



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.

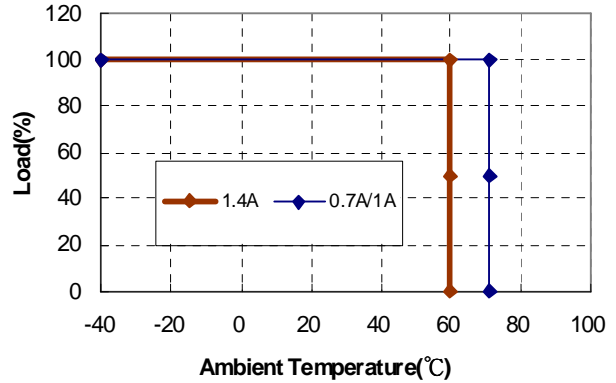
OUTPUT SPECIFICATIONS:

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:

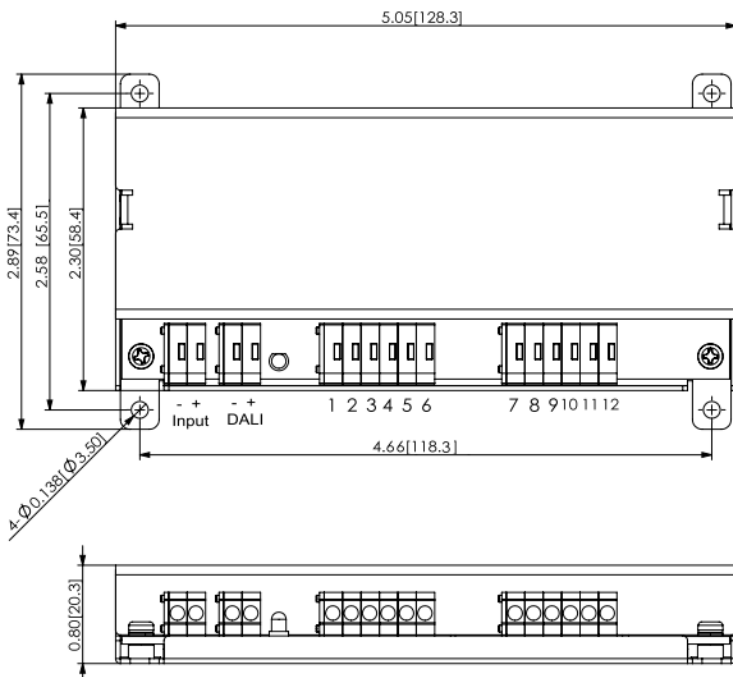
EMI Meet EN55015 Class B
 EMS Meet EN61547, EN61000-4-2,3,4,6,8

NOTE:

- 3V < Vin-Vout < 30Vdc. to keep current accuracy.
- Current line regulation is measured from high line to low line.
- Current load regulation is measured from high to low operating voltage.
- 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₊