

**Product Specification for Approval**

**产品承认书**

WE ARE PLEASED IN SUBMITTING OUR SAMPLES WITH SPECIFICATION TO YOU FOR APPROVAL.

很荣幸提供我们的样品规格给您承认。

**CUSTOMER 客户:** \_\_\_\_\_

**DESCRIPTION 描述:** 65W PD 美规充电器 (蓝牙版)

**MODEL NO. 铭普型号:** MCUS-20032565P3

**MNC P/N 铭普料号:** \_\_\_\_\_

**REVISION 版本:** A0

**CUSTOMER P/N 客户料号:** \_\_\_\_\_

**ISSUED DATE 发行日期:** \_\_\_\_\_

**MADE IN 制造产地:** CHINA

APPROVED BY MNC		
铭普核准		
PREPARE	CHECKE	APPROVE
拟制	审核	批准

APPROVED BY CUSTOMER
客户核准
SIGNATURE OR STAMP
签字或盖章

1. PLEASE SEND BACK US A COPY OF THE SPECIFICATION WITH YOUR STAMP OR SIGNATURE ONCE THE SAMPLES APPROVED.

承认样品后请回传给我们一份盖章或签字的规格书。

2. IT WILL BE DEEMED THE SAMPLES TO BE APPROVED IF NO FEEDBACK.

如无反馈将默认为样品已被承认。

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## 1、 SUMMARY 产品概述

### 1.1 Description 类型

- Adapter-Wall Mount 插墙式适配器      LED Driver LED 电源      Charger 充电器
- Adapter-Desk-Top 桌面式适配器      Open Frame 裸板      Others 其他

### 1.2 HS MANAGEMENT REQUIREMENTS 有害物质管理要求

- Comply with RoHS directive and other hazardous substances laws and regulations.  
符合 RoHS 指令及其它有害物质法律法规要求。

### 1.4 KEY FEATURES 主要特点

The Bluetooth intelligent module of the product has the function of charging management, which can allocate power to charging port A/B (the recommended scheme has been preset), and realize the setting of full power off and full reminder functions. Charger power indicator can also be on/off, and brightness management. The charging time can be set for the charging port A/B. After setting, the power will be cut off automatically when the countdown is completed. The product has small size, rich interfaces (2C), complete charging protocols, supports QC4 + /PD3.0/QC3.0/QC2.0/SCP/FCP/AFC/PE+, etc.

产品的蓝牙智能模块具有充电管理的功能，可针对充电口 A/B 进行功率分配（已预设推荐方案），并且实现充满断电、充满提醒功能设置。还可对充电器电源指示灯进行开启/关闭，与亮度管理。可针对充电口 A/B 进行充电时间设置，设置完成后，倒计时完成则自动进行断电处理。产品具有体积小，接口丰富（2C），充电协议齐全，支持 QC4+/PD3.0/QC3.0/QC2.0/SCP/FCP/AFC/PE+等。

## 2、 INPUT CHARACTERISTICS 输入特性

Item 项目	Units 单位	Minimum 最小	Normal 额定值	Maximum 最大	Remark 备注
Input voltage 输入电压	Vac	90	100-240	264	-
Input Frequency 输入频率	Hz	47	50-60	63	-
Input Current 输入电流	A	-	-	1.5	at 100Vac/60Hz~240Vac/50Hz

## 3、 OUTPUT CHARACTERISTICS 输出特性

### 3.1 Output voltage and current 输出电压与电流

Rated output voltage 额定输出电压 (V)	Rated output current 额定输出电流(A)	Output voltage range 输出电压范围(V)	Ripple & Noise 纹波噪声(mVpp)	Remark

+5V	3.0A	+4.9 ~ +5.3 ( 板端 )	150	Type-C1& Type-C2
+9V	3.0A	+8.55 ~ +9.45 ( 板端 )	150	
+12V	3.0A	+11.4 ~ +12.6 ( 板端 )	200	
+15V	3.0A	+14.25 ~ +15.75 ( 板端 )	200	
+20V	3.25A	+19 ~ +21 ( 板端 )	200	
PPS 输出电压	0~3.0A	+3.3 ~ +21 ( 板端 )	/	

Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 10uF aluminum electrolytic capacitor. (test condition: 25°C, rated input and rated output)

纹波噪声: 量测时示波器选用 20MHz 带宽限制, 输出端并联 0.1uF 陶瓷电容与 10uF 铝电解电容。(测试条件: 环境温度 25°C, 额定输入和额定输出)

