

**DONE** 东菱电源

产品类型	东菱 LED 室外驱动电源 DONE LED INTEGRATED SPECIAL DRIVER		
产品系列	DL-200W-MPA-H 系列	REV	2.5

## 中山市东菱照明科技有限公司

### 客户承认书

#### PRODUCT SPECIFICATION

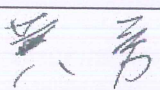
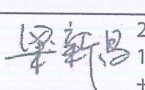

CUSTOMER/客户名:	
MODEL NO./产品型号:	DL-200W-MPA-H
Rev./版本号:	V2.5
SAMPLE DATE/送样日期:	

#### 客户确认栏

TESTED BY 检查	CHECKED BY 审核	APPROVED BY 批准
客户备注		

Please return to us one copy of "SPECIFICATION FOR APPROVAL" with you approved signature. /客户确认签章后请回传一份承认书给我公司.

#### 东菱确认栏

MADE BY 制作	CHECKED BY 审核	APPROVED BY 批准
 2020.01.13 18:04:25 +08'00'	 2020.01.14 11:55:21 +08'00'	 2020.01.15 08:13:29 +08'00'



Zhongshan Done Lighting Technology Co., Ltd.

中山市东菱照明科技有限公司

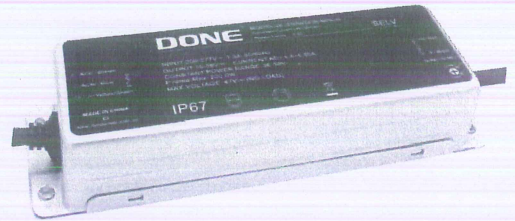
No 3-1&3-2, Kanglong 3rd Road, XinMao Industry Zone, Henglan Town, Zhongshan City, Guangdong Province, P. R. China Post code: 528478

地址: 广东省中山市横栏镇新茂工业区康龙三路3号之一之二 邮编: 528478

TEL: 0760-89838399 89838379 FAX: 0760-89831157 89838396



## FEATURES 产品特点



- ◇ Class I Driver  
Class I 结构驱动
- ◇ Input voltage: 200-277V ~ 50/60Hz  
输入电压: 200-277V ~ 50/60Hz
- ◇ Built-in active PFC function, PF>0.95, THD<10% @230Vac Full load  
内置有源功率因数校正电路, 输入 230Vac, 输出满负载时, PF>0.95, THD<10%
- ◇ Efficiency 88% min. @230Vac Full load  
输入 230Vac, 输出满负载, 效率大于 88%
- ◇ Constant current mode output  
驱动为恒流输出控制模式
- ◇ Metal shell structure, protection meet IP67  
金属外壳结构, 防护等级: IP67
- ◇ Surge immunity: Differential Mode (Line-Line): ±4 KV (2 ohm), Common Mode (Line-Earth): ±6 KV (12 ohm) (IEC61000-4-5 2014)  
浪涌抗扰度: 差模(线-线): ±4 KV (2 ohm), 共模(线-地): ±6 KV (12 ohm) 参照 IEC61000-4-5 2014
- ◇ Typical lifetime > 26000 Hours @Tc=70°C  
寿命>26000 小时 @Tc=70°C
- ◇ Function options: output current adjustable via potentiometer;  
可选功能项: 输出电流手动可调
- ◇ Applied in: Street lamp, project-light lamp or other lamps and lanterns  
应用于: 路灯、工况灯等照明灯具
- ◇ 本产品适用于印度市场

## MODEL LIST 型号列表

型号 (Model NO)	Input Voltage 输入电压	Output Voltage 输出电压	Output Current 输出电流	效率 Efficiency		谐波 THD		功率因数 (PF)	
				230Vac	277Vac	230Vac	277Vac	230Vac	277Vac
DL-200W5A55-MPA-H	200-277Vac 50/60Hz	18-38Vdc	4.4-5.55A	>88%	>88%	<10%	<15%	>0.95	>0.90
DL-200W4A2-MPA-H		24-48Vdc	3.3-4.2A	>88%	>88%	<10%	<15%	>0.95	>0.90
DL-200W3A5-MPA-H		32-58Vdc	3.0-3.7A	>88%	>88%	<10%	<15%	>0.95	>0.90

注: 以上参数为上电 15 分钟内测得

## ELECTRICAL SPECIFICATION 电气规格

### ◇Input Characteristics 输入特性

INPUT VOLTAGE RANGE 输入电压范围	180 - 305Vac		
FREQUENCY RANGE 频率范围	47-63Hz		
POWER FACTOR 功率因数	PF>0.95 230Vac full load	230Vac 输入, 满载时 PF>0.95	
THD 总谐波失真	<10% 230Vac full load	230Vac 输入, 满载时 THD<10%	
INPUT MAX CURRENT 输入最大电流	<1.3A 180Vac full load	180Vac 输入, 满载时 $I_{in}$ <1.3A	
INRUSH CURRENT 突入电流	Gold Start (25°C) 100A @230Vac	冷启动 (25°C) 100A @230Vac	

