LSDCD080 Series

80W, 20-30Vdc Input, Constant Current, DC-DC LED Driver

RoHS Compliant

Features

- Power Rating: 80W
- Input Voltage: 20-30Vdc
- Constant current design
- Output current(850mA-2100mA)
- Efficiency up to 93%
- Dimmable with 0-10V/PWM dimming (optional)
- OVP and SCP
- IP67
- Potted, watertight

*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
LSDC-080S085SS	20-30Vdc	80W	33-94V	850mA	850mA	94%	CE
LSDCD080S085SS	20-30Vdc	80W	33-94V	850mA	850mA	94%	CE
LSDC-080S105SS	20-30Vdc	80W	33-76V	1050mA	1050mA	94%	CE
LSDCD080S105SS	20-30Vdc	80W	33-76V	1050mA	1050mA	94%	CE
LSDC-080S120SS	20-30Vdc	80W	33-67V	1200mA	1200mA	93%	CE
LSDCD080S120SS	20-30Vdc	80W	33-67V	1200mA	1200mA	94%	CE
LSDC-080S175SS	20-30Vdc	80W	33-46V	1750mA	1750mA	94%	CE
LSDCD080S175SS	20-30Vdc	80W	33-46V	1750mA	1750mA	94%	CE

*(-=No dimming/D=Dimming)

NOTE: All Applications require an In-Line fuse on the input and to be installed by the user.

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.

■ Technical Data

Input Voltage Range	20-30Vdc
Ripple & Noise (pk-pk)	0.42V(850mA); 0.46V(1050mA); 0.49V(1200mA); 0.48V(1750mA)
Current Tolerance	±5%
Load Regulation	±1%
Line Regulation	±1%
Set up Rise Time	250ms/98ms 24Vdc full load
DC Current typ.	3.55A/24Vdc
Inrush Current	105A @24Vdc; Cold Start
Leakage Current	<0.6mA/24Vdc
Turn-on Delay Time	< 0.25s
Over Current Protection	95~108%; Protection type: Constant current limiting, recovers automatically after fault condition is removed
Short Circuit Protection	Hiccup mode, recovers automatically after fault condition is removed.
Over Voltage Protection	99V(850mA) 82V(1050/1200mA) 53V(1750mA); Protection Type: Hiccup mode recovers automatically after fault condition is removed
Over Temperature Protection	Hiccup mode, recovers automatically after fault condition is removed
Operating temperature	-35 ~ +70°C
Storage temperature	-40 ~ +85°C
Humidity	Operational: 10~100% RH non-condensing Storage: 5~100% RH
Temperature Coefficient	±0.3%°C(0~50°C)
Vibration	10~500Hz, 5G 12min./1 cycle, period for 72min. each along X, Y, Z, axes
MTBF	370,000 hours MIL-HDBK-217F (25°C)
Life rating	60,000 hours
Length (L)	4.88” (124mm)
Width (W)	1.92” (43.5mm)
Height (H)	1.29” (34.5mm)
Weight	340g
Packing	36pcs/case

Notes:

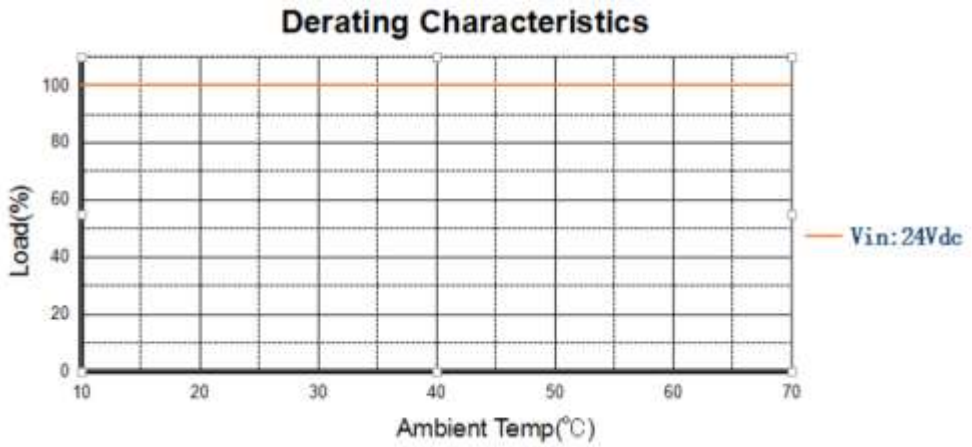
1. All parameters NOT specifically mentioned are measured at 24Vdc input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12” twisted-pair wire terminated with 0.1uF & 47uF parallel capacitors.
3. Tolerance: includes set up tolerance, line regulation, & load regulation.
4. Derating may be needed under low input voltages. Please check the static characteristic for details.
5. Suitable for indoor or outdoor use without exposure to direct sunlight. Avoid exposure or immersion in water exceeding the IP67 rating.
6. The driver (PSU) start-up time is measured from initial cold start.

