

■ Features :

- DC/DC buck-boost converter
- Constant current output: 300mA to 600mA
- Wide input voltage: 9 ~ 36VDC
- Wide output LED string voltage: 2 ~ 40VDC
- High efficiency up to 91%
- Built-in EMI filter, comply with EN55015 and FCC part15 without additional input filter and capacitors
- Built-in PWM and remote ON/OFF control
- Protections: Short circuit / Over temperature
- Cooling by free air convection
- Fully encapsulated with IP67 level
- Compact size
- Low cost, high reliability
- Suitable for driving illumination LED
- 3 years warranty



LDB-350L Blank : pin style
 W : wire style

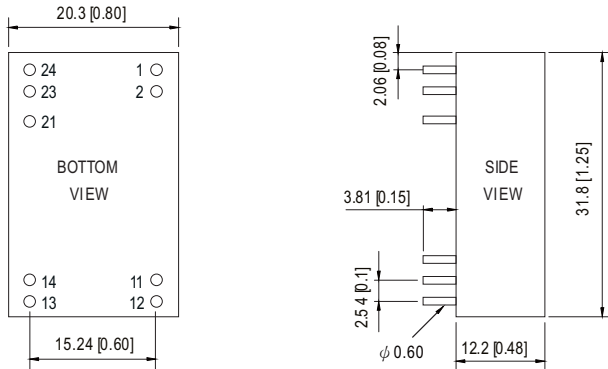
SPECIFICATION

| ORDER NO. | | LDB-300L <input type="checkbox"/> | LDB-350L <input type="checkbox"/> | LDB-500L <input type="checkbox"/> | LDB-600L <input type="checkbox"/> | |
|------------------------------|---|--|-----------------------------------|-----------------------------------|-----------------------------------|-----------------|
| OUTPUT | CURRENT RANGE | 300mA | 350mA | 500mA | 600mA | |
| | VOLTAGE RANGE | 2 ~ 40VDC | 2 ~ 40VDC | 2 ~ 32VDC | 2 ~ 30VDC | |
| | CURRENT ACCURACY (Typ.) | ±4% | | | | |
| | RIPPLE & NOISE(max.) Note.2 | 150mVp-p | 150mVp-p | 150mVp-p | 200mVp-p | |
| | SWITCHING FREQUENCY | 350KHz | | | | |
| | EXTERNAL CAPACITANCE LOAD (max.) | 10uF | | | | |
| INPUT | VOLTAGE RANGE | 9 ~ 36VDC | 9 ~ 36VDC | 9 ~ 30VDC | 9 ~ 28VDC | |
| | EFFICIENCY (max.) | 12VDC | 89% | 89% | 87% | |
| | | 24VDC | 90% | 90% | 91% | |
| | DC CURRENT | Full load | 12VDC 1070mA 24VDC 530mA | 1120mA 610mA | 1235mA 710mA | 1610mA 910mA |
| | | No load | 5mA | | | |
| FILTER | Capacitor | | | | | |
| PWM DIMMING & ON/OFF CONTROL | REMOTE ON/OFF | Leave open if not use Power ON with dimming: DIM ~ -Vin >2 ~ 10VDC or open circuit Power OFF : DIM ~ -Vin < 0.5VDC or short | | | | |
| | PWM FREQUENCY | 100 ~ 1KHz | | | | |
| | QUIESCENT INPUT CURRENT IN SHUTDOWN MODE(max.) | 1mA at PWM dimming OFF and 24VDC input | | | | |
| PROTECTION | SHORT CIRCUIT | Regulated at rated output current Protection type: Can be continued, recovers automatically after fault condition is removed | | | | |
| | OVER TEMPERATURE | Tj 145°C typically(IC1) detect on main control IC Protection type : Shut down, recovers automatically after temperature goes down | | | | |
| ENVIRONMENT | WORKING TEMP. | -40 ~ + 71°C (Refer to derating curve) | | | | |
| | WORKING HUMIDITY | 20% ~ 90% RH non-condensing | | | | |
| | STORAGE TEMP., HUMIDITY | -55 ~ +125°C, 10 ~ 95% RH | | | | |
| | TEMP. COEFFICIENT | ±0.03% / °C | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes | | | | |
| OPERATING CASE TEMP. (max.) | 110°C | | | | | |
| EMC | EMC EMISSION | Compliance to EN55015, FCC part 15 class B | | | | |
| | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,6,8, light industry level, criteria A | | | | |
| OTHERS | MTBF | 2000Khrs min. MIL-HDBK-217F (25°C) | | | | |
| | DIMENSION | 31.8*20.3*12.2mm or 1.25**0.8**0.48" inch (L*W*H) | | | | |
| | WEIGHT | LDB-L:15.6g ; LDB-LW:18g | | | | |
| | POTTING MATERIAL | Epoxy(UL94-V0) | | | | |
| NOTE | 1.All parameters are specified at normal input(24VDC), rated load, 25°C 70% RH ambient. 2.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf capacitor. 3.The output of LDB-L should not be connected to the input of the same unit or output from other sources. | | | | | |

