L4WCD050SXXXXS-20 Series

50W, 108-305Vac Input, Adjustable Constant Current LED Driver

RoHS Compliant

Features

- Power rating: 50W
- Input Voltage: 108-305Vac
- Constant current Design
- Output current(600mA-1400mA)
- Efficiency up to 88%
- Compatible with 0(0.5)-10V, PWM, external resistor dimming applications
- UL Class 2 Output
- Lightning, OVP, SCP, OTP & Open Circuit Protection
- IP20
- 5-year Warranty
- Line to line 1kV

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

Application

- Outdoor and indoor LED lights
- LED lights with flexible current settings
- Downlights, high bay and low bay lights, spot lights, LED panels

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
L4WCD050S140PS-20	108-305Vac	50W	20-50V	600mA	1400mA	88%	UL/cUL
L4WCD050S140SS-20	108-305Vac	50W	20-50V	600mA	1400mA	88%	UL/cUL

Case type

Identification	Material	Length	Width	Height	Mounting	Overall Length	Weight
PS	Plastic	125mm (4.92in)	40mm (1.57in)	29mm (1.14in)	137mm (5.39in)	150mm (5.90in)	0.33 kg (0.78lb)
SS	Metal	128mm (5.04in)	33mm (1.29in)	28mm (1.12in)	146mm (5.75in)	154mm (6.06in)	0.23 kg. (0.5lb)

Technical Data

Input voltage range	108-305Vac
Frequency	47-63Hz
Power factor	> 0.95 @120Vac & 80~100% Full load, > 0.93 @277Vac & 80~100% Full load
Output voltage	20-50V
Output power	50W

Technical Sales / Customer Service: +1-818-338-7788 • Email: sales@autec.com
31328 Via Colinas Suite 102 • Westlake Village, CA 91362 USA • www.autec.com

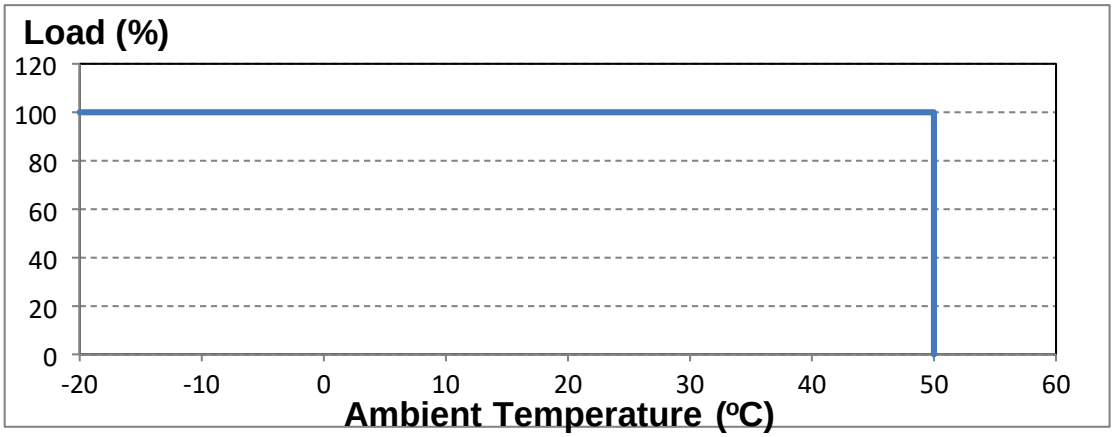
■ Technical Data(cont.)

