

产 品 规 格 书

客户名称 : _____
客户品名 : _____
客户料号 : _____
产品名称 : _____ LED驱动电源
产品型号 : _____ MM-4029E-1250-ABML0
规格书版本: _____ V1.0
产品生产商: _____ 宁波市明微电子有限公司

明微确认			客户确认		
拟 定	审 核	批 准	检 查	审 核	批 准
			合格口		
			不合格口		

公司地址: 宁波慈溪市龙山镇慈龙东路 433 号上官实业(四楼)明微电子

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网址/Web: <http://www.micromile.com.cn>

E-mail / 邮箱: sales@micromile.com.cn

一、产品特性

- ※ 隔离电源，恒流输出，拨码调电流
- ※ 高效率，高 PF 值，低谐波，0-10V 调光，电阻调光，PWM 调光
- ※ 保护功能：短路保护，开路保护，过压保护

二、电气性能

产品型号		MM-4029F-1250-ABML0
输入性能	输入电压	100~240Vac
	输入频率	50/60Hz
	输入电流	<350mA
	浪涌电流	<30A
	空载功耗	0~1.8W 之间跳动
	总谐波失真	<20%
	功率因数	≥0.95 (100Vac), ≥0.9 (220Vac)
	效率	≥87% (100Vac) ≥89% (220Vac)
输出性能	输出电压	30~42Vdc
	输出电流	1250mA
	电流精度	±5%
	纹波电流	<50%
	线性调整率	±5%
	温度漂移	±10%
	启动时间	<3S (100Vac), <2S (220Vac)
保护功能	开路保护	开路电压<50V
	短路保护	进入打嗝模式, 短路断开后自动恢复
环境描述	工作温度/湿度	-25℃~50℃/10%RH~80%RH
	存储温度/湿度	-40℃~85℃/3%RH~90%RH
安全及规范	认证	符合: CE
	耐压	I/P-O/P: 3.75KVac, 5mA, 60S I/P-PE: 1.6KVac, 5mA, 60S
	绝缘阻抗	I/P-O/P: 0.5KVac, >100MΩ I/P-PE: 1.6KVac, >100MΩ
	浪涌等级	符合 ICE61000-4-5 (L-N: 1KV) (LN-PE: 2KV)
	EMC	符合 EN55015
其它	尺寸及重量	L*W*H: 260*31.8*23mm, 重量: 210g±5%
	IP 等级	IP20
	质保	3年 (环境温度 Ta: 50℃, 负载 ≤100% 条件下)
补充说明	1、所有性能参数均在温度 25℃ 情况下, 100% 负载测量的典型值, 特别注明除外。 2、电源作为整灯灯具中的一个零部件与终端设备结合使用, 因 EMC 性能受 LED 灯具及走线的影响, 终端设备制造商需对整套装置重新进行 EMC 确认。	

三、调光功能

1. 用外加 0-10V DC 电压

调光电压	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V
输出电流	0	10%	20%	30%	40%	50%	60%	75%	85%	100%	100%

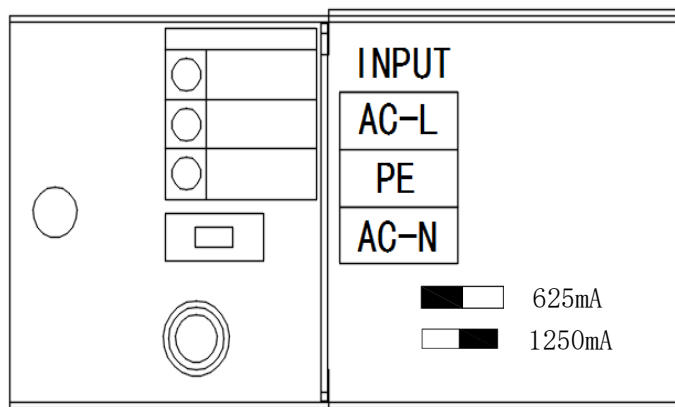
2. 外加 10V PWM 信号（频率范围 100Hz-3KHz）

PWM 信号	0	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
输出电流	0	10%	20%	30%	40%	50%	60%	75%	85%	100%	100%

3. 外加电阻（0-100K Ω 可调电阻）

电阻阻值	0 Ω	10K	20K	30K	40K	50K	60K	70K	80K	90K	100K
输出电流	0	10%	20%	30%	40%	50%	60%	75%	85%	100%	100%