Mechanical Specification

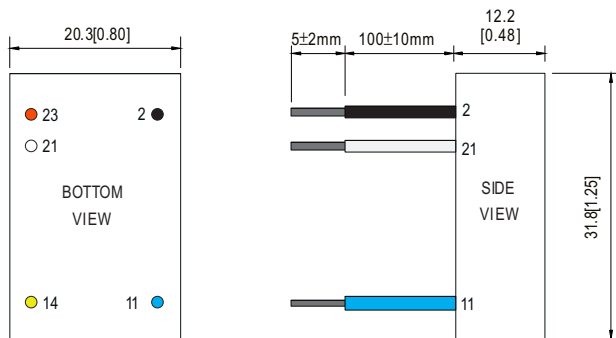
Blank type(LDB – _L):

Unit: mm (inch)



NOTE: Pin tolerance \pm 0.05mm

W type(LDB – _LW):



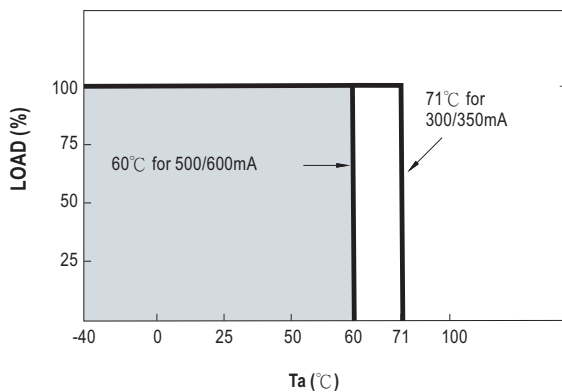
NOTE: All wires UL3385 22AWG

Pin Configuration

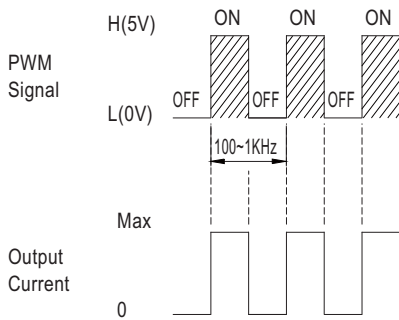
| Pin No. | Output | Comment |
|---------|---------|---|
| 1,2 | -Vin | Don't connect to -Vout |
| 11,12 | -Vout | LED - Connection |
| 13,14 | +Vout | LED + Connection |
| 21 | PWM DIM | ON/OFF and PWM Dimming (Leave open if not used) |
| 23,24 | +Vin | DC Supply |

| Pin No. | Output | Comment |
|---------|-----------------|---|
| 2 | -Vin (Black) | Don't connect to -Vout |
| 11 | -Vout (Blue) | LED - Connection |
| 14 | +Vout (Yellow) | LED + Connection |
| 21 | PWM DIM (White) | ON/OFF and PWM Dimming (Leave open if not used) |
| 23 | +Vin (Red) | DC Supply |

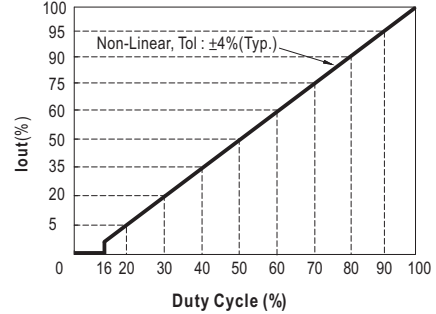
Derating Curve



■ PWM Dimming Control

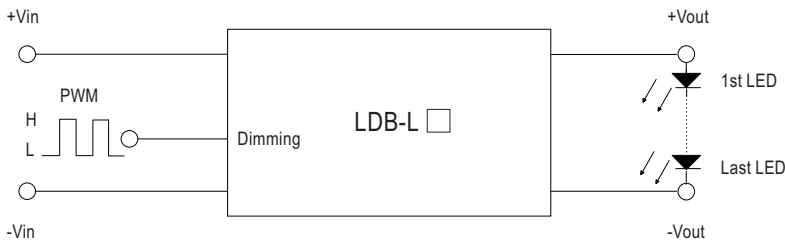


⊙ During PWM dimming operation, the output current will change to PWM style.



Power OFF : Duty cycle 0 ~ 15%
Power ON : Duty cycle 16 ~ 100%

■ Standard Application



H: >2~10VDC or open circuit
L: <0.5VDC or short

■ Efficiency VS Output Voltage (Number of LEDs)

