hot-pluggable
- Additional advanced monitoring parameters including forward voltage, LED engine temperature, operating hours and energy consumption (DALI only)

TECHNOLOGY BENEFITS

- Multiple dimming protocol and multiple power selection, excellent inventory management
- NTC thermal fold back algorithm protects LED array, COBs from over-temperature while providing regulated reduced light output.
- Our driver allow eight power settings using selectable switch. At each setting, the constant current will be regulated automatically to match the LED Vf strings, make it versatile to driver COB package or a multiple discrete LED arrays at the rated power.

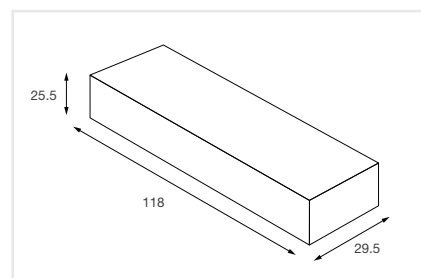
For e.g. a 8 Watts driver with 2 different Vf setup:

- 8W COB with 36V forward voltage, Current will be 0.22 A
- 8W LED strings with 28V forward voltage, Current will be 0.29 A
- Single driver model to cover output power level from 4.5 Watts to 10 Watts, and cover from forward voltage range of 26 to 40V .

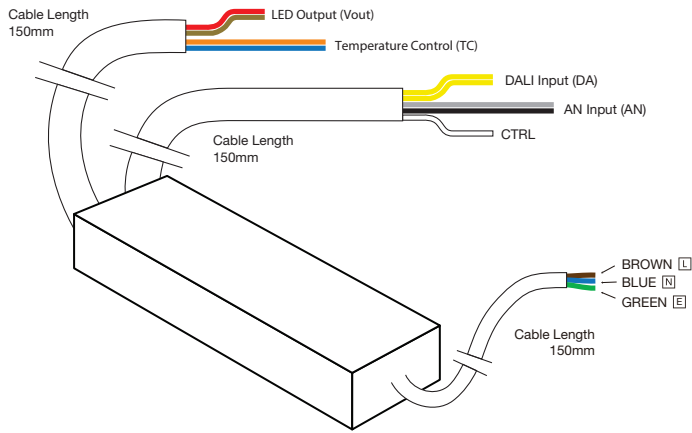
APPLICATION

- For linear, track light, down light and custom made lighting for indoor retail, hospitality and outdoor applications

DIMENSIONS (MM)



MDD4
MULTI-DIM DRIVER
DALI | 0-10V | PH | RES



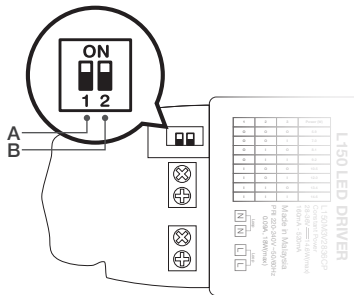
INPUT/OUTPUT WIRES

Type	Terminal Colour	Specification	Length
Line	Brown	UL1015 AWG18	150mm
Neutral	Blue	UL1015 AWG18	150mm
Vout+	Red	UI1569 AWG22	150mm
Vout-	Brown	UI1569 AWG22	150mm
DA	Yellow	UI1569 AWG22	150mm
AN+	Grey	UI1569 AWG22	150mm
AN-	Black	UI1569 AWG22	150mm
CTRL	White	UI1569 AWG22	150mm
TC+	Orange	UI1569 AWG22	150mm
TC-	Blue	UI1569 AWG22	150mm

OPTION WITH HEATSHRINK PACKAGE FOR OPTIMUM SPACE.
 (ORDER WITH ADDITIONAL CODE "-HSK" and the output power)
 * Output power are not selectable in Heatshrink version.

SLIDER SWITCH TABLE

DIP Switch Setting				LED @20V	LED @18V	LED @15V	LED @12V
A (1)	B (2)	Power (W)	Efficiency @ 230V	Current (mA)	Current (mA)	Current (mA)	Current (mA)
0	0	4.5	73%	0.23	0.25	0.30	0.38
0	1	6.2	74%	0.31	0.34	0.41	0.52
Support LED Module							Cree XHP



MAXIMUM LOADING OF CIRCUIT BREAKERS

Automatic Circuit Breaker Type	B10	B13	B16	C10	C13	C16
Amount of LED drives	10	13	16	10	13	16



CONVERT DALI TYPE 6 TO DALI TYPE 8

To enable DT8 mode of the led driver, driver need to set a setting to "1" at memory bank 2 and memory 9.

The following commands have to be used.

