ALD-E SERIES

50.4 WATT

BUCK LED DRIVER with DALI

Features

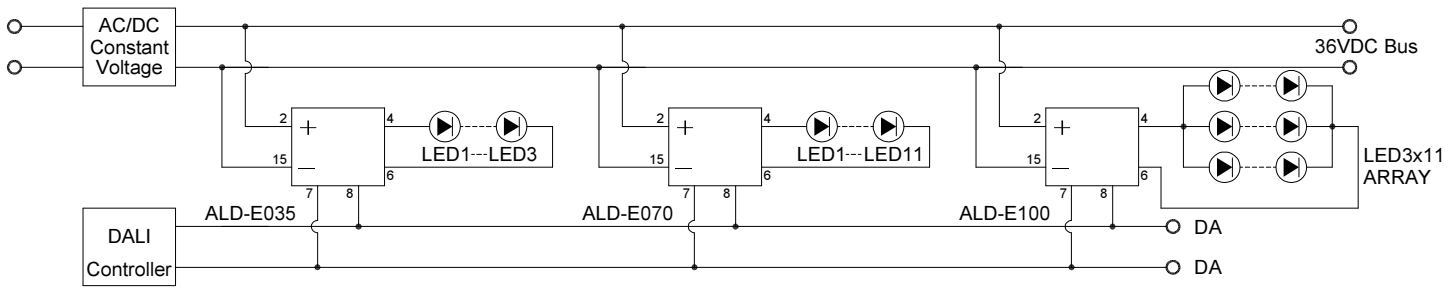
* LED Driver Current up to 1400mA
* Constant Current Output
* Digital Address Lighting Interface (DALI)
* DALI Dimming Range 1-100%
* High Efficiency up to 95%
* Continuous Short Circuit Protection
* High Reliability
* IP65 Protection (note7)

MODEL	Input Voltage Range	Output Operating Voltage	Output Rated Current	Output Rated Power	Ripple and Noise (max.) note2	Efficiency (TYPICAL) note3
ALD-E035	11 – 50 VDC	8-45 VDC	350 mA	15.75 W	300 mVpp	95%
ALD-E050	11 – 50 VDC	8-45 VDC	500 mA	22.50 W	500 mVpp	95%
ALD-E070	11 – 50 VDC	8-45 VDC	700 mA	31.50 W	500 mVpp	95%
ALD-E100	11 – 50 VDC	8-45 VDC	1050 mA	47.25 W	500 mVpp	95%
ALD-E140	11 – 40 VDC	8-36 VDC	1400 mA	50.4 W	500 mVpp	95%

Note:

1. 3V<Vin-Vou <20Vdc to Keep Current Accuracy, Nominal Input Voltage: 36Vdc.
2. Ripple and Noise are Measured at Rated Current, Nominal Input and 33Vdc Output and 20MHz Bandwidth with a 0.1uF Ceramic Capacitor.
3. Measured at Rated Current, Nominal Input and 33Vdc output.
4. Acceptable Customer Modifications.

Installation Drawing



Specifications

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

INPUT SPECIFICATIONS:

Input Voltage ..... 1400mA/other 11-40Vdc/11-50Vdc
Input Surge Voltage (1second) ..... 50Vdc max.
Input Filter ..... Capacitor
Under Voltage Lockout ..... Power Up ..... 8.1Vdc typ.
Power Down ..... 6.9Vdc typ.

OUTPUT SPECIFICATIONS:

Constant Current Accuracy ..... (note1) ..... ±5% max.
Current Line Regulation ..... (note2) ..... ±5% typ.
Current Load Regulation ..... (note3) ..... ±5% max.
Short Circuit Protection ..... Constant Current with Auto Recovery
Start up Time ..... 150ms max.

GENERAL SPECIFICATIONS:

Efficiency ..... See Table
Temperature Coefficient ..... ±0.05%/℃(0~50℃)
Isolation Voltage ..... Non-Isolation
Switching Frequency ..... 40-700KHz.
Operating Ambient Temperature ..... -40 ~ 80℃ see Derating Curve
Case Temperature ..... 100℃ max.
Cooling ..... Natural Convection
Storage Temperature ..... -55 ~ 125℃
Operating Humidity ..... 10%~95%RH non-condensing
Operating Altitude ..... Sea Level to 3000m
Shock/Vibration MIL-STD-810F
MTBF ..... MIL-HDBK-217F/25℃ ..... 700Khrs typ.
Dimensions ..... Other: 1.60x0.93x0.40 Inches(40.6x23.5x10.1mm)
T:2.354x1.339x0.646 Inches(59.80x34.01x16.40mm)
Weight ..... PIN/LW/T 20g/23g/30g
Case Material ..... Plastic Case

