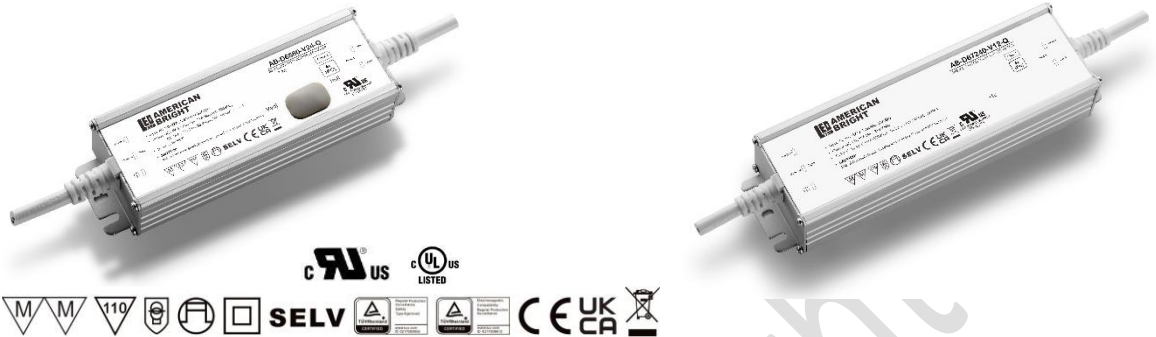


Specification for LED Driver Series

AB-D6550-V12-Q
AB-D6550-V24-Q

AB-D6750-V12-Q
AB-D6750-V24-Q



Features:

- Universal AC input / Full range (Max 305VAC)
- Built-in active PFC function
- IP65/IP67, Metal Case, Suitable for dry, humid, and rainy environments
- Protections: Short circuit / Over Voltage / Over Temperature
- Adopt metal shell and internal glue filling, which can be used in dangerous situations
- Built-in lightning protection device can meet the requirements of DM 4KV / CM 6kV
- Compliance with worldwide safety regulations for lighting
- 5 years warranty

Description:

AB-D6x50-Vxx-Q series is an outdoor waterproof power supply featuring dual mode constant voltage and constant current output for IP65 and constant voltage only for IP67. Its input voltage range is 90-305Vac, with a high efficiency of up to 87.5%, fanless design, working in the temperature range of - 40 ° C to + 60 ° C under free air convection. It has an ultra-high power factor, ultra-low total harmonic distortion, and low standby power consumption, with all-around protection functions such as lightning protection and waterproof function, which not only greatly improves the product's reliability, but also ensures the product's life cycle. This series is designed for LED lighting such as road lighting, floodlights, stage lighting, advertising lights, etc., suitable for almost all kinds of applications where LED lamps can be installed. The product is designed completely in accordance with the world's lighting equipment safety regulations to ensure the safety of both the user and the luminaire system during installation.

Model

Model	Rated Output Voltage	Rated Output Current	Min. Output Voltage CC Mode	Maximum Output Power	Current Tolerance	Total Harmonic Distortion (Typ.)	Power Factor (Typ.)	Efficiency (Typ.)
AB-D6x50-V12-Q	12V	2.08-4.17A	7.2V	50W	±5%	8%	0.97	87.5%
AB-D6x50-V24-Q	24V	1.2-2.08A	14.4V	50W	±5%	8%	0.97	87.5%

Model	Mode	IP Grade
AB-D6550-Vxx-Q	Constant Voltage and Constant Current	IP65
AB-D6750-Vxx-Q	Constant Voltage Only	IP67

Remark:

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

Naming System:

AB-D6550-V12-Q

65: IP65

50: 50 Watts

V12: 12 Volts

Q: No Dimming

AB-D6750-V12-Q

67: IP67

50: 50 Watts

V12: 12 Volts

Q: No Dimming

AB-D6550-V24-Q

65: IP65

50: 50 Watts

V24: 24 Volts

Q: No Dimming

AB-D6750-V24-Q

67: IP67

50: 50 Watts

V24: 24 Volts

Q: No Dimming

Input

Parameter	Minimum Value	Typical Value	Maximum Value	Note
Rated Input Voltage	100Vac		277Vac	The derating curve is shown in the figure
Input Voltage	90Vac		305Vac	
Input Frequency	47Hz		63Hz	
Maximum Input Current			0.60A	100Vac, Full Load
			0.26A	230Vac, Full Load
Input Inrush Current			60A	230Vac/50Hz, Cold Start
Power Factor	0.96	0.97		230Vac, Full Load
Total Harmonic Input		8%	8.5%	230Vac, Full Load
Leakage Current			0.7mA	230Vac/50Hz, Full Load
Stand-By Power Consumption		0.35W	0.5W	230Vac/50Hz, No Load

