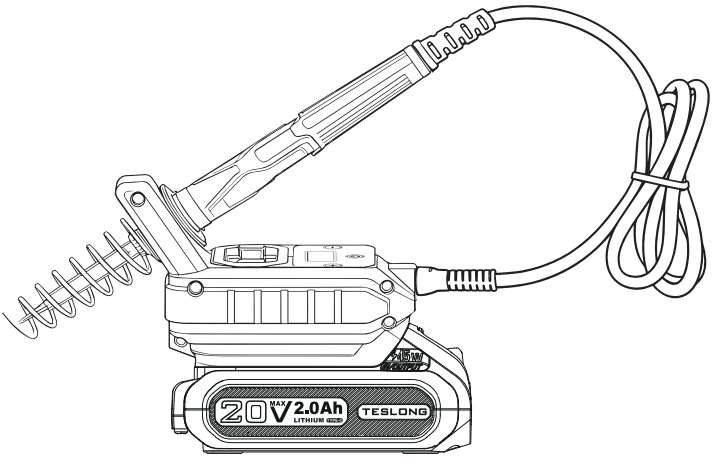
TESLONG

Soldering Iron



User Manual

Model: ML-SI01-200K

TABLE OF CONTENTS

SAFETY GUIDELINES – DEFINITIONS

It is important for you to read and understand this manual. The information it contains relates to protecting YOUR SAFETY and PREVENTING PROBLEMS. The symbols below are used to help you recognize this information.

⚠ Danger
Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ Warning
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ Caution
Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

⚠ Notice
Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage.

Safety Instructions

- Read all instructions before use.
- Ensure you fully understand the operation and safety guidelines before operating the tool.
- Always wear appropriate personal protective equipment (PPE), such as safety glasses and gloves.
- The tip becomes extremely hot during use. Avoid contact to prevent burns or fire hazards.
- Use only in a well-ventilated area. Soldering may produce fumes that can cause respiratory irritation.
- Keep flammable materials away from the work area at all times.

- Use only designated batteries and approved chargers to reduce the risk of fire, electric shock, or injury.
- Keep hands, clothing, and hair away from moving parts during operation.
- Keep bystanders at a safe distance while the tool is in use.
- Turn off and unplug (or remove the battery from) the tool when not in use, before making adjustments, or when changing accessories.
- Allow moving or heated components to come to a complete stop and cool down before handling or storage.
- Use only recommended accessories and attachments specified by the manufacturer.
- Do not apply excessive force; let the tool operate at its intended speed and capacity.
- Inspect the tool, cord, plug, or battery regularly; discontinue use if damaged.
- This tool is not a toy and should be operated by adults only.
- Repairs should only be performed by qualified service personnel.
- Keep out of reach of children.

BATTERY CHARGER SAFETY INSTRUCTIONS

Save these instructions:
This manual contains important safety instructions for battery chargers. Before using the charger, read all instructions and cautionary markings on the charger, battery pack, and the product using the battery pack.

General Warnings

- **Shock Hazard:** Do not allow any liquid to get inside the charger.
- **Burn Hazard:** To reduce the risk of injury, charge only with designated batteries. Other types of batteries may burst, causing serious personal injury and damage.
- **Compatibility:** Do not attempt to charge the battery pack with any chargers other than those specified in this manual. The charger and battery pack are designed to work together.
- These chargers are intended only for charging designated rechargeable batteries. Any other use may result in fire, electric shock, or electrocution.
- Do not expose the charger to rain or snow.

Safe Operation

- Pull by the plug rather than the cord when disconnecting the charger to reduce the risk of cord damage.
- Position the cord so it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- Do not operate the charger with a damaged cord or plug. Replace them immediately.
- Do not operate the charger if it has been dropped, struck, or otherwise damaged. Replace them immediately.
- Do not disassemble the charger. Incorrect reassembly may result in electric shock, electrocution, or fire. Service and repairs should be performed only by authorized service personnel.

- Disconnect the charger from the power outlet before attempting any cleaning. Removing the battery pack alone will not reduce this risk.
- Never attempt to connect two chargers together.

Placement and Ventilation

- Do not place any object on top of the charger or place it on a soft surface that could block the ventilation slots and cause overheating.
- Place the charger away from heat sources and ensure it has adequate ventilation.
- The charger is intended for use on a flat, stable surface (e.g., tabletop, workbench). Do not mount on a wall or affix permanently to any surface.