### ◇Output Characteristics 输出特性

Model NO. 型号	DL-200W5A55-MPA-H	DL-200W4A2-MPA-H	DL-200W3A5-MPA-H
RATED CURRENT 额定电流	5.55A	4.2A	3.5A
CURRENT ADJUSTMENT RANGE * 电流调整范围 (通过外部电位器) *	4.4-5.55A	3.3-4.2A	3.0-3.7A
CONSTANT CURRENT RANGE 恒电流范围	18-38Vdc	24-48Vdc	32-58Vdc
CONSTANT POWER RANGE 恒功率范围	36-38Vdc	-----	54-58Vdc
RATED POWER 额定功率	200W		
NO-LOAD VOLTAGE 空载电压	47Vdc	68Vdc	68Vdc
EFFICIENCY 效率 常温通电 15 分钟 (230V 满载测试)	>88%	>88%	>88%
THE RIPPLE OF OUTPUT CURRENT 输出电流纹波	<40%		
CURRENT TOLERANCE 电流精度	±5%		
LINE REGULATION 线性调整率	±3%		
LOAD REGULATION 负载调整率	±3%		
SETUP TIME 启动时间	<1000ms @230Vac full load		

Output current must be carefully adjusted based on input voltage and output voltage, refer to Fig.1, Fig.2

(注: 输出电流范围受限于输入输出电压, 具体请参照 Fig.1, Fig.2)

◇Protection 保护

OVER CURRENT 过载电流	Protection type: Constant current limiting, recovers automatically after fault condition is removed 保护模式:恒电流限制模式, 负载异常条件移除后可自动恢复
SHORT CIRCUIT 短路	Hiccup mode, recovers automatically after fault condition is removed 打嗝模式, 异常条件移除后可自动恢复
OVER VOLTAGE 过载电压	Protection type: hiccup or when it is at the highest point of output voltage the product would not be hurt when the fault is excluded or is start working again the power supply is working normally 保护模式:打嗝或钳在某输出最高电压状态, 产品不受损伤, 当故障排除或重新起机时, 电源工作正常

NOTE:

- 1) All parameters NOT specially mentioned are measured at 230Vac input, rated load and 25°C of ambient temperature.  
如未特别说明, 所有规格参数均在 230Vac (50Hz) 输入, 额定负载, 环境温度 25°C 的条件下进行测量
- 2) Tolerance : includes set up tolerance, line regulation and load regulation.  
包含设定误差、线性调整率和负载调整率。
- 3) Constant current operation region is within 50% ~100% rated output voltage. This is the suitable operation region for LED related applications.  
恒流模式在额定输出电压 50%~100%情况下运行, 适用 LED 等相关产业

◇Environment 环境

WORKING TEMP. 工作温度	-30 ~ +55°C (Refer to "Typical Lifetime Curve") -30 ~ +55°C (参考"使用寿命曲线")
WORKING HUMIDITY 工作湿度	20 ~ 95% RH non-condensing 20 ~ 95% RH, 无冷凝
STORAGE TEMP. HUMIDITY 储存温度、湿度	-30~+80°C, 10 ~ 95% RH
VIBRATION 耐振动	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes 10 ~ 500Hz, 5G 12分钟/周期, X、Y、Z轴各72分钟
WITHSTAND VOLTAGE 耐压	I/P-O/P:1.5KVAC I/P-PE :1.5KVAC O/P-PE : 0.5KVAC
ISOLATION RESISTANCE 绝缘阻抗	I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH
MTBF	150K hrs min. MIL-HDBK-217F (Ta=25°C)

**SAFETY & EMC 安全与电磁兼容**

Safety 安全	/
EMC 电磁兼容	/
SUGER 浪涌	Surge: Differential Mode +/- 4 KV ( 2 ohm ) , Common Mode +/- 6 KV ( 12 ohm ) ( IEC61000-4-5 2014 ) 浪涌等级: 差模 L-N +/- 4 KV ( 2 ohm ), 共模 L, N-地 +/- 6 KV ( 12 ohm ) 参照 IEC61000-4-5 2014
LEAKAGE CURRENT 漏电流	<0.7mA

NOTE:

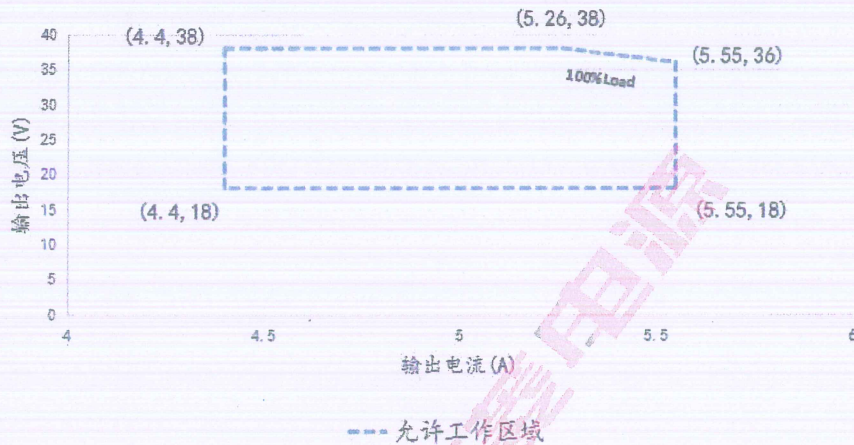
The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.

