

Specification for LED Driver Series

AB-D2060-V12-S

AB-D2060-V24-S

Features:

- Universal AC input / (max 264VAC)
- Built-in active PFC function
- IP20, Suitable for dry environment
- Protections: Short Circuit / Over Voltage / Over Temperature
- Adopt plastic case
- Built-in lighting protection device, it can satisfy DM 1kV
- Complies with world lighting equipment safety standards
- 5 Years Warranty



Description:

AB-D2060-Vxx-S series is an indoor constant voltage LED driver with an input voltage range of 90-264Vac, whose efficiency is up to 88%, and it works in the temperature range of -20 °C to +45 °C under free air convection. It also has a high power factor, ultra-low total harmonic distortion, low standby power consumption, lightning protection, and other comprehensive protective functions, which not only greatly improve the reliability of the product, but also guarantee the product life cycle. This series of products is designed for LED lighting and is used in indoor lighting applications. It is suitable for a wide range of applications in almost every environment where LED luminaires can be installed. It complies with the World Safety standard for lighting equipment and ensures the safety of the user and the luminaire system during installation.

Model

Model	Rated Output Voltage	Rated Output Current	Maximum Output Power	Power Factor (Typ.)	Efficiency (Typ.)	THD (Typ.)
AB-D2060-V12-S	12V±5%	0-5A	60W	0.95	88%	8%
AB-D2060-V24-S	24V±5%	0-2.5A	60W	0.95	88%	8%

Remark: All parameters NOT specially mentioned are measured at 230VAC input, full load, and 25°C of ambient temperature.

Input

Parameter	Minimum Value	Typical Value	Maximum Value	Note
Rated Input Voltage	100Vac		240Vac	Derating curve is shown in Figure
Input Voltage	90Vac		264Vac	
Input Frequency	47Hz		63Hz	
Maximum Input Current			0.85A	100Vac, Full Load
			0.45A	230Vac, Full Load
Input Inrush Current			75A	264Vac/50Hz, Cold Start
Power Factor	0.9	0.97		230Vac, Full Load
Total Harmonic Input		8%	15%	230Vac, Full Load
Leakage Current			0.75mA	230Vac/50Hz, Full Load
Stand-By Power Consumption		0.35W	0.5W	230Vac/50Hz, No Load

Output

Parameter	AB-D2060-V12-S	AB-D2060-V24-S	Note
Output Voltage Range	11.4-12.6VDC	22.8-25.2VDC	Maximum Output power should comply to: $P_o = V_o \cdot I_o = 60W$
Rated Output Current	5A	2.5A	
Output Current	0-5A	0-2.5A	
Rated Output Power	60W	60W	
Rated Output Efficiency	88%	88%	230Vac
Output Voltage Precision	$\pm 5\%$		
Output Voltage Ripple (PK-PK)	$\pm 1\%$		Full Load (Test under 20M bandwidth)
Rise Time	100ms		230Vac
Startup Time	500ms		230Vac
Line Regulation	$\pm 1\%$		Full Load
Load Regulation	$\pm 2\%$		

Characteristic Curve

Fig.1 Output Load-Temperature Curve:

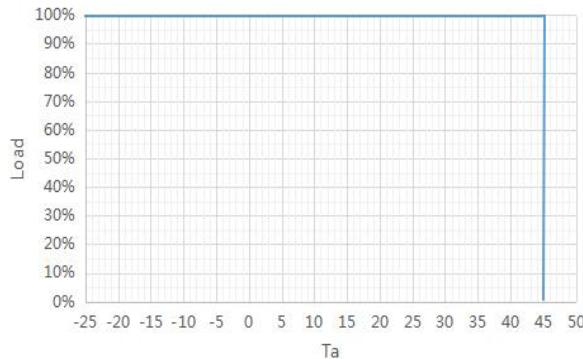


Fig.2 Static Characteristic Curve:

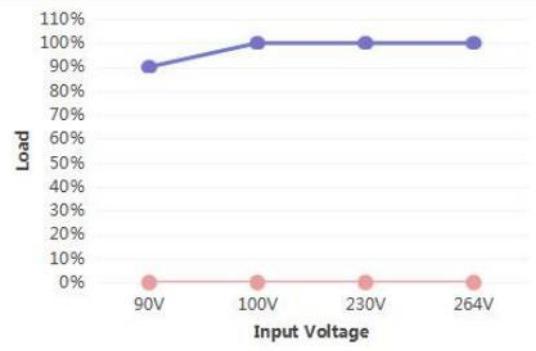


Fig.3 Power Factor Curve (PF):