Current Adjustable	Yes (by factory only)
Max. Current ripple	±5%
Max input current	0.6A
Max input Power	60W
Efficiency	87%
Max. open circuit voltage	59.5V
Dimming	0(0.5) ~10V, PWM, External Resistor
Dimming range	5~100%
THD	<20% @ 120Vac & 80~100% full load, <20% @ 277Vac & 80~100% full load
Output Current	600-1400mA
Protection	OVP, SCP, OTP, and open circuit protection
Environmental Protection	UL Dry and Damp
Working Temperature	-20~+50˚C
Max Case Temperature	90˚C
Surge Protection	Line to line 1kV
ANSI Surge Type	1.2/50μs Combination Wave (w/t 2Ω)
Isolation (Primary to Secondary)	3750Vac/10maMax/60 seconds
Lifetime	>50,00 hours @full load, 75˚C Tcase
Packing	80 units/carton; 24 cartons/pallet

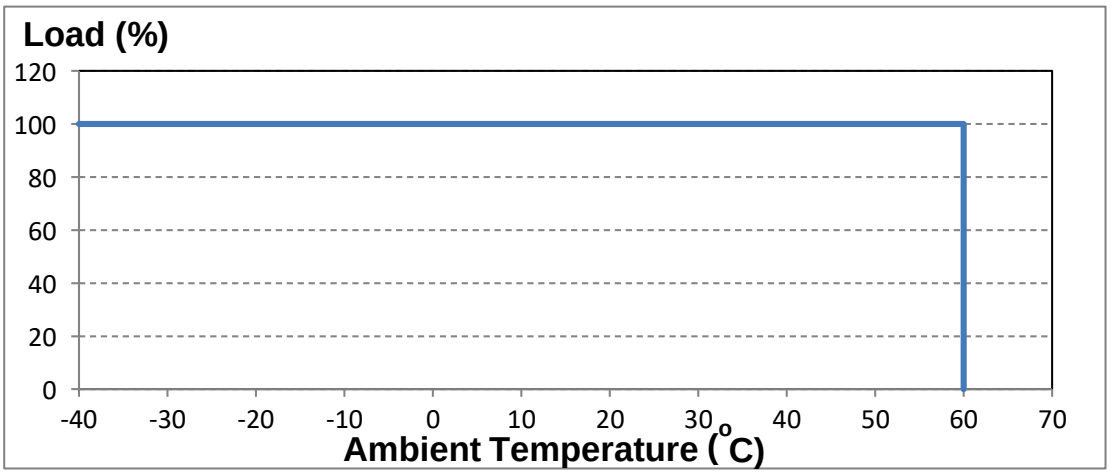
■ Safety Compliance

Safeties	UL1310 Class 2
Electromagnetic Compliance	Per Title 47 CFR Part 15 Class A

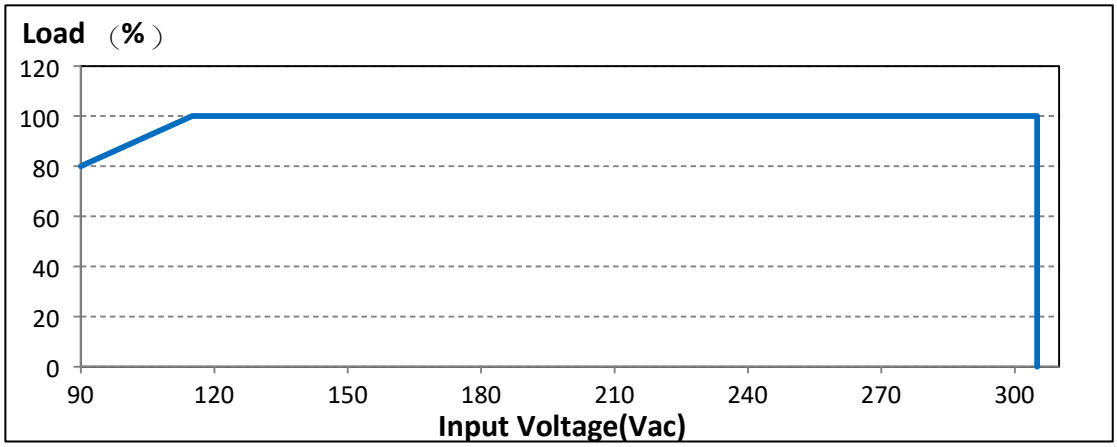
■ Derating Curve



■ Derating Curve(cont.)