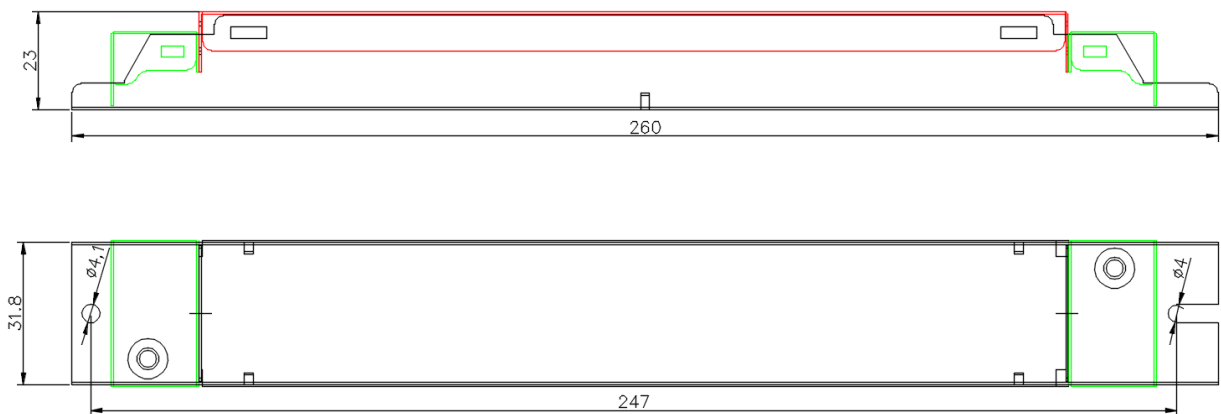
四、拨码调电流



五、产品外观图



六、外壳尺寸 (单位 mm)



七、EMC

7.1 传导骚扰/ EN 55015 Conduction QP

N:AC230V/50Hz



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Shenzhen Alpha Product Testing Co., Ltd.
 Building i, No.2, Lixin Road, Fuyong Street,
 Bao'an District, 518103, Shenzhen, Guangdong, China

Site LAB
 Limit: EN 55015 Conduction QP
 EUT:
 M/N: MM-4029F
 Mode:
 Note:
 Engineer Signature:

Phase: **N** Temperature: 24
 Power: AC 230V/50Hz Humidity: 56 %

Conducted Emission Measurement



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.2130	42.53	9.65	52.18	63.09	-10.91	peak	
2		0.7980	35.01	9.71	44.72	56.00	-11.28	peak	
3		1.3005	34.70	9.75	44.45	56.00	-11.55	peak	
4		2.1405	35.14	9.83	44.97	56.00	-11.03	peak	
5		4.4805	33.54	10.03	43.57	56.00	-12.43	peak	
6	*	28.7405	42.20	10.47	52.67	60.00	-7.33	peak	

*:Maximum data x:Over limit !:over margin

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

L1:AC230V/50Hz



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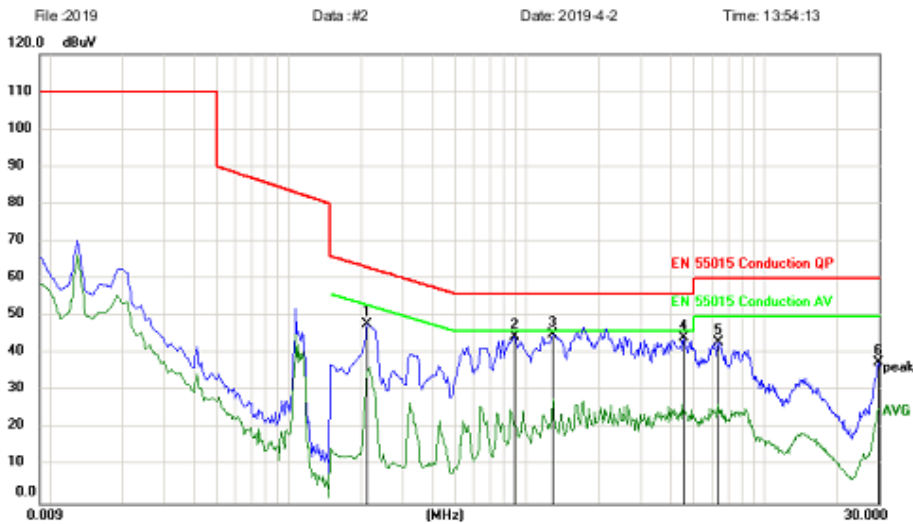
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Shenzhen Alpha Product Testing Co., Ltd.
 Building i, No.2, Lixin Road, Fuyong Street,
 Bao'an District, 518103, Shenzhen, Guangdong, China

Site: LAB	Phase: L1	Temperature: 24
Limit: EN 55015 Conduction QP	Power: AC 230V/50Hz	Humidity: 56 %
EUT:		
M/N: MM-4029F		
Mode:		
Note:		
Engineer Signature:		

