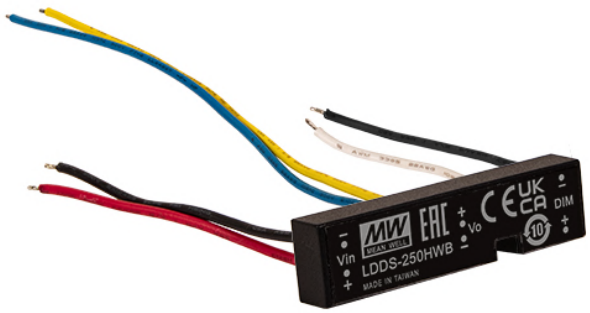
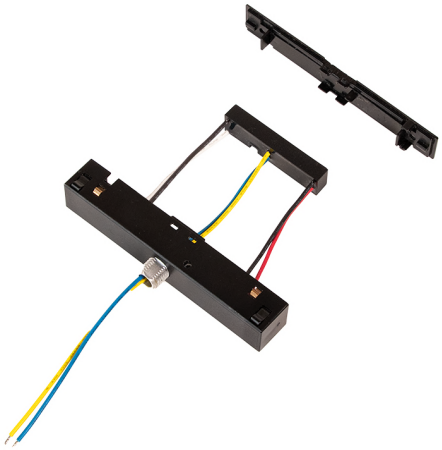
DC-DC Constant Current Step-Down LED driver

LDDS-H series





(Track adapter application)

Features

- DC/DC step-down converter
- Constant current output: 250mA to 1000mA
- Wide input voltage: 12 ~ 56VDC(48V typ.)
- Wide output LED forward string voltage: 2 ~ 45VDC
- High efficiency up to 96%
- Built-in EMI filter, comply with BS EN/EN55015
- 3 in 1 dimming and remote ON/OFF control.
- Protections: Short circuit / Over temperature / Over current
- Cooling by free air convection
- Compact size and Fully encapsulated
- Suitable for driving illumination LED
- 5 years warranty

Applications

- DC battery source lighting
- Portable lighting
- Commercial lighting
- DC 48V Track lighting
- DC 24V landscape lighting
- For STUCCHI track adapters
- For Ⅲ class Ⅲ application(SELV)

GTIN CODE

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

Description

LDDS-H series is a 45W DC/DC LED drive featuring constant current output. LDDS-H operates from 12~56VDC and offers models with different rated current ranging between 250mA and 1000mA. With the high efficiency up to 96%, The 94V-0 flame retardant plastic case with fully-potted to enhance th heat dissipation allows this series to fit for class Ⅲ commercial track light or DC bus lighting application.

Model Encoding

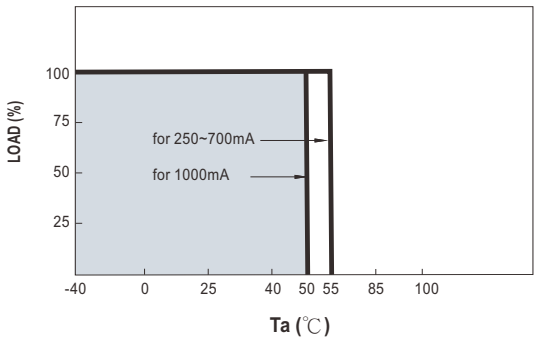
LDDS – 250 H W B

- B: Blank: Remote ON/OFF control; B: 3 in 1 Dimming function
- W: Wire style
- 250: Output current (250/300/350/500/700/1000mA)
- LDDS: Series name