电源作为一个元件与终端设备使用，因为 EMC 受整套装置的影响，终端设备制造商需对整套装置重新进行 EMC 确认。

## I-V 工作区域

### OUTPUT CURRENT VS OUTPUT VOLTAGE 输出电流 VS 输出电压 (DL-200W5A55-MPA-H)

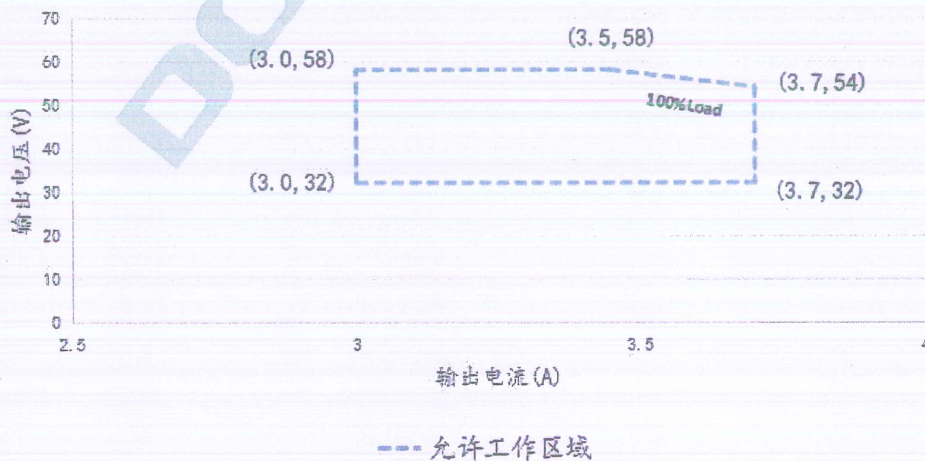
(Fig. 1) DL-200W5A55-MPA-H(输入200-277Vac时)输出电流VS输出电压



负载工作电压 (V)	18	20	23	26	28	33	36	37	38
电源电流 I <sub>o</sub> _MAX(A)	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.41	5.26
电源功率 P <sub>o</sub> _MAX(W)	99.9	111	127.7	144.3	155.4	183.2	200	200	200

### OUTPUT CURRENT VS OUTPUT VOLTAGE 输出电流 VS 输出电压 (DL-200W3A5-MPA-H)

(Fig. 2) DL-200W3A5-MPA-H(输入200-277Vac时)输出电流VS输出电压

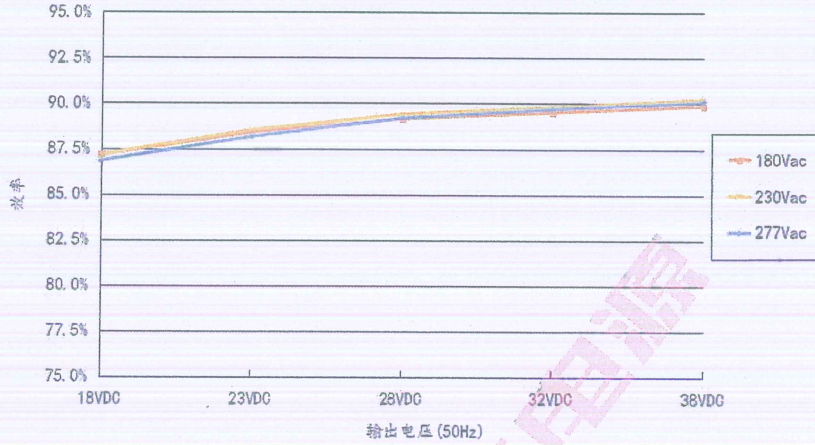


负载工作电压 (V)	32	35	38	42	45	51	54	56	58
电源电流 I <sub>o</sub> _MAX(A)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.57	3.45
电源功率 P <sub>o</sub> _MAX(W)	118.4	129.5	140.6	155.4	166.5	188.7	200	200	200

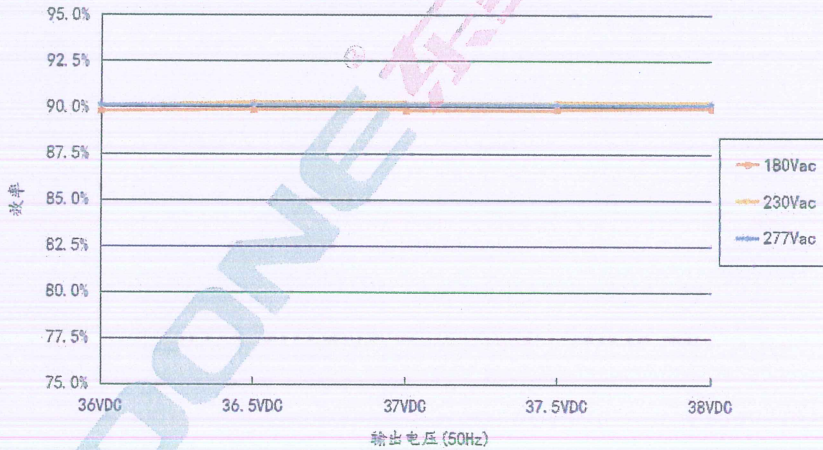
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效率曲线

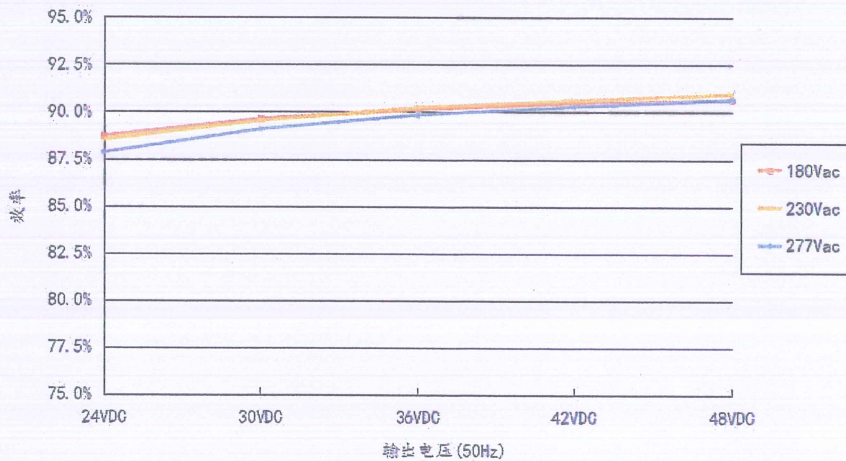
EFFICIENCY VS OUTPUT VOLTAGE 效率 VS 输出电压 (DL-200W5A55-MPA-H 恒电流) 热测  
效率VS输出电压



