

# 产品规格书

## MM-2042K-1500-BMN0

LED Driver Series



### 产品特性/Product Features

- 隔离 LED 电源
- IP20 防护等级
- 工作温度 -25°C ~ 40°C
- 高效率, 高 PF 值, 低谐波, 无频闪

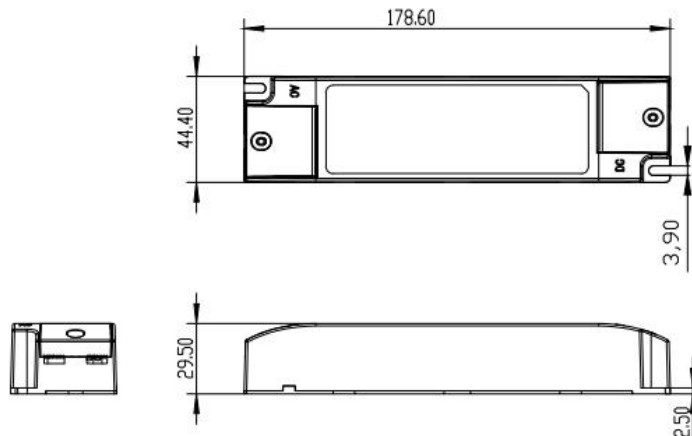
### 保护功能/Protection Function

- 短路保护, 开路保护, 过流保护

### 应用领域/Application Area

- LED 面板灯等

### 外壳尺寸/Shell size (单位/U.: mm)



### 铭牌丝印/Nameplate schematic

750mA 1500mA		www.micromile.com.cn	CE		0.5-1.5mm <sup>2</sup>	V-2
						V-1
0.75-1.5mm <sup>2</sup>	AC-N	Model: MM-2042K-1500-BMN0	•tc		V+	
AC-L	PRI	PRI: 220-240V ~ 50/60Hz 0.36A Max			SEC	
		Power Factor: >0.9		SELV		
		SEC: 30-40 Vdc 1500mA(CC) 60W Max				
		Uout: 50Vdc MAX ta: 40°C tc: 80°C			V-1 V-2V-1 V-2	
		Ningbo Micrmile Electronics co., Ltd.				

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### 电气性能/Electrical properties

输入性能/Input character	
输入电压/Input voltage	220-240Vac
输入频率/Input Frequency	50/60Hz
输入电流/Input current	≤0.32A@220V Full load
浪涌电流/Inrush Current	≤25A AC220V DC40V 1.5A
功率因数/Power Factor	AC220V DC40V 1.5A ≥0.97
总谐波失真/THD	AC220V DC40V 1.5A <18%
效率/Efficiency	AC220V DC40V 1.5A ≥89%
空载功耗 No load power consumption	≤1W AC220V
输出性能/Output performance	
最大输出功率/Max output power	60W AC220V
输出电压范围 Output Voltage Range	30-40V AC220V DC40V 1.5A
输出电流/Output Current	750-1500mA AC220V
输出纹波电流 Output Current Ripple	<5% 额定输出电流/<5% Rated Output Current
输出电流精度 Output Current Accuracy	±5% AC220V DC40V
线性调整率/Line Regulation	±5% AC220V DC40V
负载调整率/Load Regulation	±5% AC220V DC40V
温度漂移/Temperature Drift	±10% AC220V DC40V
启动时间/Start Up Time	<500mS AC220V DC40V 1.5A
保护功能/Protection Function	
开路保护/Open Circuit Protection	<50V AC220V
短路保护/Short Circuit Protection	自动恢复/Automatic Recovery AC220V
过载保护/Over Load Protection	自动恢复/Automatic Recovery AC220V
环境描述/Environment Description	
工作温度/湿度 Operating Temperature/Humidity	-25°C – +40°C/5% RH – 95% RH
存储温度/湿度 Storage Temperature/Humidity	-40°C – +85°C/5% RH – 95% RH
防护等级/Protection Class	IP20
平均无故障时间/MTBF	Ta25°C, >200,000H
过温保护 Over-Temperature Protection	*
安全及规范/Safety and Regulation	
认证/Certification	CE
耐压/Withstand Voltage	I-P 3.75kVac,5mA,60S
绝缘阻抗/Insulation Resistance	>500M
浪涌等级/Surge Rating	符合/Meet to IEC61000-4-5(L-N 1KV)
EMC 标准/EMC and standards	符合/Meet to EN55015

