LSDCD040 Series

40W, 10~30Vdc Input, Constant Current, DC-DC LED Driver

Features

- Power Rating: 40W
- Input Voltage: 10~30Vdc
- Constant current design
- Output current(450mA-1200mA)
- Efficiency up to 94%
- Dimmable with 0-10V/PWM/Timer dimming (optional)
- OVP, OCP, SCP, OTP
- Potted, watertight
- IP67

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

Application

- Indoor or outdoor lights
- Dry, damp and wet locations

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-040S045SS	10~30Vdc	40W	33-88V	450mA	450mA	94%	CE
LSDCD040S045SS	10~30Vdc	40W	33-88V	450mA	450mA	94%	CE
LSDC-040S070SS	10~30Vdc	40W	33-58V	700mA	700mA	94%	CE
LSDCD040S070SS	10~30Vdc	40W	33-58V	700mA	700mA	94%	CE
LSDC-040S105SS	10~30Vdc	40W	33-39V	1050mA	1050mA	94%	CE
LSDCD040S105SS	10~30Vdc	40W	33-39V	1050mA	1050mA	94%	CE
LSDC-040S120SS	10~30Vdc	40W	33-36V	1200mA	1200mA	94%	CE
LSDCD040S120SS	10~30Vdc	40W	33-36V	1200mA	1200mA	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.

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■ Technical Data

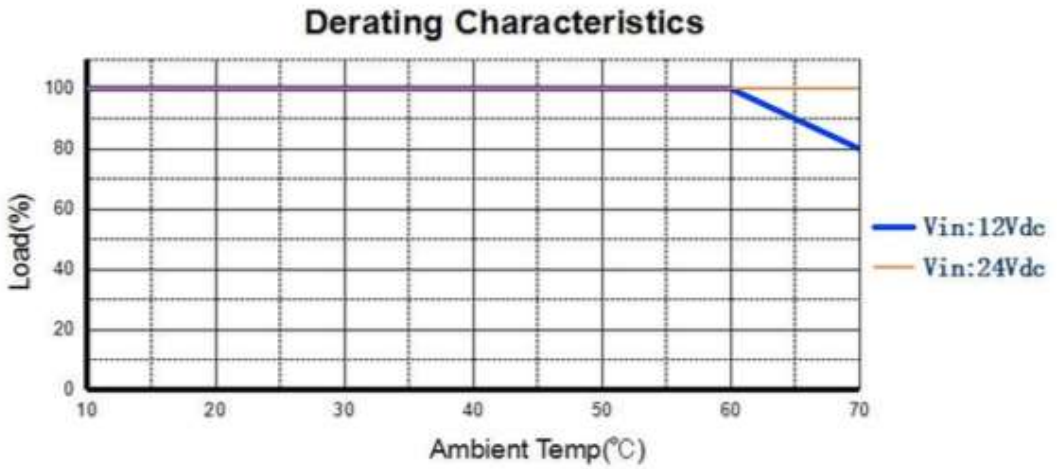
Input voltage range	10~30Vdc
Inrush current	Cold start 68A @12Vdc
DC Current(typ.)	3.7A @12Vdc and 1.8A @24Vdc
Load Regulation	± 1%
Line Regulation	± 1%
Current Tolerance	± 5%
Setup Rise time	250ms/50ms 12VDC at full load 250ms/100ms 24VDC at full load
Ripple & Noise (pk-pk)	0.35V for 450mA model; 0.25V for other models
Leakage current	<0.6mA @12Vdc
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(450mA), 66V(700mA), 44V (1050/1200mA), Protection type: Hiccup mode, recovers automatically after fault condition 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
Temp Coefficient	± 0.3%°C (0~50°C)
MTBF	430,000 hours MIL-HDBK-217F(25°C)
Length (L)	4.09” (104mm)
Width (W)	1.93” (49mm)
Height (H)	1.30” (33mm)
Packing	310±10g