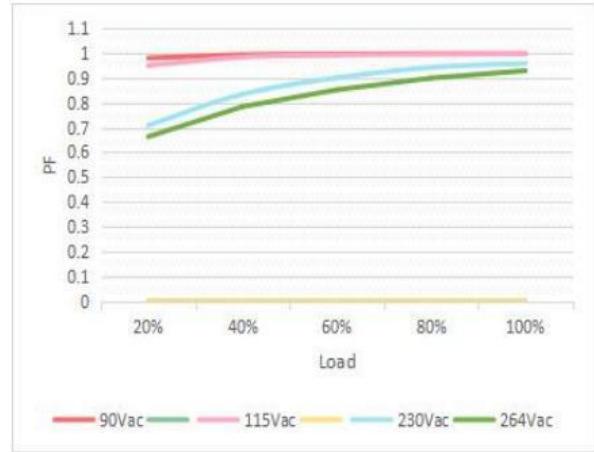


Fig.4 Total Harmonic Distortion Curve (THD):

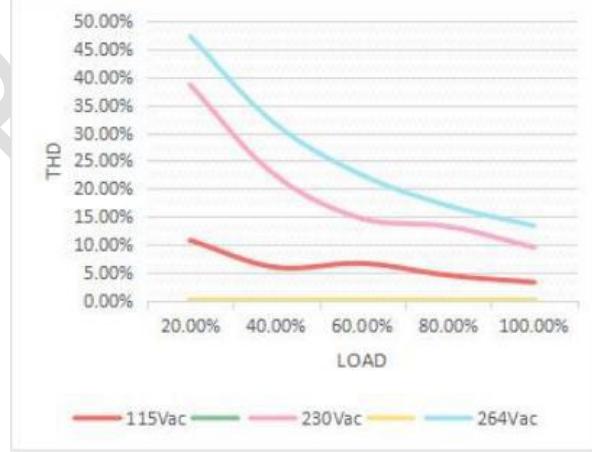
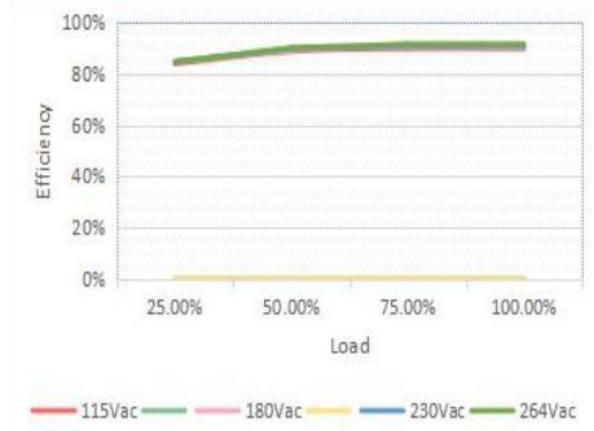


Fig.5 Efficiency-Load Curve:



Protection

Parameter		Conditions	Note
Protection	Overload	1.1-1.6 times rated load	Auto-recovery after overload removed
	Short Circuit	Short circuit power $\leq 1W$	Hiccup mode, auto-recovery after short circuit removed
	Over Voltage	≤ 1.5 times of rated output power	Auto-recovery after over voltage fault removed
	Over Temperature	$65 \pm 5^{\circ}\text{C}$	Auto-recovery after over temperature fault removed

Environment Requirement

Parameter	Minimum	Typical	Maximum	Note
Working Temperature	-20°C	25°C	$+45^{\circ}\text{C}$	See Fig.1
Storage Temperature	-40°C	25°C	$+85^{\circ}\text{C}$	
Working Humidity	45%RH		85%RH	
Storage Humidity	5%RH		95%RH	
IP Grade			IP20	
Cooling Mode	Natural Cooling			

Naming System:

