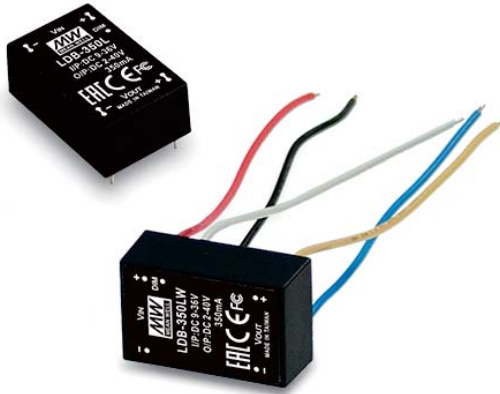




## DC-DC Constant Current Buck-Boost LED driver

# LDB-L series



- 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%
  - Comply with BS EN/EN55015 and FCC part15
  - 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
  - High reliability
  - Suitable for driving illumination LED
  - 3 years warranty

### ■ GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>



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

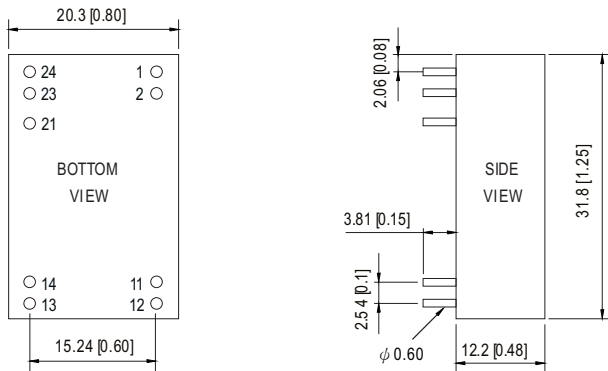
### SPECIFICATION

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 <small>Note.4</small>	2 ~ 40VDC	2 ~ 40VDC	2 ~ 32VDC	2 ~ 30VDC	
	CURRENT ACCURACY (Typ.)	±5%				
	RIPPLE & NOISE(max.) <small>Note.2</small>	150mVp-p	150mVp-p	150mVp-p	200mVp-p	
	SWITCHING FREQUENCY	1000KHz				
NO LOAD OUTPUT VOLTAGE		75VDC				
INPUT	VOLTAGE RANGE <small>Note.4</small>	9 ~ 36VDC	9 ~ 36VDC	9 ~ 30VDC	9 ~ 28VDC	
	EFFICIENCY (max.)	12VDC	86%	89%	87%	82%
		24VDC	90%	91%	89%	88%
	DC CURRENT	Full load	12VDC 930mA	1100mA	1590mA	2000mA
		No load	24VDC 450mA	520mA	790mA	930mA
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				
	MAX. PWM SIGNAL CURRENT	1mA				
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 ~ + 70°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.)		115°C				
EMC	SAFETY STANDARDS	EAC TP TC 020/2011 approved				
	EMC EMISSION	Compliance to BS EN/EN55015, FCC part 15 class B, EAC TP TC 020				
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,6,8, light industry level, criteria A, EAC TP TC 020				
OTHERS	MTBF	350Khrs 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(15pcs/Tube) ; LDB-LW:18g(20pcs/Box), Please order Base on MPQ				
	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. 4. If input voltage is 36V then the output voltage operating range had better <38V.					

### Mechanical Specification

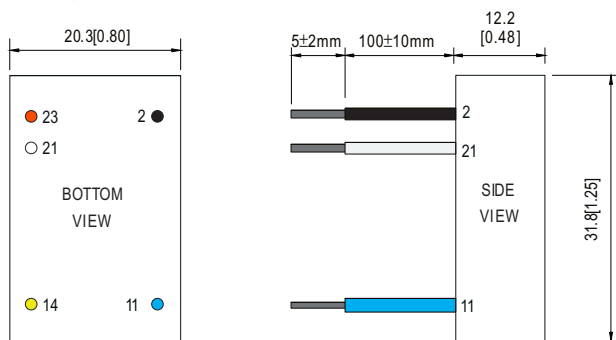
Blank type(LDB - \_L):

Unit: mm (inch)



NOTE: Pin tolerance  $\pm 0.05$ mm

W type(LDB - \_LW):



