



■ Features :

- DC/DC step-up converter
- Constant current output : 350mA to 1050mA
- Wide output LED string voltage up to 126VDC
- High efficiency up to 95%
- Built-in EMI filter ,comply with EN55015 without additional input filter and capacitors
- PWM + analog dimming and remote ON/OFF control [(Blank) type or W type]
- DALI dimming [(Blank)DA type or WDA type]
- Protections: Short circuit / Over voltage / Under voltage
- Cooling by free air convection
- Fully encapsulated
- 3 years warranty



LDH-45□-350○ □=A or B; A: 9~18VDC input range, B: 18~32VDC input range
 ○=(Blank) or W or (Blank)DA or WDA ;
 (Blank): PIN style, PWM+analog dimming
 W: Wire style, PWM+analog dimming
 (Blank)DA: PIN style, DALI dimming
 WDA: Wire style, DALI dimming

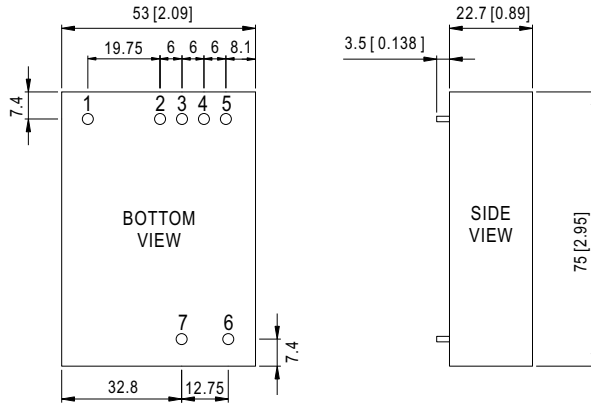
SPECIFICATION

MODEL		LDH-45A-350○	LDH-45A-500○	LDH-45A-700○	LDH-45A-1050○	LDH-45B-350○	LDH-45B-500○	LDH-45B-700○	LDH-45B-1050○	
OUTPUT	RATED CURRENT		350mA	500mA	700mA	1050mA	350mA	500mA	700mA	1050mA
	CURRENT ACCURACY(Typ.)		±5% at 12VDC input				±5% at 24VDC input			
	VOLTAGE RANGE Note.2	Non-DALI	12~86VDC	12~86VDC	12~64VDC	12~43VDC	21~126VDC	21~86VDC	21~64VDC	21~43VDC
		DALI	24~86VDC	24~86VDC	24~64VDC	24~43VDC	36~126VDC	36~86VDC	36~64VDC	36~43VDC
	NO LOAD OUTPUT VOLTAGE(max.)		100V	100V	75V	50V	146V	100V	75V	50V
	RATED POWER		30.1W	43W	44.8W	45.15W	44.1W	43W	44.8W	45.15W
RIPPLE & NOISE (max.) Note.3		2.5Vp-p	2.5Vp-p	1.9Vp-p	1.9Vp-p	2.5Vp-p	1.7Vp-p	1.2Vp-p	1.2Vp-p	
INPUT	RATED VOLTAGE		12VDC				24VDC			
	VOLTAGE RANGE Note.2		9~18VDC				18~32VDC			
	EFFICIENCY (max.)		91%	90%	90%	91%	93%	94%	95%	95%
	DC CURRENT (Typ.)		2.8A	4.1A	4.2A	4.2A	2.1A	2.1A	2A	2A
PWM DIMMING & ON/OFF CONTROL	REMOTE ON/OFF		Leave open if not used							
			Power ON with dimming: PWM signal >2~8VDC or open circuit, between PWM DIM and DIM-							
			Power OFF : PWM signal <0.5VDC or short or PWM duty is equal to 0%, between PWM DIM and DIM-							
	PWM DIMMING FREQUENCY		1K~10KHz							
QUIESCENT INPUT CURRENT IN SHUTDOWN MODE(Typ.)		7mA when PWM dimming OFF								
ANALOG DIMMING & ON/OFF CONTROL	REMOTE ON/OFF		Leave open if not used							
			Power on with dimming: DC input >0.25~8VDC or open circuit, between Analog DIM and DIM-							
			Power off : DC input <0.2VDC or short, between Analog DIM and DIM-							
	DIM INPUT VOLTAGE RANGE		0.25~1.3VDC							
	MAX OPERATION VOLTAGE		8V; The output current remains constant when voltage changes from 1.3V to 8V							
QUIESCENT INPUT CURRENT IN SHUTDOWN MODE(Typ.)		7mA when Analog dimming OFF								
PROTECTION	SHORT CIRCUIT		Protection type : Power OFF and fuse open							
	OVER VOLTAGE (max.)		100V	100V	75V	50V	146V	100V	75V	50V
ENVIRONMENT			Protection type : Constant output voltage and shut off o/p current, recovers automatically after fault condition is removed							
	WORKING TEMP.		-40 ~ +70℃ (Refer to "Derating Curve")							
	WORKING HUMIDITY		20 ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY		-40 ~ +85℃, 10 ~ 95% RH							
	TEMP. COEFFICIENT		±0.03%/℃ (0 ~ 50℃)							
EMC	VIBRATION		10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes							
	EMC EMISSION		Compliance to EN55015							
	EMC IMMUNITY		Compliance to EN61547,EN61000-4-2,3,4,6,8; light industry level, criteria A							
OTHERS	MTBF		1179.3Khrs min. MIL-HDBK-217F (25℃)							
	DIMENSION		75*53*22.7mm (L*W*H)							
	PACKING		138g;100pcs/14.8Kg/0.83CUFT[(Blank) type or (Blank) DA type],1.04CUFT(W type or WDA type)							
NOTE	1. All parameters are specified at normal input(12VDC,24VDC), rated load, 25℃ 70% RH ambient. 2. (Blank) type and W type output voltage must step up by 3 Volts from input DC voltage; (Blank)DA type and WDA type output voltage must step up by 12 Volts from input DC voltage. 3. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf parallel capacitor.									

