



R45 8W - MDD4

PREMIUM indoor LED driver with four dimming protocol from DALI, 0/1-10V, Phase and resistor. Compact output up to 10 Watts. Eye response dimming curve with low optical flicker percentage, deep & smooth down to 0.1%. Smooth ON/OFF

PRODUCT FEATURES

- Multiple Dimming (DALI, 0/1-10V, Phase and Resistor)
- 8 Watts
- Optical flicker %, <5%
- Perfect Dimming to 0.1%
- Smooth On/Off
- Eye response dimming
- Low Standby Power < 0.5W
- High Power factor (>0.95)
- MTBF >100K hours
- IP20

FUNCTIONS

- Configurable Output Power (Factory level only)
- 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 15 Watts driver with 2 different Vf setup:

15W COB with 36V forward voltage, Current will be 0.41 A

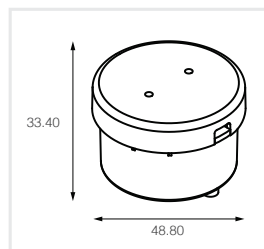
15W LED strings with 28V forward voltage, Current will be 0.53 A

- Single driver model to cover output power level from 5 Watts to 10 Watts, and from forward voltage range of 26 V to 42 V.

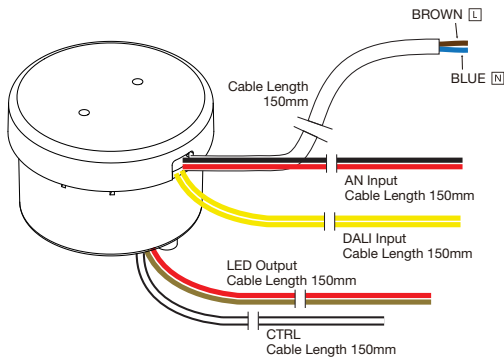
APPLICATION

- For linear, track light, down light and custom made lighting for indoor retail and hospitality 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+	Red	UI1569 AWG22	150mm
AN-	Black	UI1569 AWG22	150mm
CTRL	White	UI1569 AWG22	150mm

CONFIGURABLE TABLE

Configurable on order		LED @38V	LED @36V	LED @34V	LED @30V	LED @28V
Power (W)	Efficiency @ 230V	Current (mA)	Current (mA)	Current (mA)	Current (mA)	Current (mA)
3.0	69%	0.08	0.08	0.09	0.10	0.11
4.0	71%	0.11	0.11	0.12	0.13	0.14
5.0	72%	0.14	0.14	0.15	0.17	0.18
6.0	73%	0.16	0.17	0.18	0.2	0.21
7.0	73%	0.19	0.19	0.21	0.23	0.25
8.0	73%	0.22	0.22	0.24	0.27	0.29
Support LED Module		LUCENT Module	CREE COB	ELR Module	SORAA lamp / light engine	SORAA lamp / light engine
			LUMINUS CXM 6			
		CITIZEN CRI>90 COB	LUMILEDS COB	CITIZEN COB		LUMINUS CLM-6 27V
			OSRAM COB			

MAXIMUM LOADING OF CIRCUIT BREAKERS

Automatic Circuit Breaker Type	B10	B13	B16	C10	C13	C16
Amount of LED drives	27	35	43	40	52	64



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	Protection	Over Load Protection	Yes	
	Input voltage AC	198-277 Vac		Over Temperature Protection	Yes	
	Input Current	0.05A @220Vac		Short circuit Protection	Yes	
	Inrush current	1.5A 350uS @ 230V/50Hz		Self Recover after Protection	Yes	
	Leakage Current	<0.21 mA @230Vac Full Load		Standard & Certifications	Safety	EN 55015
	Input No Load Power, Standby Power	<0.5 W				EN 61547
	THD (at 230V, 50Hz)	<6.5%				EN 61000-3-2
	Power factor	>0.95 @ 230Vac Full Load				EN 61000-3-3
	Input Capacitance	~32nF				EN 61347-1, EN 61347-2-13
	Mains frequency	50Hz/60Hz		Dimension	EMC	CISPR15
Output	LED Output Power	3W - 8W (Configurable on order)	RoHS		Yes	
	Output Voltage	26V - 42V	DALI Protocol		EN 62386	
	Current Range	80mA - 290mA (Configurable on order)	Weight	80g		
	Tolerance	+/- 5%	L x W x H	D48.8 x H33.4mm		
	Ripple	<5%			Environment	Ambient Temperature
	Optical flicker %	<5%	Working Humidity	0% - 95%		
Turn On Time	0.5s	Storage Temp/Humidity	-20°C ~ +85°C, 0 ~ 85% RH			
Control	Dimming Protocol	DALI, 0/1-10V, Phase and resistor	Lifetime	>50,000 hours at Tc, 60°C		
	DALI Dimming Range	<0.1%-100%	Warranty Period	5 years		
	0-10V Dimming Range	<1%-100%				
	PHASE Dimming Range	<1%-100% *Depend on dimmer				
	Resistor Dimming Range	<0.1%-100% with 1M ohm resistor				

MODEL DATA

Type	Rated power	Output Forward Voltage ranges	Output Current ranges	Output Power ranges
R45 MDD4 8W 28-36V CP	11W	26-42V	80mA - 290mA	3W - 8W
Current ripple	Optical flicker %	Max. Tc, case temperature	Dimming options	Dimming ranges
<5%	<5%	60°C	DALI, 0/1-10V, Phase, Resistor	<0.1% - 100%

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ORDERING MATRIX CHART

Type	Part number	Unit/carton	Dimension/carton	Weight/carton
R45 MDD4 8W 28-36V CP	R45M4V2836CP	50	28 X 22 X 9 CM	4 KG

example: R45M4V2836CP.50