



Features:

- DC/DC step-down converter
- Constant current output: 300mA to 700mA
- Wide input voltage: 9 ~ 36VDC
- Wide output LED string voltage: 2 ~ 32VDC
- High efficiency up to 95%
- Built-in EMI filter, comply with BS EN/EN55015 and FCC part15 without additional input filter and capacitors
- Built-in PWM dimming and remote ON/OFF control
- Protections: Short circuit / Over temperature
- Cooling by free air convection
- Fully encapsulated with IP67 level for pin and wire style
- Compact size
- Low cost, high reliability
- Suitable for driving illumination LED
- 3 years warranty

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LDD-350L W Blank : pin style

W : wire style S : SMD style

SPECIFICATION

ORDER NO.		LDD-300L	LDD-350L	LDD-500L	LDD-600L	LDD-700L		
	CURRENT RANGE		300mA	350mA	500mA	600mA	700mA	
	VOLTAGE RANGE Note.4		2 ~ 32VDC for LDD-300~700L/LW; 2~ 28VDC for LDD-300~700LS					
ОИТРИТ	CURRENT ACCURACY (Typ.)		±5% at 24VDC input					
OUTFUT	RIPPLE & NOIS	SE(max.) Note.2	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	
	SWITCHING FF	REQENCY	40KHz ~ 1000KHz	40KHz ~ 1000KHz				
	EXTERNAL CAPACI	TANCE LOAD (max.)	2.2uF	2.2uF				
	VOLTAGE RAN	GE	9 ~ 36VDC for LDD-300~700L/LW; 9~ 32VDC for LDD-300~700LS					
	EFFICIENCY (n	nax.)	95% at full load and 24VDC/36VDC input for LDD-300~700L/LW; 95% at full load and 24VDC input for LDD-300~700LS					
INPUT	DC CURRENT	Full load Note.3	300mA	350mA	500mA	600mA	700mA	
	DC CURRENT	No load	5mA					
	FILTER		Capacitor					
			Leave open if not use					
PWM	REMOTE ON/O	FF	Power ON with dimming	: DIM ~ -Vin >3.5 ~ 8V	DC or open circuit			
DIMMING &			Power OFF : DIM ~ -Vin	< 0.5VDC or short				
ON/OFF	PWM FREQUE	NCY	100 ~ 1KHz					
CONTROL			1mA at PWM dimming OFF and 24VDC input					
	OLIOPE OIDOU		Regulated at rated output current					
	SHORT CIRCU	11	Protection type: Can be continued, recovers automatically after fault condition is removed					
PROTECTION	PROTECTION OVER TEMPERATURE		Tj 150°C typically(IC1) detect on main control IC					
			Protection type : Shut of	lown, recovers autom	atically after temperature	goes down		
	WORKING TEMP. WORKING HUMIDITY		-40 ~ +85°C (Refer to derating curve)					
			20% ~ 90% RH non-condensing for LDD-300~700L/LW; 20% ~ 85% RH non-condensing for LDD-300~700LS					
FAILUR CAMERIT	STORAGE TEMP., HUMIDITY		-55 ~ +125°C, 10 ~ 95% RH					
ENVIRONMENT	TEMP. COEFFI	CIENT	±0.03% / ℃					
	VIBRATION		10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes					
	OPERATING CA	SE TEMP. (max.)	100℃					
	SAFETY STANI	DARDS	EAC TP TC 020/2011 a	proved				
EMC	EMC EMISSION	١	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					
	MTBF		1000Khrs min. MIL-HDBK-217F (25°C)					
	DIMENSION		22.6*9.9*8.9mm or 0.89**0.39**0.35" inch (L*W*H) for LDD-300~700L/LW; 25.4*10.5*9.3mm or 1**0.4135**0.366" inch (L*W*H) for LDD-300~700L/S					
OTHERS	WEIGHT		LDD-300~700L:4g; LDD-300~700LW:7.3g; LDD-300~700LS:3.4g					
	POTTING MATE	ERIAL	Expoxy(UL94-V0) for LDD-300~700L/LW; without potted for LDD-300~700LS					
NOTE	1.All parameters are specif 2.Ripple & noise are meast 3.Test condition: 24VDC in 4.Output voltage will always 5.The output of LDD-L sho % Product Liability Disclaim		red at 20MHz by using but. step down by 3 volts fild not be connected to	a 12" twisted pair ter rom input DC voltage the input of the same	rminated with a 0.1uf cap e. e unit or output from othe	er sources.	ox	
				-			File Name: I DD-1 - SPEC 2021-11-2	