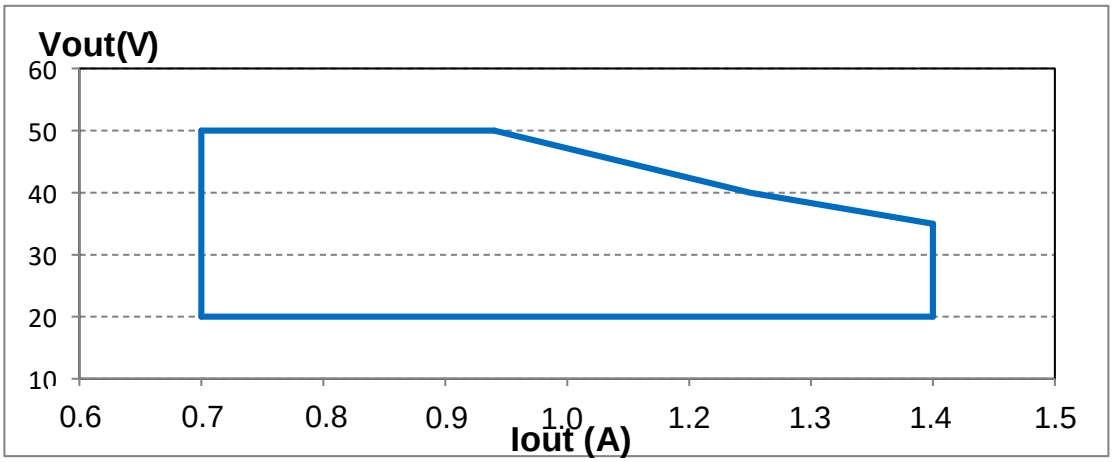


■ Static Characteristics

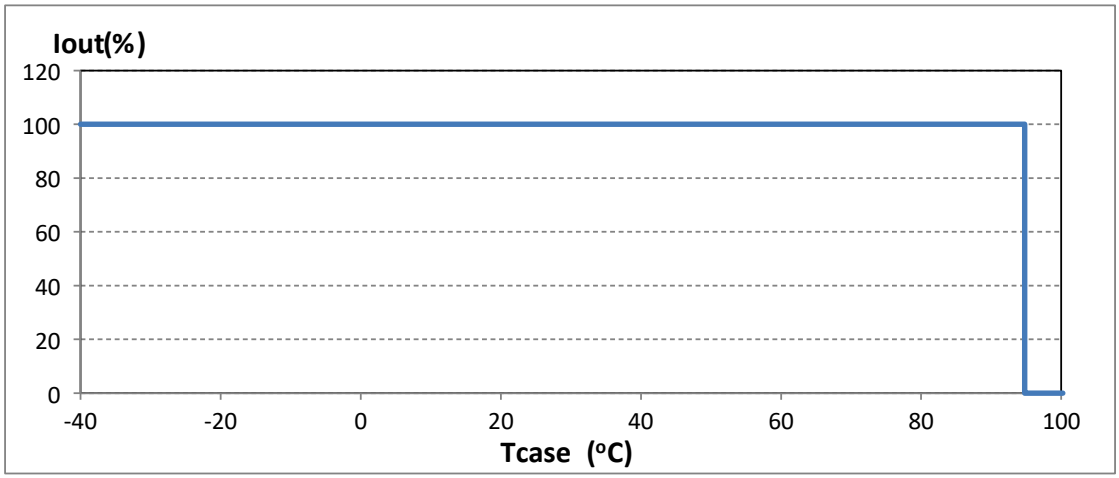


■ Electrical Specifications