Mechanical Specification

LDH (PIN Style):

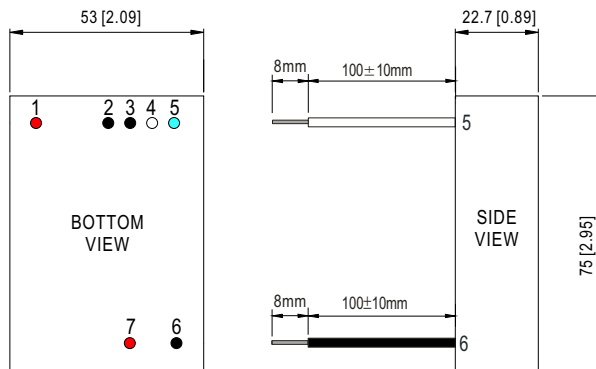
Unit: mm [inch]


NOTE: PIN size tolerance 1.0 $\phi \pm 0.05\text{mm}$

Pin Configuration

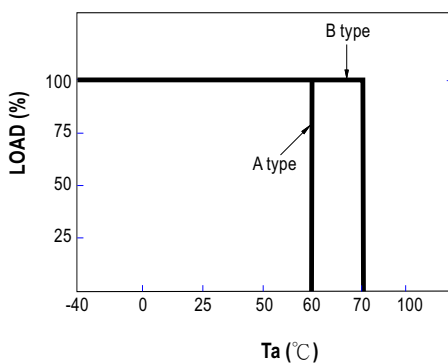
PIN No.	Output	Description
1	Vin+	DC Supply
2	Vin-	Don't connect to Vout-
3	DIM-	○=(Blank) type: GND of DIM signal Don't connect to Vout- or Vin-
	DA-	○=(Blank)DA type: DALI- signal
4	Analog DIM	○=(Blank) type: ON/OFF and analog dimming (leave open if not used)
	DA+	○=(Blank)DA type: DALI+ signal
5	PWM DIM	ON/OFF and PWM dimming (leave open if not used) [(Blank)DA type: no such PIN]
6	Vout-	LED - connection
7	Vout+	LED + connection

LDH (Wire Style):

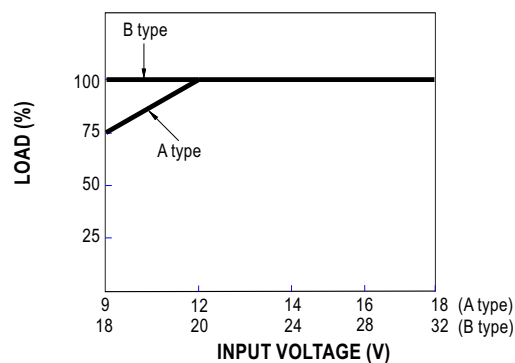


PIN No.	Output	Description
1	Vin+(red)	DC Supply
2	Vin-(black)	Don't connect to Vout-
3	DIM-(black)	○=W type: GND of DIM signal Don't connect to Vout- or Vin-
	DA-(white)	○=WDA type: DALI- signal
4	Analog DIM (white)	○=W type: ON/OFF and analog dimming (leave open if not used)
	DA+(blue)	○=WDA type: DALI+ signal
5	PWM DIM (blue)	ON/OFF and PWM dimming (leave open if not used) [WDA type: no such PIN]
6	Vout-(black)	LED - connection
7	Vout+(red)	LED + connection