### 3.2 Output power 输出功率

Item/项目	Maximum output power/最大输出功率
Type-C1+ Type-C2	65W

### 3.3 Turn on delay time 开机延迟时间

3 S max. @115Vac input & rated load.

开机延迟时间小于 3 S @115Vac & 额定负载。

### 3.4 Efficiency 电源效率

Efficiency 能效		DOE		ERP		Remark 备注
		V	VI	V	VI	
Output voltage 输出电压(V)	20	-	20	-	-	Burn-in 30 minutes &115Vac/ 60Hz,230 Vac/50Hz
Output current 输出电流(A)	3.25	-	3.25	-	-	
Output power 输出功率(W)	65	-	65	-	-	
Efficiency 电源效率(%)		-	88.00	-	-	
10% Load Efficiency 10% 负载电源效率(%)		-	-	-	-	
No-load power consumption 空载功耗(W)		-	0.3	-	-	

### 3.5 Over Current Protection 过流保护

Rated output voltage 额定输出电压(V)	Rated output current 额定输出电流(A)	Over Current Protection 过流保护 (A)	Remark 备注
+5	3	3.1~3.9	Type-C1&
+9	3	3.1~3.9	
+12	3	3.1~3.9	

+15	3	3.1~3.9	Type-C2
+20	3.25	3.4~4.2	

### 3.6 Over temperature Protection 过温保护

Over temperature, power supply protection;After the ambient temperature is lowered, the power supply automatically recovers.

过温时，电源保护；降低环境温度后，电源可以自动恢复工作。

### 3.7 Short Circuit Protection 短路保护

When the output short circuit, power protection;When the short circuit is removed, the power supply can be automatically restored to work.

当输出短路后，电源保护；当短路移除后，电源可以自动恢复工作。

## 4、 ELECTRO MAGNETIC COMPATIBILITY 电磁兼容

### 4.1 Radiated Emission 电磁辐射干扰

Test criteria(测试标准): EN55032/FCC Part 15, GB/T 9254.1 Class B

### 4.2 Conducted Emission 电磁传导干扰

Test criteria(测试标准): EN55032/FCC Part 15, GB/T 9254.1 Class B

### 4.3 Electrostatic Discharge(ESD) 静电抗扰

EN 55035; 2017; IEC 61000-4-2:2008

Air Discharge(空气放电): ±8 KV

Contact Discharge(接触放电): ±6 KV

Performance Criteria(性能标准) B

### 4.4 Lightning Surge Attachment 雷击抗扰

EN 55035; 2017; IEC 61000-4-5:2005

Differential mode standard(差模标准): ±1.0 KV

Common mode standard(共模标准): ±2.0 KV

Performance Criteria(性能标准) B

## 5、 SAFETY STANDARD 安规标准

### 5.1 Safety 安规

Item 安规	Country 国家	Standard 标准	Certified Status 状况
UL/cUL	America/Canada 美国/加拿大	UL62368-1	Meet

### 5.2 HI-POT 耐压

Primary-to-Secondary: 3000Vac for 60 seconds, the leakage current 10 mA max.

初级到次级:交流 3000Vac 持续 60 秒, 漏电流最大 10 mA。

### 5.3 LEAKAGE CURRENT 漏电流

0.25 mA max. at 264Vac/50Hz input.

输入 240Vac/50HZ, 漏电流最大 0.25 mA。

### 5.4 INSULATION RESISTANCE 绝缘阻抗

10 MΩ min, at primary to secondary add a 500Vdc test voltage.

500Vdc,初级对次级最小 10 MΩ。

## 6、 ENVIRONMENTAL PERFORMANCES 环境性能

### 6.1 Operating Ambient Temperature: -5 °C to + 25 °C.

使用环境温度: -5 °C至 + 25 °C。

### 6.2 Operating Ambient Relative Humidity:5% to 95%R.H.

使用环境相对湿度: 5%至 95% R.H。

### 6.3 Storage Temperature :-10°C to +70°C.

储存温度: -10°C 至 +70°C。

### 6.4 Altitude: Safe use of belowing the sea level 5000 m area.

适用于海拔 5000 米及以下地区安全使用。

## 7、 RELIABILITY 可靠性

### 7.1 MEAN TIME BETWEEN FAILURE(MTBF) 平均无故障时间

The MTBF should not be less than 100000 hours at the temperature of 25°C.(BELLCORE TR-332)

