SPECIFICATION FOR APPROVAL

CUSTOMER: _____

CUSTOMER P.N.: 102024130

PRODUCT MODEL: MSP-ZA350IC68V0-024W

PRODUCT NO.: MOS00007-N0

SAMPLE DATE: 2014-02-26

CUSTOMER AUTHORIZED SIGNATURE		

Please return to us one copy of "SPECIFICATION FOR APPROVAL" with you approved signature.

Bright Way Electronics Technology (Asia) Co.,Ltd
Tel : +852-2850 6311 Tax :+852-2850 4440
Address :12/F .,San Toi Building , 137-139 Connaught Road Central , Hong Kong
Email:Sales@brightway-tech.com Web: http://www.brightway-tech.com

Prepared By:	Checked By:	Approved By:

Revision History

Rev.	Description of Change		Changed Date	Notes.
	Before	After		
A/0	Original Release	---	2014-2-26	---

Table Of Content

1. Scope

The document detail the electrical, mechanical and environmental specifications of a 24W constant current LED driver. The LED driver shall meet the RoHS requirement.

Description:

☐ LED driver (With AL Case) ■ LED driver (With Plastic Case)

☐ Open Frame ☐ Others

2. Input Characteristics

2.1. Input Voltage & Frequency

The range of input voltage is from 90 to 264Vac single phase.

Items	Minimum	Nominal	Maximum
Input Voltage	90Vac	100-240Vac	264Vac
Input Frequency	47Hz	60Hz/50Hz	63Hz

2.2. Input AC Current

0.4Amax. @ 100-240Vac input & full load.

2.3. Inrush Current (cold start)

45Amax. @ 230Vac input, 25℃(cold start).

2.4. Power Factor

Typical value is 0.95@110Vac input & full load ;

Typical value is 0.90@220Vac input & full load .

2.5. Efficiency

Typical value is 84% (Min.82%) @110Vac input & full load;

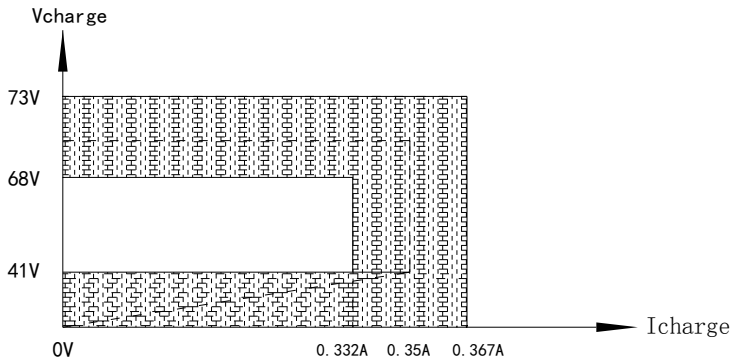
Typical value is 85% (Min.83%) @220Vac input & full load.

3. Output Characteristics

3.1. Static Output Characteristics <Vo & R&N<5000mVp-p >

Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 10uF electrolysis capacitor. (test under the condition of rated input and rated output)

3.2. Voltage/Current Curve



Constant Current Output Characteristics	Min.	Typical.	Max.
Output Current Range	0.332A	0.35A	0.367A
Output Voltage Range	41V	/	68V

3.3.Turn - on Delay Time

3.0S max. @ 100-240Vac input & full load.

4. Protection Requirements

4.1.Short Circuit Protection

The input power shall be less than 10w and without any damage when output is short, it will auto-recovery work once the fault conditions removed.

5. Environment Requirements

5.1.Operating Temperature and Relative Humidity

-25℃ to +50℃

5%RH to 95%RH

5.2.Storage Temperature and Relative Humidity

-35℃ to +70℃

5% to 95%RH non-condensing at Sea level shall be low 10,000 feet.

5.3.Vibration

10 to 300Hz sweep at a constant acceleration of 1.0G(Breadth: 3.5mm) for 1Hour for each of the perpendicular axes X, Y, Z.

6. Reliability Requirements

6.1.Life Time Qualification

The life time shall be at least 3 years at 110Vac input,80% load and 45℃ ambient temperature.

6.2.MTBF Qualification

The MTBF shall be at least 490,000 hours at 110Vac, 80% load and 25℃ ambient temperature(MIL-HDBK-217F).