Derating Curve



Static Characteristics

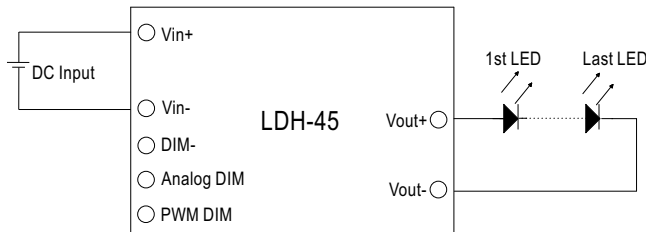


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Standard Application

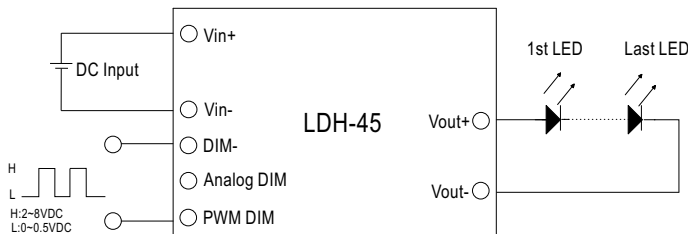
※ Operation without dimming:

IO operates at rated current without dimming function when the pins of analog DIM and PWM DIM keep open

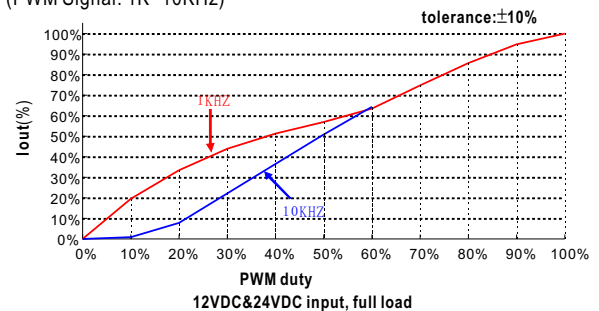


※ PWM Dimming Control (non DA type):

IO adjustment by PWM Signal



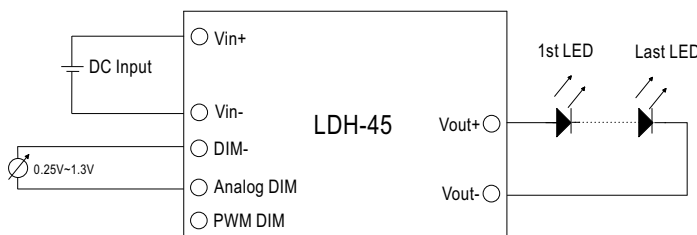
During PWM dimming operation, IO will change with the PWM duty (PWM Signal: 1K~10KHz)



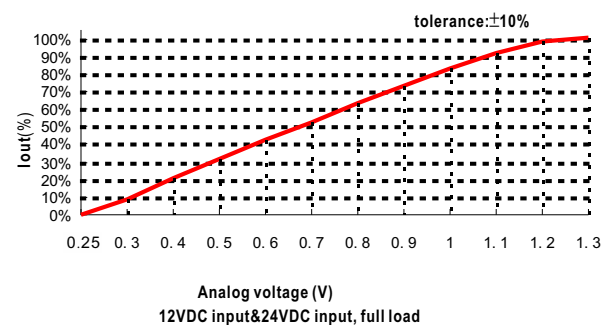
Note: DALI dimming curve refer to 10KHz curve

※ Analog Dimming Control (non DA type):

