



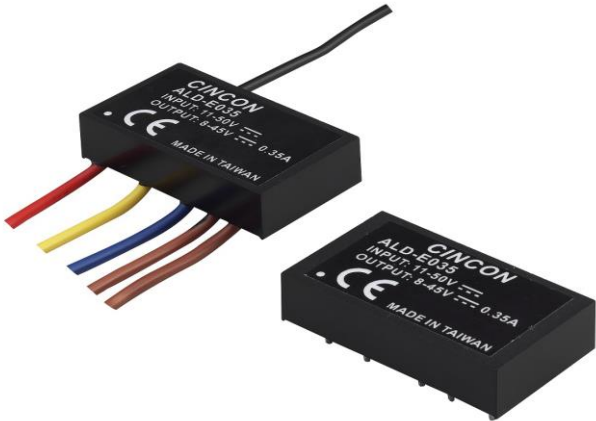
ALD-E SERIES

50.4 WATT BUCK LED DRIVER



Features

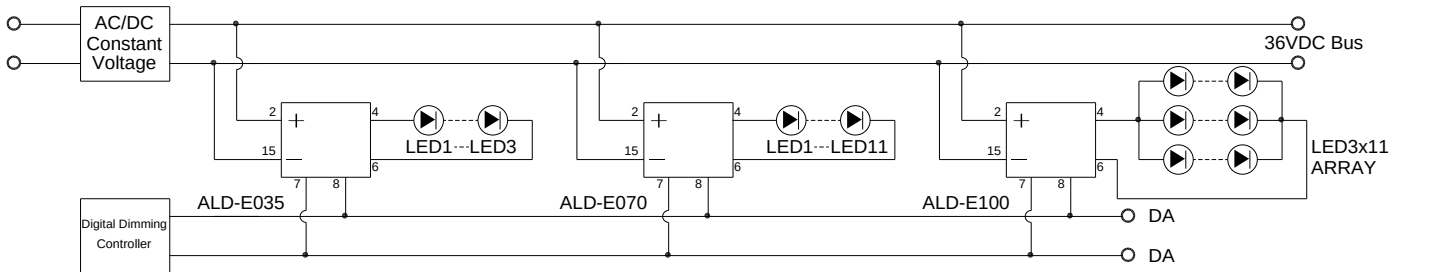
- * LED Driver Current up to 1400mA
- * Constant Current Output
- * Digital Dimming Control Dimming Range 1-100%
- * High Efficiency up to 95%
- * Continuous Short Circuit Protection
- * High Reliability
- * IP65 Protection (note7)



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. $3V < V_{in} - V_{ou} < 20V_{dc}$ 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



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Specifications

All specifications are Typical at nominal line, full load and 25°C 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%/°C (0~50°C)
Isolation Voltage Non-Isolation
Switching Frequency 40-700KHz.
Operating Ambient Temperature -40 ~ 80°C see Derating Curve
Case Temperature 100°C max.
Cooling Natural Convection
Storage Temperature -55 ~ 125°C
Operating Humidity 10%~95%RH non-condensing
Operating Altitude Sea Level to 3000m
Shock/Vibration MIL-STD-810F
MTBF MIL-HDBK-217F/25°C 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

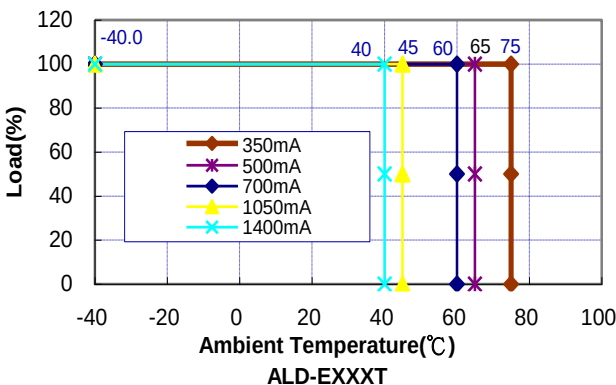
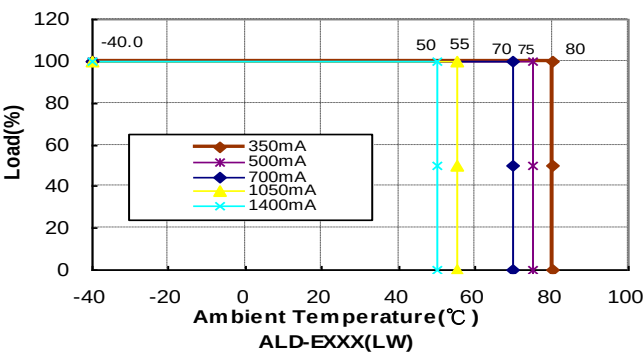
DIGITAL DIMMING CONTROL:

Output Current Range (Hybrid Dimming) 1%-100%
Meets IEC62386 Part 102, 207 Version1

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-EXXX

1.6[40.6]

TOP View

0.93[23.5]

0.40[10.1]

0.039[1.00]

1.20[30.48]

0.15[3.81]

0.90[22.86]

0.70[17.78]

0.30[7.62]

0.25[6.34]

Bottom View

15 14 12

0.20[5.08]

0.50[12.70]

ALD-EXXXLW

1.6[40.6]

TOP View

0.93[23.5]

0.40[10.1]

0.20[5.08]

3.94[100.04]±0.004[0.10]

Bottom View

15 14 12

ALD-EXXXT

2.354[59.80]

2.052[52.12]

+VO

+VIN

-VIN

DA

1.339[34.01]

0.646[16.40]

0.54[13.90]

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

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