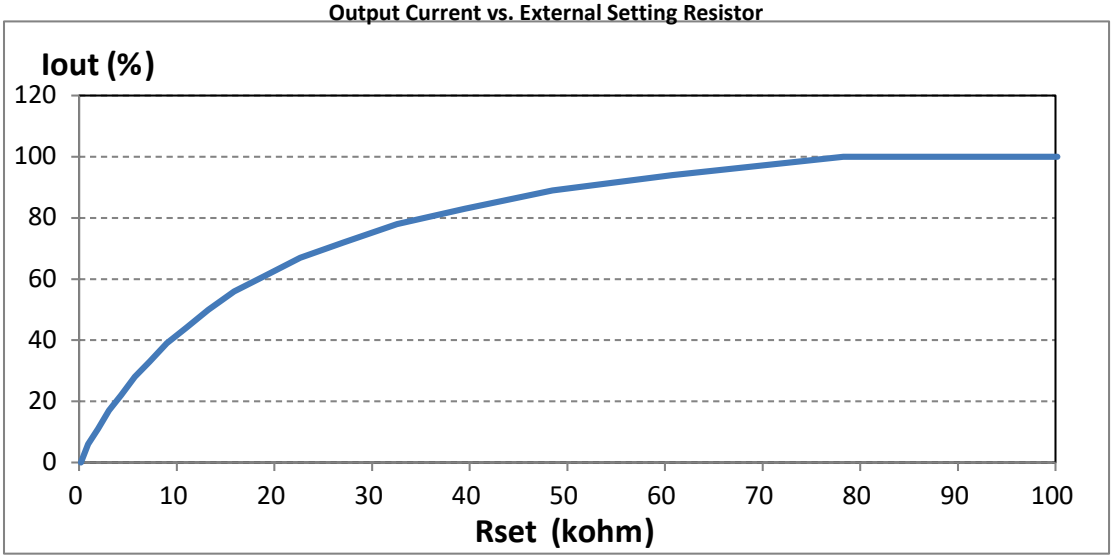
Output Current vs. Case Temperature (with ±5ºC Tolerance)



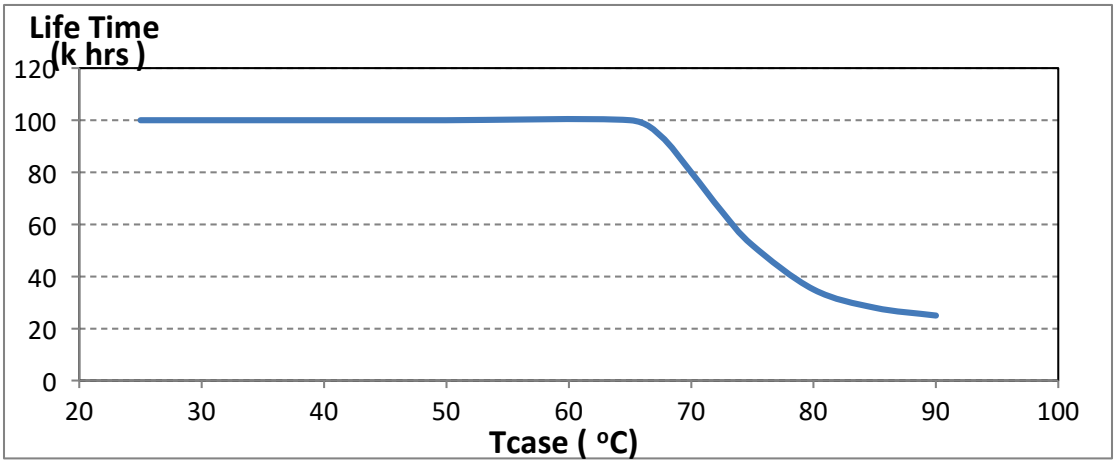
■ Electrical Specifications(cont.)