Conducted Emission Measurement



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.2130	38.14	9.65	47.79	63.09	-15.30	peak	
2		0.8925	34.96	9.72	44.68	56.00	-11.32	peak	
3	*	1.2805	35.45	9.75	45.20	56.00	-10.80	peak	
4		4.5405	34.08	10.04	44.12	56.00	-11.88	peak	
5		6.4005	32.96	10.12	43.08	60.00	-16.92	peak	
6		29.9805	27.02	10.55	37.57	60.00	-22.43	peak	

*:Maximum data x:Over limit !:over margin

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

L1:AC120V/60Hz



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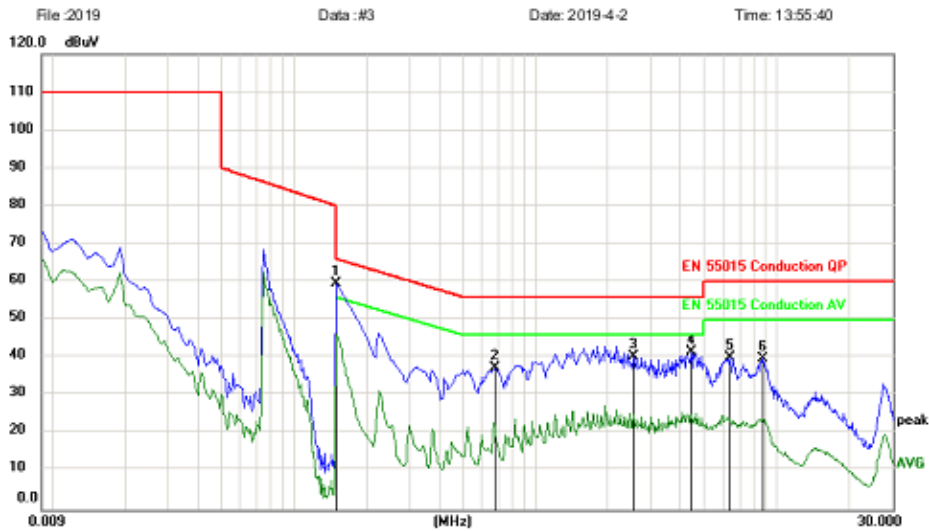
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Shenzhen Alpha Product Testing Co., Ltd.
 Building 1, No.2, Lixin Road, Fuyong Street,
 Bao'an District, 518103, Shenzhen, Guangdong, China

Site LAB	Phase: L1	Temperature: 24
Limit: EN 55015 Conduction QP	Power: AC 120V/60Hz	Humidity: 56%
EUT:		
M/N: MM-4029F		
Mode:		
Note:		
Engineer Signature:		

Conducted Emission Measurement



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1	*	0.1500	50.05	9.63	59.68	66.00	-6.32	peak	
2		0.6765	27.51	9.70	37.21	56.00	-18.79	peak	
3		2.5405	30.47	9.87	40.34	56.00	-15.66	peak	
4		4.4005	31.39	10.03	41.42	56.00	-14.58	peak	
5		6.3405	30.04	10.12	40.16	60.00	-19.84	peak	
6		8.7205	29.77	10.13	39.90	60.00	-20.10	peak	

*:Maximum data x:Over limit !:over margin

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

N:AC120V/60Hz



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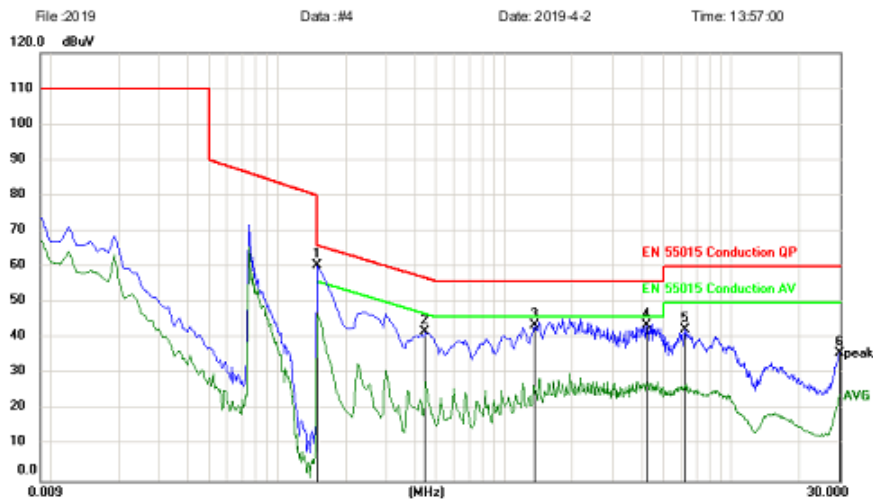
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Shenzhen Alpha Product Testing Co., Ltd.
 Building 1, No.2, Lixin Road, Fuyong Street,
 Bao'an District, 518103, Shenzhen, Guangdong, China

