CUI INC®

SERIES: VLD24 | DESCRIPTION: LED DRIVER

FEATURES

- up to 700 mA constant current
- wide input (5.5~36 V)
- compact package
- PWM or analog dimming capable
- short circuit protection
- remote on/off control
- efficiency up to 96%



RoHS

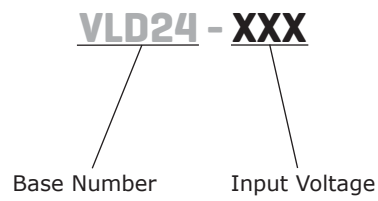
V-Infinity

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MODEL

MODEL	input voltage		output voltage	output current		dimming control	efficiency
	typ (Vdc)	range (Vdc)	range (Vdc)	min (mA)	max (mA)		typ (%)
VLD24-300	24	6.5~36.0	2~30	0	300	digital + rheostat	96
VLD24-350	24	6.5~36.0	2~30	0	350	digital + rheostat	96
VLD24-500	24	6.5~36.0	2~30	0	500	digital + rheostat	96
VLD24-600	24	6.5~36.0	2~30	0	600	digital + rheostat	96
VLD24-700	48	6.5~36.0	2~30	0	700	digital + rheostat	96

PART NUMBER KEY



INPUT

parameter	conditions/description	min	typ	max	units
maximum input voltage	for ≤ 10 seconds	5.5		40	Vdc
operating input voltage		6.5	24	36	Vdc
quiescent input current in off mode	Vin = 24 V, V_r < 0.6 V			400	µA
input filter	capacitor				
remote on/off	ON (V_r on pin 3) open or 2.8 V < V_r < 6 V OFF V_r < 0.6 V				
remote pin current	V_r = 5 V			1	mA
PWM frequency			0.2	10	kHz

OUTPUT

parameter	conditions/description	min	typ	max	units
output voltange range	Vin = 36 V	2		30	Vdc
current accuracy	Vin = 24 V, 5 LEDs		±7	±12	%
current stability	Vin = 24 V, 1~5 LEDs		±8	±15	%
temperature coefficient			±0.03		%/°C
capacitive load				470	µF

PROTECTIONS

parameter	conditions/description	min	typ	max	units
short circuit protection	continuous				

SAFETY AND COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	for 1 minute at 1 mA max.	1,500			Vdc
isolation resistance	at 500 Vdc	1,000			MΩ
MTBF		1,000,000			hours
RoHS compliant	yes				

ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature	300 and 350 mA 500, 600, and 700 mA	-40 -40		85 71	°C °C
storage temperature		-55		125	°C
case temperature				100	°C
storage humidity	non-condensing			95	%
temperature rise	at full load		15		°C
lead temperature	1.5 mm from case for 10 seconds			300	°C

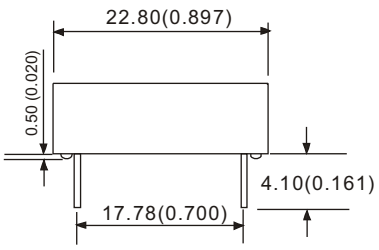
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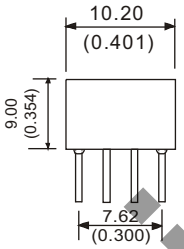
MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	0.897 x 0.401 x 0.374 (22.80 x 10.2 x 9.5 mm)				inch
case material	plastic (UL94-V0)				
weight			3.5		g

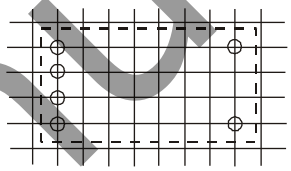
MECHANICAL DRAWING

units: mm [inches]
tolerance: ±0.25 [±0.010]
pin section tolerance: ±0.05 mm [±0.002]





Top view,grid:2.54mm(0.1inch), diameter:1.00mm(0.039inch)