Output Current vs. External Setting Resistor

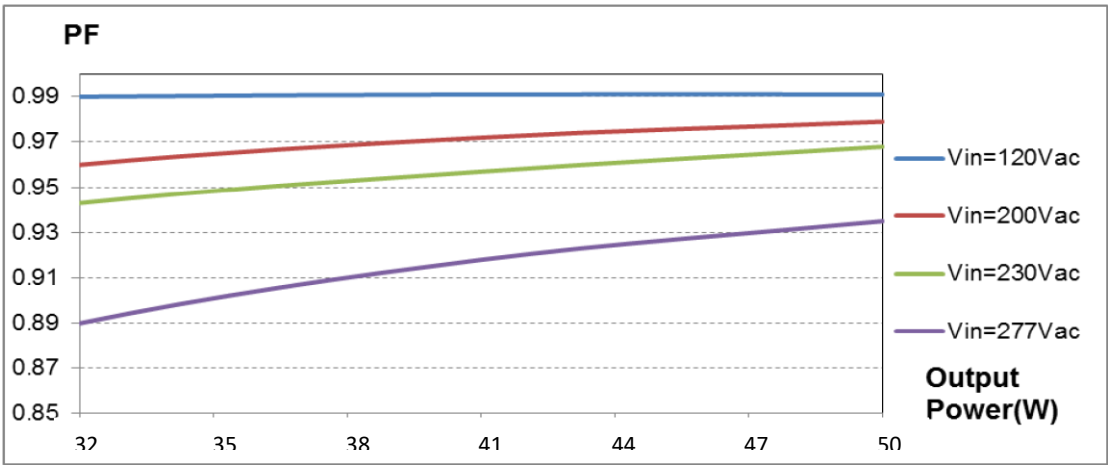


■ Lifetime vs Case Temperature



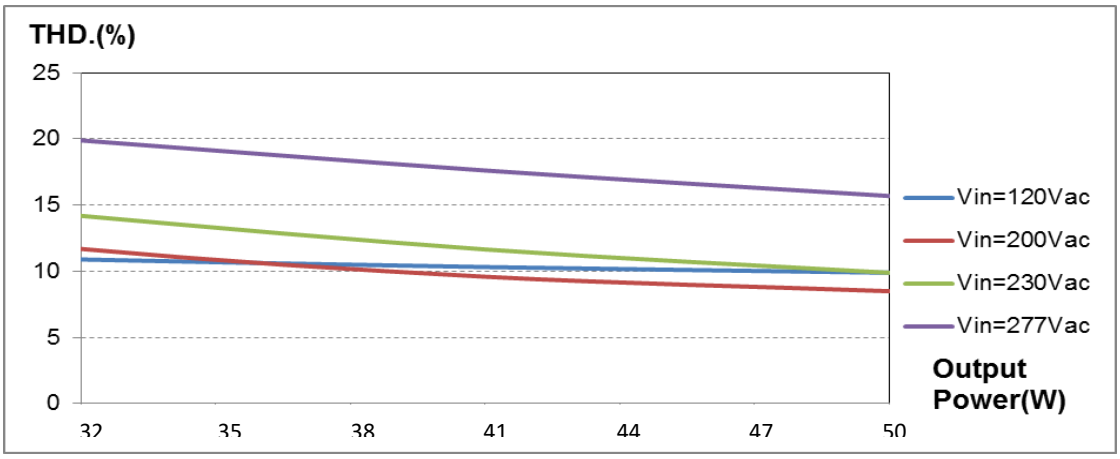
■ Power Factor vs. Output Power

(@ 25°C)

