

# 压电陶瓷点火器规格书

## Piezoelectric Ceramic Specification

产品名称 (Product Name) : Piezoelectric Ceramic Igniter

产品型号 (Product No.) : JYYQ510-53/B1 CIK-L150

版本号 (Version): A/01

版本 Version	日期 Date	版本更新记录 Version History Record	修订 Revision
A/01	2016-6-30	初版 Original Version	

## 目录-Content

1. 适用范围- Applicable scope
2. 引用标准及规范- Reference standards and specifications
3. 原理与用途- Principle and Application
4. 产品说明- Product Description
5. 结构与配合尺寸-Structure and Dimensions
6. 产品要求- Product requirement
7. 包装要求- Packaging Requirements
8. 产品注意事项- Product Notes

### 1. 适用范围(Applicable scope)

该产品规格书仅适用于 JYYQ510-53/B1 CIK-LXX 点火器系列

This product specification is only applicable to JYYQ510-53/B1 CIK-LXX igniter series

### 2. 引用标准及规范(Reference standards and specifications)

GB/T 191-2008 包装储运图示标志(Packaging, storage and transportation icons)

GB/T 4857.3 包装 运输包装件基本试验 第 3 部分：静载荷堆码试验方法 3

Basic tests for packaging and transport packages - Part 3: Static load stacking test method

GB/T 4857.5 包装 运输包装件 跌落试验方法(Transport packaging drop test method)

YQ/K-BZ-11-A/3 JYYQ510 系列检验标准(Series of inspection standards)

### 3. 原理与用途(Principle and Application)

由外力的撞击作用使压电陶瓷可以产生足够高的电压，在电极之间引起火花，这样的火花可以用于燃气的点火，其装置称之为压电陶瓷点火器。

The impact of external force enables piezoelectric ceramics to generate a high enough voltage to cause sparks between electrodes. Such sparks can be used to ignite gas. The device is called a piezoelectric ceramic igniter.

由于压电陶瓷点火器的点火系统没有那么复杂，电学部分只要由两个圆柱形压电陶瓷材料组成，其点火所需的击穿电压是由电压陶瓷承受一个机械作用力面产生，而且操作简单、使用受命长、能在高温环境中工作，因此被广泛用于煤气炉，烤箱等厨房设备以及台式点火器等点火系统。

Since the ignition system of the piezoelectric ceramic igniter is not that complicated, the electrical part only needs to be composed of two cylindrical piezoelectric ceramic material stages. The breakdown voltage required for ignition is generated by the voltage ceramic bearing a mechanical force surface, and it is easy to operate, has a long service life, and can work in high temperature environments. Therefore, it is widely used in kitchen equipment such as gas stoves and ovens, as well as ignition systems such as desktop igniters.

### 4. 产品说明(Product Description)

4.1 此款压电陶瓷点火器是一种用来点燃燃烧气体的点火器。

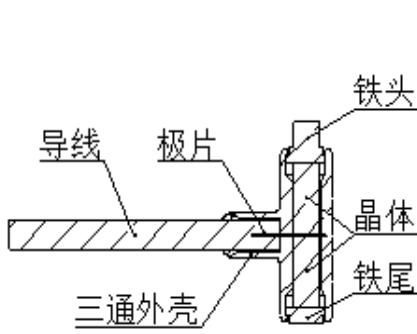
This piezoelectric ceramic igniter is an igniter used to ignite combustion gases

4.2 产品实物图(Product Real Picture): (As shown 1)

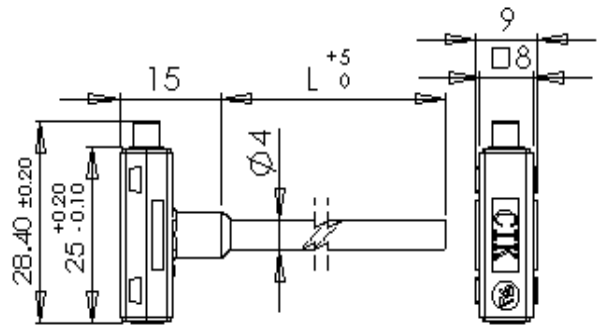


JYYQ510-53/B1 CIK-L XX Picture

4.3 安装要求(Installation Requirements)