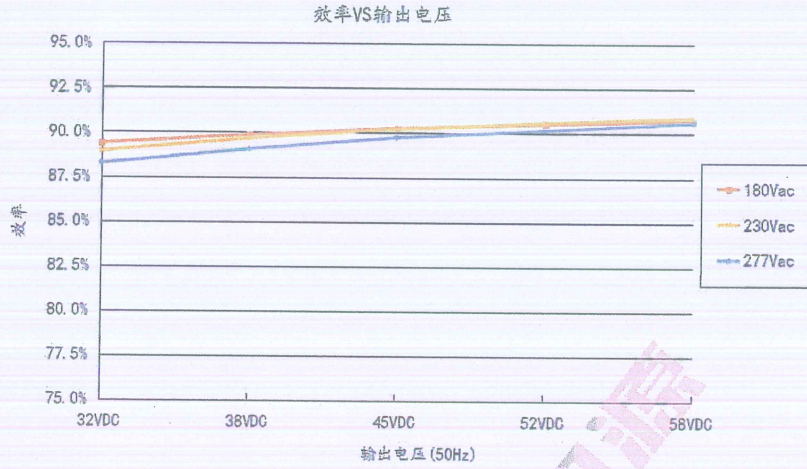
EFFICIENCY VS OUTPUT VOLTAGE 效率 VS 输出电压 (DL-200W5A55-MPA-H 恒功率) 热测  
效率VS输出电压



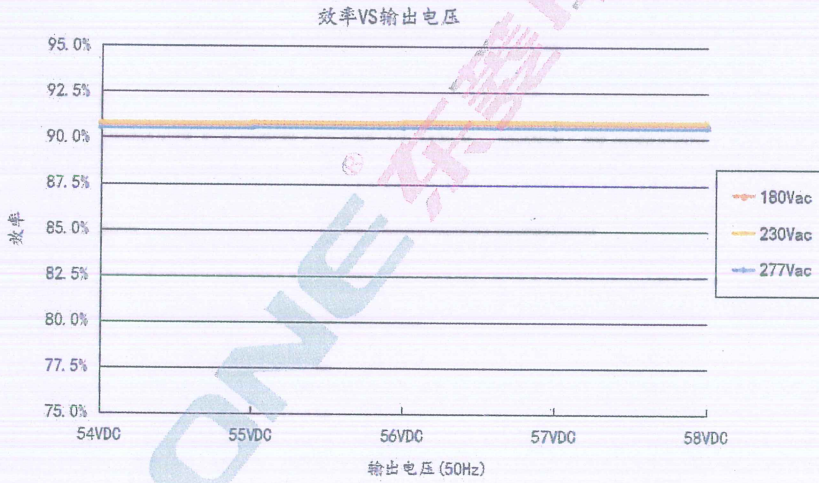
EFFICIENCY VS OUTPUT VOLTAGE 效率 VS 输出电压 (DL-200W4A2-MPA-H 恒电流) 热测  
效率VS输出电压



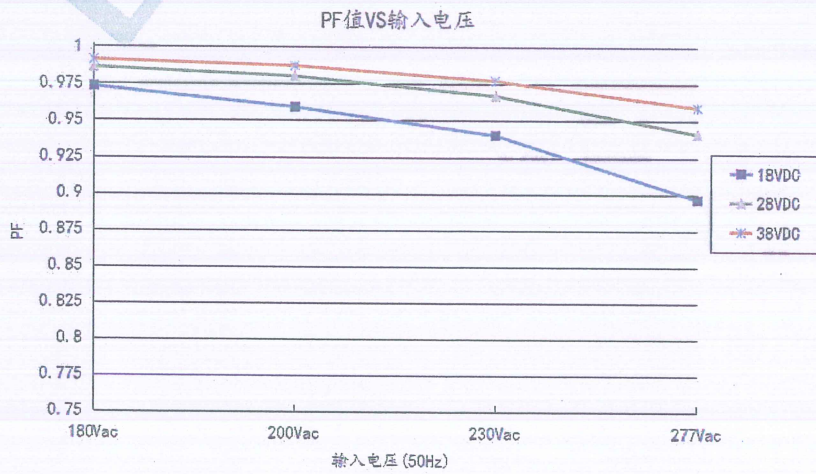
■ EFFICIENCY VS OUTPUT VOLTAGE 效率 VS 输出电压 (DL-200W3A5-MPA-H 恒电流) 热测



