

■ Features

- Power Rating: 48W
- Input Voltage: 9-52Vdc
- Nominal Voltage: 48Vdc
- Constant current design
- Output current(0-1500mA)
- Efficiency up to 96%
- PWM dimming control
- SCP and OTP
- Internal SMD technology
- Fully isolated plastic case
- IP67
- 3-year warranty



*Product images are for illustrative purposes only and may vary from actual design.

■ Application

- Indoor or outdoor lights

■ Model List*(See part number scheme for model number details)

Model Number	Input Voltage Range	Output Power	Output Voltage	Output Current Min.	Output Current Max.	Efficiency	Certification
LDDCD048S100SM	9-52Vdc	48W	9-52V	0mA	1000mA	96%	CE
LDDCD048S120SM	9-52Vdc	48W	9-52V	0mA	1200mA	96%	CE
LDDCD048S150SM	9-52Vdc	48W	9-52V	0mA	1500mA	96%	CE

■ Technical Data

Input Voltage	9-52Vdc
Input Filter	Capacitor
Output Voltage range	2-46Vdc
Output Current Accuracy	Vin=48V, 10 LEDS $\pm 4\%$ (typ.), $\pm 6\%$ (max.)
Output Current Stability	Vin=48V, 1 LED to 10 LEDS $\pm 4\%$ (typ.), $\pm 6\%$ (max.)
Humidity Pins/Wired	95%
Maximum Capacitive Load	10uF
Operating Frequency	1000KHz
Short Circuit Protection	Continuous
Temperature Coefficient	-40°C to +71°C ambient. $\pm 0.03^\circ\text{C}$
Operating Temperature	-40°C to +71°C (1000mA-1200mA); -40°C to +65°C (1500mA)

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August 30, 2019

■ Technical Data(cont.)

Storage Temperature	-55°C to +125°C
Overtemperature Shutdown (Auto-restart after cool down)	Internal IC Temperature 155°C Temperature Hysteresis 30°C
Maximum Case Temperature	105°C
MTBF	2,000,000h@25°C ambient Temperature
Case Material	Non Conductive plastic
Potting Material	Epoxy(UL94V-0)
Case Size Pins/Wired	31.8x20.3x12.2mm
Weight Pins	15.6g
Weight Wired	18g

Typical at 25°C, nominal input voltage, rated output current unless otherwise specified

■ Safety/EMC

EMI Radiated Emissions	EN55015
Dust Test & Waterproof Test	IP67

Disclaimer:

Autec Power Systems' (Autec) LED Drivers are Hi-Pot tested during the manufacturing process. Autec assumes no responsibility for secondary Hi-Pot testing at customer location or designated production line(s). Should customer require further Hi-Pot testing, at their own production line, following assembly of the LED Driver into the customer's assembled fixture, Autec requests advance notice. This request must be communicated to Autec in a timely manner and is recommended to be requested at time of issuing each purchase order.

■ PWM Dimming and ON/OFF Control

ON/OFF Control ON(DIM-VIN)	2.5-6Vdc
ON/OFF Control OFF(DIM-VIN)	0-0.8Vdc
Quiescent Input Current in Shutdown Mode	Vin=24, 1mA
PWM Frequency	For linear Operation(measured 1%-100% Dimming), 100-1KHz