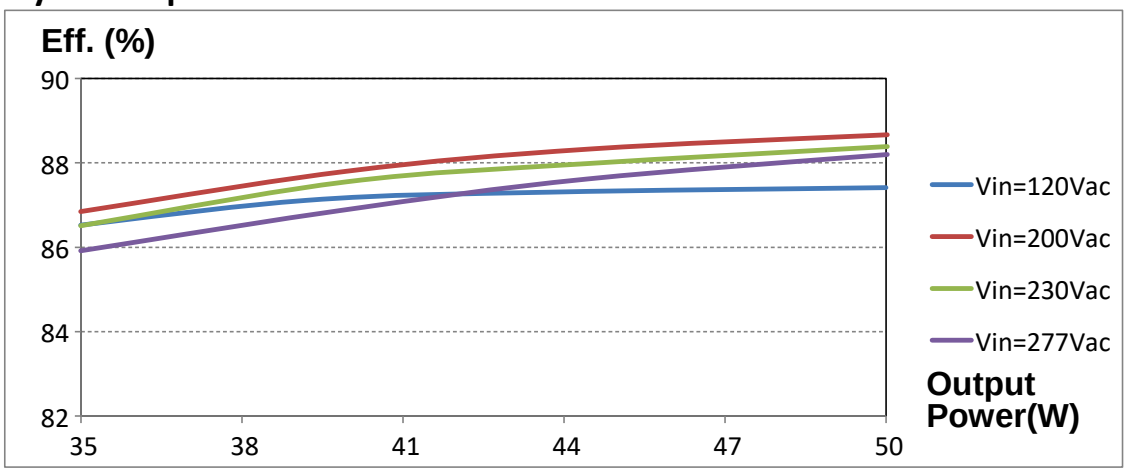


■ THD vs. Output Power

(@ 25°C)

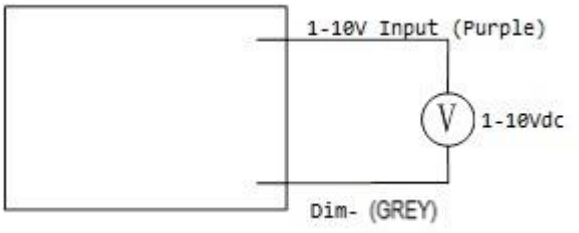


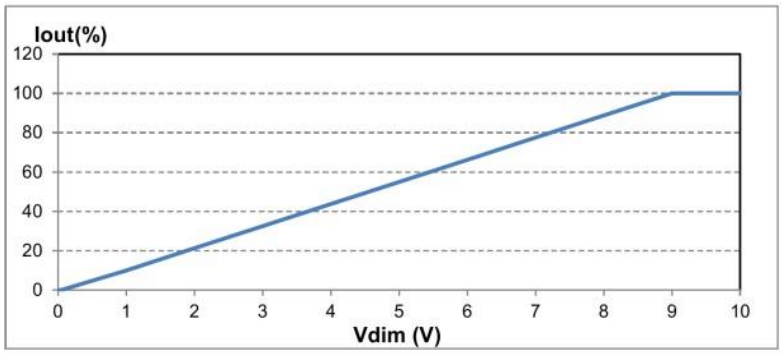
■ Efficiency vs. Output Power



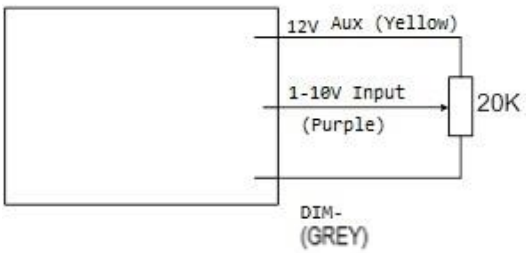
■ Dimming

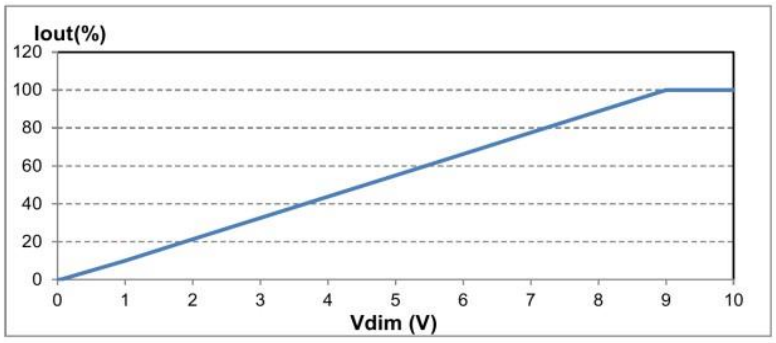
Mode 1 : 1-10Vdc Input on Dimming Control