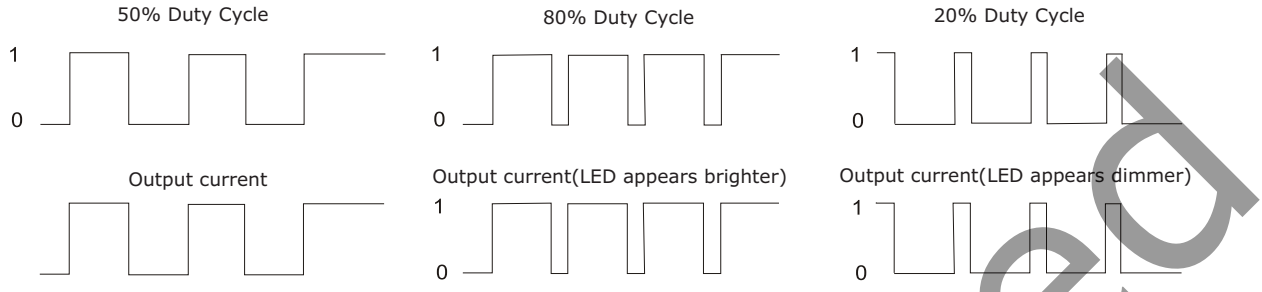


PIN CONNECTIONS		
PIN	FUNCTION	COMMENTS
1	Vin	DC supply
2	Rheostat Dim	must connect to Vin if not in use
3	On/Off/PWM	leave open if not in use
4	GND	do not connect to -Vo
5	-Vo	LED cathode connection
6	+Vo	LED anode connection

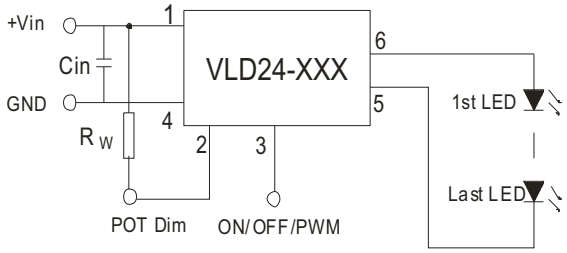
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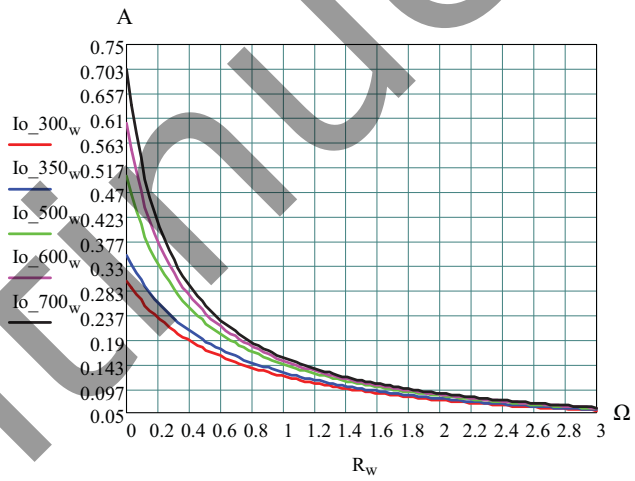
APPLICATION NOTES

1. **Digital Dimming Control**



2. **Analog Dimming Control**

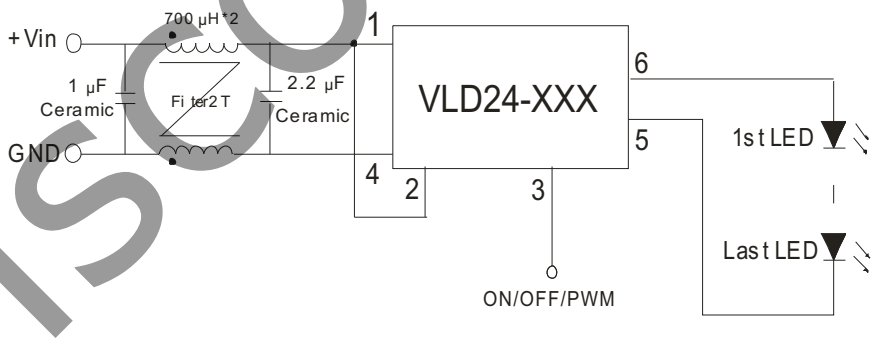




General:
Cin: 47 µF for best performance

Io can be set between 0A and Io(max) with trim pot Rw. For example, to set the output current (Io) to 200mA using the VLD24-350, choose Rw=0.4Ω. The trim pot should be placed close to pins 1 and 2 with shortest possible leads.

3. **EMS Filter Circuits**



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REVISION HISTORY

rev.	description	date
1.0	initial release	07/18/2008
1.01	new template applied	09/02/2011

The revision history provided is for informational purposes only and is believed to be accurate.

Discontinued

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CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

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CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.