备注：所有性能参数均在温度 25°C 情况下，100%负载测量的典型值，特别注明除外。

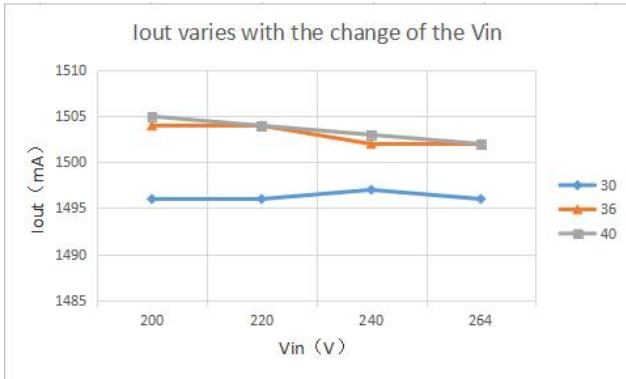
Remarks: All the parameters are typical value under the environment temperature 25°C and full load, unless otherwise specified.

# 产品规格书

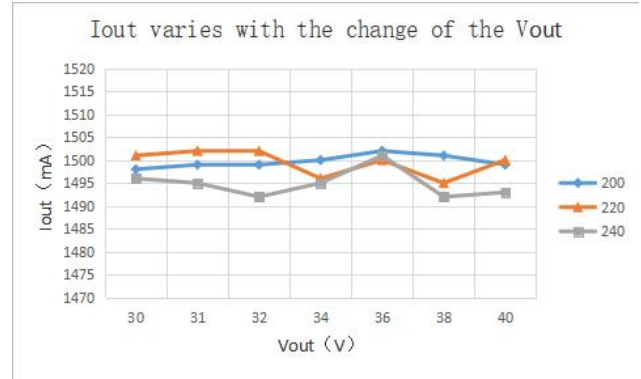
## MM-2042K-1500-BMNO

LED Driver Series

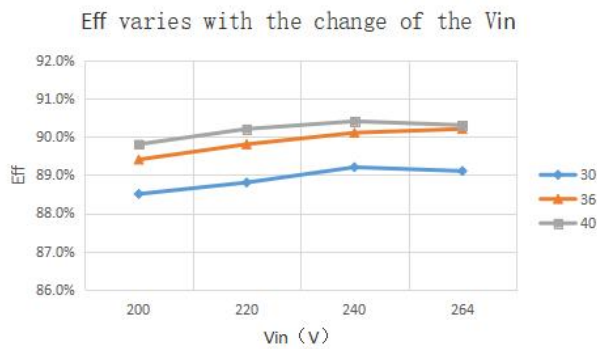
### 线性调整率/Line Regulation



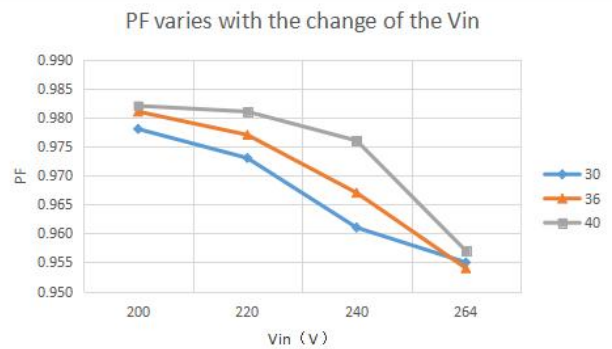
### 负载调整率/Load Regulation



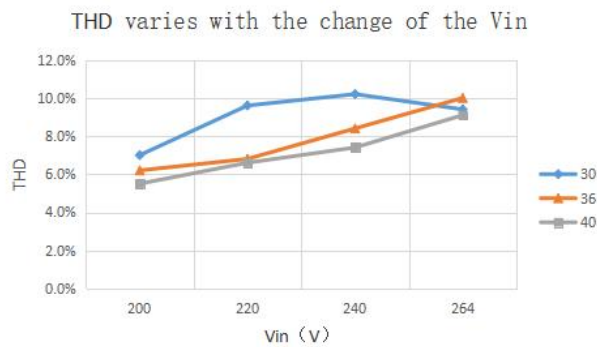
### 效率曲线/Efficiency curve



### 功率因素特性曲线/PF characteristic curve

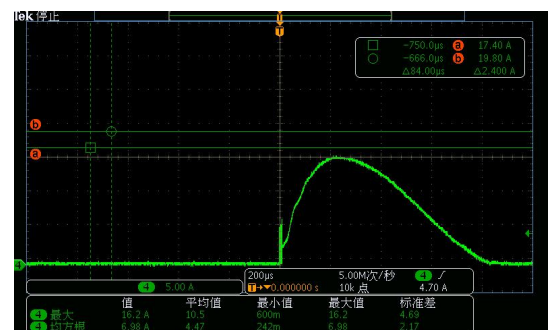


### 总谐波失真特性曲线(THD)



### 浪涌电流 /Inrush Current

最大电流: 16.2A, 持续时间: 766us。



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LED Driver Series

### EMI 传导辐射/EMI conduction radiation

样机/prototype	EMC 余量/EMC allowance (dB)			
	传导/Conduction		辐射/Radiation	
	L	N	水平/Horizontal	垂直/Vertical
最小值/Minimum	5.7	6	8.2	7.3