Power Supply

- The charger is designed to operate on standard household electrical power (120 V). Do not attempt to use it with any other voltage source.

BATTERY PACKS SAFETY INSTRUCTIONS

⚠ Warning

For safe operation, read this manual and all instructions originally supplied with the tool before using the battery pack.

General Guidelines

- The battery pack is not fully charged out of the box. Follow the charging procedures outlined in this manual before first use.
- Never attempt to open, crush, drop, or damage the battery pack. If the case is cracked or damaged, do not insert it into the charger. Damaged battery packs should be returned to an authorized service center for recycling.
- Do not incinerate the battery pack, even if severely worn or damaged. The battery may explode in fire, releasing toxic fumes and hazardous materials.

Handling and Exposure Hazards

- Do not charge or use the battery in explosive atmospheres, such as near flammable liquids, gases, or dust. Inserting or removing the battery may ignite fumes.
- If battery contents contact skin, wash immediately with mild soap and water.
- If battery liquid contacts the eye, flush with clean water for at least 15 minutes and seek medical attention. Lithium-ion electrolyte contains liquid organic carbonates and lithium salts.
- Inhalation of leaked cell contents may cause respiratory irritation. Move to fresh air and seek medical help if symptoms persist.
- **Burn Hazard:** Battery liquid may be flammable if exposed to sparks or flames.

Charging and Storage

- Only charge the battery pack using designated chargers or approved charging methods.
- Do not splash or immerse the battery in water or other liquids.
- Do not store or use the battery pack where temperatures may reach or exceed 105 °F (40 °C), such as in outdoor sheds or metal buildings during summer.

Transport and Fire Safety

- **Fire Hazard:** Do not carry or store the battery pack in a way that metal objects can contact the terminals (e.g., nails, screws, keys, coins, or tools in pockets, aprons, or toolboxes).
- When transporting batteries, ensure the terminals are properly insulated to prevent accidental short circuits.
- The U.S. Department of Transportation (DOT) Hazardous Material Regulations prohibit transporting unprotected lithium-Ion batteries in commerce or on airplanes.

⚠**Note:** Lithium-ion batteries must not be placed in checked baggage. Carry them in protective cases in carry-on luggage only.

PRODUCT DESCRIPTION

The 20V Cordless Soldering Iron delivers fast heating, stable temperature control, and convenient cordless operation. Powered by a 20V lithium-ion battery, it is ideal for electronics repair, wiring work, and DIY projects. Its ergonomic design and quick-change tips ensure efficient and comfortable use.

Features

- **40-Second Fast Heating:** Heats up to 425 °C (797 °F) in just 40 seconds
- **Wide Temperature Range:** Adjustable temperature range from 100-500 °C, suitable for various soldering and repair applications
- **Temperature Accuracy:** Temperature deviation is less than ±20 °C
- **Automatic Shut-Off:** Auto power-off design enhances safety and extends battery life

20V MAX BATTERY PACK – CHARGING METHOD

Your battery pack supports two charging methods:

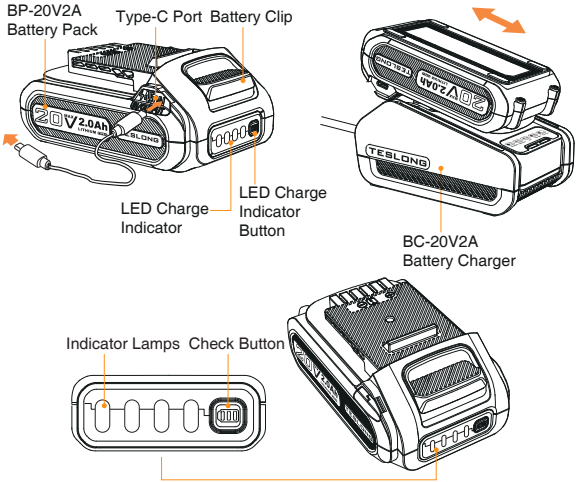
Charging Methods	Description	Included/Sold Separately
Type-C Charging	Connect the supplied type-C cable to the battery pack and a type-C power adapter.	Included
Charging Dock	Insert the battery pack into the optional desktop charging dock.	Sold separately at www.teslong.com

⚠ **Important**

- Only use the supplied Type-C cable or the designated charging dock. Using other charging methods may damage the battery or create a safety hazard.
- To use the Type-C port for charging or discharging, press the LED Charge Indicator Button on the battery pack to activate the port.