Site: LAB Phase: **N** Temperature: 24
 Limit: EN 55015 Conduction QP Power: AC 120V/60Hz Humidity: 56 %
 EUT:
 M/N: MM-4029F
 Mode:
 Note:
 Engineer Signature:

Conducted Emission Measurement



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1500	50.72	9.63	60.35	66.00	-5.65	peak	
2		0.4470	32.08	9.68	41.76	56.93	-15.17	peak	
3		1.3605	33.83	9.76	43.59	56.00	-12.41	peak	
4		4.2404	33.60	10.02	43.62	56.00	-12.38	peak	
5		6.2604	32.26	10.12	42.38	60.00	-17.62	peak	
6		29.9605	25.24	10.55	35.79	60.00	-24.21	peak	

*:Maximum data x:Over limit !:over margin

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

7.2 辐射骚扰/EN55015 Radiation



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垂直: AC230V/50Hz,3m



Shenzhen Alpha Product Testing Co., Ltd.
Building i, No.2, Lixin Road, Fuyong Street,
Bao'an District, 518103, Shenzhen, Guangdong, China

Site LAB

Polarization: **Vertical**

Temperature: 24

Limit: EN55015 Radiation

Power: AC 230V/50Hz

Humidity: 56 %

EUT: 灯

Distance: 3m

M/N: MM-4029F

Mode:ON

Note:

Engineer Signature:

Radiated Emission Measurement

File :2019

Data :#26

Date: 2019/4/2

Time: 16:24:50



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
							Detector		Comment
1		39.0051	10.67	14.20	24.87	40.00	-15.13	peak	
2		140.6440	16.90	13.87	30.77	40.00	-9.23	peak	
3	*	195.0389	23.90	10.62	34.52	40.00	-5.48	peak	

Note:1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

水平: AC230V/50Hz,3m



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Shenzhen Alpha Product Testing Co., Ltd.
 Building i, No.2, Lixin Road, Fuyong Street,
 Bao'an District, 518103, Shenzhen, Guangdong, China

Site: LAB
 Limit: EN55015 Radiation
 EUT: 灯
 M/N: MM-4029F
 Mode: ON
 Note:
 Engineer Signature:

Polarization: **Horizontal** Temperature: 24
 Power: AC 230V/50Hz Humidity: 56 %
 Distance: 3m

Radiated Emission Measurement



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	
1		138.3953	17.38	13.73	31.11	40.00	-8.89	peak		
2	*	199.1229	21.74	10.38	32.12	40.00	-7.88	peak		

Note: 1. *:Maximum data; x:Over limit; !:over margin.
 2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

垂直: AC120V/60Hz,3m



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Shenzhen Alpha Product Testing Co., Ltd.
Building i, No.2, Lixin Road, Fuyong Street,
Bao'an District, 518103, Shenzhen, Guangdong, China

Site LAB
Limit: EN55015 Radiation
EUT: 灯
M/N: MM-4029F
Mode: ON
Note:
Engineer Signature:

Polarization: **Vertical** Temperature: 24
Power: AC 120V/60Hz Humidity: 56 %
Distance: 3m

Radiated Emission Measurement



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		30.2776	20.75	13.28	34.03	40.00	-5.97	peak		
2		40.3758	15.09	14.19	29.28	40.00	-10.72	peak		
3		136.1825	18.15	13.61	31.76	40.00	-8.24	peak		
4	*	203.7611	23.83	10.46	34.29	40.00	-5.71	peak		

Note: 1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Limit Factor=Antenna Factor+Cable Loss.

水平: AC 120V/60Hz, 3m



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 Bao'an District, 518103, Shenzhen, Guangdong, China

Site: LAB
 Limit: EN55015 Radiation
 EUT: 灯
 M/N: MM-4029F
 Mode: ON
 Note:
 Engineer Signature:

Polarization: **Horizontal** Temperature: 24
 Power: AC 120V/60Hz Humidity: 58 %
 Distance: 3m

Radiated Emission Measurement



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		137.4425	19.57	13.68	33.25	40.00	-6.75	peak	
2	*	205.6465	24.60	10.54	35.14	40.00	-4.86	peak	

Note: 1. *: Maximum data; x: Over limit; !: over margin.
 2. Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.