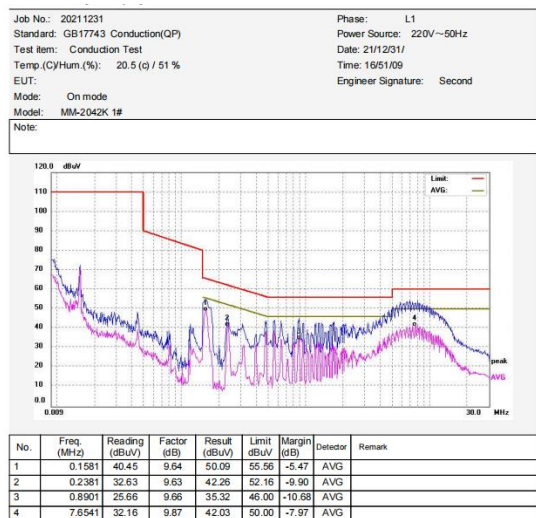
说明: 1. EMC 余量符合标准 GB/T 17743-2017.

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。

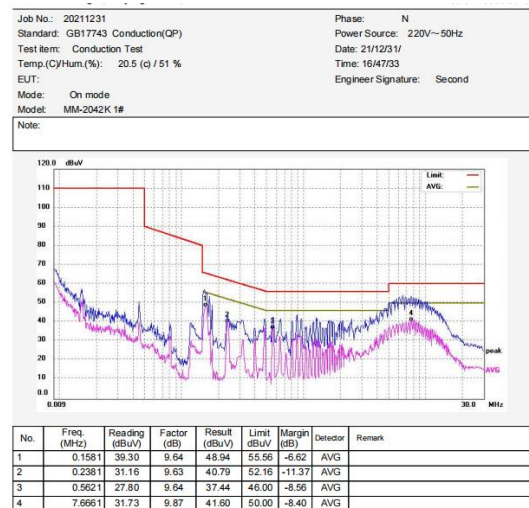
Note: 1. EMC allowance complies with GB/T 17743-2017.

2. LED Driver is just a part of luminaries. The luminaries' manufacturers have to re-confirm the EMC performance of the whole lamp, because it will be affected by the wiring of luminaries.