Charging Procedure

- **Connect Charger:** Plug the Type-C cable into an appropriate Type-C power source, or connect the battery pack to the optional charging dock.
- **Insert Battery:** Insert the battery pack into the charger or Type-C port as shown in the diagram.



Indicator Lamps	Remaining Capacity
Lighted Off	
● ● ● ●	75-100%
● ● ● ○	50-75%
● ● ○ ○	25-50%
● ○ ○ ○	0-25%

Type-C Port Description

The battery pack is equipped with a multi-function Type-C port that supports both charging input and power output.

Input (Charging the Battery Pack)					
5 V ⎓ 3 A	9 V ⎓ 3 A	12 V ⎓ 3 A	15 V ⎓ 3 A	20 V ⎓ 2.25 A	Max 45 W

Output (Powering External Devices)					
5 V ⎓ 3 A	9 V ⎓ 3 A	12 V ⎓ 3 A	15 V ⎓ 3 A	20 V ⎓ 2.25 A	Max 45 W

This port supports Type-C PD Fast Charging, allowing fast and safe charging of the battery pack as well as other external electronic devices.

⚠ Notice

Depending on the conditions of use and the ambient temperature, the indication may differ slightly from the actual capacity.

Charging Status

Full Charge

- When the battery is charging, the LED Charge Indicator on the battery will flash a green light.

Full Charge

- When the battery is fully charged, the green LED will remain lit and turn off after 1 minute.

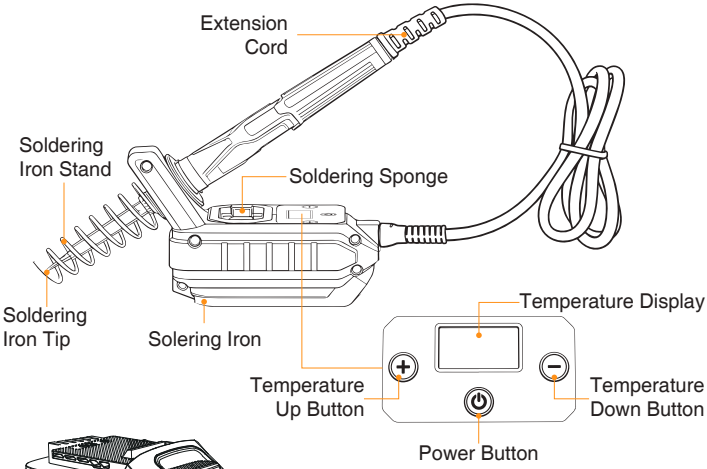
Tips for Best Performance

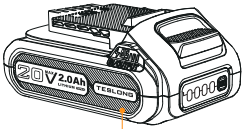
- Recharge the battery as soon as possible after use. Prolonged storage in a discharged state may reduce battery life.
- Avoid fully discharging the battery. Recharging after each use is recommended.

Important Charging Notes

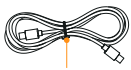
- **Optimal Temperature:** Charge the battery pack when the ambient temperature is between 65-75 °F (18-24 °C).
  - Do not charge below 40 °F (4.5 °C) or above 105 °F (40.5 °C). Charging outside this range may cause permanent damage.
- **Warmth During Charging:** The charger and battery pack may become warm to the touch during charging. This is normal.
  - Avoid placing the charger or battery in hot environments (e.g., metal shed or hot enclosed space).