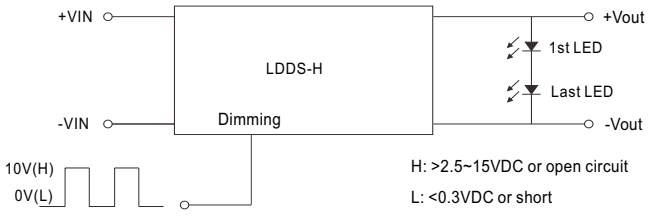
SPECIFICATION

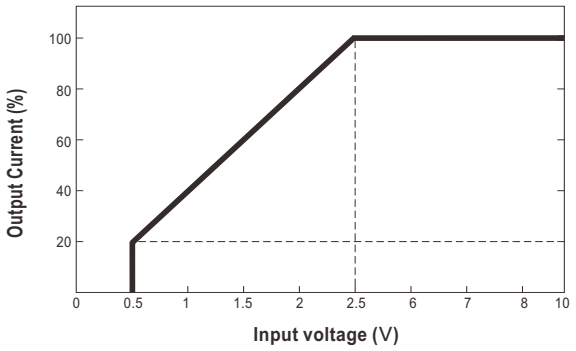
ORDER NO.			LDDS-250HW ☐	LDDS-300HW ☐	LDDS-350HW ☐	LDDS-500HW ☐	LDDS-700HW ☐	LDDS-1000HW ☐
OUTPUT	CURRENT RANGE		250mA	300mA	350mA	500mA	700mA	1000mA
	VOLTAGE RANGE Note.4		2 ~ 45VDC					
	CURRENT ACCURACY (Typ.)		±5% at 48VDC input (or 24VDC)					
	RIPPLE & NOISE(max.) Note.2		150mVp-p	150mVp-p	200mVp-p	350mVp-p	350mVp-p	350mVp-p
	SWITCHING FREQENCY		40KHz ~ 1000KHz					
	EXTERNAL CAPACITANCE LOAD (max.)		2.2uF					
INPUT	VOLTAGE RANGE		12 ~ 56VDC					
	EFFICIENCY (Typ.) Note.3		94%	95%				96%
	DC CURRENT	Full load Note.3	200mA	250mA	300mA	400mA	570mA	820mA
		No load	6mA					
	FILTER		Capacitor					
REMOTE ON/OFF & 3 IN 1 DIMMING	REMOTE ON/OFF		Leave open if not use					
			Power ON with dimming: DIM ~ -Vin >2.5 ~ 15VDC or open circuit					
			Power OFF : DIM ~ -Vin < 0.3VDC or short					
	PWM FREQUENCY		100 ~ 1KHz (4mA at PWM dimming off)					
	3 IN 1 DIMMING		0 ~ 10V / PWM / Resistor Dimming					
PROTECTION	SHORT CIRCUIT		Regulated at rated output current					
			Protection type: Can be continued, recovers automatically after fault condition is removed					
	OVER TEMPERATURE		Tj 150℃ typically(IC1) detect on main control IC					
			Protection type : Shut down, recovers automatically after temperature goes down					
ENVIRONMENT	WORKING TEMP.		-40 ~ + 55℃(Refer to derating curve) @ full load					
	WORKING HUMIDITY		20% ~ 90% RH non-condensing					
	STORAGE TEMP., HUMIDITY		-55 ~ +125℃, 10 ~ 95% RH					
	TEMP. COEFFICIENT		±0.03% / ℃					
	VIBRATION		10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes					
	OPERATING CASE TEMP. (max.)		90℃					
SAFETY & EMC	SAFETY STANDARDS		EAC TP TC 020/2011 approved					
	EMC EMISSION		Compliance to BS EN/EN55015, 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		650Khrs min. MIL-HDBK-217F (25℃)					
	DIMENSION		47*12*7mm or 1.85"*0.47"*0.28" inch (L*W*H)					
	PACKING		LDDS-HW: 9.5g, 36pcs/box, 0.43kg/box. 12 box per carton/6kg LDDS-HWB: 9.4g, 36pcs/box, 0.43kg/box. 12 box per carton/6kg					
	POTTING MATERIAL		Expoxy(UL94-V0)					
NOTE	1.All parameters are specified at normal input(48VDC), rated load, 25℃ 70% RH ambient. 2.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1μf capacitor. 3.Test condition: 48VDC input, 36VDC output without Dimming. 4.Output voltage will always step down 4 volts from input DC voltage. 5.The output of LDDS-H should not be connected to the input of the same unit or output from other sources. ※ Product Liability Disclaimer：For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx							