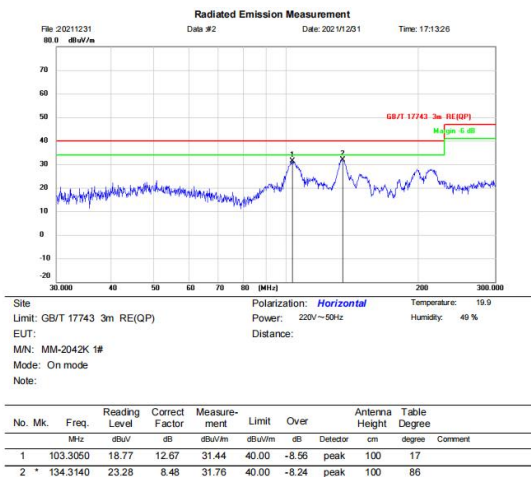
#### 传导/Conduction L AC230V 50HZ



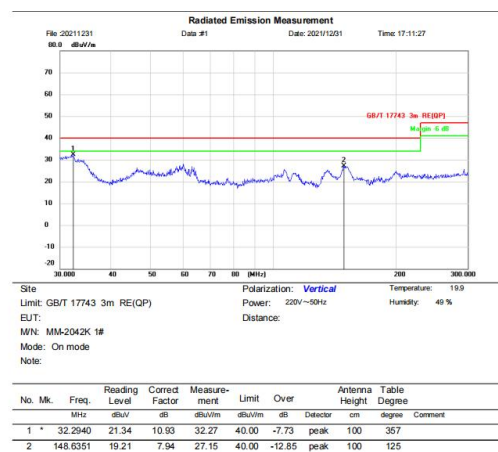
#### 传导/Conduction N AC230V 50HZ



#### 辐射/Radiation 水平/Horizontal AC230V 50HZ



#### 辐射/Radiation 垂直/Vertical AC230V 50HZ



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## MM-2042K-1500-BMNO

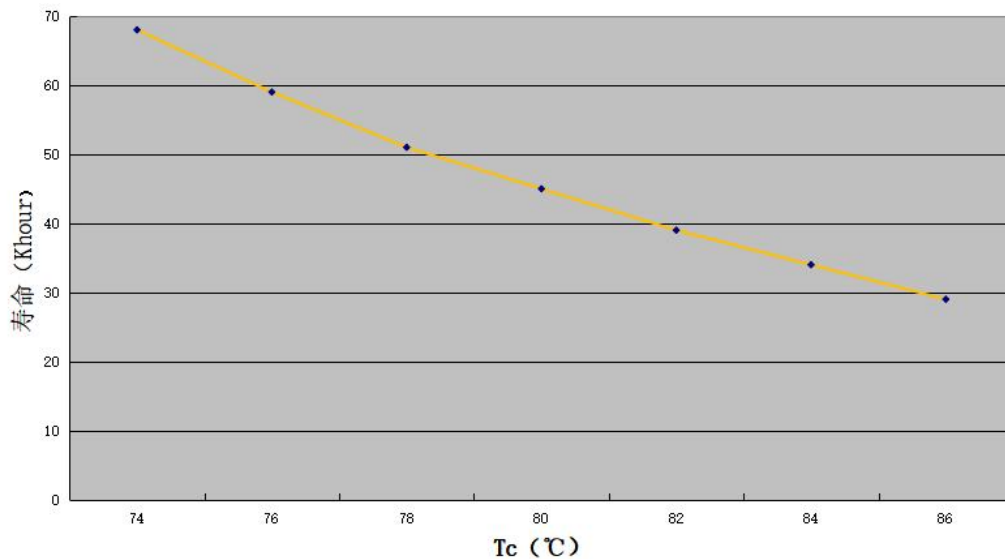
LED Driver Series

### 产品寿命参考&质保/Product Lifespan Referred Diagram & Warranty

- 30,000 小时寿命设计。/30,000 hours Lifespan design.

- 3 年质保。/3 Years warranty.

Tc (°C)	74	76	78	80	82	84	86
寿命/Lifespan (KHours)	68	59	51	45	39	34	29



### Life Estimation Formula for the Capacitors

$$L_x = L_0 \times 2^{(T_0 - T_x)/10} \times 2^{(\Delta T_0 - \Delta T_x)/5}$$

L<sub>x</sub>=lifetime(hours)of the capacitor to be estimated

L<sub>0</sub>=Base (Assured)lifetime (hours)of the capacitor

T<sub>0</sub>=Maximum rated operating temperature(°C)

T<sub>x</sub>=Actual ambient temperature of the capacitor within device

(this is not the environment temperature of the device, but the environment temperature of the capacitor that has been placed within the device, details as note 2)

ΔT<sub>0</sub>=Rise in core temperature of the capacitor due to rated (permissible)maximum ripple current.

ΔT<sub>x</sub>=Actual rise in the core temperature of the capacitor due to actual ripple current at device operating conditions.

ΔT<sub>x</sub>=ΔT<sub>0</sub> × (I<sub>x</sub>/I<sub>0</sub>)<sup>2</sup>

Where: I<sub>0</sub>=rated rms ripple

I<sub>x</sub>=Actual rms ripple

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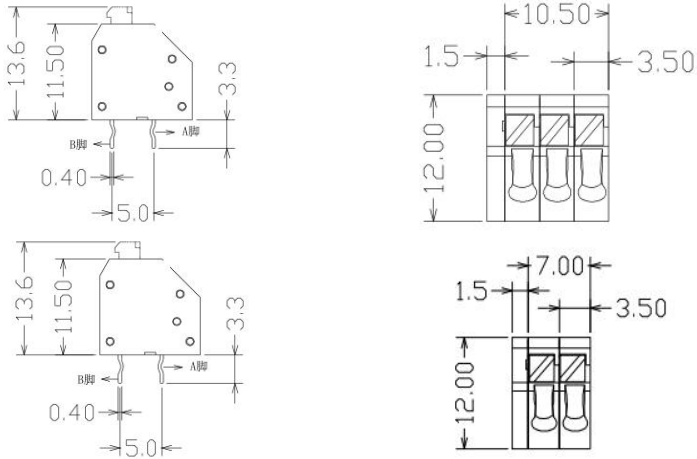
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LED Driver Series