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August 30, 2019

■ PWM Dimming and ON/OFF Control

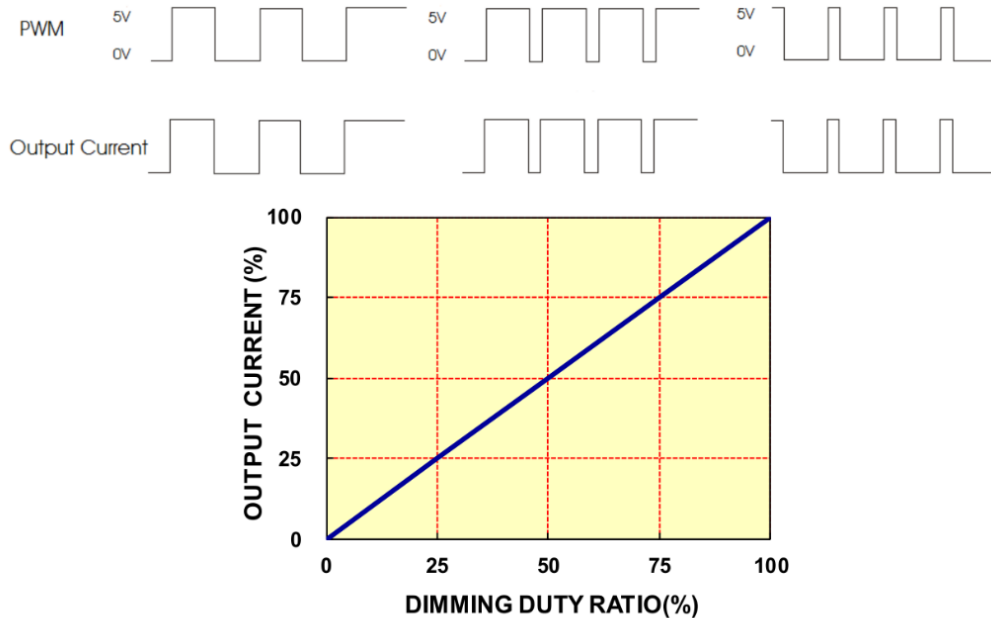
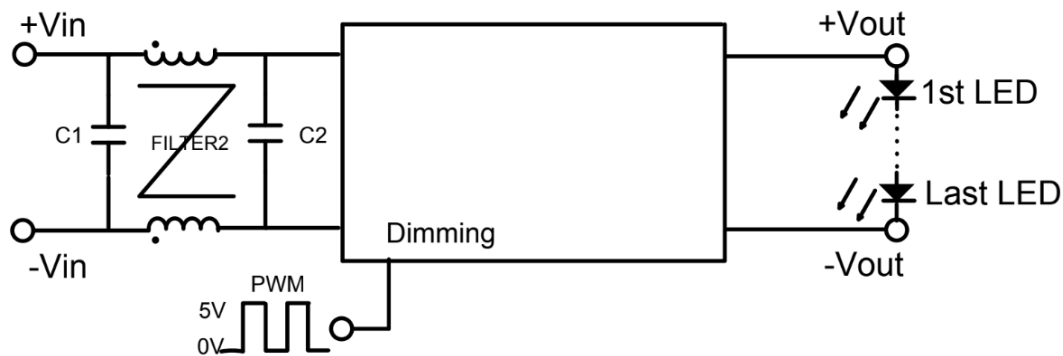


Fig.1 Dimming Duty Cycle: 1%-100%

The dimming of LEDs can be performed by applying PWM signals to DIM pin. A logic low (below 0.5V) at DIM PIN will disable the device and shut off the current flow to the LED Driver.

■ Wiring Diagram(EMI Filter Circuit)



■ Wiring Diagram(PWM Dimming Control Circuit)

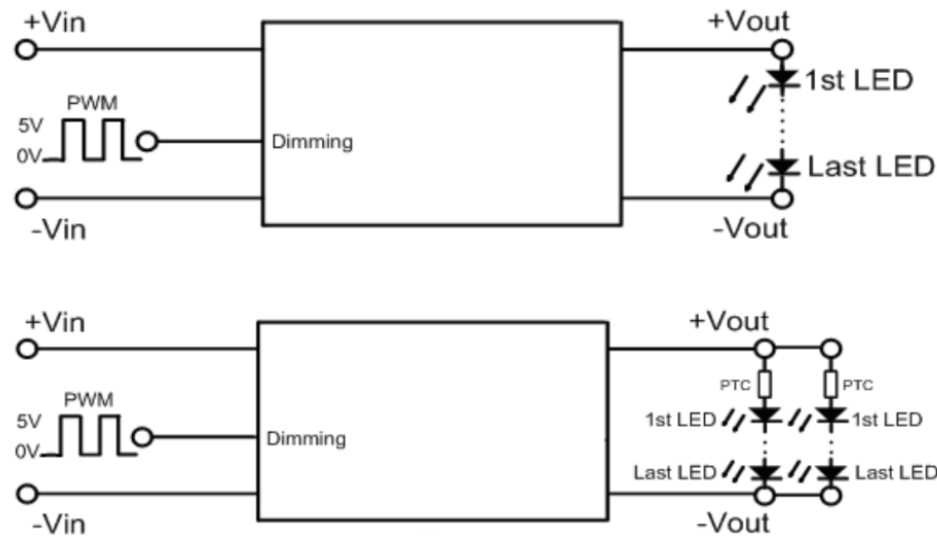
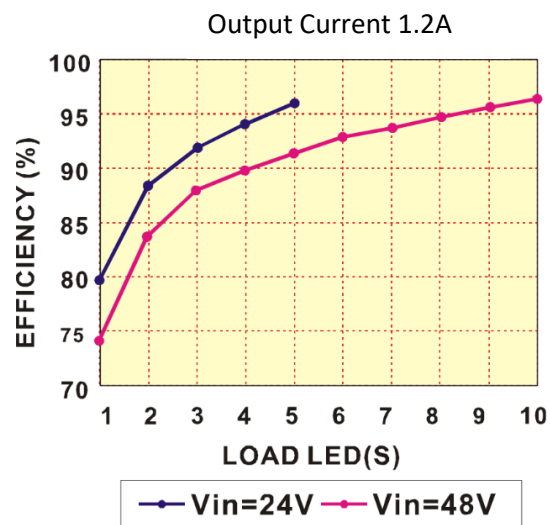
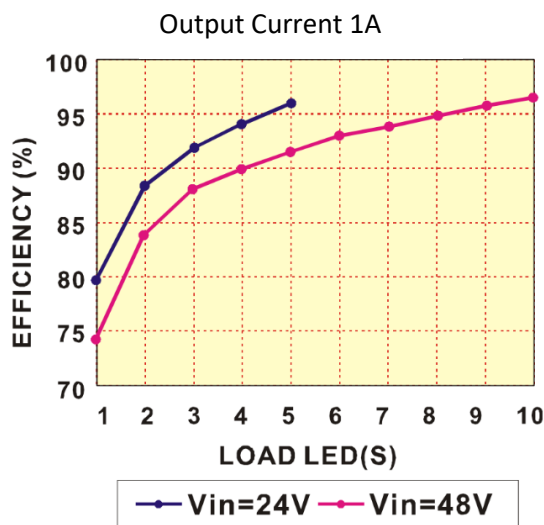