在 25°C环境温度下平均无故障时间不小于 100000 小时。(BELLCORE TR-332)

## 8、 MECHANICAL 机械性能

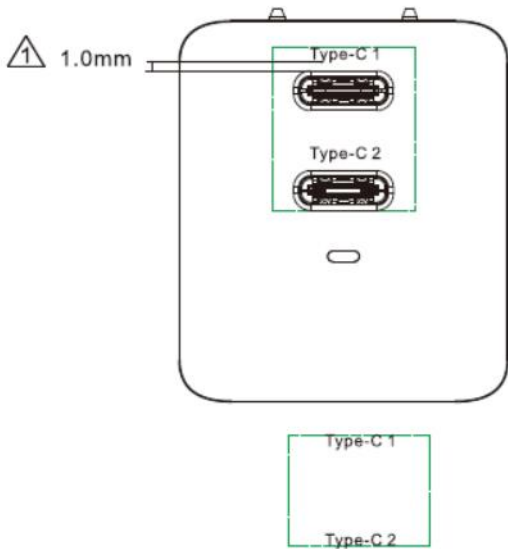
### 8.1 Connector type 接口类型

AC Input pin 输入插脚: US 2PIN

DC Cable DC 线材: /

DC Plug 插头: /

9、LABEL 铭牌



GaN Fast Charger (Bluetooth version)  
 MODEL NO.:MCUS-20032565P3  
 INPUT: 100-240V~ 50/60Hz 1.5A

FC

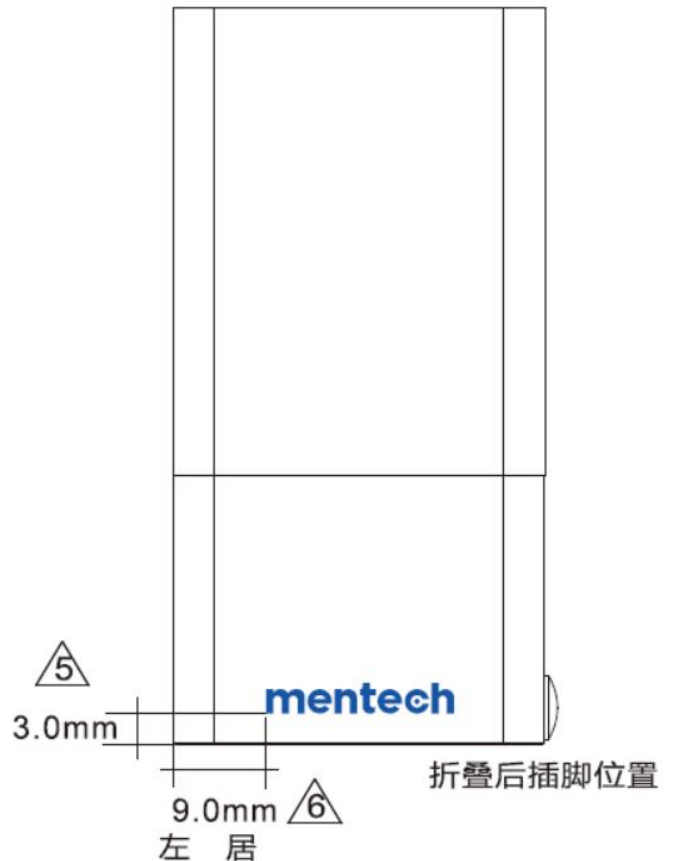
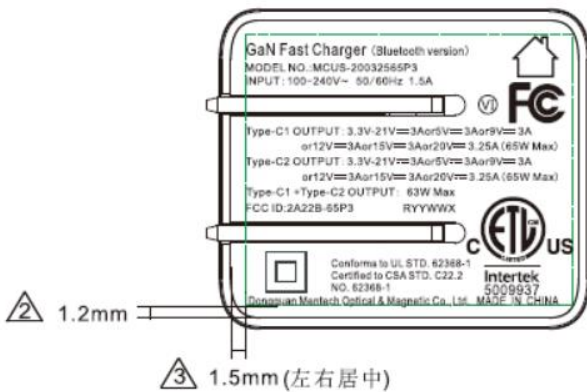
Type-C1 OUTPUT: 3.3V-21V==3Aor5V==3Aor9V==3A  
 or12V==3Aor15V==3Aor20V==3.25A (65W Max)  
 Type-C2 OUTPUT: 3.3V-21V==3Aor5V==3Aor9V==3A  
 or12V==3Aor15V==3Aor20V==3.25A (65W Max)  
 Type-C1 +Type-C2 OUTPUT: 63W Max  
 FCC ID:2A22B-65P3 RYYWWX