### 输入&输出方式 / Input-output mode

输入/Input: 端子 3P 灰色 0.75-1.5mm<sup>2</sup>

输出/Output: 端子 3P 红黑黑色 0.5-1.5mm<sup>2</sup>



### 材料特性

端子: 铜 镀锡  
塑件: PA66 UL94V-0

### 技术参数

	IEC	UL
额定电压:	450V	300V
额定电流:	5A	7A
额定线径:	0.5-0.75mm <sup>2</sup>	22-18AWG

### 包装/Packaging

产品尺寸/Product Dimension: L178.6\*W44.4\*H29.5mm

净重/Net Weight: 160g±5%

包装方式/Packaging:

## 包装规格书

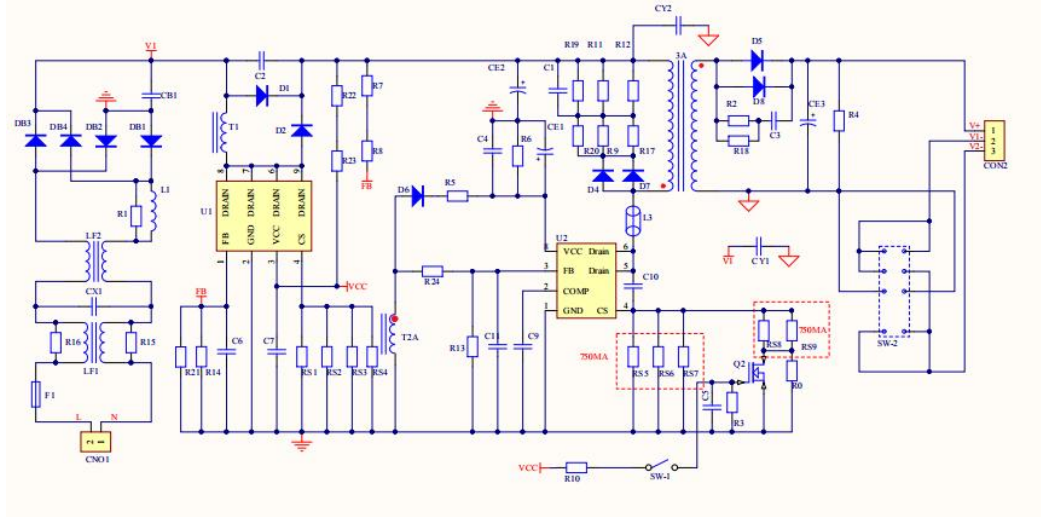
编号:	版本: A/D
客户: SAL	機種: MM-4041C-1200/MM-4041C-0700不带线
简图	<p>The diagram illustrates the packaging process. It shows a single LED driver component (labeled '电源') and a separator board (labeled '隔板'). A grid of 18 components is shown, arranged in 3 rows and 6 columns. An open cardboard box is shown with a blue oval representing a self-drilling screw (labeled '自攻螺丝') being used to secure the components inside.</p>
包装方	<ol style="list-style-type: none"><li>1. 不带线电源18pcs/层, 4层/箱, 共计:72PCS/箱.</li><li>2. 在包装前将内衬板放入纸箱底部。</li><li>3. 将装配好的成品电源如图所示整齐的排列在纸箱底部。</li></ol>

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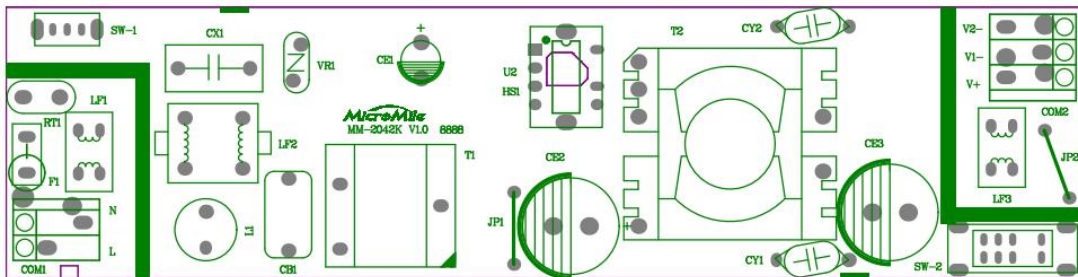
LED Driver Series

### 原理图/ Schematic Diagram



### PCB 走线图/ PCB Layout

#### 顶层丝印图/Top silk-screen



#### 底层走线图/ Bottom Line