Features :

- DC/DC step-down converter
- Constant current output: 1000mA to 1500mA
- Wide input voltage: 6 ~ 36VDC
- Wide output LED string voltage: 2 ~ 30VDC
- High efficiency up to 95%
- Built-in EMI filter, comply with BS EN/EN55015 and FCC part15 without additional input filter and capacitors
- Built-in PWM +analog dimming and remote ON/OFF control
- Protections: Short circuit
- Cooling by free air convection
- Fully encapsulated with IP67 level for pin and wire style
- Non-potted, optional conformal coating for SMD style (Order No.: LDD-1000LSC)
- Compact size
- · Low cost, high reliability
- Suitable for driving illumination LED
- 3 years warranty

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 $LDD\text{-}1000L \boxed{W} \quad \text{Blank: pin style}$

W : wire style S : SMD style

SPECIFICATION

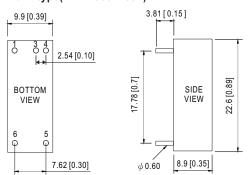
ORDER NO.			LDD-1000L	LDD-1200L	LDD-1500L		
	CURRENT RANGE		1000mA	1200mA	1500mA		
	VOLTAGE RANGE Note.4		2 ~ 30VDC				
OUTPUT	CURRENT ACCURACY (Typ.)		±5% at 24VDC input				
OUIPUI	RIPPLE & NOIS	SE(max.) Note.2	1.5Vp-p	1.5Vp-p	1.5Vp-p		
	SWITCHING FR	REQENCY	1000KHz				
	EXTERNAL CAPACI	TANCE LOAD (max.)	2.2uF				
	VOLTAGE RAN	IGE	6 ~ 36VDC				
	EFFICIENCY (r	nax.)	95% at full load and 24VDC/36VDC input for LDD-1000~1500L/LW				
INPUT	DC CURRENT	Full load Note.3	990mA	1160mA	1450mA		
	DC CURRENT	No load	5mA				
	FILTER		Capacitor				
			Leave open if not use				
PWM	REMOTE ON/O)FF	Power ON with dimming: DIM ~ -Vin >2	2.6 ~ 5.5VDC or open circuit			
DIMMING &			Power OFF: DIM ~ -Vin < 0.4VDC or s	hort			
ON/OFF	PWM FREQUE	NCY	100 ~ 500Hz				
CONTROL	QUIESCENT IN		1mA at PWM dimming OFF and 24VDC input				
ANALOG DIMMING			Leave open if not use				
& ON/OFF	REMOTE ON /	OFF	Power ON with dimming: DIM ~ -Vin>0.5~2.5VDC or open circuit				
CONTROL			Power OFF: DIM ~ -Vin<0.4VDC or short				
PROTECTION	SHORT CIRCU	IT	Regulated at rated output current				
TROTEOTION			Protection type: Can be continued, recovers automatically after fault condition is removed				
	WORKING TEN	/IP.	-40 ~ + 71°C (Refer to derating curve)				
	WORKING HUI			DD-1000~1500L/LW ; 20%~85°	% RH non-condensing for LDD-1000~1500LS		
ENVIRONMENT	STORAGE TEN		-55 ~ +125°C, 10 ~ 95% RH				
LITTINONIILITI	TEMP. COEFFI	CIENT	±0.03% / °C				
	VIBRATION		10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes				
		SE TEMP. (max.)					
	SAFETY STAN		EAC TP TC 020/2011 approved				
EMC	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				
	MTBF		1000Khrs min. MIL-HDBK-217F (25°C)				
OTHERS	DIMENSION		31.8*20.3*12.2mm or 1.25**0.8**0.48" inch (L*W*H) for LDD-1000~1500L/LW; 31.8*20.3*10.9mm or 1.25**0.8**0.43" inch (L*W*H) for LDD-1000~1500LS				
OTTLKS	WEIGHT		LDD-1000~1500L:15.6g; LDD-1000~1500LW:18g; LDD-1000~1500LS:12.8g				
	POTTING MAT	ERIAL	Expoxy(UL94-V0) for LDD-1000~1500L/LW; without potted for LDD-1000~1500LS				
NOTE	2.Ripple & no 3.Test condit 4.Output volt 5.The output	pise are measu tion: 36VDC inp age will always of LDD-L shou	ed at normal input(24VDC), rated lo- red at 20MHz by using a 12" twisted out. step down by 3 volts from input DC Id not be connected to the input of the er: For detailed information, please	pair terminated with a 0.1uf voltage. ne same unit or output from o	ther sources.		