AB-D2060-V12-S

20: IP20

60: 60 Watts

V12: 12 Volts

S: Socket and connector output

AB-D2060-V24-S

20: IP20

60: 60 Watts

V24: 24 Volts

S: Socket and connector output

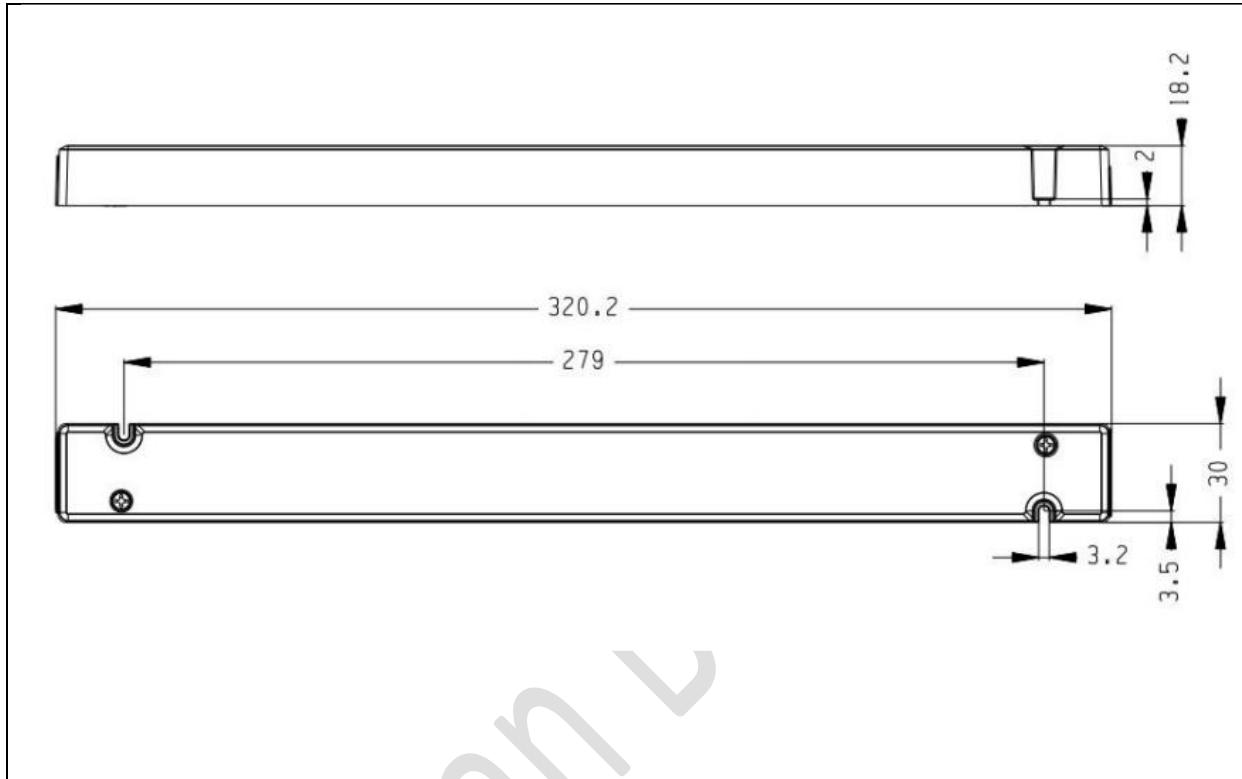
Safety & EMC Standard

Certificate	Safety Standards		Certification	Note
UL/CUL	UL8750			
TUV	EN61347-1:2015 EN 61347-2-13:2014+A1 EN62493:2015			
SAA	AS/NZS 61347.2.13			
CCC	GB 19510.14-2009			
CE	EN 61347-2-13:2014 +A1 EN61347-1:2015			
Safety Test	Technical Indexes		Note	
Dielectric Strength	Input-Output	3750Vac/5mA Max/60s	Reinforced insulation, no breakdown, no flashover	
Insulation Resistance	Input-Output	≥50MΩ	Test voltage: 500Vdc	
Leakage Current		≤0.75mA	240Vac	
EMI/EMS Item	Standard		Data	
Conduction CE	EN55015			
Radiation RE	EN55015			
Harmonics	EN IEC 61000-3-2		Class C	

Others

Parameter	Condition	Note
Lifetime	30,000 Hours	230Vac, Full Load, TC: 85°C
MTBF	200,000 Hours	230Vac, Full load, Ta: 25°C (MIL-HDBK-217F)
TC	90°C	Ta: 45°C
Warranty	5 Years	TC: 85°C
Weight	182g	±5g
Dimensions	320.2*30*18.2mm	L x W x H

Mechanical Specification (Unit: mm)



Remark:	
AC Input:	C8 AC socket, 2PIN, 2.5A/250Vac, black.
DC Output:	12V: LED-2AW 3-position pin holder, 3A/48V, contact resistance ≤ 0.02 Ohm, black
	24V: LED-2AW 3-position pin holder, 3A/48V, contact resistance ≤ 0.02 Ohm, black