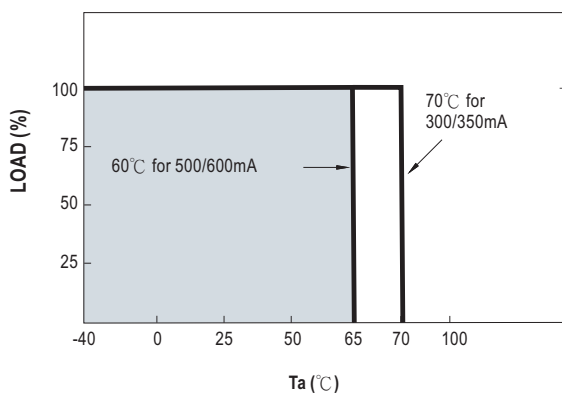
NOTE: All wires UL3385 22AWG

### Pin Configuration

Pin No.		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

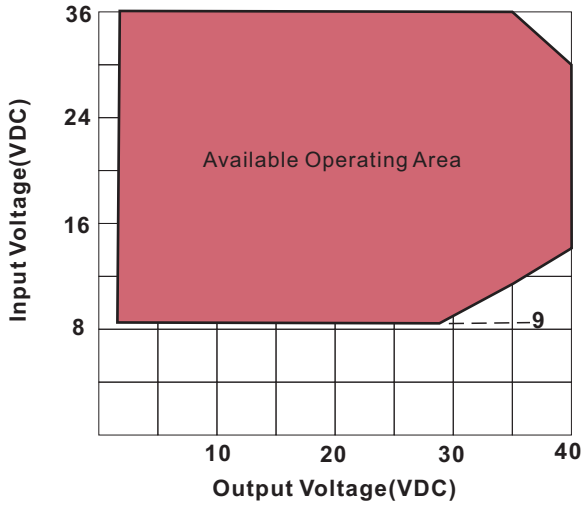
Pin No.		Comment
2	-Vin (Black)	Don't connect to -Vout
11	-Vout (Blue)	LED - Connection
14	+Vout (Yellow)	LED + Connection
21	PWM DIM (White)	ON/OFF and PWM Dimming (Leave open if not used)
23	+Vin (Red)	DC Supply

### Derating Curve



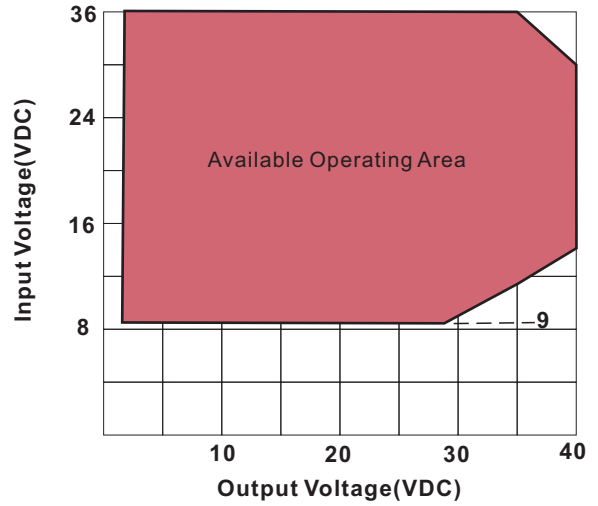
■ Safe Operating Area

OUTPUT CURRENT 300mA



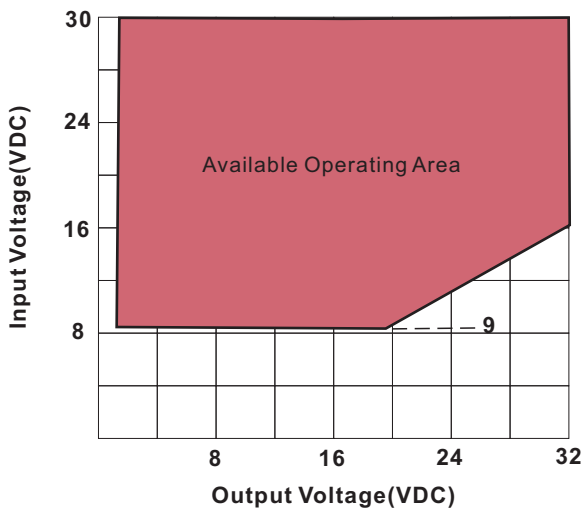
V<sub>in</sub> 9V up to V<sub>out</sub>=27V  
 V<sub>in</sub> 12V up to V<sub>out</sub>=36V

