

LED 50W DE Series – Fixed Output and Dimmable
Switch Mode LED Drivers
Constant Current & Constant Voltage with Isolation
Black Plastic Housing

Total Power: 50 Watts
 Input Voltage: 110-277Vac
 Outputs: Single from 7-142Vdc
 Indoor Application
 High Power Factor
 EN61347, CSA 22.2
 EN61000-3-2, EN61000-3-3 Class C

Electrical Specifications

Input Voltage Range: 110-277Vac Nom. (100-305 V Min/Max)
 Frequency: 50/60 Hz Nom. (47-63 Hz Min/Max)
 Power Factor: ≥ 0.9 @ full load, 100 V through 277 V
 Inrush Current: $< 15A$ max @ 230 Vac, Cold Start $25^{\circ}C$
 Input Current: 0.52A @ 100 Vac
 Maximum Power: 50 W
 Line Regulation: $\pm 1\%$
 Load Regulation: $\pm 3\%$
 THD: $\leq 20\%$ @ 70-100% load, 100-277V
 Leakage Current: 400 μ A Typical
 Turn-on Time Delay: 3.0 S Max
 Protection: Output Over-Voltage reset by power cycling
 Output Over-Current and Output Short
 Circuit Protection with auto recovery

Electrical Specifications

Operating Temperature: $-40^{\circ}C$ to $+60^{\circ}C$
 Maximum Case Temp: $80^{\circ}C$
 Storage Temperature: $-45^{\circ}C$ to $+85^{\circ}C$
 Humidity: 5% - 95%
 Cooling: Convection
 Vibration Frequency: 10 to 300 Hz/1G, 60 minutes
 MTBF: 423,000 Hours at full load and $30^{\circ}C$ ambient conditions per MIL-HDBK-217F
 EMC: FCC 47CFR Part 15 Class B compliant

Ordering Options:

- TC: 0-10V&PWM dimmable version comes with an extra two wires +Purple/-Grey on the output side. See page 3 for additional specifications.
- TA: DALI dimming. See page3 for additional specifications.
- TE: Customized timeshare dimming. See page 3 for additional specifications.

IP65

Note:

1. All parameters NOT specially mentioned are measured at 230Vac input, rated load and $25^{\circ}C$ of ambient temperature.
2. Specifications subject to change without notice.



Constant Current – Product Specifications

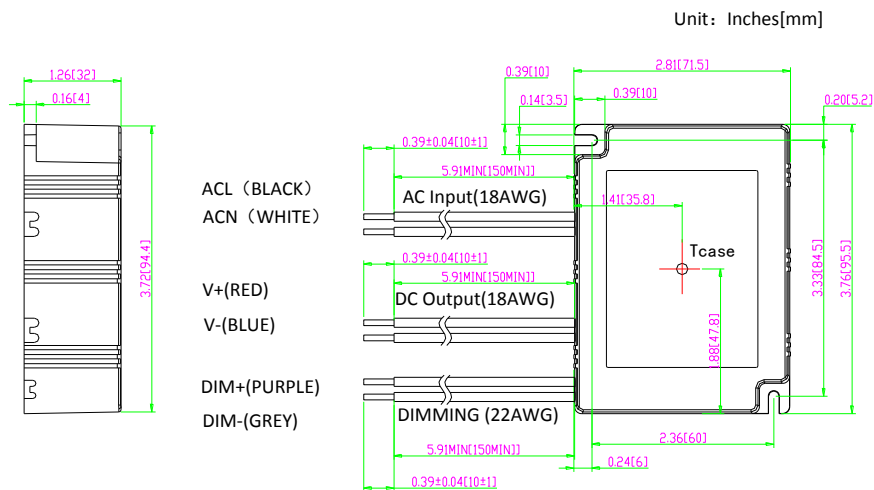
Model Number	Output Current (mA $\pm 3\%$)	Output Voltage Range (Vdc)	Max. Output Power (W)	Typical Efficiency
DE050-142S035-YY	350	85~142	49.7	89%
DE050-111S045-YY	450	67~111	50	89%
DE050-072S070-YY	700	43~72	50.4	88%
DE050-048S105-YY	1050	29~48	50.4	88%
DE050-036S140-YY	1400	22~36	50.4	87%
DE050-029S175-YY	1750	17~29	50.8	87%
DE050-024S210-YY	2100	14~24	50.4	87%
DE050-020S245-YY	2450	12~20	49	87%
DE050-018S280-YY	2800	11~18	50.4	86%
DE050-016S315-YY	3150	10~16	50.4	85%
DE050-012S420-YY	4200	7~12	50.4	84%

-YY indicates dimming options are available. See options at left. Blank = fixed current output.