7. The driver (PSU) is considered a component that will be operated as part of a finished lighting assembly. The manufacturer of the finished lighting assembly must ensure EMC Directive compliance for the completed assembly.
8. Direct connection of the driver (PSU) to the LED lights is suggested. Not suitable for use in connecting additional drivers(PSU's).
9. To fulfill the requirements of the latest ERP regulations for lighting fixtures, this LED driver(PSU) can only be used with a switch; Not for permanent direct connection to AC main power.

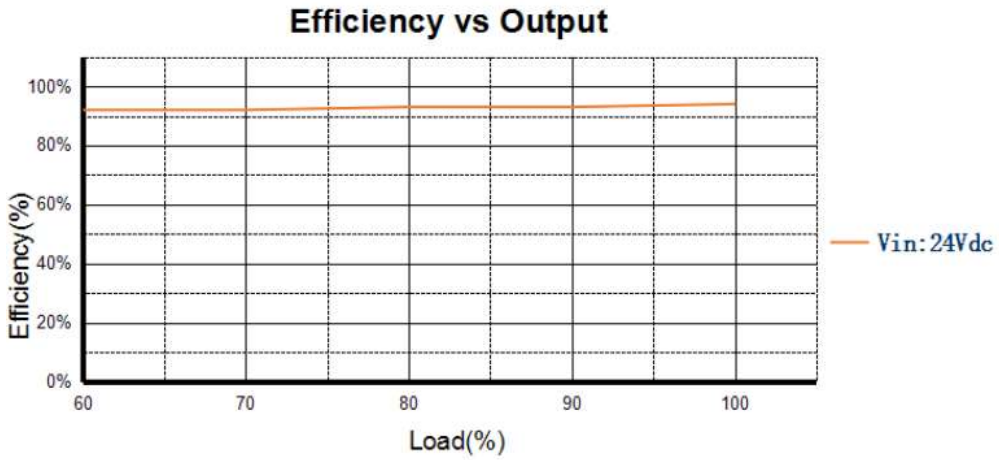
■ Safety and EMC

Safety Standards	UL8750, UL935, UL1012, CSA-C22.2 No.107.1, EN61347-1, EN61347-2-13
Isolation Resistance	I/P-FG: 100M Ohms/500Vdc/25°C/70%RH
EMC Emission	Compliance to EN55015, EN61000-3-2 Class C (≥60% load) EN61000-3-3
EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, EN55024