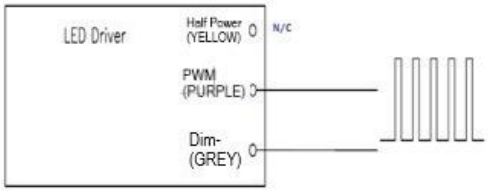


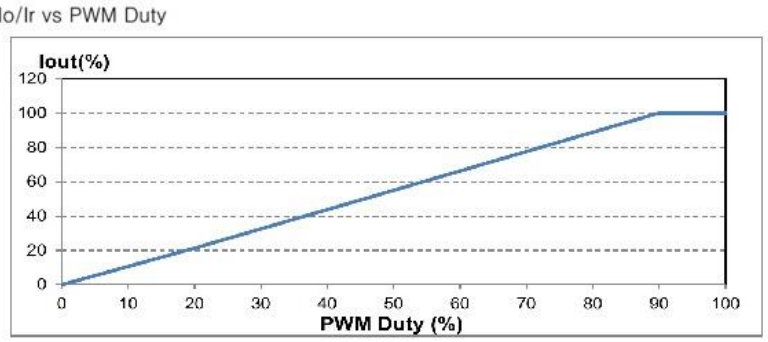
Mode 2 : Potentiometer on Dimming Control





Mode 3 : PWM Signal on Dimming Wires

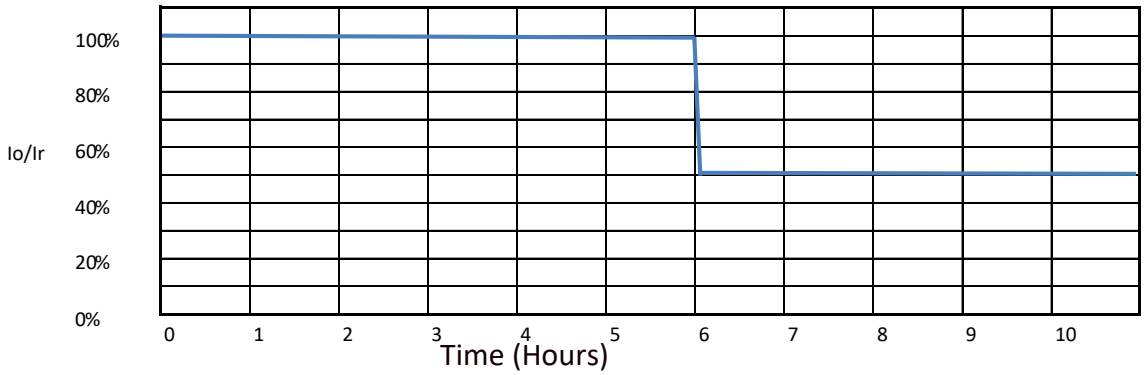




■ Dimming(cont.)

Parameter	Values	Conditions
Input Voltage	0~10 V	Purple wire.
Input Current	10 mA	
PWM Frequency	0.5 ~ 3 kHz	
PWM Pulse Width	10%~100%	

Mode 4 : Timer Dimming (Does not require dimming wires



Standard power/time combination above, can be factory set to customer specification.
Recycle AC to restart timer.