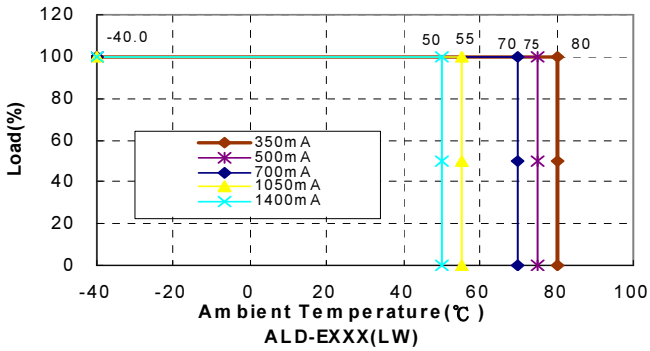
DALI Control:

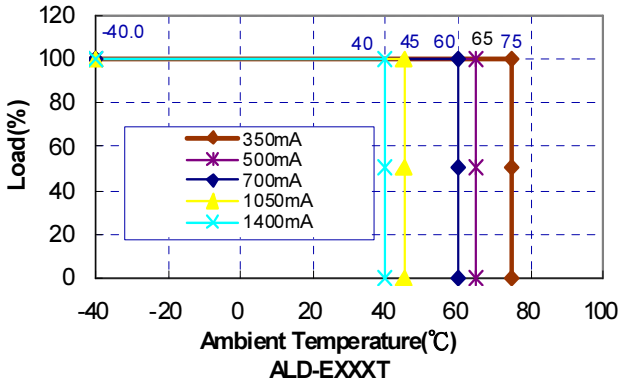
Output Current Range ..... (Hybrid Dimming) 1%-100%

SAFETY AND EMISSIONS:

EMI ..... EN55022/EN55015 Class B
EMS EN61547, EN61000-4-2, 3, 4, 5, 6

ALD Derating Curve



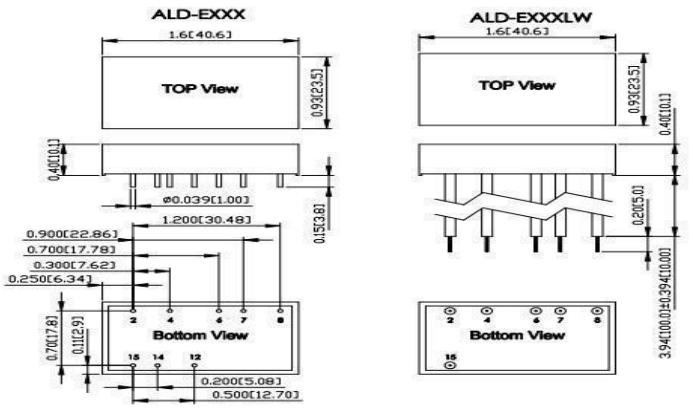


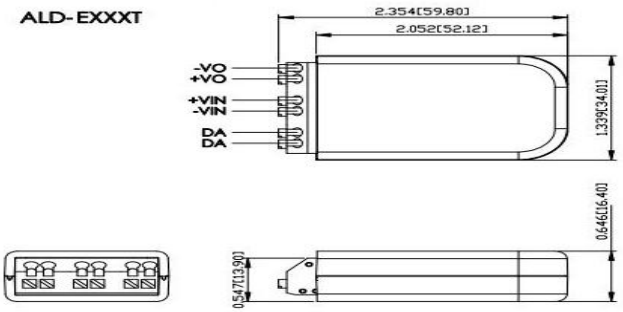
NOTE:

1. 3V<Vin-Vout<20Vdc 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 "LW" to the model number with wire type.
5. Suffix "T" to the model number with terminal type and only meets IP20
   Terminal: WAGO 250-108 or equivalent; wire range: 16~20 AWG.
6. Acceptable customer modifications.
7. IP65 for model: ALD-EXXX、ALD-EXXXLW.
   IP64 for model: ALD-EXXXT.

Mechanical Specification

NOTE:Pin Size is 0.039" Inch (1.00mm) DIA±0.05
All Dimensions In Inches[mm]
Tolerance Inches:x.xx=±0.02 ,x.xxx=±0.010
Millimeters: x.x=±0.5 , x.xx=±0.25





ALD CONNECTION		
ALD-EXXX	ALD-EXXXLW	Function
2	2 (Red)	+V Input
4	4 (Yellow)	+V Output
6	6 (Blue)	-V Output
7	7 (Brown)	DA
8	8 (Brown)	DA
12	NC	Analogue Dimming
14	NC	PWM DIM
15	15 (Black)	-V Input