Output

Parameter	AB-D6x50-V12-Q	AB-D6x50-V24-Q	Note
Output Voltage Adjusted Range	10.5-13.5VDC	22-26VDC	Maximum Output power should comply to: Po = Vo*Io=50W
The Minimum Output Voltage (CC Mode)	7.2V	14.4V	
Rated Output Current	4.17A	2.08A	
Output Current Adjusted Range	2.08-4.17A	1.2-2.08A	
Rated Output Power	50W	50W	
Rated Output Efficiency	87.5%	87.5%	230Vac
Output Current Tolerance	±5%		
Output Voltage Ripple (PK-PK)	±2%		Full Load (Test under 20M bandwidth)
Output Current Ripple (PK-PK)	±5%		
Rise Time	100ms		230Vac
Startup Time	400ms		230Vac
Line Regulation	±1%		Full Load
Load Regulation	±2%		

Characteristic Curve

Fig.1 Output Load-Temperature Curve:

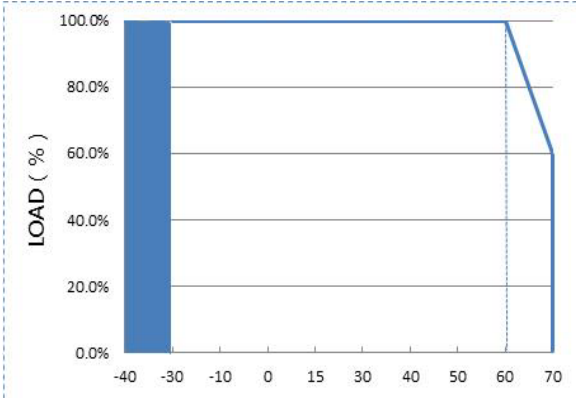


Fig.2 Static Characteristic Curve:

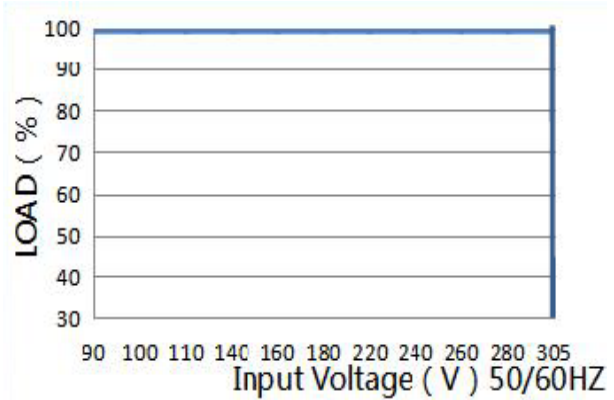


Fig.3 I-V Curve:

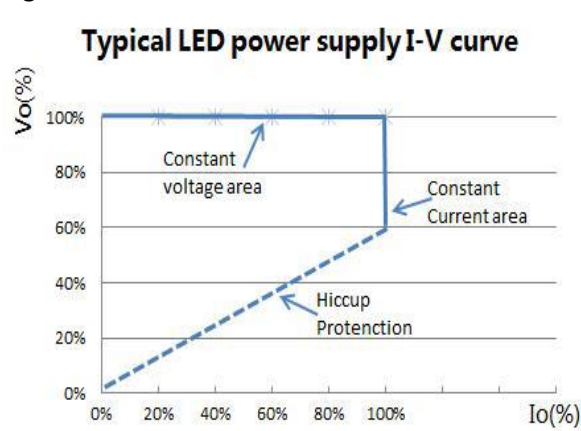


Fig.4 Efficiency-Load Curve:

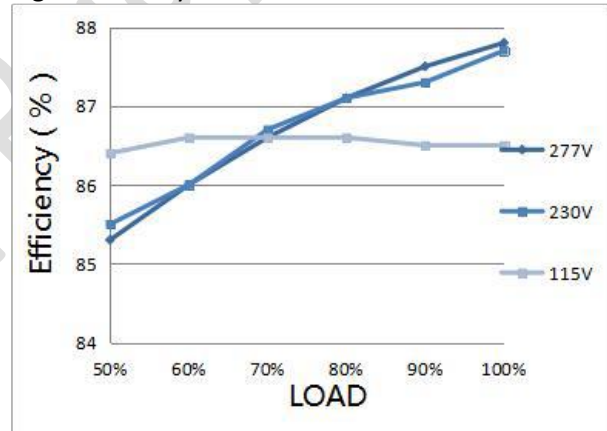


Fig.5 Power Factor Characteristics Curve (PF):

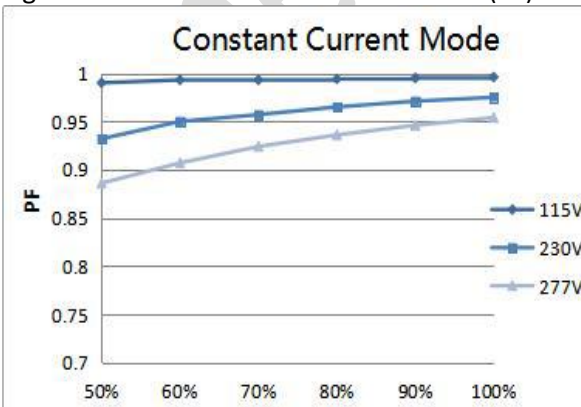
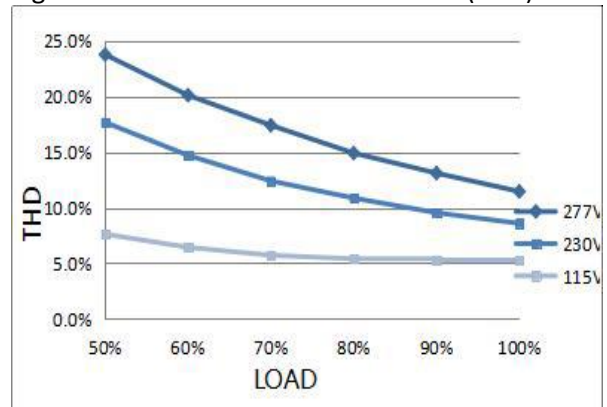


Fig.6 Total Harmonic Distortion Curve (THD):



Protection

Parameter		Conditions	Note
Protection	Overload	1.1-1.6 times of rated load	Auto-recovery after overload removed
	Short Circuit	Short circuit power $\leq 0.6W$	Hiccup mode, auto-recovery after short circuit removed
	Over Voltage	1.5 times of rated output voltage	Auto-recovery after overvoltage removed
	Over Temperature	110°C	Auto-recovery after over temperature removed

Environment Requirement

Parameter	Minimum	Typical	Maximum	Note
Working Temperature	-40°C	25°C	+60°C	See Fig.2
Storage Temperature	-40°C	25°C	+85°C	
Working Humidity	10%RH		90%RH	
Storage Humidity	5%RH		95%RH	
IP Grade			IP67	
Cooling Mode	Natural Cooling			