OUTPUT CURRENT 350mA



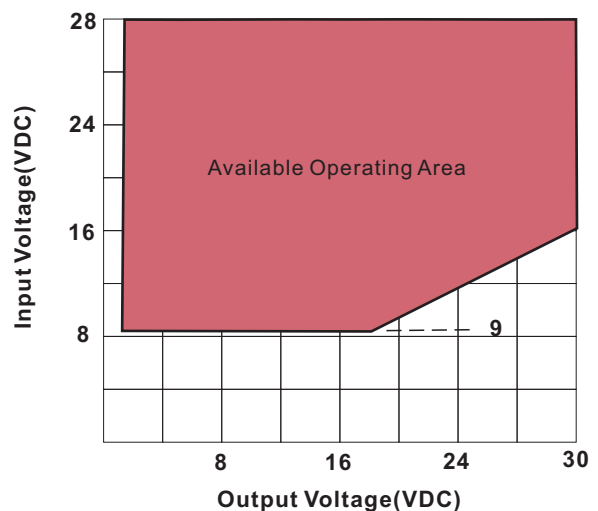
V<sub>in</sub> 9V up to V<sub>out</sub>=27V  
 V<sub>in</sub> 12V up to V<sub>out</sub>=36V

OUTPUT CURRENT 500mA



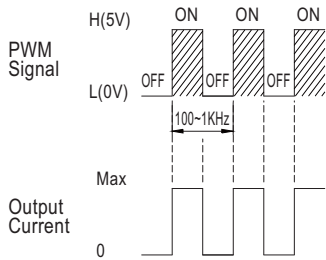
V<sub>in</sub> 9V up to V<sub>out</sub>=20V  
 V<sub>in</sub> 12V up to V<sub>out</sub>=24V  
 V<sub>in</sub> 16V up to V<sub>out</sub>=32V

OUTPUT CURRENT 600mA

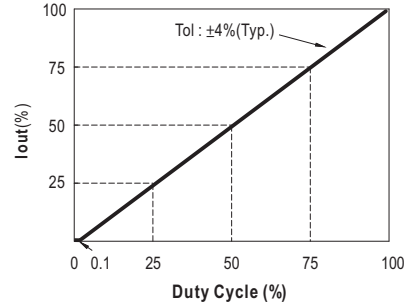


V<sub>in</sub> 9V up to V<sub>out</sub>=18V  
 V<sub>in</sub> 12V up to V<sub>out</sub>=24V  
 V<sub>in</sub> 16V up to V<sub>out</sub>=30V