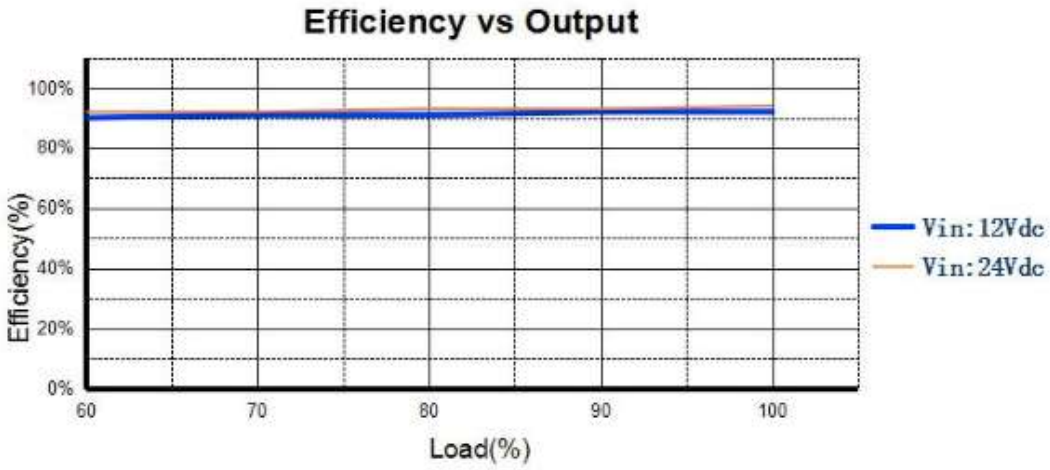
Notes:

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).

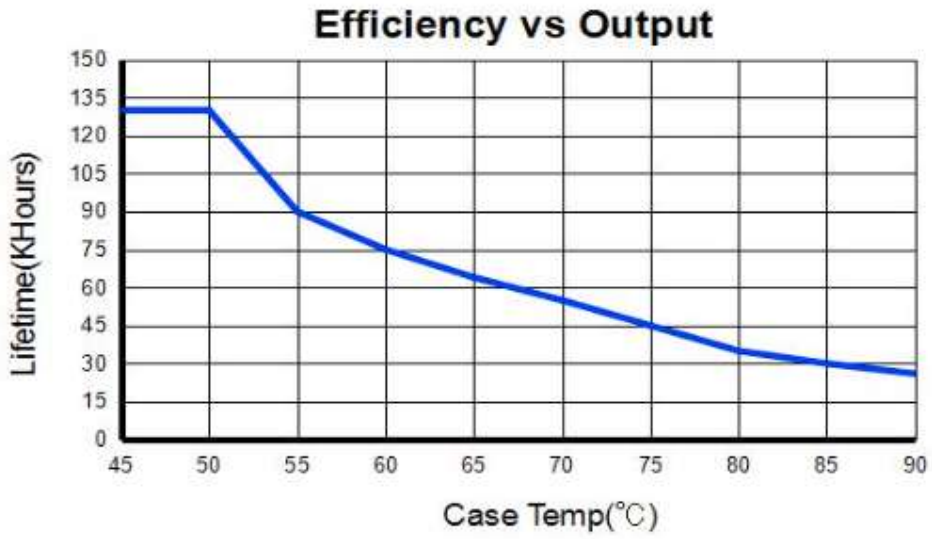
9. To fulfill the requirements of the latest ERP regulations for lighting fixtures, this LED driver(PSU) can only be used with a switch; Not for permanent direct connection to AC main power.

■ Derating Curve

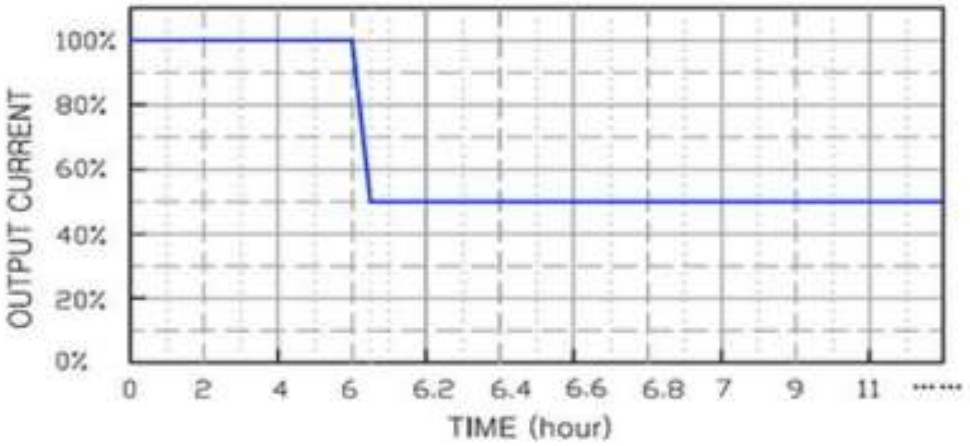




■ Derating Curve(Cont.)

