



MLD SERIES

MULTI-CHANNEL BUCK

DC LED DRIVER with DALI



Features

- * Wide Input Range
- * LED Driver Current up to 1400mA
- * Compatible to the DALI Standard
- * Provides Multi-channel of LED Lighting Synchronization Controls
- * Constant Current Dimming Control (PWM mode)
- * Option Auxiliary power

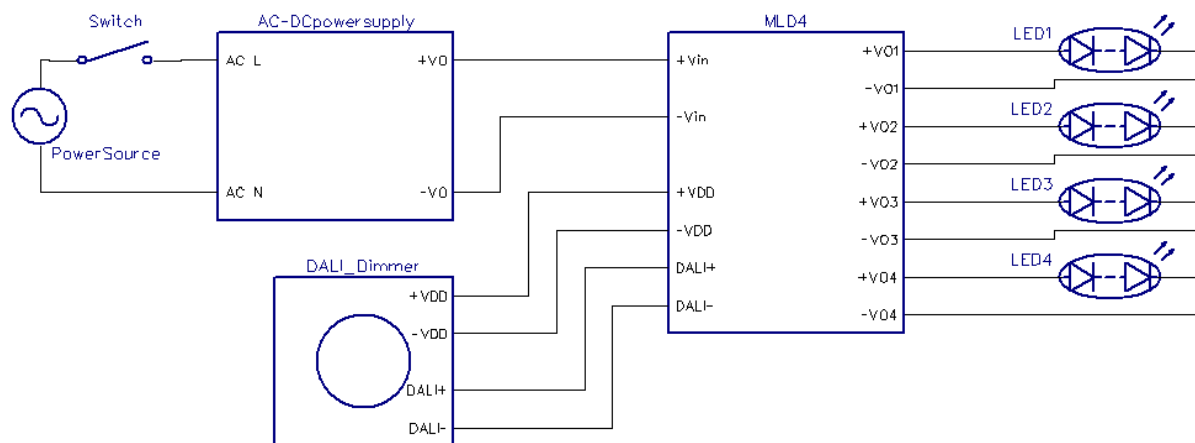


MODEL	Input Voltage Range	Output Operating Voltage	Output Rated Current	Output Rated Power/Channel I	Ripple and Noise (max.) Note2	Efficiency (TYPICAL) Note3
MLD4-C070	4.5-60Vdc	2-57VDC x4	700mA x4	40W	500mVpp	95%
MLD4-C100	4.5-60Vdc	2-57VDC x4	1000mA x4	57W	500mVpp	95%
MLD4-C140	10-36Vdc	8-33VDC x4	1400mA x4	46.2W	500mVpp	95%
MLD6-C070	4.5-60Vdc	2-57VDC x6	700mA x6	40W	500mVpp	95%
MLD6-C100	4.5-60Vdc	2-57VDC x6	1000mA x6	57W	500mVpp	95%
MLD6-C140	10-36Vdc	8-33VDC x6	1400mA x6	46.2W	500mVpp	95%

Note:

1. Nominal Input Voltage: 48Vdc, 28Vdc(C140 models)
2. Ripple and Noise are measured at rated current, Nominal Input and 36Vdc or 24Vdc (C140 models) output and 20MHz bandwidth with a 0.1uF ceramic capacitor.
3. Measured at rated current, Nominal Input and 36Vdc or 24Vdc(C140 models) output.
4. Acceptable customer modifications.

Example Circuit Connection of MLD4 module for driving 4 LED Luminaries



Specifications

All specifications are Typical at nominal line , full load and 25°C unless otherwise noted

INPUT SPECIFICATIONS:

Input Voltage see table
 Input Surge Voltage (1second) 1.4A/Others 50V/65Vdc max.
 Input Filter Capacitor
 Under Voltage Lockout .. Power up ... 1.4A/Others ... 8.0Vdc/4.0Vdc typ.
 Power down 1.4A/Others 6.9Vdc/3.7Vdc typ.

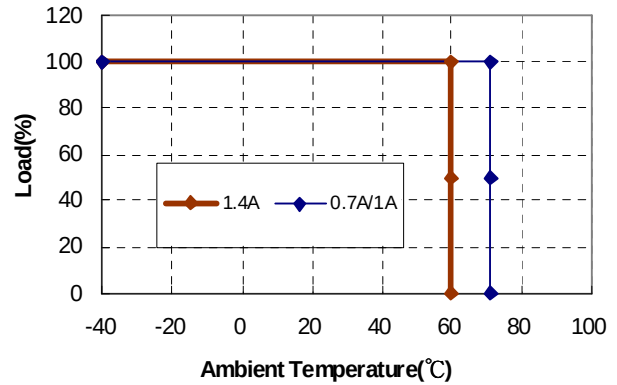
OUTPUT SPECIFICATIONS:

Constant Current Accuracy (note1) ±5% max.
 Current Line Regulation (note 2) ±5% max.
 Current Load Regulation (note 3) ±5% max.
 Auxiliary power (40Vdc>Vin>21Vdc) 18Vdc/300mA
 Short Circuit Protection Constant Current with Auto Recovery
 Start up time 1.4A/Others 400ms/10ms max.