No.	DALI CMD	Value (Hex)	Comment
1	DTR1 (CMD 0xC3)	0x02	Set DTR1 with address of memory bank (02)
2	DTR0 (CMD 0xA3)	0x02	Set DTR with address of memory (02)
3	Enable Write Memory (CMD 0x81) x 2	-	Enable Write Memory: 2 times (Repeat Command)
4	Write Memory Location (CMD 0xC7)	0x55	Unlock the Memory bank
5	DTR0 (CMD 0xA3)	0x09	Set DTR with address of memory (09)
6	Enable Write Memory (CMD 0x81) x 2	-	Enable Write Memory: 2 times (Repeat Command)
7	Write Memory Location (CMD 0xC7)	0x01	Set "1" to enable DT8 mode
8	DTR1 (CMD 0xC3)	0x02	Set DTR1 with address of memory bank (02)
9	DTR0 (CMD 0xA3)	0x02	Set DTR with address of memory (02)
10	Enable Write Memory (CMD 0x81) x 2	-	Enable Write Memory: 2 times (Repeat Command)
11	Write Memory Location (CMD 0xC7)	0xFF	Lock the Memory bank

CONVERT DALI TYPE 8 TO DALI TYPE 6

To enable DT6 mode of the led driver, driver need to set a setting to "0" at memory bank 2 and memory 9.

The following commands have to be used.

No.	DALI CMD	Value (Hex)	Comment
1	DTR1 (CMD 0xC3)	0x02	Set DTR1 with address of memory bank (02)
2	DTR0 (CMD 0xA3)	0x02	Set DTR with address of memory (02)
3	Enable Write Memory (CMD 0x81) x 2	-	Enable Write Memory: 2 times (Repeat Command)
4	Write Memory Location (CMD 0xC7)	0x55	Unlock the Memory bank
5	DTR0 (CMD 0xA3)	0x09	Set DTR with address of memory (09)
6	Enable Write Memory (CMD 0x81) x 2	-	Enable Write Memory: 2 times (Repeat Command)
7	Write Memory Location (CMD 0xC7)	0x00	Set "0" to enable DT6 mode
8	DTR1 (CMD 0xC3)	0x02	Set DTR1 with address of memory bank (02)
9	DTR0 (CMD 0xA3)	0x02	Set DTR with address of memory (02)
10	Enable Write Memory (CMD 0x81) x 2	-	Enable Write Memory: 2 times (Repeat Command)
11	Write Memory Location (CMD 0xC7)	0xFF	Lock the Memory bank

NOTE: Default operating Model for DALI is DALI type 6.
Please power on the driver before do the setting.



DETAILS SPECIFICATIONS

Input	Rated supply Voltage	220-260 Vac
	Input voltage AC	198 - 277 Vac
	Input Current	0.06A @220Vac
	Inrush Current	1.5A 350uS @ 230V/50Hz
	Leakage Current	<0.23 mA @230Vac Full Load
	Input No Load Power	<0.5 W
	THD (at 230V, 50Hz)	<6.5%
	Power factor	>0.95 @ 230Vac Full Load
	Input Capacitance	~32nF
	Mains frequency	50Hz/60Hz
Output	LED Output Power	4W - 6W (Configurable)
	Output Voltage	10V - 20V
	Current Range	150mA - 500mA (Configurable)
	Tolerance	+/- 5%
	Ripple	<35%
	Optical flicker %	<35%
	Turn On Time	0.5s
Control	Dimming Protocol	DALI, 0/1-10V, Phase and resistor
	DALI Dimming Range	<5%-100%
	0/1-10V Dimming Range	<5%-100%
	PHASE Dimming Range	<5%-100% *Depend on dimmer
	Resistor Dimming Range	<5%-100% with 1M ohm resistor

Protection	Over Load Protection	Yes
	Over Temperature Protection	Yes
	Short circuit Protection	Yes
Thermal protection	Self Recover after Protection	Yes
	External NTC thermistor	Throttle @ 80C
Standard & Certifications	External thermistor value	47Kohm
	Safety	EN 55015
		EN 61547
		EN 61000-3-2
		EN 61000-3-3
		EN 61347-1, EN 61347-2-13
	EMC	CISPR15
	RoHS	Yes
	DALI Protocol	EN 62386
	Dimension	Weight
L x W x H		L118 X W29.5 X H25.5mm
Environment	Ambient Temperature	-20°C - +50°C
	Working Humidity	0 - 95%
	Storage Temp/Humidity	-20°C ~ +85°C, 0 ~ 85% RH
Lifetime	>50,000 hours at Tc, 75°C	
Warranty Period	5 years	

MODEL DATA

Type	Rated Power	Output Forward Voltage ranges	Output Current ranges	Output Power ranges
L80 IP68 MDD4 6W 10-20V CP LVDC	8.2W	10 - 20V	150mA - 500mA	4W - 6W

Current ripple	Optical flicker %	Max. Tc, case temperature	Dimming options	Dimming ranges
>35%	>35%	75°C	DALI, 0/1-10V, Phase, Resistor	<5% - 100%

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ORDERING MATRIX CHART

Type	Part number	Unit/carton	Dimension/carton	Weight/carton
L80 IP68 MDD4 6W 10-20V CP LVDC	L80M4V2836CP-LVDC (IP68)	50	31 X 22 X 15 CM	9 KG

example: L80M4V2836CP-LVDC (IP68).50