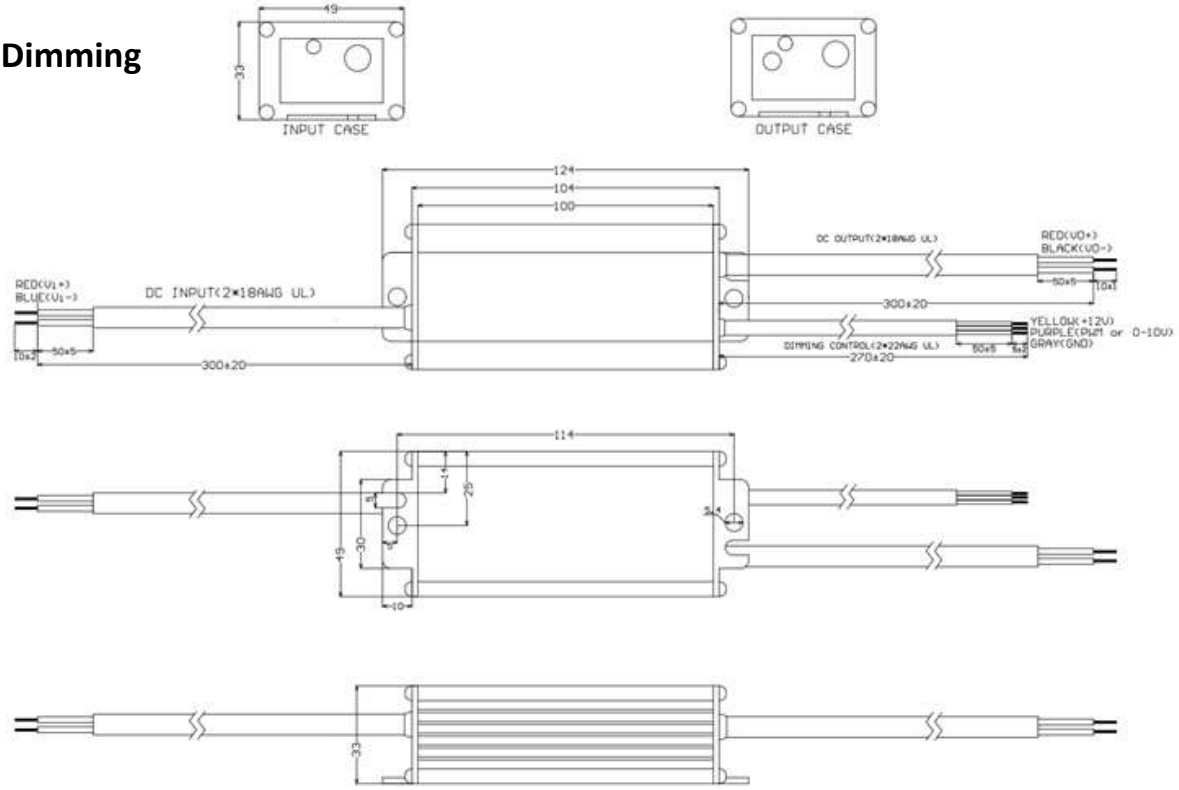


■ Timer Dimming

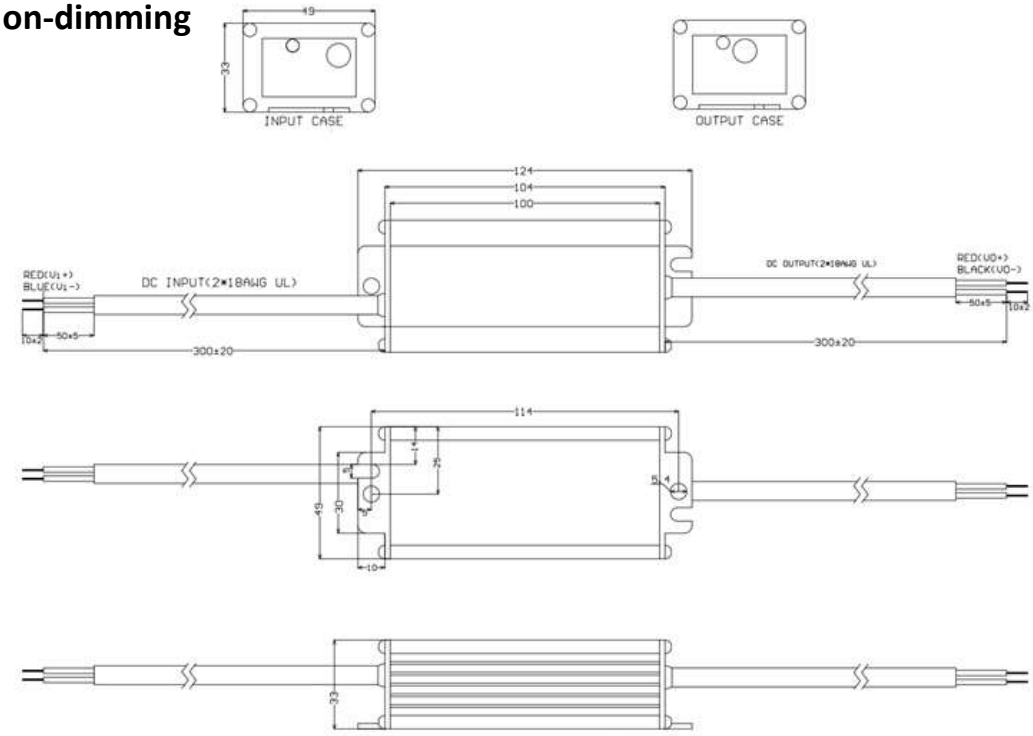


■ Mechanical Diagram

-Dimming

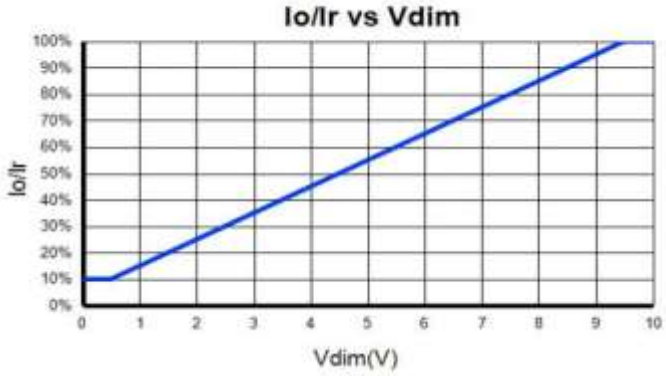


-Non-dimming



■ 0-10 V Analog Dimming

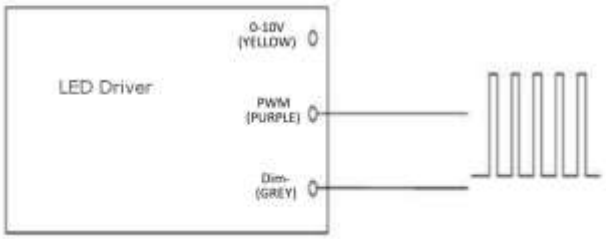
Input Dimming Voltage	0-12V	Normal 10-11V
Input Source Current	0-10mA	47 ~ 63Hz



Notes:

1. If the dimming function is not used, do not connect the dimming output wires.
2. *Io* is the actual output current and *Ir* is the rated current without dimming control.
3. For the driver (PSU) to operate properly, the load voltage must be maintained above the input voltage *t*, approximately 50% of the maximum output voltage for any given mode.
4. The dimming signal for the application is permitted to be less than1v and highly recommended.
5. Do not connect the dimming control **GND** wire (GRAY) to the output as the driver (PSU) will not function properly.

■ PMW Dimming



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

Part Number Scheme

LS D C D 040 S XXX S S

- LS=LED Driver Series
- D=DC/DC Input Voltage 10-30Vdc
- C=Constant Current
- D=Dimmable
- 040=Output Power(Watts)
- S=Class II, 2 Wire Input
- S=Metal case
- XXX=Rated Current
  Ex.) 045=450mA
  120=1200mA
- S=Single Output

Part Number Scheme

LS D C - 040 S XXX S S

- LS=LED Driver Series
- D=DC/DC Input Voltage 10-30Vdc
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- "-"=Non-Dimmable
- 040=Output Power(Watts)
- S=Class II, 2 Wire Input
- S=Metal case
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  Ex.) 045=450mA
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