ETL US LISTED

Conforms to UL STD. 62368-1  
 Certified to CSA STD. C22.2  
 NO. 62368-1  
 Intertek 5009937  
 Dongguan Mentech Optical & Magnetic Co., Ltd. MADE IN CHINA

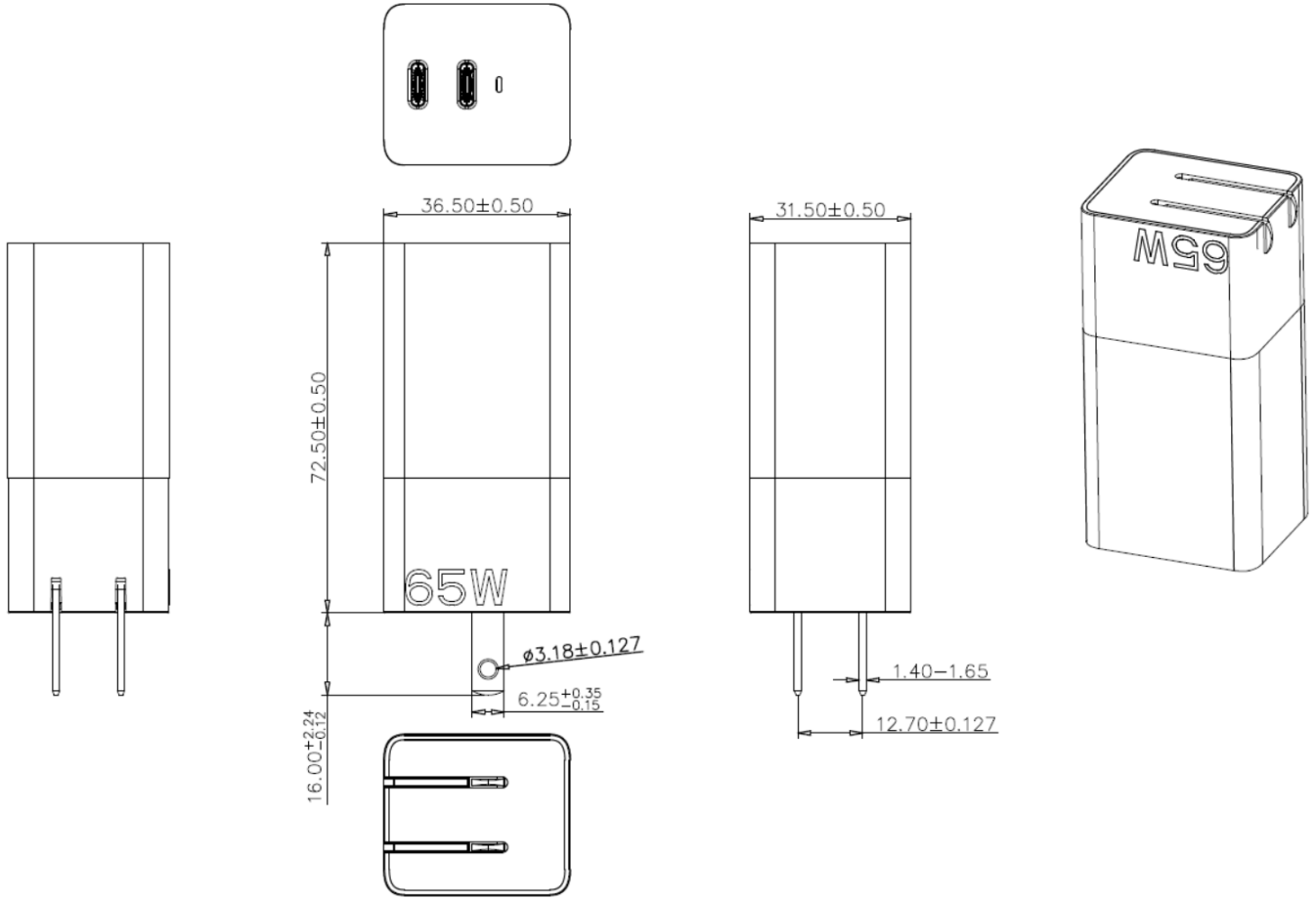
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SCALE 2:1





### 10、 TRUCTURE AND DIMENSION 结构尺寸规格



# 11、PACKAGE 包装方式