PRODUCT DESCRIPTION



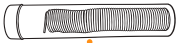


20 V 2.0 Ah (Battery Pack)



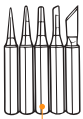
Type-C Charging Cable

Solder Sucker



Solder Wire

Tweezers



Replacement Soldering Iron Tips

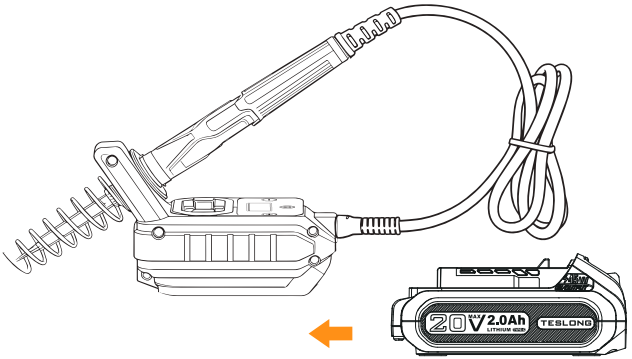
Sponge Pad

Steel Wool Ball

BATTERY PACK INSTALLATION & REMOVAL

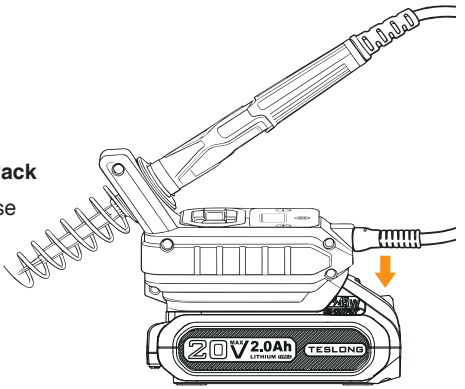
Installing the Battery Pack

- Insert the battery pack into the power unit until an audible click is heard.
- Ensure the battery pack is firmly secured and latched into position.

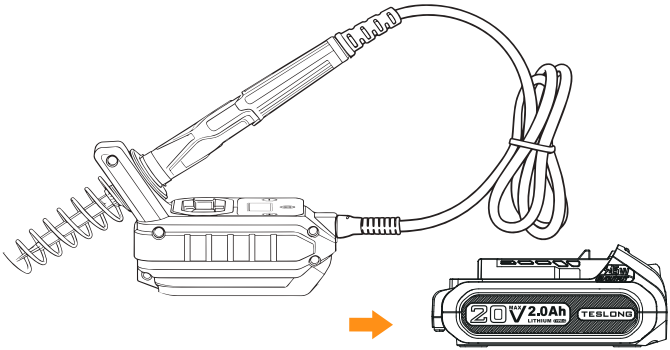


Removing the Battery Pack

- Press the battery release button.



- Pull the battery pack out of the power unit.



⚠ Warning

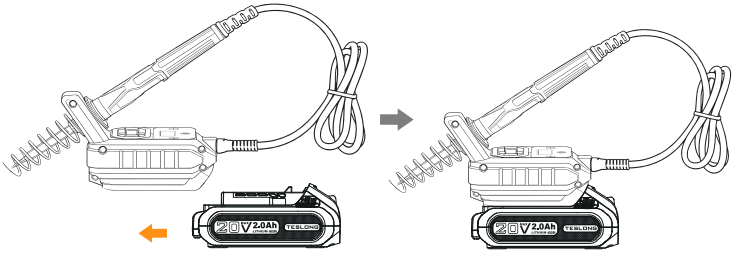
Safety Precautions: Ensure the lock-off button is engaged to prevent accidental switch activation before removing or installing the battery pack.

SPECIFICATIONS

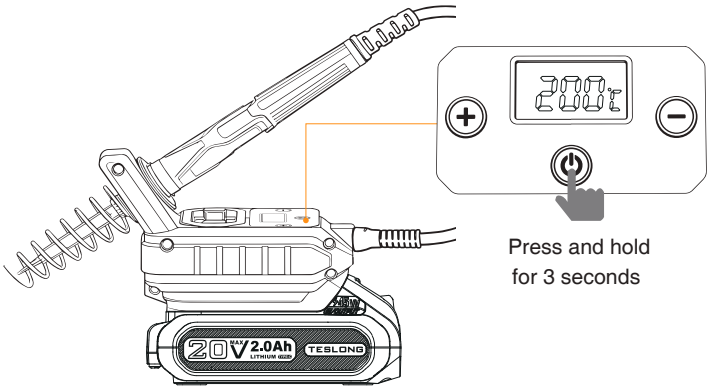
Specification	Details
Power Type	Cordless
Battery Voltage	20 V max
Battery Capacity	2.0 Ah
Type-C Power	45 W PD fast charging (input/output)
Temperature Range	100–500 °C (212–932 °F)
Temperature Accuracy	±20 °C
Heating Time	Heats to 425 °C (797 °F) in ~40 seconds
Product Weight	287 g (10.1 oz) excluding battery