GENERAL SPECIFICATIONS:

Efficiency See Table
 Temperature Coefficient ±0.05%/°C
 Isolation voltage Non-isolation
 Switching Frequency 1.4A/Others 50-500KHz/300KHz typ.
 Operating Ambient Temperature -40 ~ 71°C see De-rating Curve
 Cooling Natural Convection
 Storage Temperature..... -55 ~ 105°C
 Operating Humidity 10%~95%RH non-condensing
 Operating Altitude Sea Level to 3000m
 Vibration 0~500Hz, 2G 60min./1cycle, period for 3hours, 3 axes
 Shock 30g peak, half sine, 6 axes
 MTBF, MIL-HDBK-217F (25°C) TBD
 Dimensions 5.05x2.30x0.80 Inches(128.3x58.4x20.3 mm)
 Weight MLD4/MLD6 145/160g
 Case Material Aluminum Case

MLD4/6 Derating Curve



DALI Control:

Output Current Range 10%-100%

SAFETY AND EMISSIONS:

EMI Meet EN55015 Class B

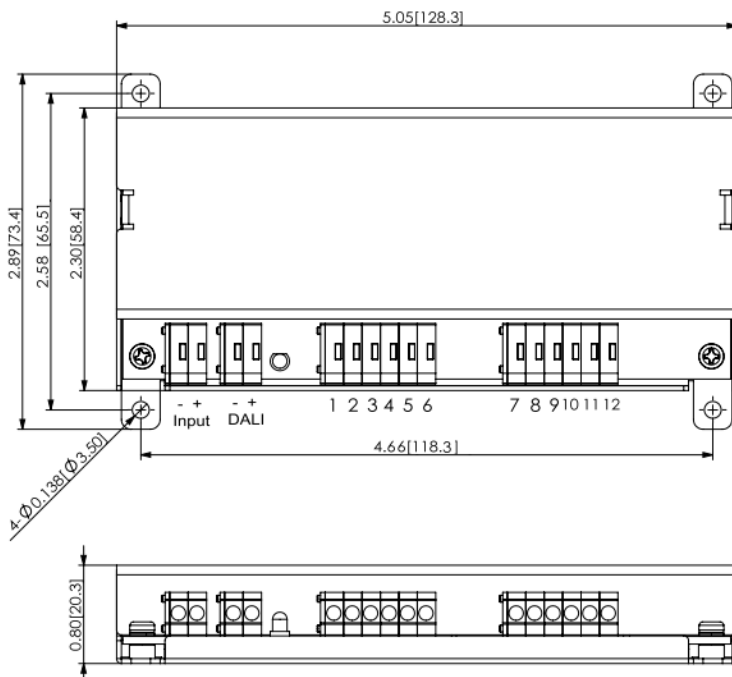
EMS Meet EN61547, EN61000-4-2,3,4,6,8

NOTE:

1. $3V < V_{in} - V_{out} < 30V_{dc}$. to keep current accuracy.
2. Current line regulation is measured from high line to low line.
3. Current load regulation is measured from high to low operating voltage.
4. Suffix "A" to the model number with Aux. power for MLD4 only.

Mechanical Specification

All Dimensions are in inches[mm]
 Tolerances : Inches : x.xx=±0.02, x.xxx=±0.010
 Millimeters : x.x=±0.5, x.xx=±0.25



PIN CONNECTION			
Pin	MLD4-CXXX	MLD4-CXXXA	MLD6-CXXX
1	V ₁₋	V ₁₋	V ₁₋
2	V ₁₊	V ₁₊	V ₁₊
3	V ₂₋	V ₂₋	V ₂₋
4	V ₂₊	V ₂₊	V ₂₊
5	NC	NC	V ₃₋
6	NC	NC	V ₃₊
7	NC	AUX.-	V ₄₋
8	NC	AUX.+	V ₄₊
9	V ₃₋	V ₃₋	V ₅₋
10	V ₃₊	V ₃₊	V ₅₊
11	V ₄₋	V ₄₋	V ₆₋
12	V ₄₊	V ₄₊	V ₆₊

Mouser Electronics

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