Fig.2

When using PWM Dimming Control Circuit, to protect the LED Driver, a PTC of positive coefficient may used to connect to the input end of every channel or all channels.

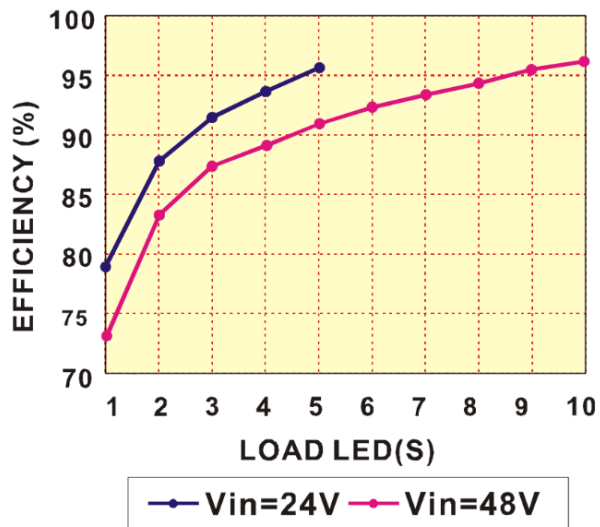
■ Efficiency vs. Load

1-LED VF=3.6V; 2-LED VF=7.2V; 3-LED VF=10.8V; 4-LED VF=14.4V; 5-LED VF=18V

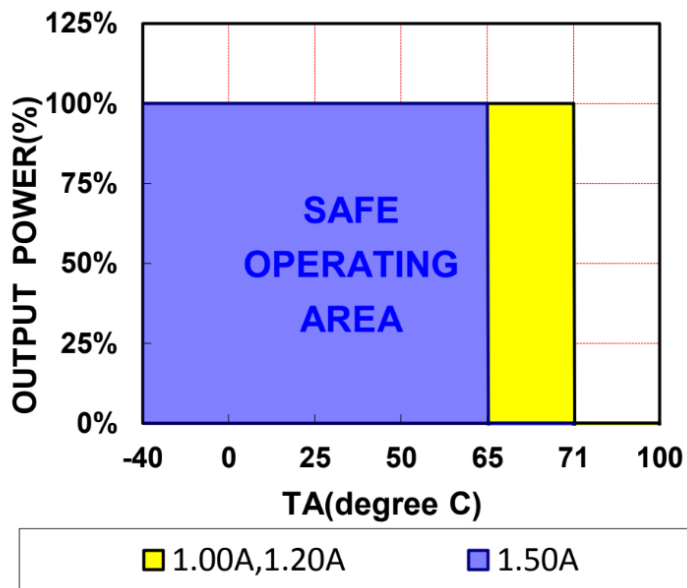


■ Efficiency vs. Load(cont.)