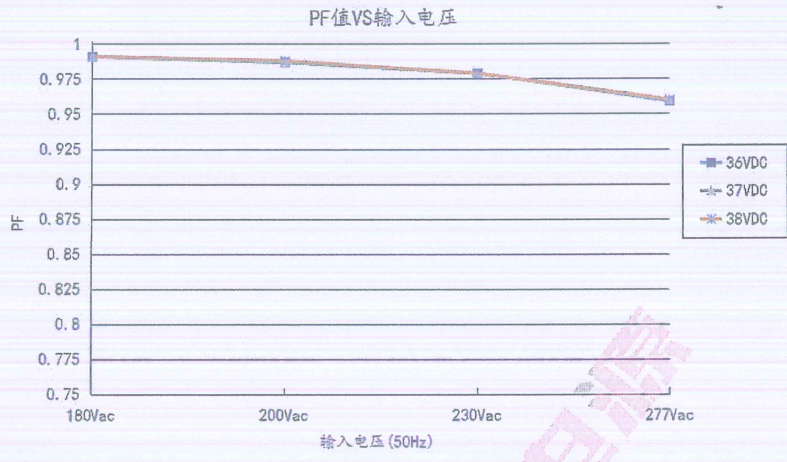
■ EFFICIENCY VS OUTPUT VOLTAGE 效率 VS 输出电压 (DL-200W3A5-MPA-H 恒功率) 热测



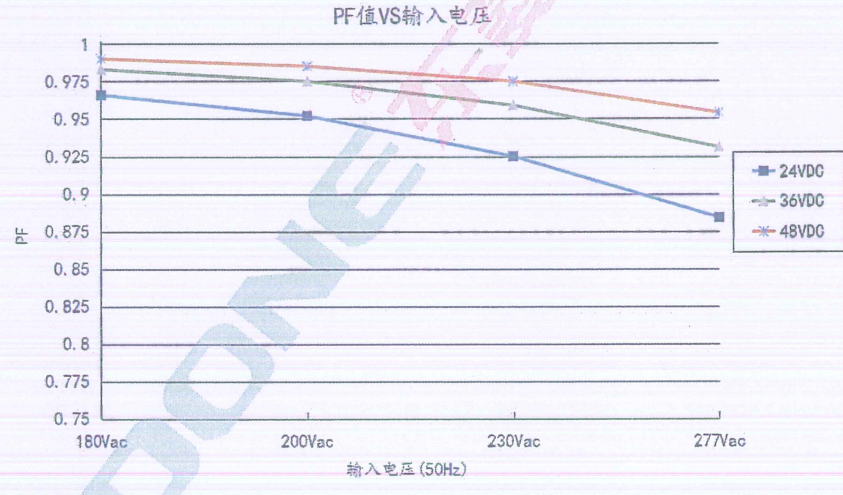
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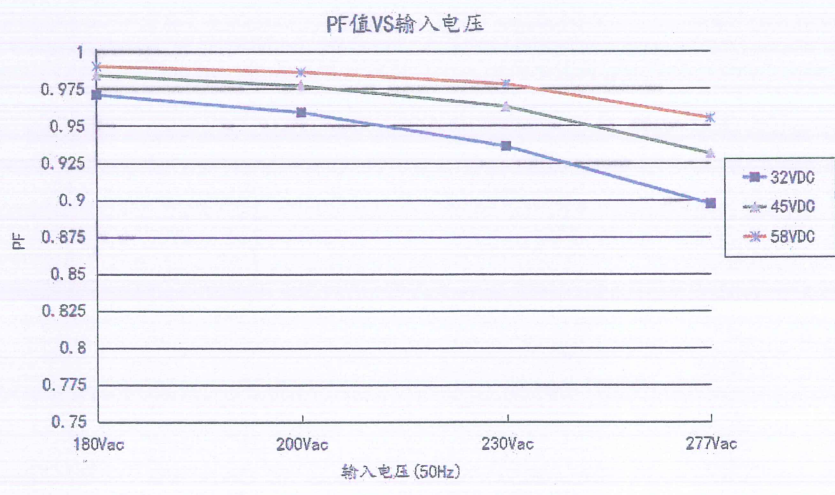
■ PF VS INPUT VOLTAGE PF 值 VS 输入电压 (DL-200W5A55-MPA-H 恒功率)



■ PF VS INPUT VOLTAGE PF 值 VS 输入电压 (DL-200W4A2-MPA-H 恒电流)

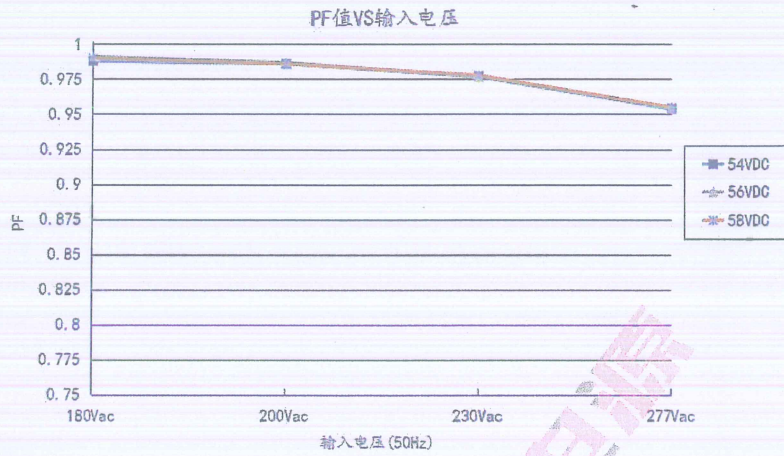


■ PF VS INPUT VOLTAGE PF 值 VS 输入电压 (DL-200W3A5-MPA-H 恒电流)