As Shown 2 JYYQ510-53/B1 CIK Structure



As Shown 3 JYYQ510-53/B1 CIK Dimensions

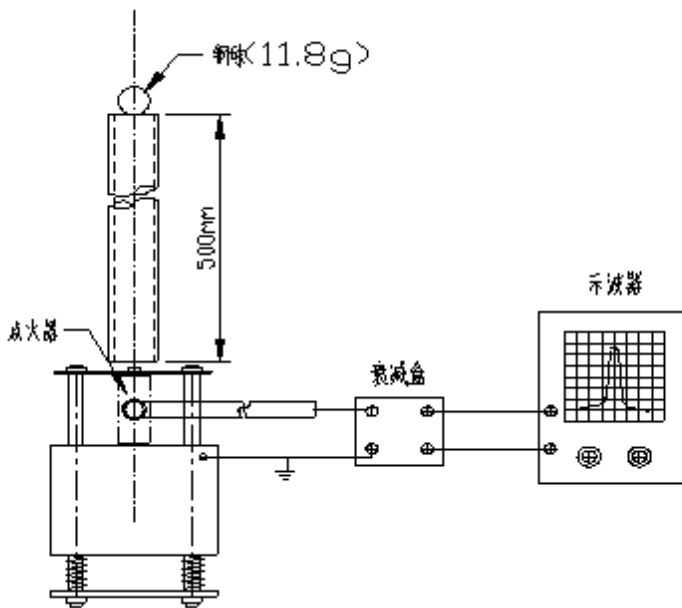
表 1 点火器组装结构说明

Table 1 Assembly structure instructions

No.	Part Name	Part Spec	Qty
1	三通 three-way connector	YQ510-53/B1 CIK-T	1
2	极片 Electrode plate	YQ510-6JP	1
3	晶体 Piezoelectric Ceramic	511 Φ5*10 A	2
4	铁头 Iron Head	31# 彩锌 (Color zinc)	1
5	铁尾 Iron Tail	31# 彩锌 (Color zinc)	1

4.4 标准电压是由 11.8g 的钢球从 500mm 高处自由落下,撞击而产生的电压,其输出电压 $\geq 16KV$ 。(如图 4 所示)

The standard voltage is the voltage generated by a 11.8g steel ball falling freely from a height of 500mm and impacting, and its output voltage is  $\geq 16KV$ . (As Shown 4)

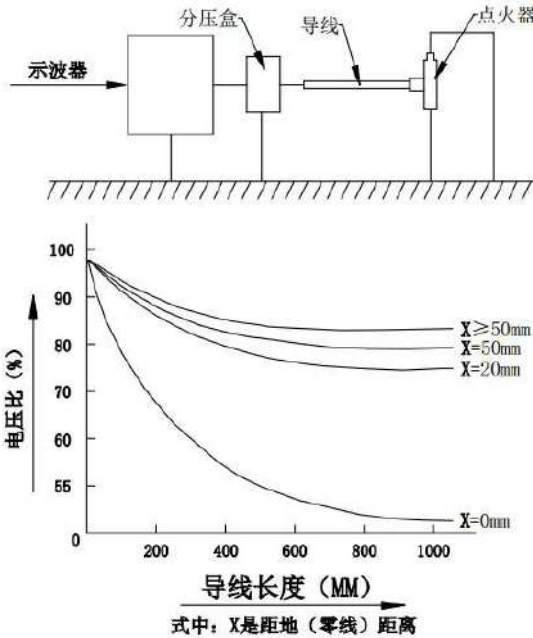


As Shown 4

4.5 影响电压测试的原因导线长度和导线与地线之间的距离.(图 5 所示)

Reasons that affect the voltage test the length of the wire and the distance between the wire and the ground wire. (As Shown 5)

As Shown 5



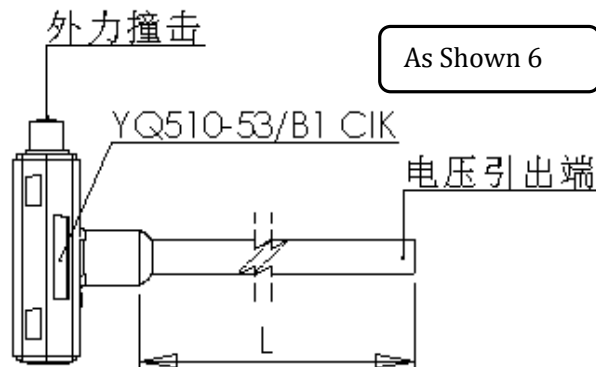
5. 产品要求 (product requirement)

序号	项目	说明
1	外观要求 Appearance requirements	1. 字样清晰、颜色光亮、均匀、塑料内无残留杂质; Clear lettering, bright color, uniform, no residual impurities in the plastic 2. 外观光滑无开裂、严重凹陷、批锋等注塑缺陷; The appearance is smooth without cracks, serious depressions, sharp edges and other injection molding defects; 3. 注塑水口凸起 ≤ 0.1mm; Injection gate bulge ≤ 0.1mm; 4. 金属片等镶嵌件与塑料吻合处必须密封; The joints between inserts such as metal sheets and plastic must be sealed;
2	结构 Structure	1. 产品尺寸应符合(图 3)中标注的尺寸要求 The product size should meet the size requirements marked in (As Shown 3) 2. 各零件需符合(表 1)中要求 Each part must meet the requirements in (Table 1)