■ Mechanical Specification

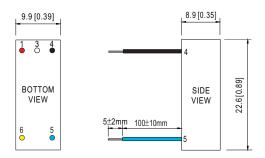
Blank type(LDD-300~700L):

Unit: mm (inch)



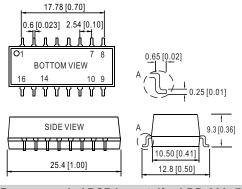
NOTE: Pin tolerance ±0.05mm

W type(LDD = 300~700LW):

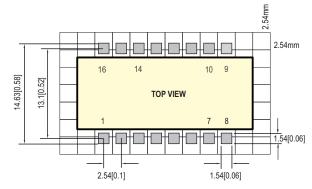


NOTE: All wires UL3385 22AWG

S type(LDD -300~700LS):



■ Recommended PCB layout (for LDD-300~700LS)



■ Pin Configuration

Р	in No.	Comment
1	+Vin	DC Supply
3	PWM DIM	ON/OFF and PWM Dimming (Leave open if not used)
4	-Vin	Don't connect to -Vout
5	-Vout	LED - Connection
6	+Vout	LED + Connection

Р	in No.	Comment
1	+Vin (Red)	DC Supply
3	PWM DIM (White)	ON/OFF and PWM Dimming (Leave open if not used)
4	-Vin (Black)	Don't connect to -Vout
5	-Vout (Blue)	LED - Connection
6	+Vout (Yellow)	LED + Connection

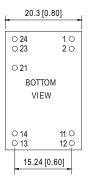
Р	in No.	Comment
1	+Vin	DC Supply
7,8	+Vout	LED + Connection
9,10	-Vout	LED - Connection
14	PWM DIM	ON/OFF and PWM Dimming (Leave open if not used)
16	-Vin	Don't connect to -Vout
others N.C		LED - Connection

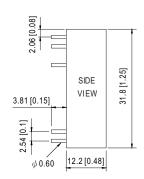


■ Mechanical Specification

Blank type(LDD-1000~1500L):

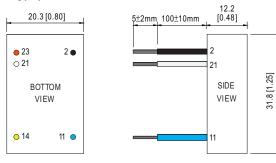
Unit: mm (inch)





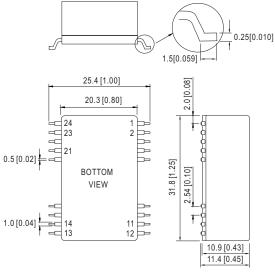
NOTE: Pin tolerance ±0.05mm

W type(LDD - 1000~1500LW):



