

# VLG TECHNOLOGY

VLG Communication Technology Limited

## 深圳市维力谷无线技术有限公司 产品规格书 Specifications

客户/项目名 Customer/ project name		产品名称 Product name	P28 无线充电移动电源 P28 Wireless charging power bank
VLG 料号	V1710-001	版本 Version	V1
电子 Electronics engineer	朱洪金 Hongjin Zhu	确认 Confirmation	
结构 Structural engineer	廖义永 Yiyong Liao		
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PM	程千 Qian Chen		
日期 Date	2018-11-26		
客户项目名称 Customer project name	客户项目名称: Customer project name: 客户项目编号: Customer project number		
客户确认 Customer Confirmation			
VLG Communication Technology			

研发项目客户满意度调查（客户请针对我们的研发或 PM 管理人员工作进行一个评述，督促我们更好服务于你）  
 Customer satisfaction survey for R & D project (Customer please comment on our R & D or PM management work to motivate us a better service)

硬件技术人员 Hardware technician	<input type="checkbox"/> 满意 Satisfied	<input type="checkbox"/> 基本满意 Basically satisfied	<input type="checkbox"/> 不满意 Discontent
结构技术人员 Structural technician	<input type="checkbox"/> 满意 Satisfied	<input type="checkbox"/> 基本满意 Basically satisfied	<input type="checkbox"/> 不满意 Discontent
项目管理 (PM )	<input type="checkbox"/> 满意 Satisfied	<input type="checkbox"/> 基本满意 Basically satisfied	<input type="checkbox"/> 不满意 Discontent

建议项说明: Suggestions:

表单编号 Form number: VLG/QRF7.3-24/A2

保存年限 Shelf life: 2 年 years

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## 目录

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## 1、描述 Description:

本产品为内置无线充电发射功能的移动电源，适合于手机、MP3、MP4、数码、通信、GPRS、汽车、家具、消防、防水等产品实现无线充电功能。以及基于其他 5V-1A、9V-1.1A 的电池无线充电或者无线供电。支持三星手机 10W 无线快充，苹果手机 7.5W 无线快充。

The power bank integrated with Qi wireless charging(Tx) function which can be taken as a wireless charger supplying power to mobile devices with Qi wireless charging(Rx)function. Support for Samsung 10 w wireless fast charging, Apple 7. 5 w wireless fast charge.

本产品的移动电源支持 QC2.0/3.0、PD2.0/3.0、PE2.0/1.1、FCP、SFCP、BC1.2 充电标准。移动电源充放电最高功率可以达到 18W。TYPE-C 输出和无线输出可以同时使用

The power bank part supports QC2.0/3.0, PD2.0/3.0, PE2.0/1.1、FCP、SFCP、BC1.2 charging standards. The input power reaches 18W(max), TYPE-C output and wireless output can be used simultaneously.

注：需快充适配器支持 18W

Remark: Fast charging adapter should support 18W

Frequency bands: 112.66kHz-204.34kHz H-field strenght: 22.1dB $\mu$ A/m@10m distance



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## 2、输入特性 Input:

充电电压 Voltage	5V±0.25V 9V±0.25V
充电电流 Current	5V-2A/9V-2A MAX 18W
静态休眠电流 Standby current	<150uA
开机电流(红外无遮挡) Startup current (infrared unobstructed)	<3.0mA
电池充满电压 Battery charge voltage	4.4±0.05V
电池低电保护 Battery low voltage protection	2.9V±0.1V

## 3、输出特性 Output:

有线输出 Output by cable	5V-3A/9V-2A/12V-1.5A MAX 18W
无线输出 Output by wireless	5V-1A/9V-1.1A MAX10W 支持无线快充 Support quick-charging

## 4、电池性能 Battery:

基于 750Wh/L 硅负极锂电池，容量 5000mAh 4.4V 高压

Lithium battery based on 750wh/L silicon anode ,high capacity 5000mAh, 4.4V high- voltage

## 5、工作状态指示 Working status indication:



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**充电 charging**

容量 Capacity	LED1	LED2	LED3	LED4
0~25%	闪烁 flickering	灭 off	灭 off	灭 off
25~50%	亮 on	闪烁 flickering	灭 off	灭 off
50~75%	亮 on	亮 on	闪烁 flickering	灭 off
75~95%	亮 on	亮 on	亮 on	闪烁 flickering
充电完成	亮 on	亮 on	亮 on	亮 on