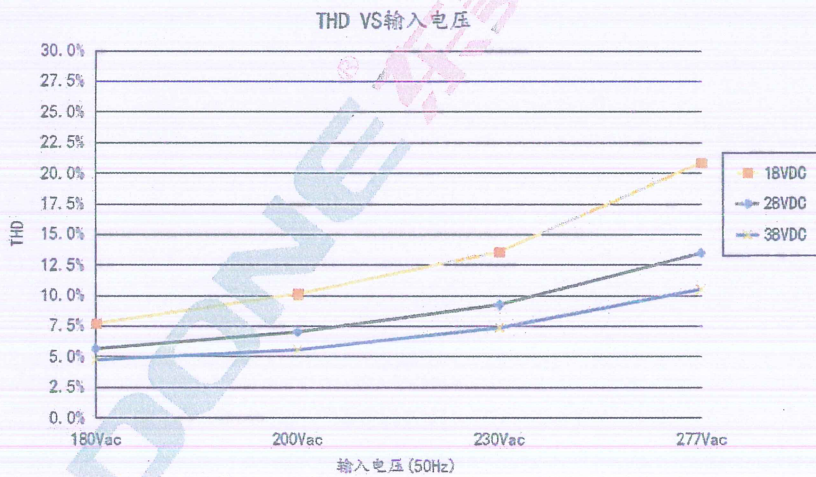


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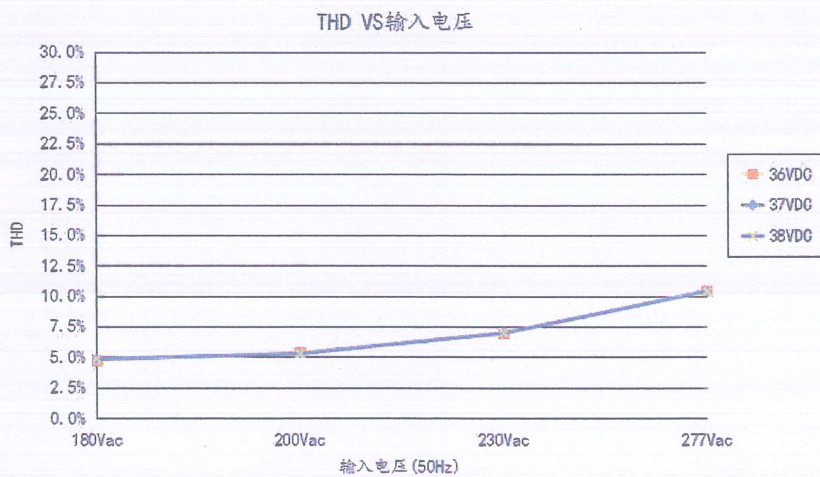
■ PF VS INPUT VOLTAGE PF 值 VS 输入电压 (DL-200W3A5-MPA-H 恒功率)



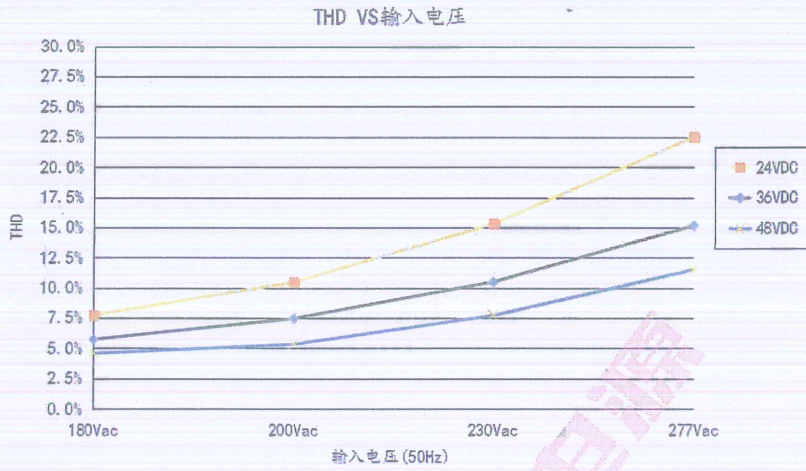
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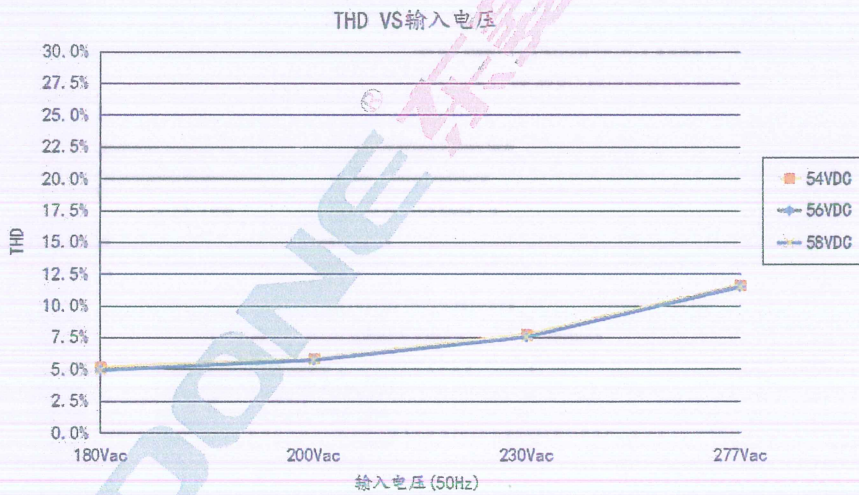
■ THD VS INPUT VOLTAGE 总谐波失真 VS 输入电压 (DL-200W5A55-MPA-H 恒功率)