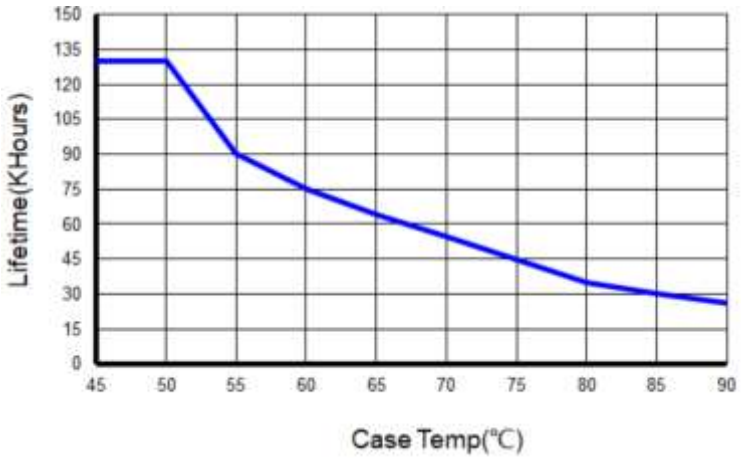
■ Derating Curve



■ Efficiency vs Output

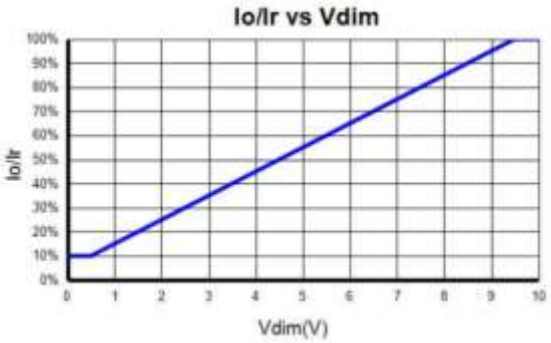


■ Tc vs Lifetime



■ O-10V Analog Dimming

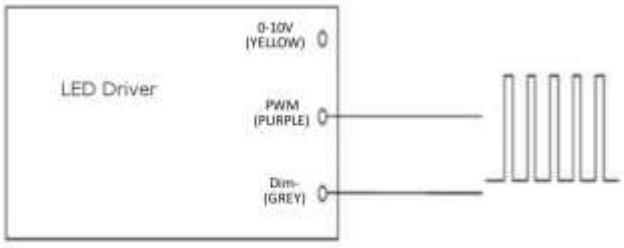
Dimming Specifications	12V Aux Output Voltage	10.8-13.2V
	12 Aux Output Source Current(Max)	200mA
	DIM+ PIN Source Current(Max)	250uA
	Dimming Input Range	0-10V



Note:

1. If the dimming function is not used, all wire NC.
2. Io is actual output current and Ir is rated current without dimming control.
3. The dimmer can also be replaced by an active 0-10V voltage source signal or passive components like resistors..
4. Do not connect the GND of DIM-(grey) to the output. Otherwise, the LED driver will not function properly.