**放电 Discharge**

容量 Capacity	LED1	LED2	LED3	LED4
欠压 under voltage	灭 off	灭 off	灭 off	灭 off
0~25%	闪烁 flickering	灭 off	灭 off	灭 off
25~50%	闪烁 flickering	闪烁 flickering	灭 off	灭 off
50~75%	闪烁 flickering	闪烁 flickering	闪烁 flickering	灭 off
75~100%	闪烁 flickering	闪烁 flickering	闪烁 flickering	闪烁 flickering

**无线充 wireless charging**

状态 status	红灯 red light	白灯 white light
待机 standby	灭 off	灭 off
充电 charging	灭 off	呼吸灯 flickering
FOD	闪烁 flickering	灭 off
异常 Abnormal	闪烁 flickering	闪烁 flickering
充满 Full charging	灭 off	灭 off

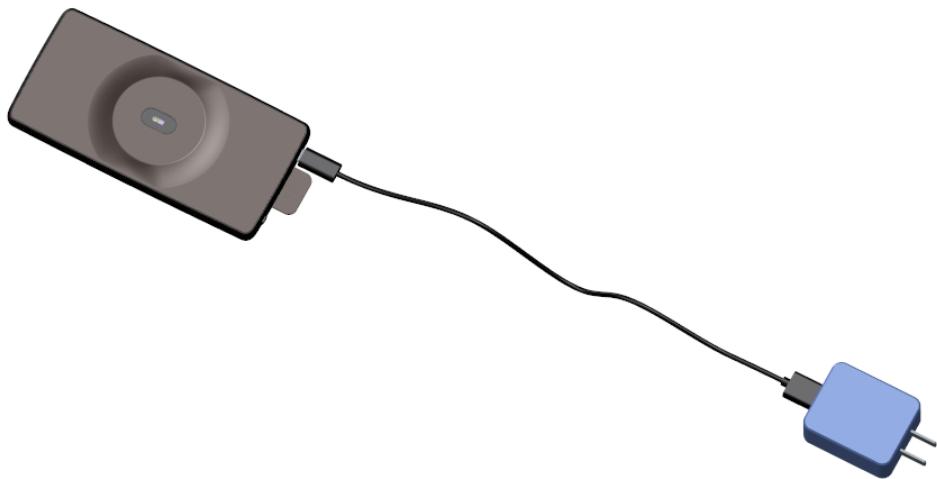
注：三星手机内置无线充功能才有充满转灯

Remark: There is turning lights when full charging only for Samsung mobile phone with Built-in wireless charging function.

## 6、无线充电 Wireless charging:

给此设备充电 **Charging this device.**

- 1 将充电器线缆的一端插入电源装置（QC 适配器）；  
Plug one end of the charger cable into the Power device (QC adapter)
- 2 将电源装置插到交流电源插座上；  
Plug the power supply into an AC power outlet
- 3 将线缆的另一端（TYPE-C）插入移动电源；  
Insert the other end of the cable (TYPE-C) into the mobile power supply



### 充电完毕 **Finish charging**

断开电源装置与充电板的连接，然后从交流电源插座上拔出电源装置。

Disconnect the power device from the Charger board , then unplug the power device from the AC outlet

给无线设备充电（本无线充电发射端符合 **QI** 标准）

**Charge the wireless device (this wireless charging transmitter meets the QI standard)**

- 1 确保充电板上无任何杂物。

Make sure there is no clutter on the charging board

- 2 将您的手机或其他兼容设备放在充电板上。直至手机或设备充满电。

Place your phone or other compatible device on the Charger board. Until the phone or device is full of power.

充电板和手机变热属于正常现象，如果您在充电时使用手机（例如流式播放音乐），充电板和手机可能变得更热。

Charging boards and cell phones are normal, and if you're charging with a mobile phone (such as streaming music), the Charger Board and cell phone may become hotter.

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## 7、无线充开关机 ON/OFF:

将拨动开关置于 ON 红外检测到手机自动打开无线充电，开关置于 OFF 关机

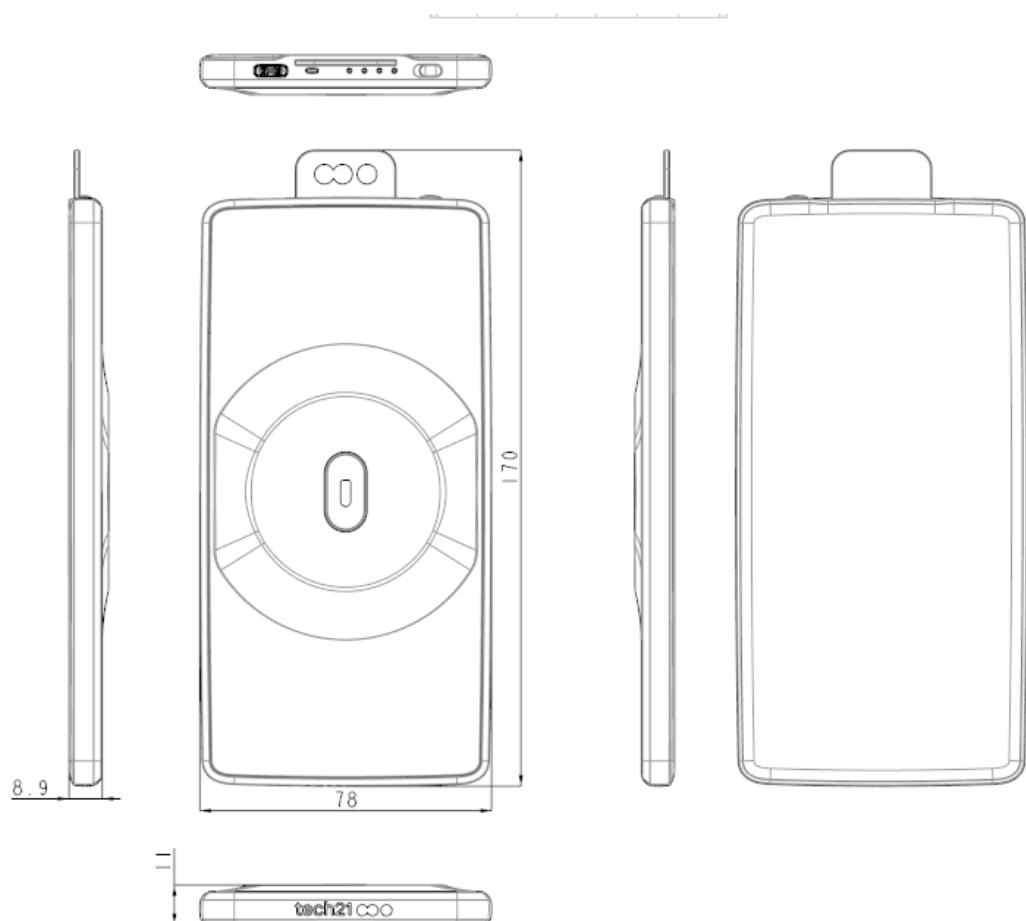
Put the toggle switch on the on IR detect the mobile phone automatically turn on the wireless charge, the switch is put on the off turn off the machine



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8、产品外形尺寸 Size:



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## 9、测试数据/Testing data:

### 9.1、无线充电效率测试（10W） Wireless Charging efficiency test (10W) :

专用测试接收器，发射与接收线圈中心相对，线圈间相距 2.5mm。

输入电压读数以 PCB 板上的电压为准。

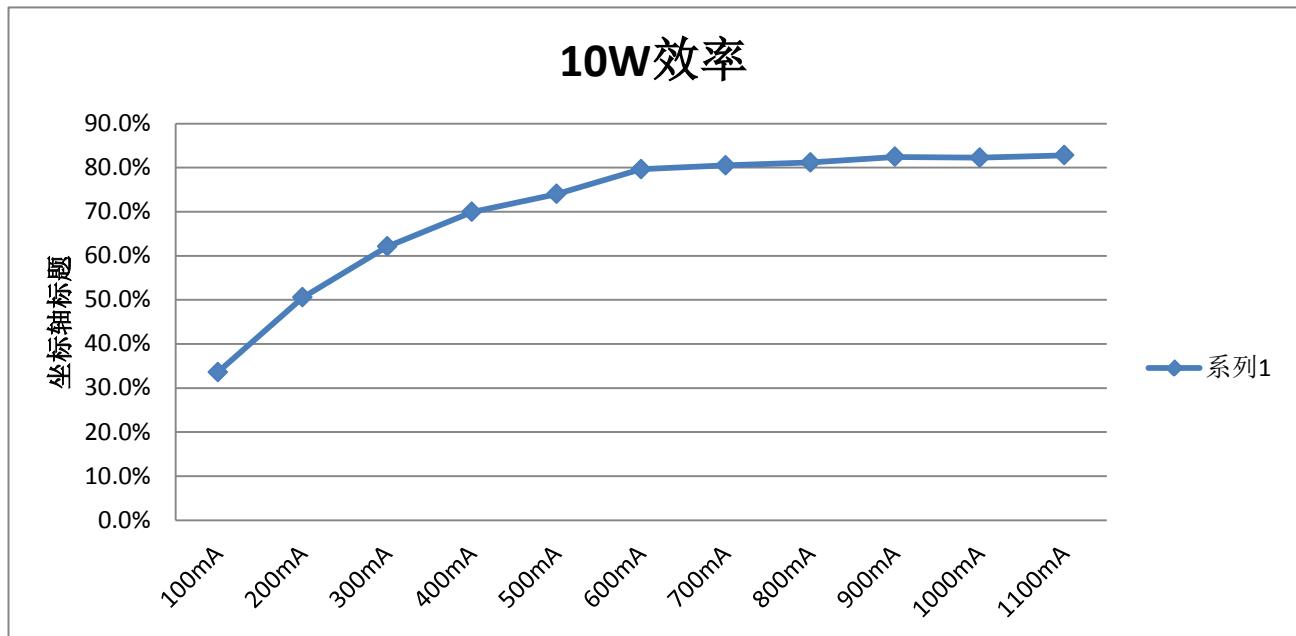
The special test receiver, the transmitter and the receiving coil center, the 2.5mm between the coils.  
Input voltage readings are subject to the voltage on the PCB board.