NOTE:

1. If the dimming function is not used, cap the dimming wires and don't use them.
2. Io is actual output current and Ir is rated current without dimming control.
3. For the driver to operate properly, the load voltage must be maintained above the minimum voltage threshold, approximately 50% of the max. output voltage for any given mode.
4. The dimming signal can be less than 1V, when it is 0-1V, the output current can maintain about 10%Ir, however, the connected LEDs may flicker. Maintain dimming voltage greater than 1V in the application is strongly recommended.
5. Pulse width less than 10% will cause the driver to work improperly.

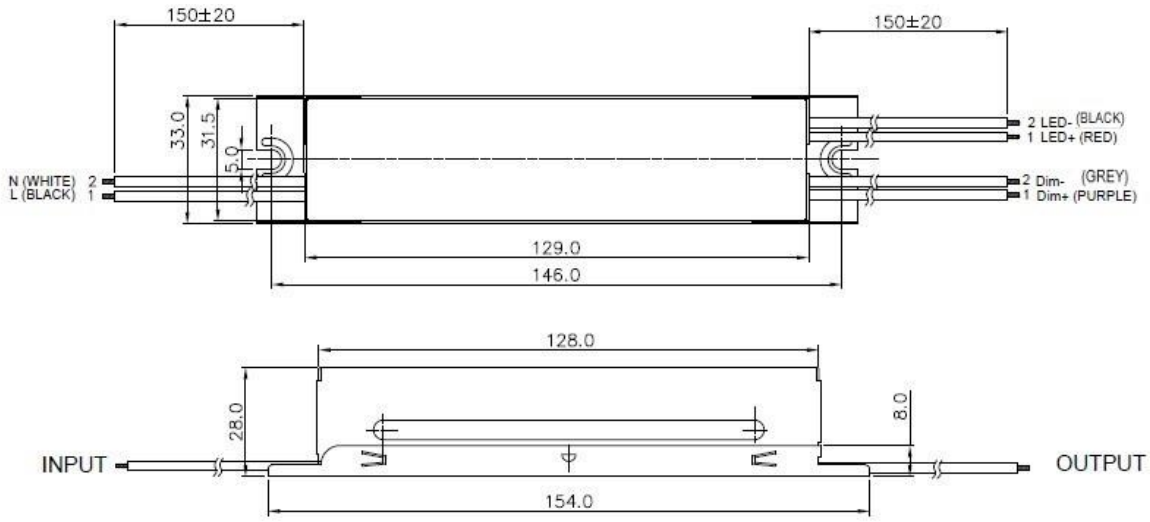
■ Mechanical Design

L4WCD050S140PS

(Contact Autec Sales for Mechanical Diagram)

■ Mechanical Design(cont.)

L4WCD050S140SS



Notes: 1. Outline Dimension: 154*33*28

2. Input and Output Connector and Pin Assignment

Input Wire	**3/#18AWG**	**L= Black, N=White**
Output	**2/#18AWG**	**V+ is Red, V- is Black**
Dimming Wire	**3/#22AWG**	**Dim + is Purple, Dim Return is Grey,**

Part Number Scheme

L4 W C D 050 S XXX P S -20

- L4=LED Driver Series
- W=Input Voltage 108-305VAC
- C=Constant Current
- D=Dimmable
- 050=Output Power(Watts)
- -20=IP20
- S=Class II, 2 Wire Input
- P=Plastic Case
- XXX=Rated Current Ex.) 140=1400mA
- S=Single Output

Part Number Scheme

L4 W C D 050 S XXX S S -20

- L4=LED Driver Series
- W=Input Voltage 108-305VAC
- C=Constant Current
- D=Dimmable
- 050=Output Power(Watts)
- -20=IP20
- S=Class II, 2 Wire Input
- S=Metal case
- XXX=Rated Current Ex.) 140=1400mA
- S=Single Output

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

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

Technical Sales / Customer Service: +1-818-338-7788 • Email: sales@autec.com
31328 Via Colinas Suite 102 • Westlake Village, CA 91362 USA • **www.autec.com**