



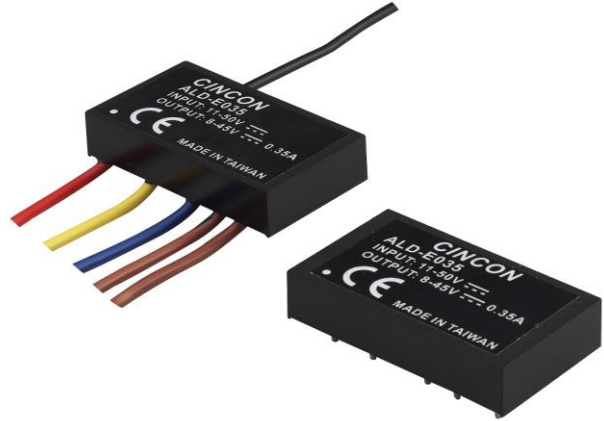
ALD-E SERIES

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)

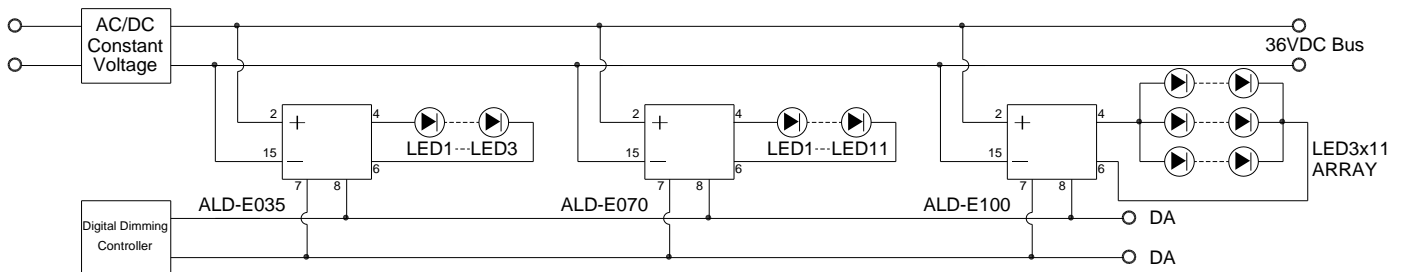


MODEL	Input Voltage Range	Output Operating Voltage	Output Rated Current	Output Rated Power	Ripple and Noise (max.) note2	Efficiency (TYPICAL) note3
ALD-E035	11 – 50 VDC	8-45 VDC	350 mA	15.75 W	300 mVpp	95%
ALD-E050	11 – 50 VDC	8-45 VDC	500 mA	22.50 W	500 mVpp	95%
ALD-E070	11 – 50 VDC	8-45 VDC	700 mA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

ALD Derating Curve

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)

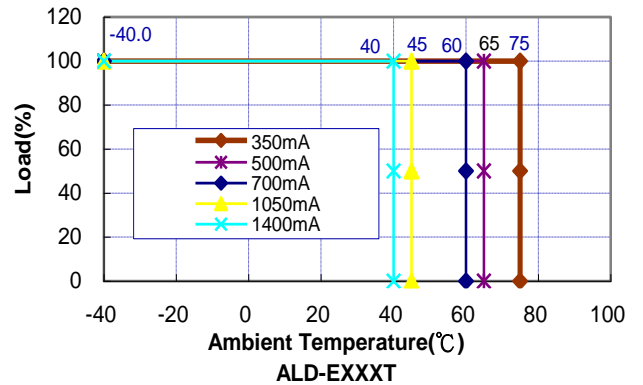
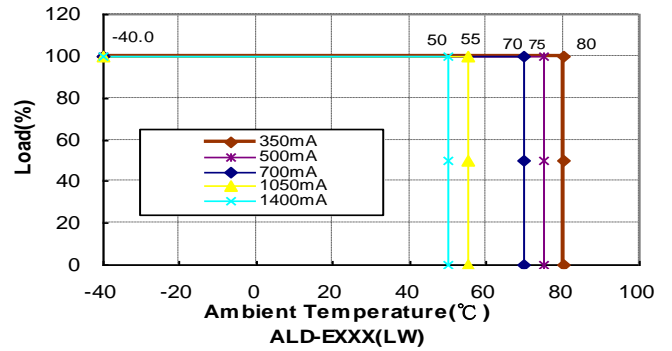
Weight PIN/LW/T 20g/23g/30g
 Case Material Plastic Case

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



NOTE:

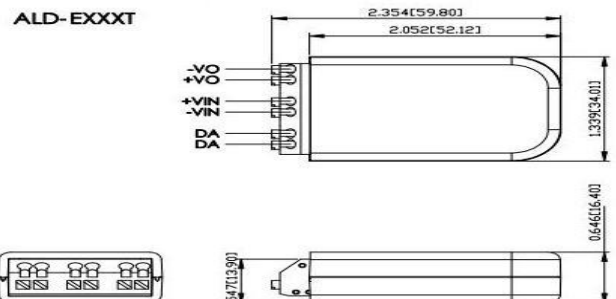
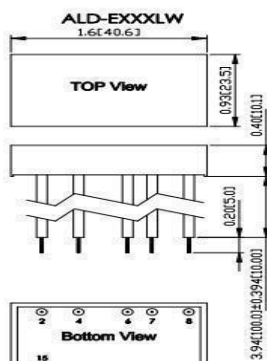
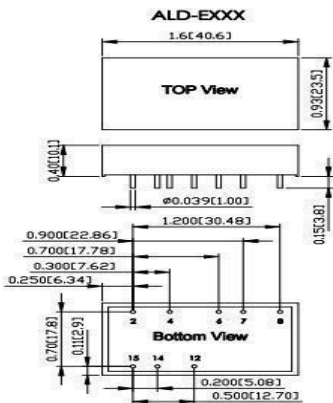
- 3V<Vin-Vout<20Vdc to keep current accuracy.
- Current line regulation is measured from high line to low line.
- Current load regulation is measured from high to low operating voltage.
- Suffix "LW" to the model number with wire type.
- Suffix "T" to the model number with terminal type and only meets IP20

Terminal: WAGO 250-108 or equivalent; wire range: 16~20 AWG.

- Acceptable customer modifications.
- 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

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