10W 效率测试

	输入电压(V) Input voltage	输入电流(mA) Input currency	输出电(V) Output voltage	输出电流 (mA) Output currency	效率 Efficiency
1	9.17	300	9.24	100	33.6%
2	9.15	400	9.25	200	50.5%
3	9.13	441	9.26	300	62.1%
4	9.12	490	9.25	400	69.9%
5	9.10	680	9.16	500	74.0%
6	9.08	760	9.16	600	79.6%
7	9.05	880	9.16	700	80.5%
8	9.03	1000	9.16	800	81.2%
9	9.01	1110	9.16	900	82.4%
10	8.98	1317	9.16	1000	82.3%
11	8.95	1360	9.16	1100	82.8%

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## 10、产品及安全信息 Safety info:

小心使用您的设备

请小心处理您的设备、充电器和配件。下列建议将帮助您有效使用保修服务。

Be careful to use the item. The tips below will help you use after-sales service.

- 保持设备干燥。雨水、湿气和各种液体或水分都可能含有矿物质，会腐蚀电路。如果设备被打湿，请将设备晾干。

Keep the item dry. Water, humidity and liquid will affect the circuit.

- 请选择合适的过安全认证的适配器。使用不当或使用不兼容的充电器可能存在火灾、爆炸或发生其他危险的风险。切勿使用受损的充电器。只能在室内使用充电器。

Please choose a good quality adapter, Improper use or use of incompatible chargers may present a risk of fire, explosion or other hazards. Do not use a damaged charger. The charger can only be used indoors.

- 请勿尝试给电池外壳损坏、破裂或打开的设备以及与 Qi 不兼容的设备充电。

Do not use the product to charge any damaged or incompatible with Qi device

- 请勿在有灰尘或肮脏的地方使用或存放设备。这样会损坏它的可拆卸部件和电子元件。

- Do not use or storage the item in a dirty place. Or it will damage its removable parts and electronic components.

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- 请勿在高温环境中存放设备。 高温会缩短设备的寿命，使塑料部件变形或熔化。

Do not storage the item in high temperature place. High temperatures shorten the life of the equipment, making the plastic parts deformed or melted.

- 请勿将设备存放在过冷的地方。 否则当设备温度升高至常温时，其内部会形成潮气，这会毁坏电路。

Do not storage the item in a over-cold place. Otherwise, when the equipment temperature rises to normal temperature, its interior will form moisture, which will destroy the circuit.

- 不要尝试打开设备。

Do not try to open the device.

- 未经认可的改装会损坏设备并违反无线电设备的有关规定。

Do not fix the item without safety protection.

- 请勿扔掷、敲打或振动设备。 粗暴地对待设备会毁坏内部电路板及结构。

Do not hit the item or heavily throw it on the ground. Or it can damage internal circuit boards and structures of equipment by rough treatment.

- 必须使用清洁、干燥的软布清洁设备表面。

Clean and dry soft cloth must be used to clean the surface of the device

Tech21 UK Ltd

Syd's Quay, Eel Pie Island, London, TW1 3DY, England

This device complies with Part 18 of the FCC Rules.

NOTE: This equipment has been tested and found to comply with the limits for a wireless power charger, pursuant to Part 18 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Changes or modifications not expressly approved by the party responsible for

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compliance could void the user's authority to operate the product.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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