7. Safety & EMI/EMS Standards

7.1.Safety Category

Safety Category	Country	Standard
CUL	USA & Canada	UL8750,UL935,UL1012,UL1310 Class 2,CSA-C22.2 No.107.1,CSA C22.2 No.223-M91 Class 2
CE	Europe	EN 61347-1,EN 61347-2-13
CQC	China	GB 19510.1, GB 19510.14, GB 7000.1

7.2.EMI Standards

EMI Standards	Country	Notes
EN 55015	Europe	Conducted emission Test & Radiated emission Test with 6 dB margin
FCC	USA	FCC Part 15 class B,ANSI C63.4:2009

7.3.EMS Standards

EN 61000-3-2	Harmonic current emissions
EN 61000-3-3	Voltage fluctuations & flicker
EN 61000-4-2	Electrostatic Discharge(ESD): 8kV air discharge, 4kV contact discharge
EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS
EN 61000-4-4	Electrical Fast Transient / Burst-EFT
EN 61000-4-5	Surge Immunity Test: AC Power Line: line to line 1 kV
EN 61000-4-6	Conducted Radio Frequency Disturbances Test-CS
EN 61000-4-8	Power Frequency Magnetic Field Test
EN 61000-4-11	Voltage Dips
EN 61547	Electromagnetic Immunity Requirements Applies To Lighting Equipment

7.4.Energy Star Standards

Energy Star Standards	Notes
ANSI / IEEE C62.41-1991	Transient protection,power supply shall comply with Class A operation.The line transient shall consist of seven strikes of a 100kHz ring wave,2.5kV level,for both common mode and differential mode

8. Main Safety Test Items

8.1.Dielectric Strength(Hi-pot)

Primary to Secondary: 3750Vac 10mAMax / 60second(3second for production)/Finished goods

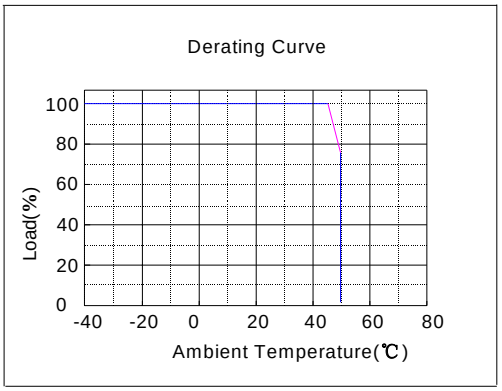
8.2.Leakage Current

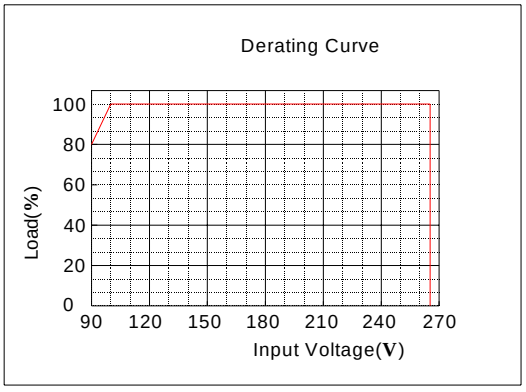
0.5mAmax. at 230Vac/50Hz input.

8.3.Insulation Resistance

The IR shall be at least 50MΩ when apply 500Vdc between primary and secondary.

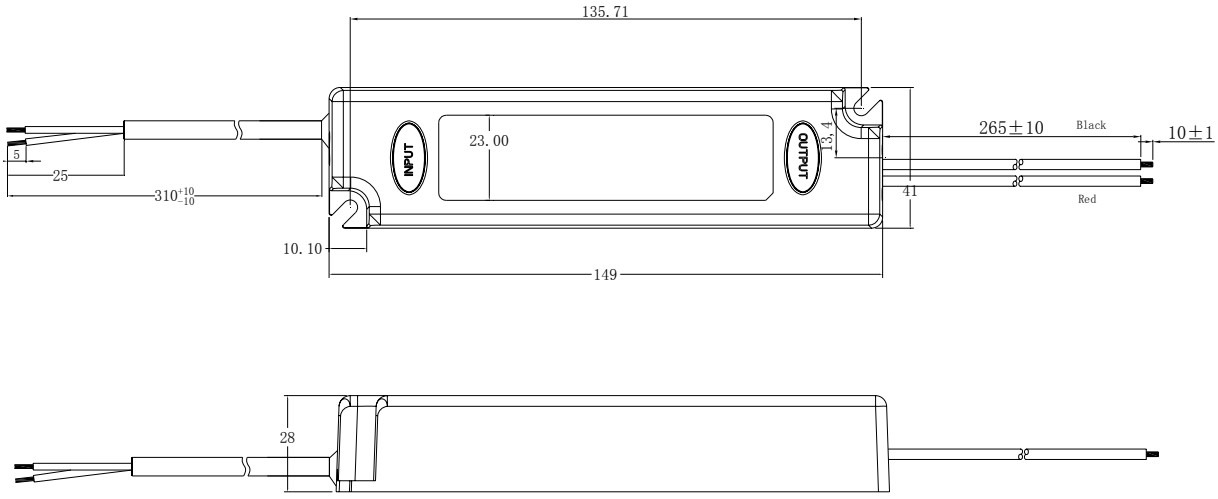
9. Derating Curve





10. Mach. Outline Drawing

1. Tolerance:±0.5mm for unidentified part, indentified refer to the fact
2. Unit: mm



Dimensions	Millimeters(Inches)
Length	149(5.87)
Width	41(1.61)
Height	28(1.1)

Wire	Specification
AC Input	2*1.0mm^2 CCC+VDE
DC Output	UL1015 18AWG
Dimming	/

11. Product Picture