Constant Voltage– Product Specifications

Model Number	Output Voltage (Vdc $\pm 5\%$)	Output Current Range (mA)	Max. Output Power (W)	Typical Efficiency
DE050-142S035-YY	142	18~350	49.7	89%
DE050-111S045-YY	111	23~450	50	89%
DE050-072S070-YY	72	35~700	50.4	88%
DE050-048S105-YY	48	53~1050	50.4	88%
DE050-036S140-YY	36	70~1400	50.4	87%
DE050-029S175-YY	29	88~1750	50.8	87%
DE050-024S210-YY	24	105~2100	50.4	87%
DE050-020S245-YY	20	123~2450	49	87%
DE050-018S280-YY	18	140~2800	50.4	86%
DE050-016S315-YY	16	158~3150	50.4	85%
DE050-012S420-YY	12	210~4200	50.4	84%

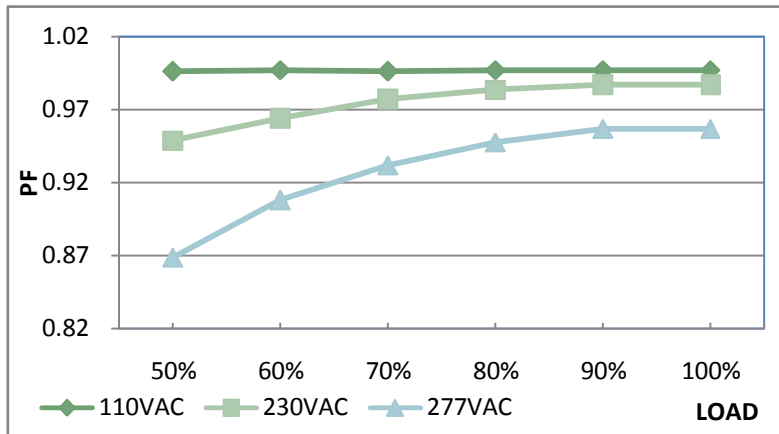
Dimensions:



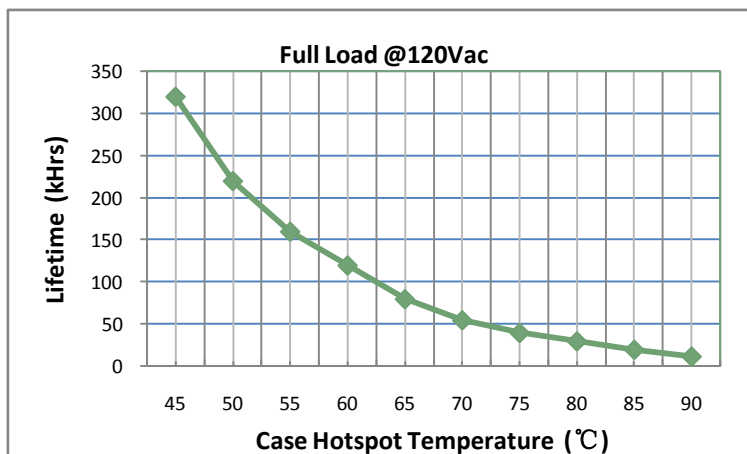
WIRE SPECS:
 AC Input: UL1015
 DC Output: UL1569
 Dimming Control: UL1015

- ※Tcase: Max. Case Temperature
- ※Power's internal temperature is 10 °C warmer than case temperature.
- ※No dimming control wire if without dimming function.
- ※Please DO NOT connect "DIM -" to "V -" (load)

Power Factor vs Load



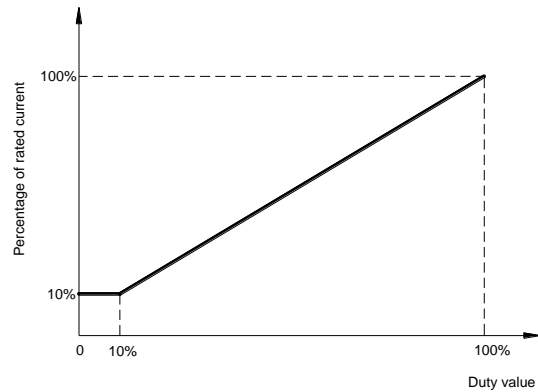
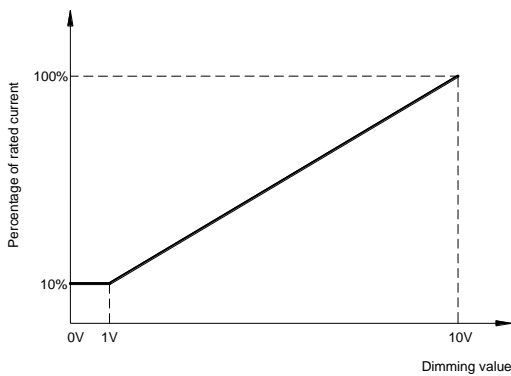
Lifetime vs Case Temperature



“-TC” option: 0-10V & PWM dimming

Parameters		Minimum	Typical	Maximum
Dimming Type	Voltage	-2V	0-10V	15V
	10V PWM(10%~100% f=200~1.5KHz)	-2V	0-10V	15V
Dimming Current		-0.5mA	-	0.5mA

0-10V dimming function for output current adjustment (Typical) 10V PWM signal for output current adjustment (Typical): Frequency range: 200Hz ~ 1.5KHz



“-TA” option: DALI dimming

- a. DALI Testing Software: Please refer to www.impowercorp.com for downloading.
- b. Percentage of rated current: 10%~100%.
- c. “TA” version LED Driver shall work with a DALI Master and DALI Master control software.



“-TE” option: Customized timeshare dimming.

- a. Different output current (10% - 100% rate output current) can be set for different time periods.
- b. Maximum 4 sections is available. The minimum length is 0 to maximum 12 hours for each section.
- c. The parameter can't be changed after shipping.

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