■ Derating Curve



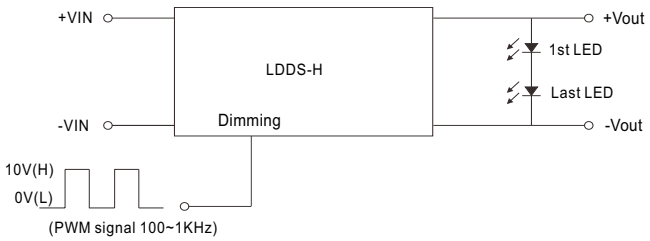
■ Standard Application(LDDS-HW series)(Remote ON/OFF control)

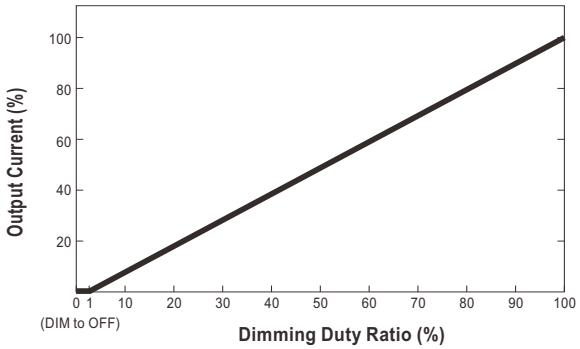




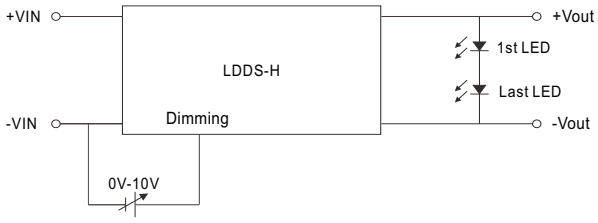
■ 3 in 1 Dimming Control(LDDS-HWB series)

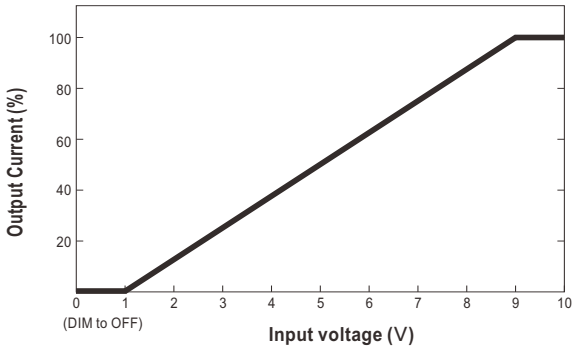
◎ Applying additive 10VDC PWM signal



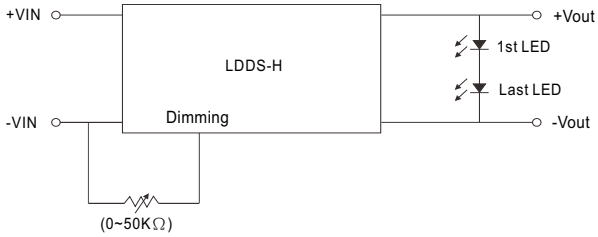


◎ Applying additive 0~10VDC

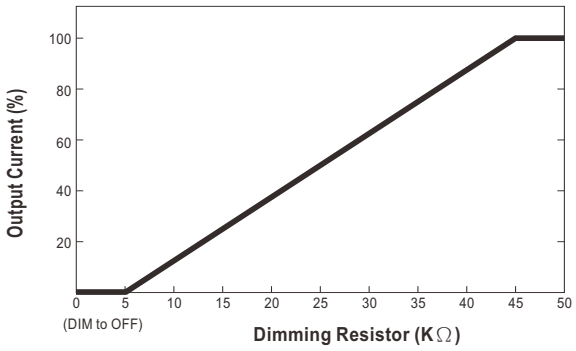




◎ Applying additive resistance

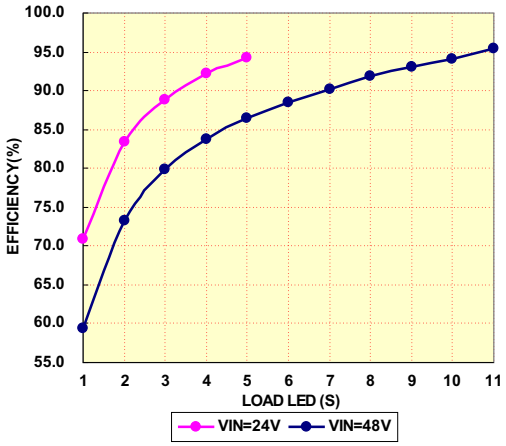


(Dimming source current from power supply:200μA)

