

LED 20W DE Series – Fixed Output and Dimmable
Switch Mode LED Drivers
Constant Current & Constant Voltage with Isolation
Black Plastic Housing

Total Power: 20 Watts
 Input Voltage: 110-277Vac
 Outputs: Single from 7-57Vdc
 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°C
 Input Current: 0.25A @ 100 Vac
 Maximum Power: 20 W
 Line Regulation: $\pm 2\%$
 Load Regulation: $\pm 3\%$
 THD: $\leq 20\%$ @ 70-100% load, 100-277V
 Leakage Current: 300 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°C to +60°C
 Maximum Case Temp: 80°C
 Storage Temperature: -45°C to +85°C
 Humidity: 5% - 95%
 Cooling: Convection
 Vibration Frequency: 10 to 300 Hz/1G, 60 minutes
 MTBF: 494,000 Hours at full load and 30°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.

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Note:

- All parameters NOT specially mentioned are measured at 230Vac input, rated load and 25°C of ambient temperature.
- 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
DE020-057S035-YY	350	34~57	20	84%
DE020-050S040-YY	400	30~50	20	82%
DE020-040S050-YY	500	24~40	20	82%
DE020-036S055-YY	550	22~36	19.8	81%
DE020-029S070-YY	700	17~29	20.3	81%
DE020-024S083-YY	830	14~24	19.9	81%
DE020-018S105-YY	1050	11~18	18.9	80%
DE020-017S125-YY	1250	10~17	21.3	80%
DE020-015S140-YY	1400	9~15	21	80%
DE020-012S175-YY	1750	7~12	21	79%
DE020-010S210-YY	2100	6~10	21	78%

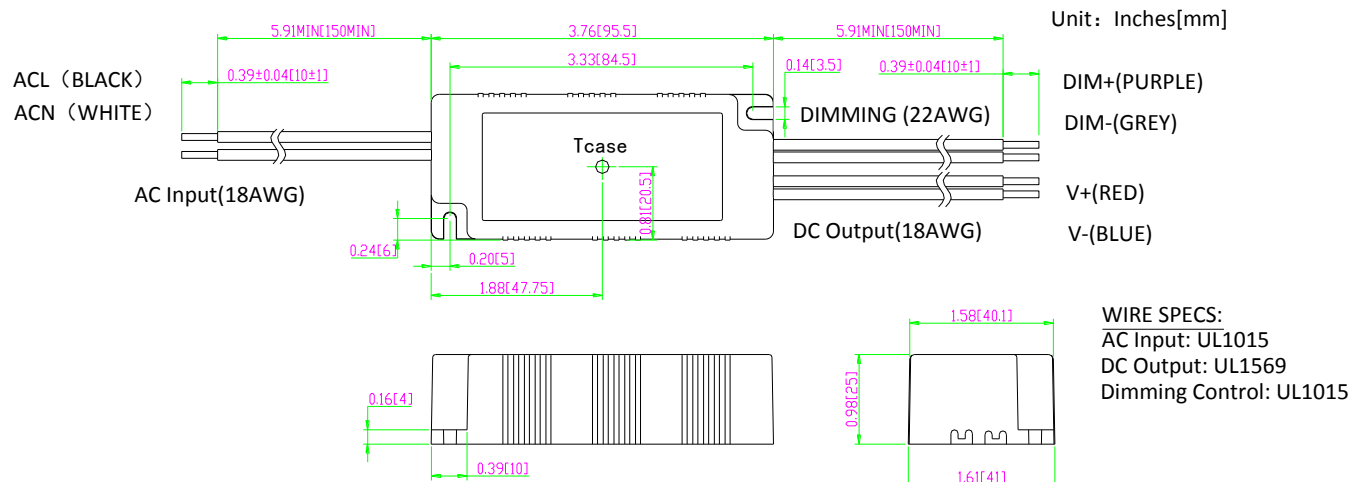
–YY indicates dimming options are available. See options at left. Blank = fixed current output.