3	标准电压 Standard Voltage	标准电压是由 11.8g 的钢球从 500mm 高处自由落下, 撞击产生的电压 $\geq 16KV$ The standard voltage is that a 11.8g steel ball falls freely from a height of 500mm, and the voltage generated by the impact is greater than or equal to 16KV
4	耐久测试 Durability test	40000 次久后输出电压 $\geq 13KV$ (打击频率 70 次/分钟)久机打击力度为落球打击力度的 75-80%.打击力度越大, 衰减率就越大。 After 40,000 times, the output voltage is greater than or equal to 13KV (Note: the hitting frequency is 70 times/min), and the hitting force of the durable machine is 75-80% of the hitting force of the falling ball. The greater the hitting force, the greater the decay rate
5	绝缘性 Insulation	电子头外壳表面耐压 $\geq 22KV$ The surface withstand voltage of the igniter shell is $\geq 22KV$
6	抗潮湿性 Humidity Resistance	产品在 60°C/95%环境下连续 3 小时, 电压下降率 $\leq 15\%$ , 恢复到常温后电压下降率 $\leq 10\%$ , 其塑料件导线通过 500V 的直流电时, 阻抗必须达 100M $\Omega$ 。 When the product is kept at 60°C/95% for 3 hours, the voltage drop rate is $\leq 15\%$ , and the voltage drop rate is $\leq 10\%$ after returning to normal temperature. When the wire of the plastic part passes through 500V DC, the impedance must reach 100M $\Omega$
7	抗热性能 Heat resistance	1.在 120°C下续 3 小时, 电压下降率 $\leq 15\%$ , 恢复到常温后电压下降率 $\leq 10\%$ 。 At 120°C for 3 hours, the voltage drop rate is less than or equal to 15%, and the voltage drop rate after returning to normal temperature is less than or equal to 10% 2.塑料件、导线不变形。 Plastic parts and wires are not deformed

## 6. 安装要求与检测事项(Installation requirements and inspection items)

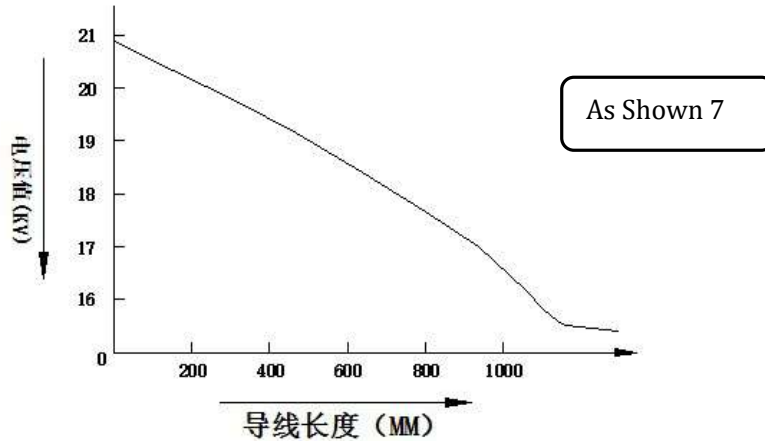
### 6.1 安装示意图(Installation and test Schematic) .(As Shown 6)



安装检测示意图 Installation and test Schematic

6.2 电压引出的导线越长，电压衰减就越大

The longer the lead from which the voltage is drawn, the greater the voltage attenuation.  
(As Shown 7)



## 7.包装要求(Packaging Requirements)

7.1 若客户无特别要求，均按如下包装方法包装:

If the customer has no special requirements, they are packaged according to the following packaging methods

7.2 主要材料(Main Material)：瓦楞纸箱(corrugated box)

7.3 外箱尺寸(Carton Dimension)：410mm×340mm×150mm;

7.4 包装数量(Package Qty)：按实际包装数量为准(According to the actual packaging quantity);

7.5 在外箱上正确填写好“产品型号”、“数量”、“产品批号”的信息.

(Correctly fill in the information of "product model", "quantity" and "product batch number" on the outer carton.)

## 8 产品注意事项(Product Notes)

8.1 在运输、安装过程中，较强的振动和碰撞都会使点火系统出异常，影响点火性能;

In the process of transportation and installation, strong vibration and collision will make the ignition system abnormal and affect the ignition performance;

8.2 搬运时应严禁滚动、抛掷和手钩作业.

Rolling, throwing and hand hooking operations are strictly prohibited during handling

8.3 产品应放置在干燥通风、周围无腐蚀性气体的仓库内，且外箱堆码不应超过 5 层.

The product should be placed in a dry and ventilated warehouse without corrosive gas around, and the outer box should not be stacked more than 5 layers.