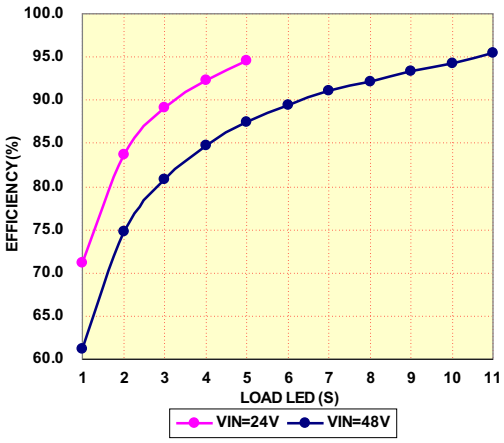


Efficiency VS Output Voltage(Number of LEDs)

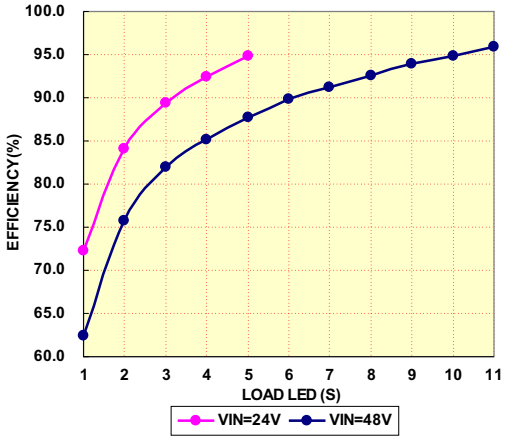
OUTPUT CURRENT 250mA



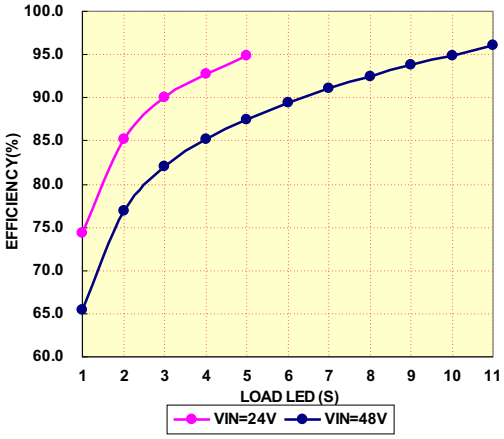
OUTPUT CURRENT 300mA



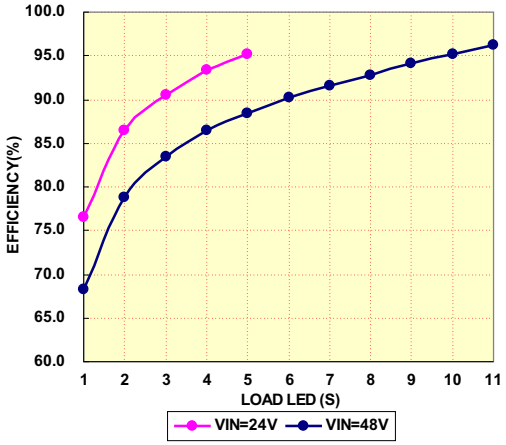
OUTPUT CURRENT 350mA



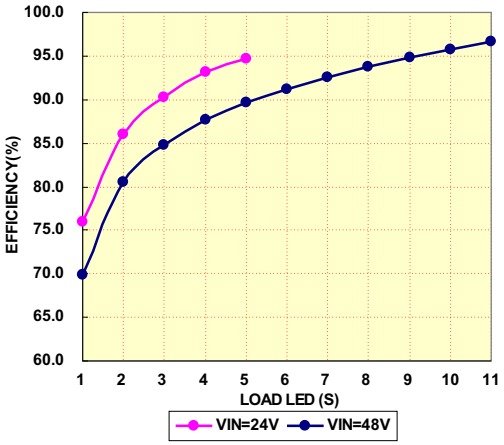
OUTPUT CURRENT 500mA



OUTPUT CURRENT 700mA

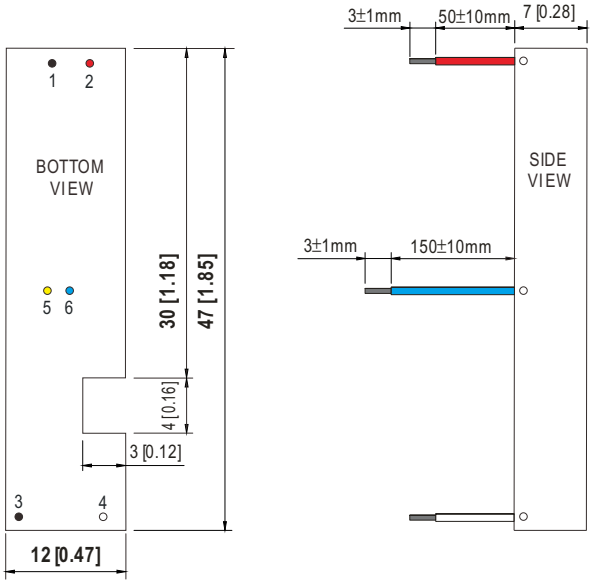


OUTPUT CURRENT 1000mA



Mechanical Specification

Unit: mm (inch)