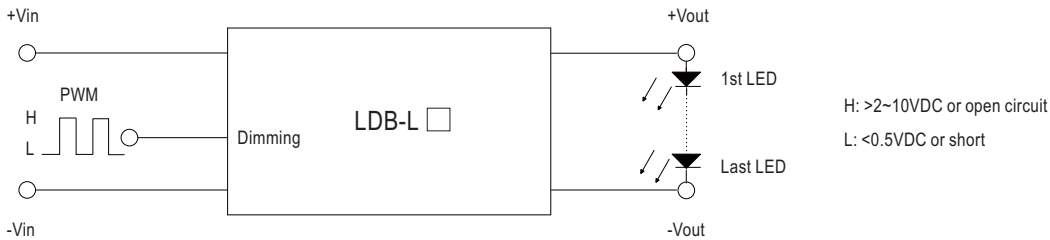
### ■ PWM Dimming Control



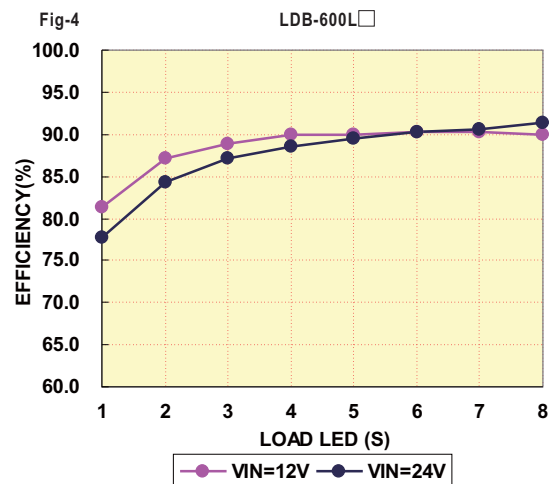
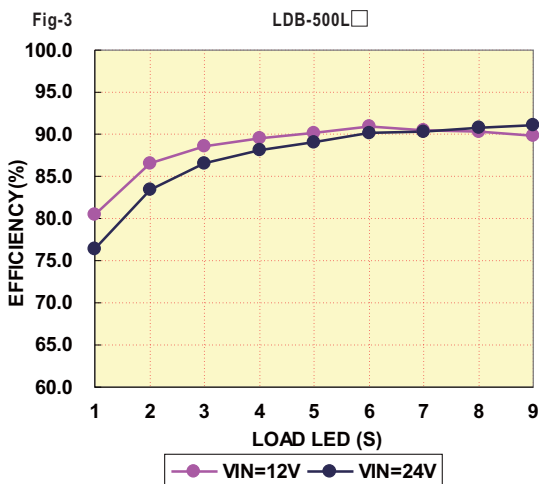
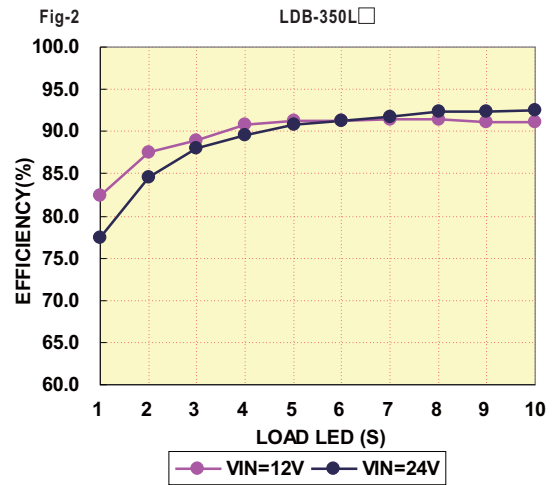
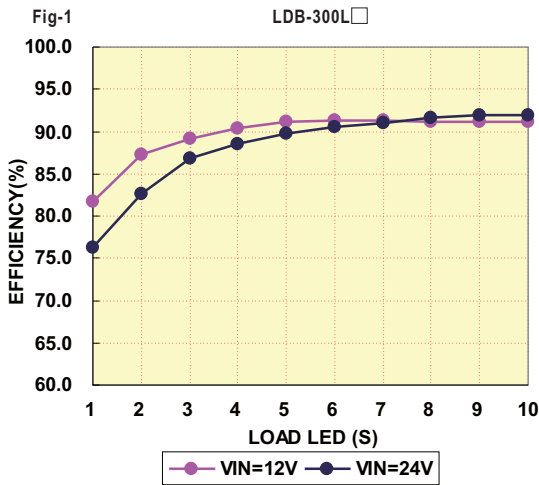
© During PWM dimming operation, the output current will change to PWM style.



### ■ Standard Application



### ■ Efficiency VS Output Voltage(Number of LEDs)

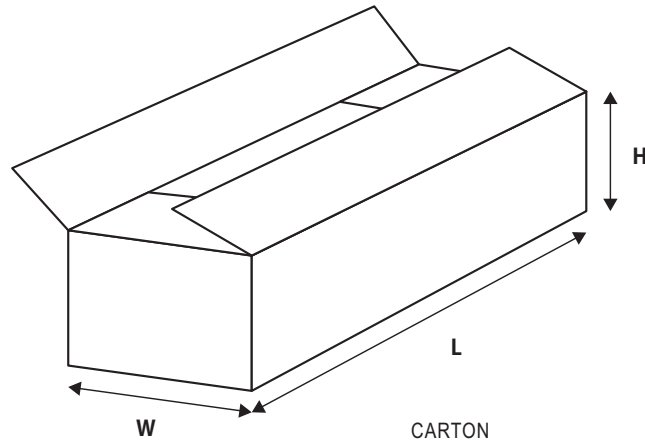


■ Packing

Standard Tube Packing	LDB-L			
	MPQ Per Tube (PCS)	One Tube G.W.	Max. Q'TY/ Carton(PCS)	One Carton G.W.
<p>Unit : mm</p> <p>Product</p> <p>Tube Plugs</p> <p>520</p> <p>24</p> <p>21.3</p> <p>8.472</p> <p>Tube pattern</p>	15	260g	750	13.8Kg
<p>Unit : mm</p> <p>2 pcs inside</p> <p>Product</p> <p>Box</p> <p>220</p> <p>45</p> <p>195</p> <p>Antistatic Foam</p> <th colspan="4">LDB-LW</th>	LDB-LW			
	MPQ (Box)	One Box G.W.	Max. Q'TY/ Carton(PCS)	One Carton G.W.
<p>20</p> <p>440g</p> <p>240</p> <p>6.08Kg</p>				

**Standard Tube Packing**

Unit : mm



CARTON  
L620 x W230 x H230

■ **Installation Manual**

Please refer to : <http://www.meanwell.com/manual.html>