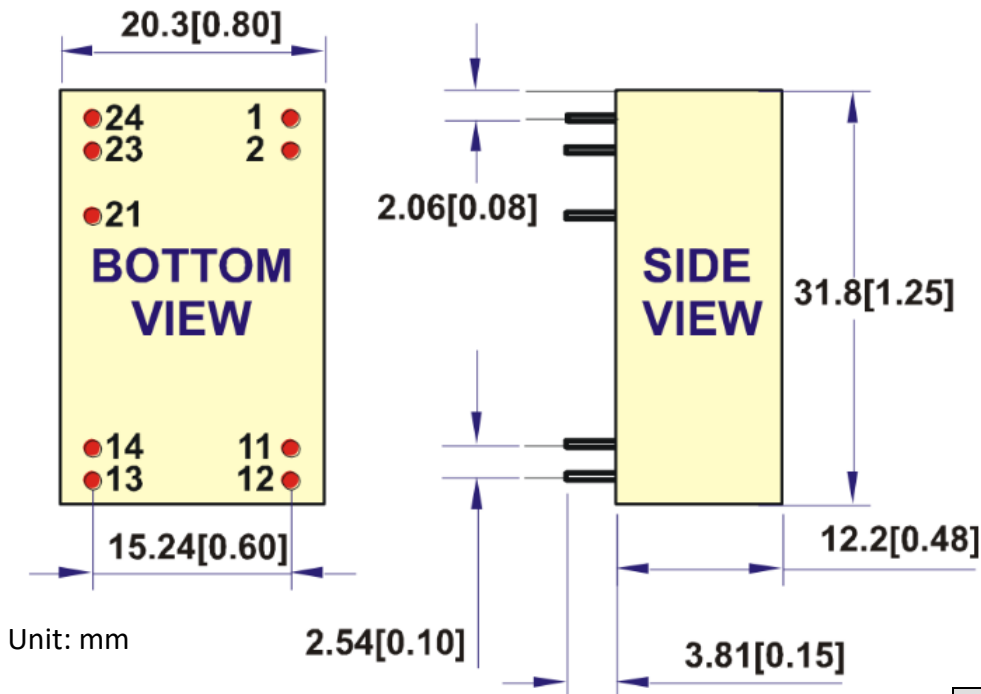
Output Current 1.5A



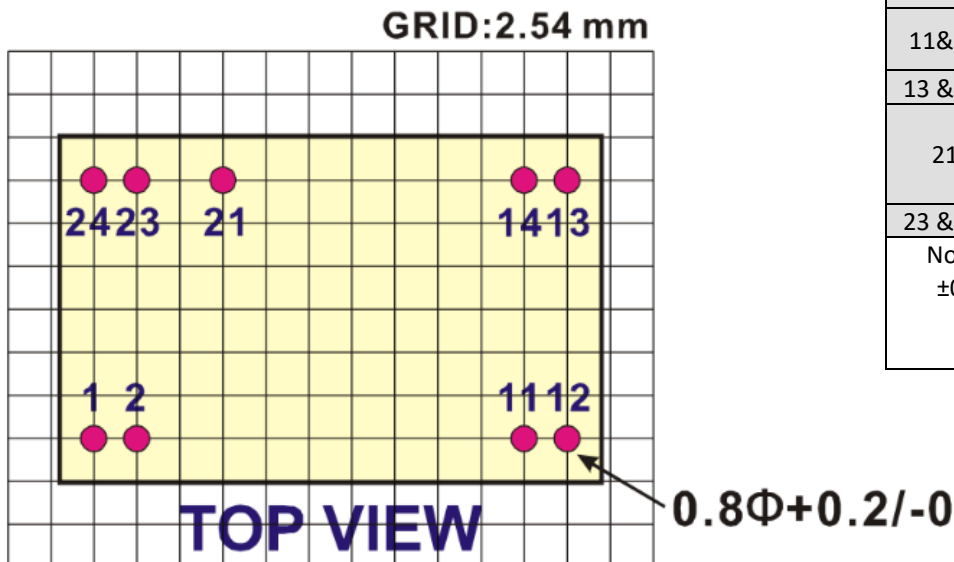
■ Derating Curve



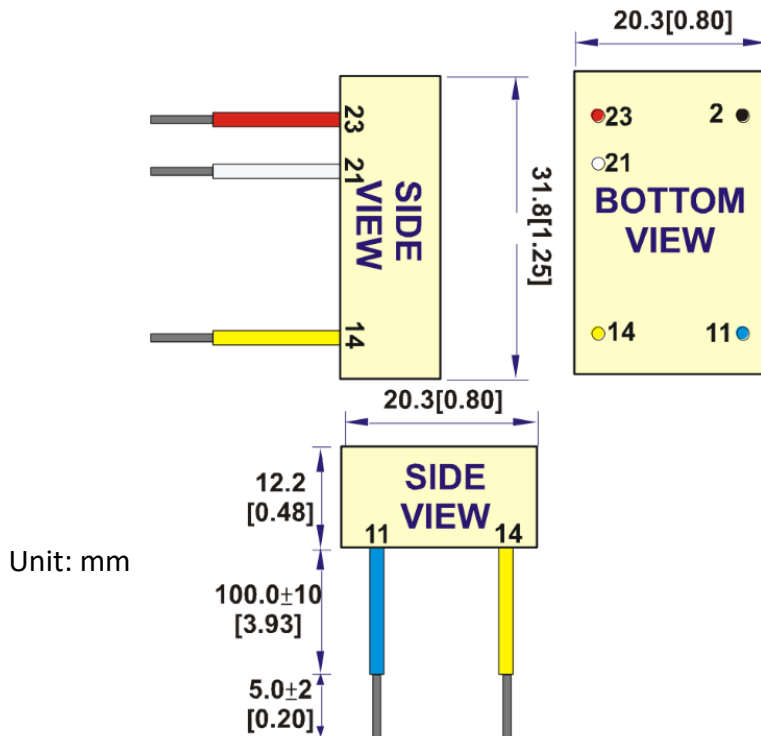
■ Mechanical Dimensions (Pin Model)



Pin Out		Comment
1 & 2	-Vin	Don't connect to -Vout
11&12	-Vout	LED – Connection
13 & 14	+Vout	LED + Connection
21	PWM DIM	ON/OFF/PWM Dimming Leave open if not used
23 & 24	+Vin	DC Supply
Note Pin Size is Tolerance 0.060φ ±0.05mm, All dimensions are in mm[Inches], Tolerance .X or .XX=±0.5mm		



■ **Mechanical Dimensions (Wired Model)**

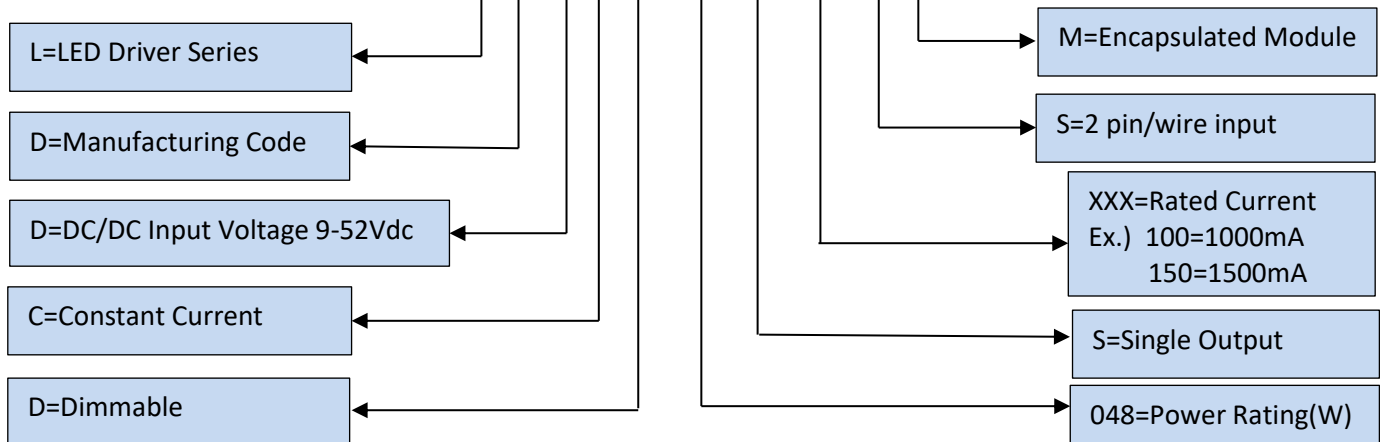


Pin Out		Comment
2 (Black)	-Vin	Don't connect to -Vout
11 (Blue)	-Vout	LED - Connection
14 (Yellow)	+Vout	LED + Connection
21 (White)	PWM DIM	ON/OFF/PWM Dimming Leave open if not used
23 (Red)	+Vin	DC Supply

Note:
All dimensions are in mm [inches]
1. Case Tolerance .X or .XX=0.5mm
2. Wire outside diameter=1.6mm±0.1
3. Wire core diameter=0.75mm±0.1
4. Wire is UL3385/CAS TEM listed
#22AWG/300V/105°C Rated

Part Number Scheme

L D D C D 048 S XXX S M



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*Specifications are subject to change without notice. Autec is not responsible for issues arising from errors or omissions.

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