Constant Voltage– Product Specifications

Model Number	Output Voltage (Vdc $\pm 5\%$)	Output Current Range (mA)	Max. Output Power (W)	Typical Efficiency
DE020-057S035-YY	57	18~350	20	84%
DE020-050S040-YY	50	20~400	20	82%
DE020-040S050-YY	40	25~500	20	82%
DE020-036S055-YY	36	28~550	19.8	81%
DE020-029S070-YY	29	35~700	20.3	81%
DE020-024S083-YY	24	42~830	19.9	81%
DE020-018S105-YY	18	53~1050	18.9	80%
DE020-017S125-YY	17	63~1250	21.3	80%
DE020-015S140-YY	15	70~1400	21	80%
DE020-012S175-YY	12	88~1750	21	79%
DE020-010S210-YY	10	105~2100	21	78%

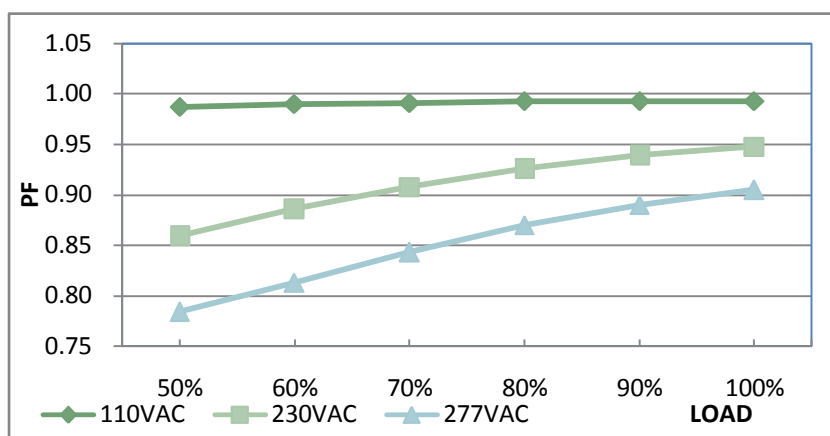
2015-08-22

Dimensions:

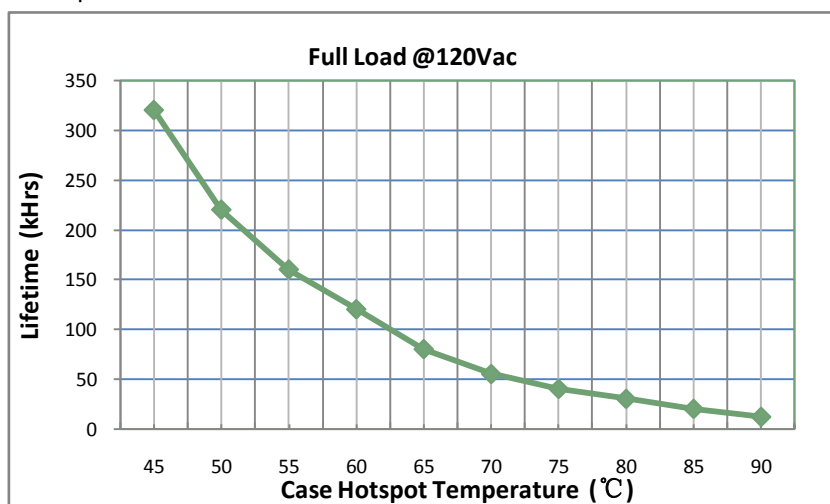


- ※Tcase: Max. Case Temperature
- ※Power's internal temperature is 10 °C warmer than case temperature.
- ※No dimming control wire if without dimming function.
- ※Please DO NOT connect "DIM -" to "V -" (load)

Power Factor vs Load



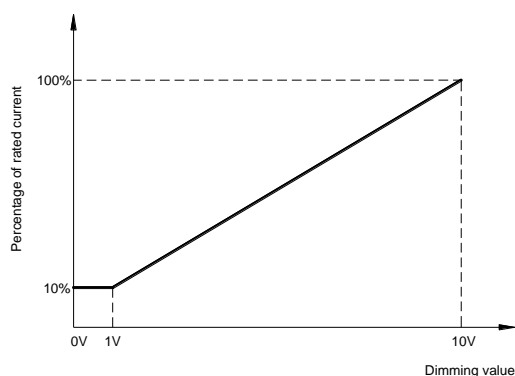
Lifetime vs Case Temperature



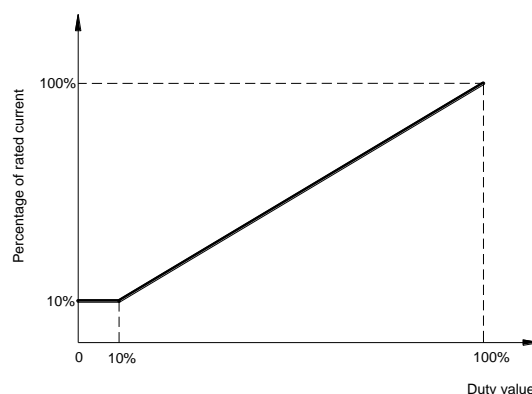
"-TC" option: 0-10V & PWM dimming

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

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



"-TE" option: Customized timeshare dimming.

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

This datasheet is for reference only. Impow reserves the right to final explanation of the technical materials.