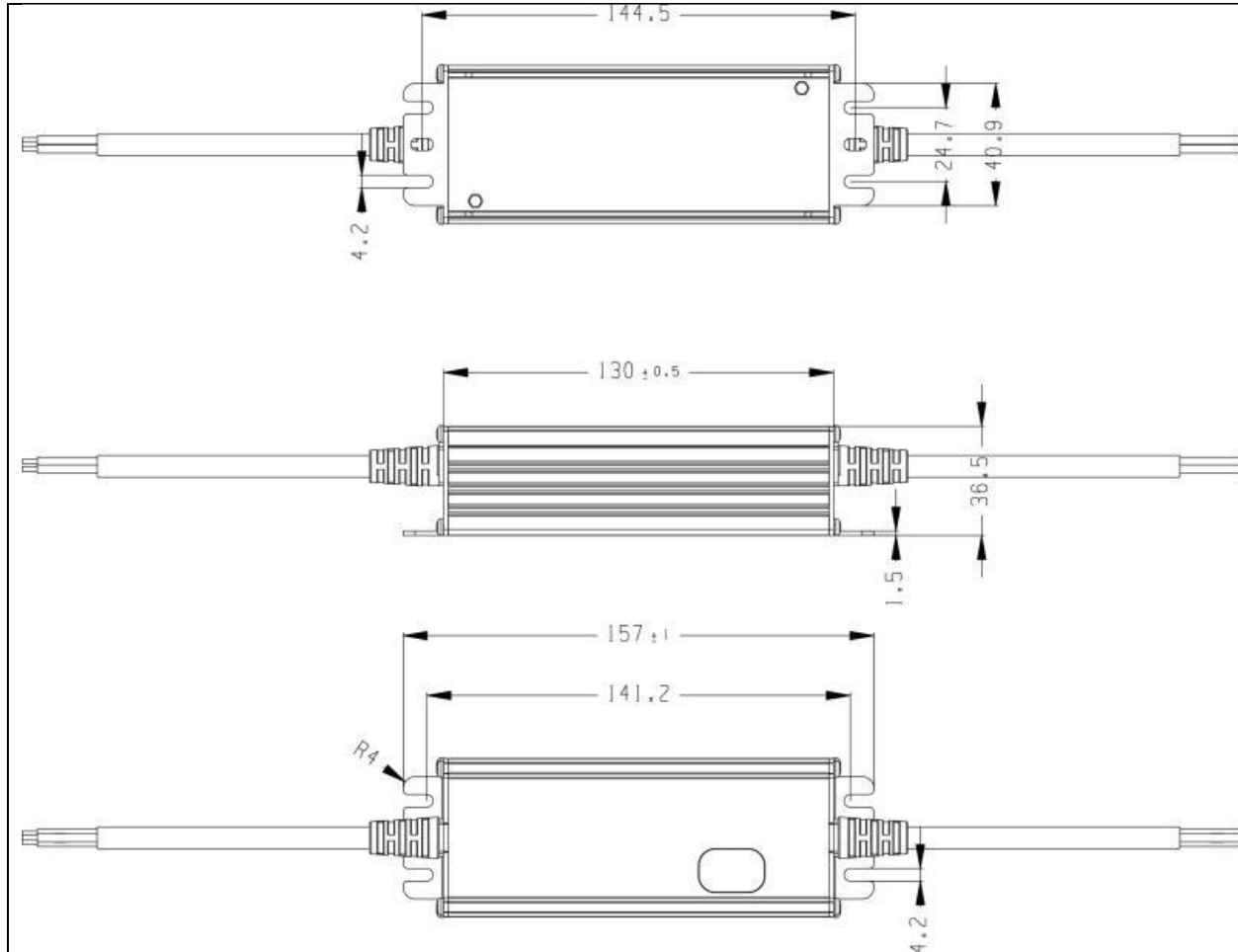
Safety & EMC Standard

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	3200Vac/5mA Max/60s	Reinforced insulation, no breakdown, no flashover	
	Primary to Safety (Ground AC To FG)	1600Vac/5mA Max/60s	Basic insulation, no breakdown, no flashover	
	Secondary to Safety (Ground DC To FG)	1000Vac/5mA Max/60s	Functional insulation, no breakdown, no flashover	
Insulation Resistance	Input-Output	≥10MΩ	Test voltage: 500Vdc	
Ground Resistance		≤0.1Ω	25A/1min	
Leakage Current		≤0.75mA	277Vac	
EMC Test		Standard	Criterion	
Conduction CE		EN55015		
Radiation RE		EN55015		
Harmonics		EN IEC 61000-3-2	Class C	

Others

Parameter	Condition	Note
Lifetime	55,000 Hours	230Vac, Full Load, TC: 75°C
MTBF	200,000 Hours	230Vac, Full Load, Ta: 25°C (MIL-HDBK-217F)
TC	80°C	
Warranty	5 Years	TC: 75°C
Weight	470g	
Dimensions	157*52.9*36.5mm	L x W x H

Mechanical Specification (Unit: mm)



Remark: AB-D6550-Vxx-Q

AC Input Cable:	VDE, H05RN-F 105°C 3G*1.0mm ² , L=300mm+SR Yellow-green: PE, Brown: L, Blue: N
DC Output Cable:	12V: SJTW, 18AWG/ 0.824mm ² 105°C, L=300mm+SR White : V+, Black : V- 24V: SJTW, 18AWG/ 0.824mm ² 105°C, L=300mm+SR White : V+, Black : V-

Mechanical Specification (Unit: mm)