HOW TO USE

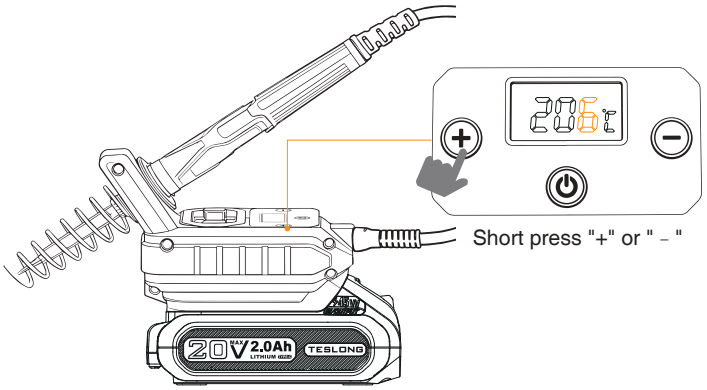
1. Insert Battery: Insert the battery pack into the base of the soldering iron.



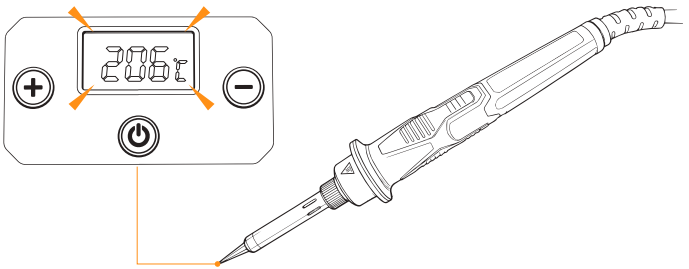
2. Power On: Press and hold the power button for 3 seconds to turn on the device.



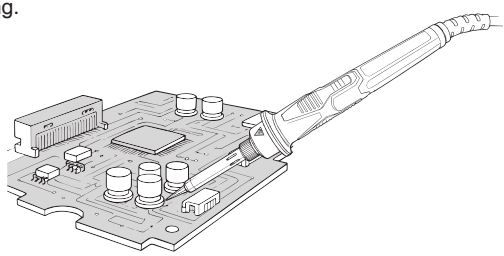
3. Adjust Temperature: Press the temperature adjustment buttons to increase or decrease the temperature to the desired level (up to 500 °C).

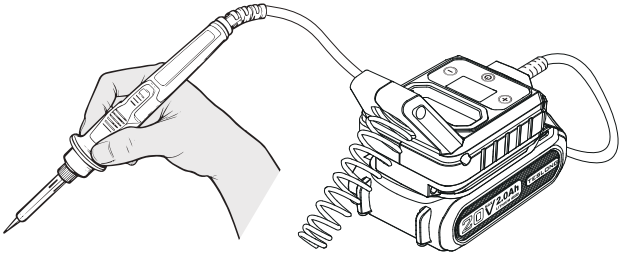


4. Allow Heating to Complete: The target temperature will flash a few times and then the display will show the real-time tip temperature.

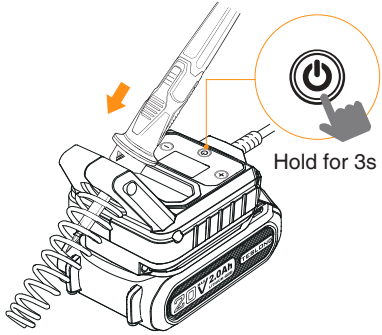


5. Begin Operating: Once the display shows that the target temperature has been reached, you can remove the soldering iron from the stand and start soldering.





6. Power Off: After soldering is finished, place the soldering iron back on the stand and press the power button to turn device off.



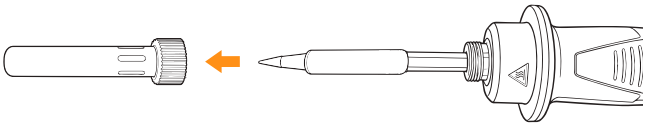
⚠**Note:**

- Allow the soldering tip to cool down completely before replacing or cleaning it.
- Keep the device away from water, moisture, or humid environments.
- Use the soldering iron only in a well-ventilated area to avoid inhaling fumes.
- A slight sizzling sound during use is normal and indicates the heating process.