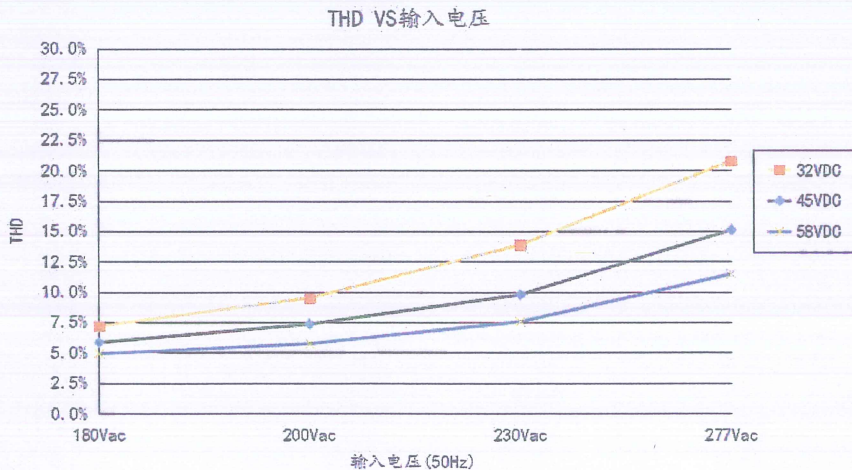
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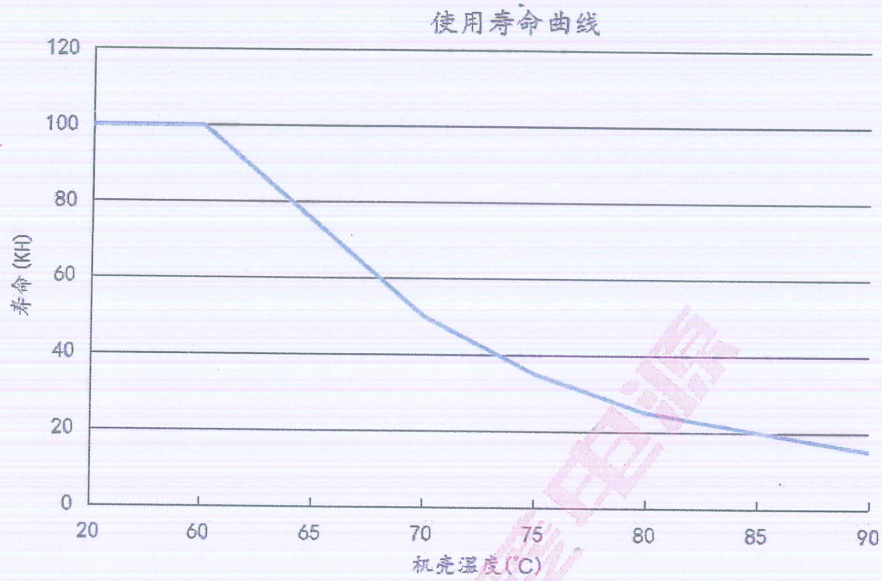
■ THD VS INPUT VOLTAGE 总谐波失真 VS 输入电压 (DL-200W3A5-MPA-H 恒功率)



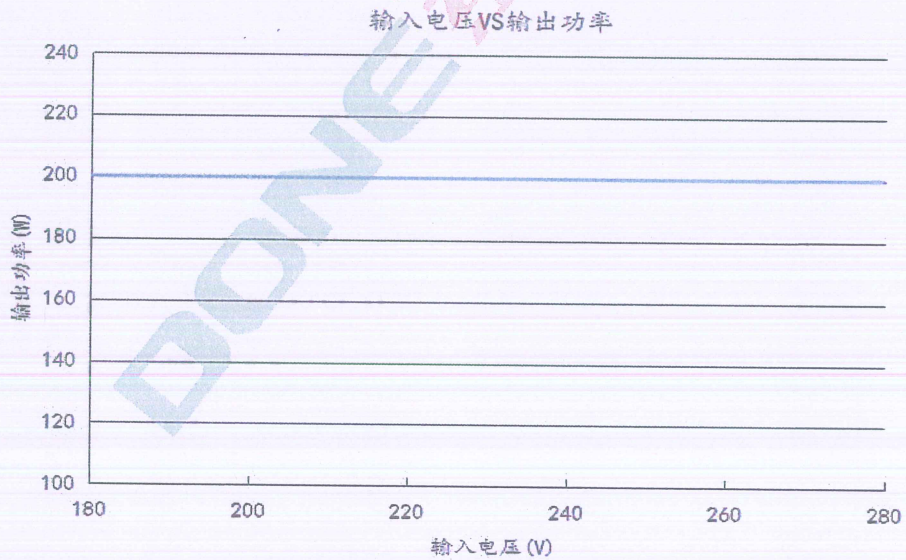
■ THD VS INPUT VOLTAGE 总谐波失真 VS 输入电压 (DL-200W3A5-MPA-H 恒电流)



■ TYPICAL LIFETIME 使用寿命曲线 (DL-200W-MPA-H)



■ INPUT VOLTAGE VS OUTPUT POWER 输入电压 VS 输出功率 (DL-200W-MPA-H)