NOTE: All wires UL3385 22AWG

S type(LDD -1000~1500LS):



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4 0 10 041	44	T I		

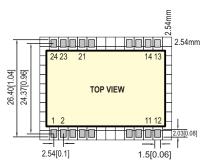
■ Pin Configuration

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

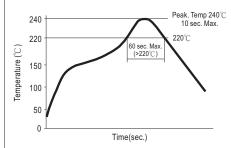
	Pin No.	Comment
1,2	-Vin	Don't connect to -Vout
11,12	-Vout	LED - Connection
13,14	+Vout	LED + Connection
21	PWM +analog DIM	ON/OFF and PWM / analog Dimming (Leave open if not used)
23,24	+Vin	DC Supply
others N.C		No connection

■ Recommended PCB layout (for LDD-1000~1500LS)



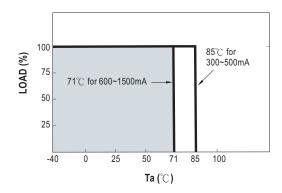


■ Reflow Soldering Curve (for LDD-300~1500LS)



Remark : The curve applies only to the "Hot Air Reflow Soldering"

■ Derating Curve



■ PWM Dimming Control (for 300~1500mA)

Io Adjustment by PWM signal:



300 ~ 700mA:

H: > 3.5~8VDC or open circuit

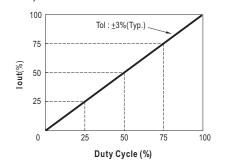
L: < 0.5VDC or short

1000 ~ 1500mA:

H: > 2.6~5.5VDC or open circuit

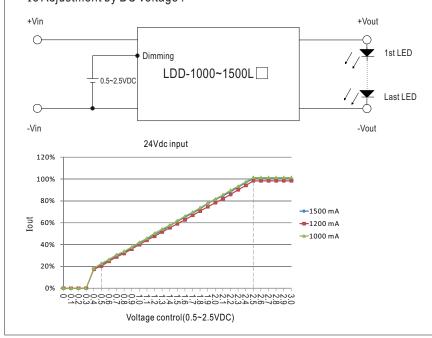
L: < 0.4VDC or short

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

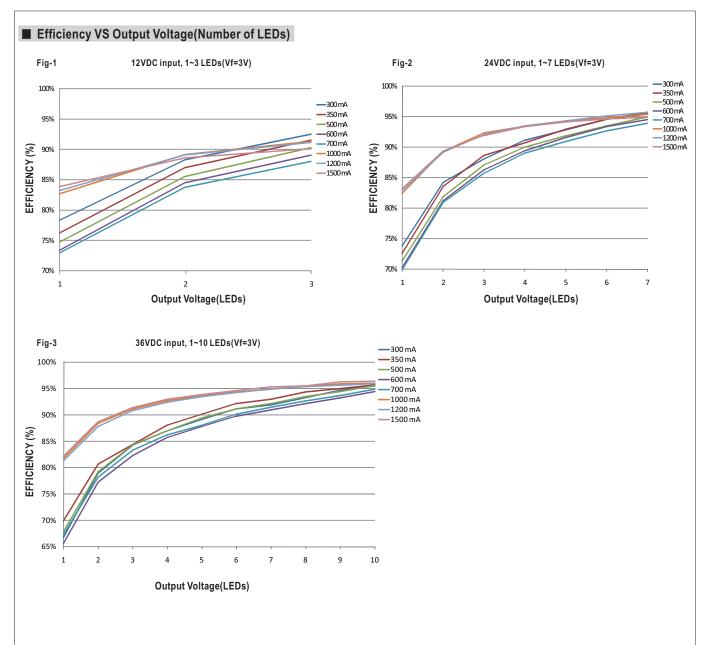


■ Analog Dimming Control for 1000~ 1500mA only

Io Adjustment by DC voltage:







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