■ PWM Dimming

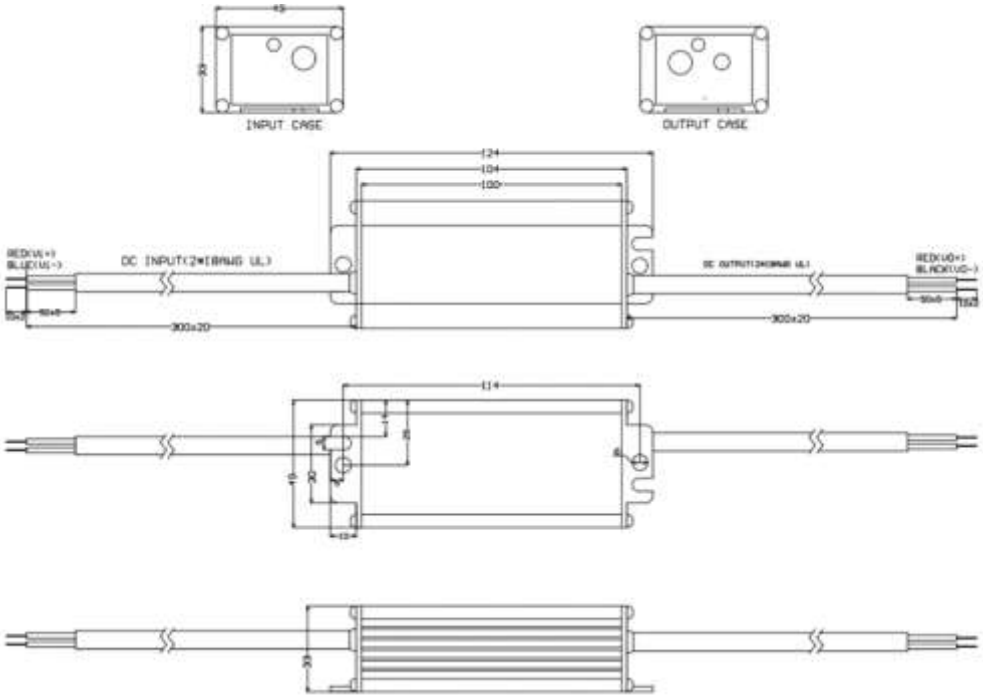


PWM Dimming:

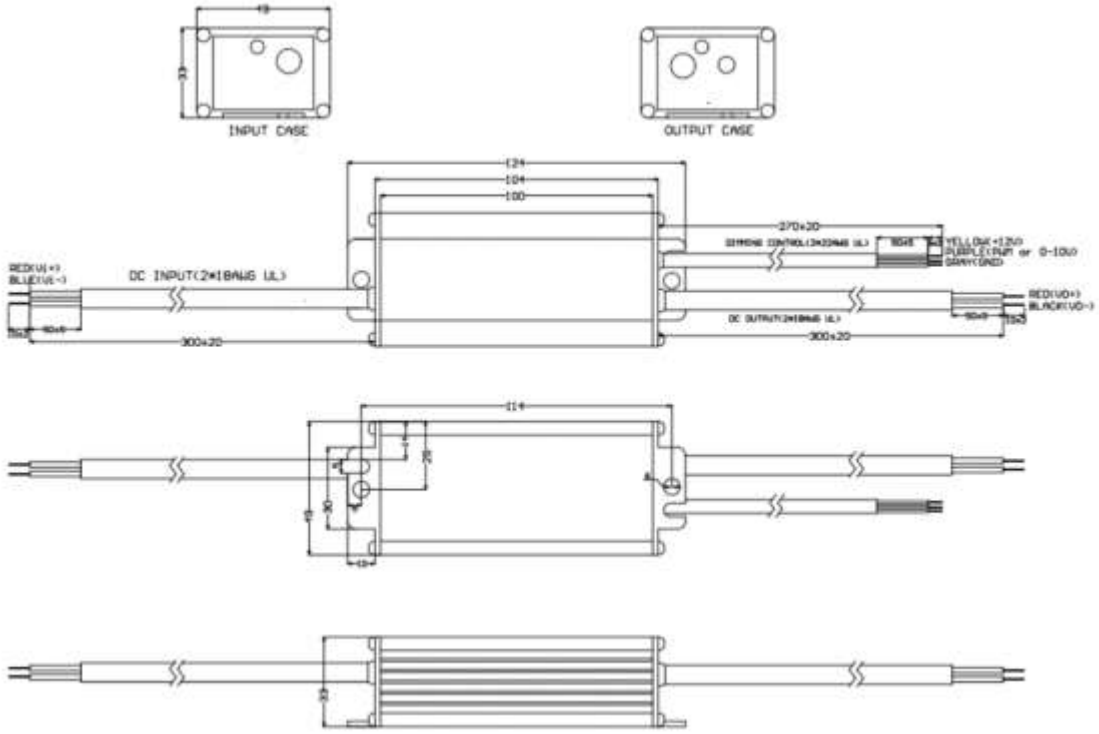
Pulse: High=5V, Low=2V

Duty: 10-100% Fsw: 1-2KHz

■ Non-Dimming Wiring Diagram



■ Dimming Wiring Diagram



***Requires a slow blow in-line fuse and housing on the input cable, contact the factory.**

Part Number Scheme

LS D C D 080 S XXX S S

- LS=LED Driver Series
- D=DC/DC Input Voltage 20-30Vdc
- C=Constant Current
- D= Dimmable
- 080=Output Power(Watts)
- S=Class II, 2 Wire Input
- S=Metal case
- XXX=Rated Current
  Ex.) 085=850mA
  175=1750mA
- S=Single Output

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