## NAMEPLATE 铭牌

DL-200W5A55-MPA-H	<div style="background-color: #333; color: white; padding: 10px;"> <p style="text-align: center;"><b>DONE<sup>®</sup></b> MODEL: DL-200W5A55-MPA-H Constant Current LED Driver Power Factor &gt; 0.95 <span style="float: right;">SELV</span></p> <p> <input type="radio"/> ACL--Brown  <input type="radio"/> ACN--Blue  <input type="radio"/> Yellow/Green                 </p> <p style="text-align: center;">INPUT: 200-277V ~ 1.3A 50/60Hz                  OUTPUT: 18-38V <math>\Rightarrow</math> CURRENT ADJ: 4.4~5.55A                  CONSTANT POWER RANGE: 36-38V                  P rated: Max. 200.0W                  MAX. VOLTAGE: 47V <math>\Rightarrow</math> (NO LOAD)</p> <p>MADE IN CHINA CI www.donepower.com.cn</p> <p style="text-align: center;">IP67</p> <p style="text-align: right;">                 OUTPUT: +V--Red                  -V--Black                  ta: 55°C tc: 90°C             </p> </div>
DL-200W4A2-MPA-H	<div style="background-color: #333; color: white; padding: 10px;"> <p style="text-align: center;"><b>DONE<sup>®</sup></b> MODEL: DL-200W4A2-MPA-H Constant Current LED Driver Power Factor &gt; 0.95 <span style="float: right;">SELV</span></p> <p> <input type="radio"/> ACL--Brown  <input type="radio"/> ACN--Blue  <input type="radio"/> Yellow/Green                 </p> <p style="text-align: center;">INPUT: 200-277V ~ 1.3A 50/60Hz                  OUTPUT: 24-48V <math>\Rightarrow</math> CURRENT ADJ: 3.3~4.2A                  P rated: Max. 200.0W                  MAX. VOLTAGE: 68V <math>\Rightarrow</math> (NO LOAD)</p> <p>MADE IN CHINA Da www.donepower.com.cn</p> <p style="text-align: center;">IP67</p> <p style="text-align: right;">                 OUTPUT: +V--Red                  -V--Black                  ta: 55°C tc: 90°C             </p> </div>
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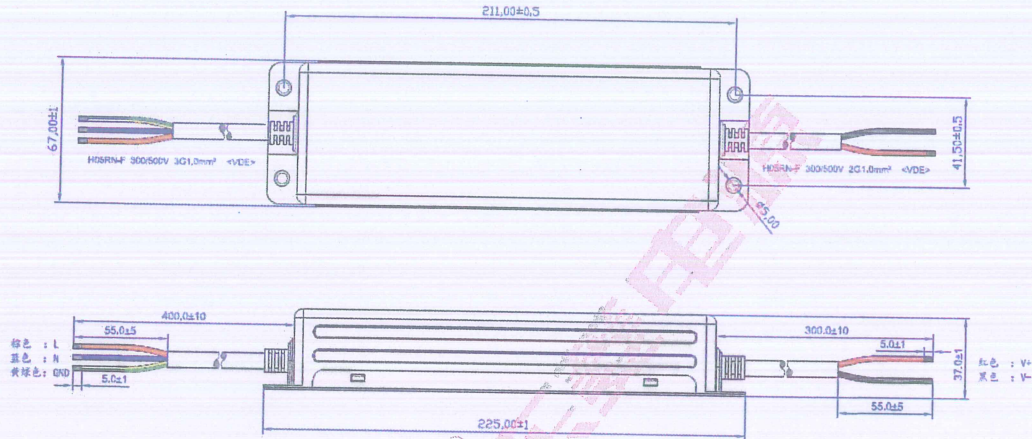
## MECHANICAL SPECIFICATION 机械尺寸图

DIMENSION 尺寸 (mm)	L225*W67*H37
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Case No.机壳型号: A250-007

Unit 单位:mm

### 常规产品尺寸图

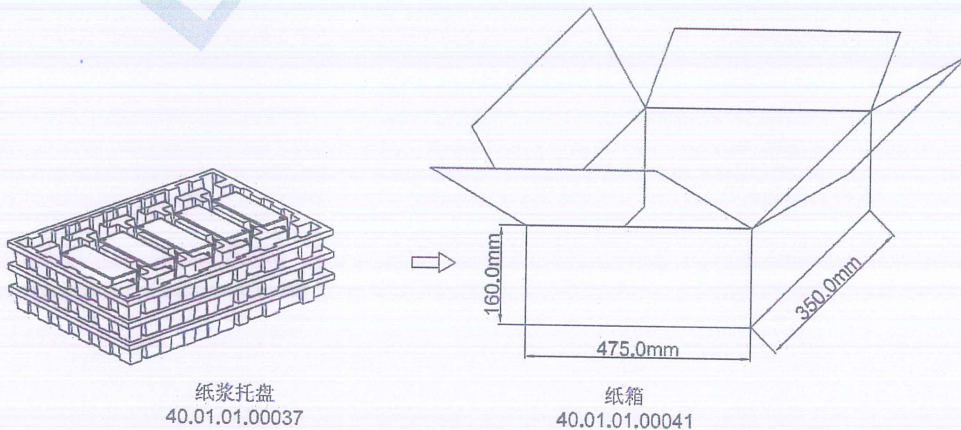


## MONOMER WEIGHT 单体重量

MONOMER WEIGHT 单体重量	940g
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## THE PACKING WAY 包装方式

PACKING 包装 (mm)	L475*W350*H160
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注: 一箱3层, 每层5PCS  
 每箱净重: 14.1KG  
 每箱毛重: 15.7KG