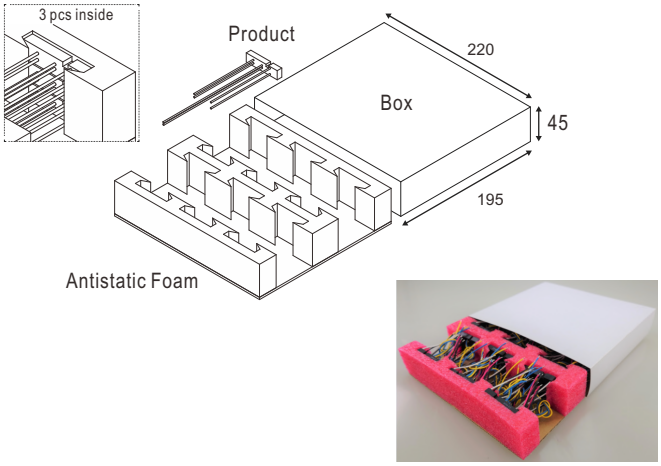
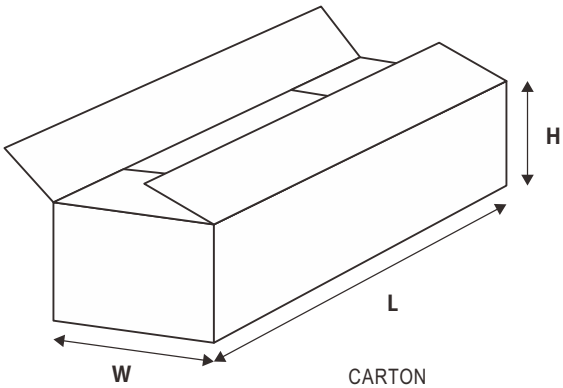


NOTE: All wires UL3385 22AWG/300V/105℃ rated

Pin Configuration

Pin No.		Comment
1	-Vin (Black)	Don't connect to -Vout
2	+Vin (Red)	DC Supply
3	DIM(-) (Black)	Connect to -Vin
4	DIM(+) (White)	ON/OFF control or 3 in 1 Dimming
5	+Vout (Yellow)	LED + Connection
6	-Vout (Blue)	LED - Connection

Packing

Standard Packing	MPQ (Box)	One Box G.W.	Max. Q'TY/ Carton(PCS)	One Carton G.W.
Unit : mm   CARTON L620 x W230 x H230	36	430g	432	6Kg