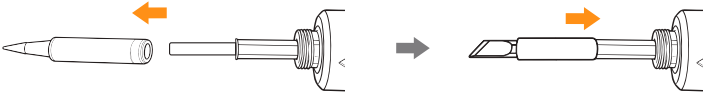
How to Replace the Soldering Iron Tip

1. Remove Nut: to remove the tip nut, turn it counter clockwise.

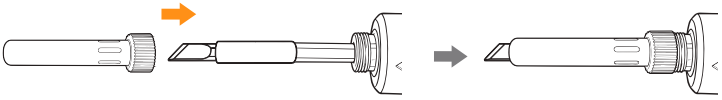
2. Remove Protective Sleeve: Remove the tip protected sleeve.



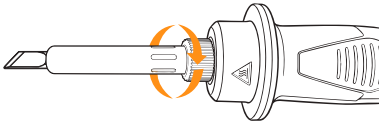
3. Remove Tip & Replace: Takoe out the soldering iron tip and replace it with a new one.



4. Put Protective Sleeve On: Put the protective sleeve back on.

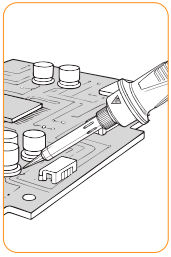


5. Put Nut Back On: to add the nut back on tip, turn it clockwise.

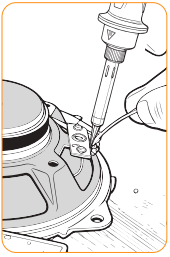


Clockwise

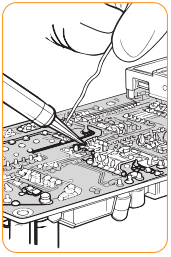
Application Scenarios



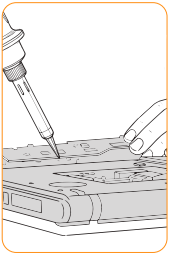
Circuit Board



Electrical Repair



Metal Melding



DIY Handmade

TROUBLESHOOTING GUIDE

Problem	Possible Cause	Possible Solution
The Soldering Iron Does Not Heat Up	Power is not properly connected	Check the power connection
	Power switch is not turned on	Ensure the power switch is ON
	Heating core is damaged	Replace the heating core or contact customer service
Temperature Is Unstable or too Low	Tip is oxidized or dirty	Clean or replace the soldering tip
	Poor contact between the tip and heating core	Reinstall the tip to ensure proper contact
Solder Does Not Melt Properly	Temperature setting is too low	Increase the temperature setting
	Tip is dirty or worn	Clean or replace the soldering tip
Excessive Smoke During Operation	New tip heating for the first time (normal)	Continue heating until initial smoke disappears
	Residual flux or impurities on the tip	Clean the tip and wipe it with a damp sponge
Soldering Tip Turns Black or Cannot be Tinned	Temperature setting is too high	Lower the temperature
	Tip was not tinned before storage	Clean the tip, then apply solder to re-tin it
Strange Noise (Buzzing or Slight Hum)	Normal heating element sound	Slight humming is normal during operation
	Loose components inside the handle	If noise is abnormal, discontinue use and contact customer support

SYMBOLS

The label on your tool may include the following symbols. The symbols and their definitions are as follows:

	Read the instruction manual to reduce the risk of injury
	Indicates a potential injury or hazard
	Lithium-ion battery, battery must berecycled
	Always wear eye protection with side shields marked to comply with ANSI Z87.1, and use appropriate respiratory protection
	Do not burn
	Hot surface/Heating area
V	Volts
A	Amperes
Hz	Hertz
W	Watts
	Direct current
n_o	No load speed

REGULATORY INFORMATION

FCC Information
Changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Compliance
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 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. If it is not installed and used in accordance with the instructions, it 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—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 the receiver.
- Connect the equipment to an outlet on a circuit different from the one the receiver is connected to.
- Consult the dealer or an experienced radio/TV technician for assistance.

FCC Conditions
This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:
1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Customer Service

Please contact us if you have any questions,
we would love to hear from you.

To review your warranty coverage
please visit www.teslong.com/warranty

Lifetime Technical Support

support@teslong.com

1-877-899-8809 (US)
(Mon-Fri, 8:00 AM-5:00 PM PST)

www.teslong.com

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说明书 技术要求:
1、材质:哑粉纸105g，骑马钉28P
2、尺寸: 成品尺寸105x140mm
3、油墨干净，文字内容清晰无缺漏
4、四色印刷