IO adjustment by DC voltage

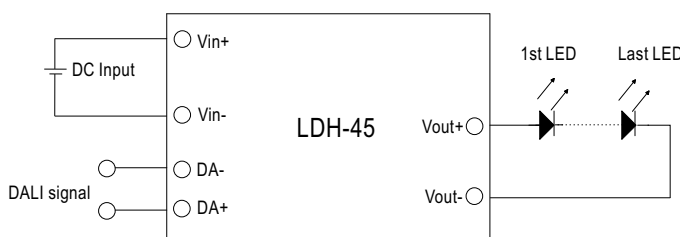


During analog dimming operation, IO will change with DC input voltage



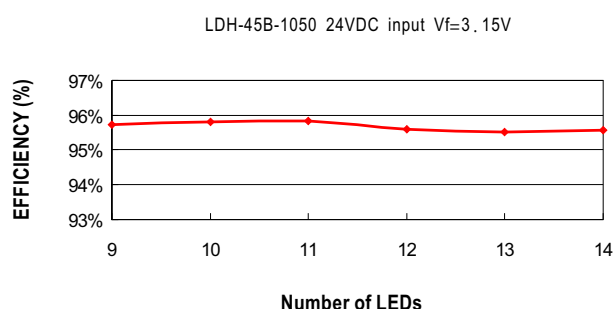
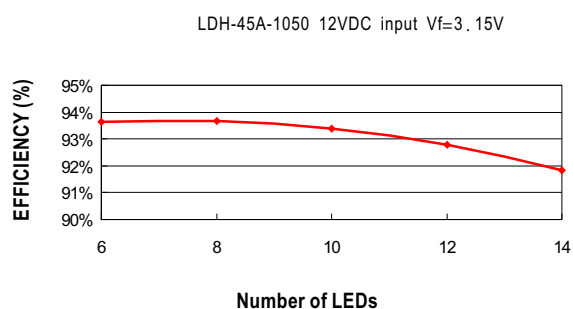
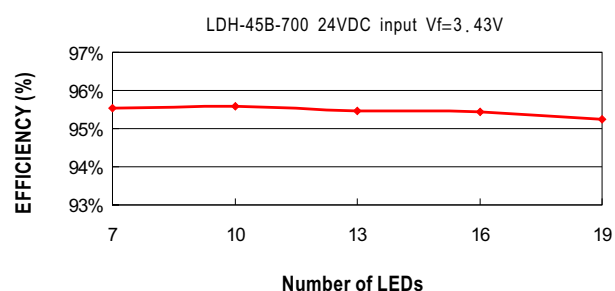
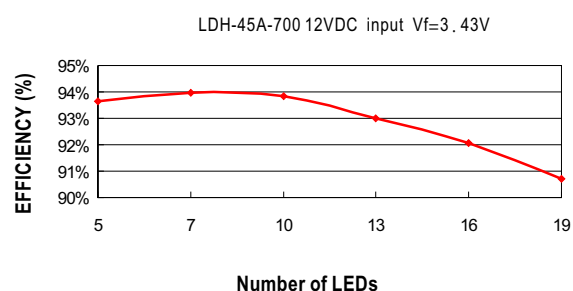
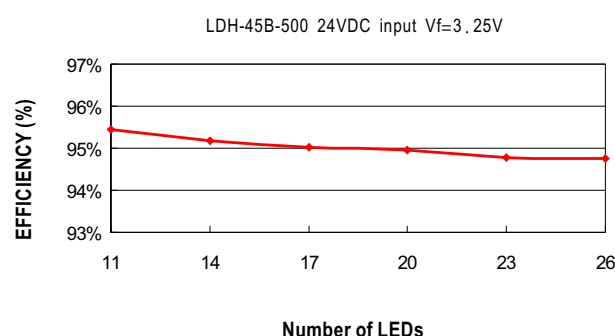
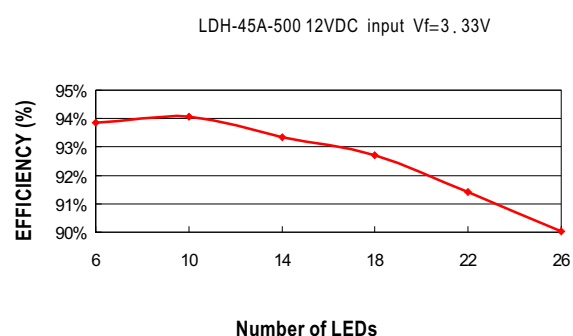
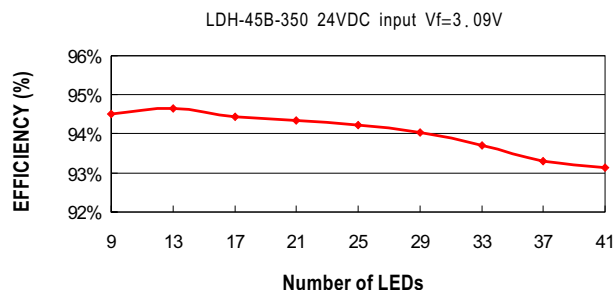
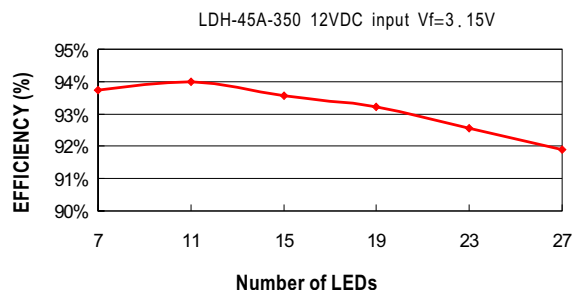
※ DALI Dimming Control (DA type only):

IO adjustment by DALI signal



- DALI protocol including 16 groups and 64 addresses.
- Min. dimming level is about 8% of output.

Efficiency VS Output Voltage(Number of LEDs)



Application Notes:

- 1.The positive and negative input terminals must be connected correctly and negative voltage can not be input to avoid damage to the power supply.
- 2.Due to the large input current, please pay attention to the voltage drop of the wiring, to ensure the power supply to work properly.
- 3.When using the LEDS of different forward voltage, please pay attention to the min Load of DA-type to ensure that LED lights went out after DALI dimming off.

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