# GT04系列薄型按键开关/
# GT04 Series Ultra-thin Keyswitch

■ 特点　Features:

- ●超薄型，从PCB端算起0.31英寸(7.8毫米)(无键帽)
  Ultra−thin profile, 0.31 inch(7.8mm) measuring from PCB(no keycap)
- ●触感的选择：平滑型、触感型
  Choice of feel: Linear, Soft tactile
- ●PCB针脚　　PCB pin
- ●高达2000万次的操作寿命
  Long life to 20 Million operation cycles
- ●最大12V AC/DC　　12V AC/DC Maximum
- ●额定电流：10mA　　Current Rating:10mA
- ●绝缘电阻＜100MΩ(在100VDC下)
  Insulation Resistance < 100MΩ under 100VDC

■ 用途　Applications:

主要应用于电脑键盘点钞机、工业设备和机器接口设备
Mainly applied on computer keyboards，Cash registers, industrial equipment and Man−Machine interfaces

■ 规格参数　Specification and Parameters:

| | | |
|---|---|---|
| 电气特性<br>Electrical<br>Characteristics | 额定负荷　Rating | 12VDC/AC max. 10mA AC/DC max. |
| | 接触电阻　Contact Resistance | 200mΩ Max.(25mΩ typical)(初始值 Initial Value) |
| | 绝缘电阻　Insulation Resistence | 100mΩ Min. |
| | 耐电压　Voltage Resistance | AC 100V (50−60Hz) 1 Minute |
| | 电气寿命　Eletrical life | Over 20,000,000 cycles(Load) |
| | 弹跳时间　Bounce Time | 操作速度为400mm/s<br>5 msec(operation speed at 400mm/sec.) |
| 特性参数<br>Parameters | 操作力　Operating force | 见具体规格表 See Detailing Spec. |
| | 行程　Pre - travel | 1.2 ± 0.5mm |
| | 全行程　Total Trave | 2.5 ± 0.4mm |
| | 机械寿命　Mechanical Life | 2,000万次以上（无负载下）<br>Over 20,000,000 cycles (No Load) |
| | 使用温度　Operating Temperature Range | −40℃ ～ +80℃ |
| | 使用湿度　Ambient Humidity | ≤85% RH |
| | 可焊性　Solder Ability | 260℃ ±5℃　3s ± 0.5s |
| | 耐焊接热　Soldering Heat Resistance | 260℃ ±5℃　3s ± 1s |
| | 手工焊接　Soldering by Hand | 焊接时，使用30瓦烙铁，控制在350℃约3秒<br>Use a 30 watts soldering iron for about 3s<br>at 350℃ while soldering |

■ 焊接参数　Solding Parameters:

1. 熔融条件 Flux Station

　A.GR8干熔型　　　　　　Flux−Dry type GR8
　B.需发泡　　　　　　　Applied by foaming
　C.特别比重−0.820g/cm3　Specific Gravty−0.820g/cm3

2. 输送速度 Conveyor Speed

　A.2.3米/分钟 2.3 meters/min

3.预热温度 Pre−heat Temperature

　A.PCB 表面温度为+85℃ Temperature of PCB surface：+85℃

4.焊接 Solder

　A.63/37合金　63/37 alloy
　B. 干波，无油 Dry wave − no oil
　C.大约接触波段2秒 Approximate contact with wave for 2 seconds

5.清洗 Cleaning

　A.GR8干熔型,不吸湿,不需要清洁 Flux−Dry GR8 is non−hygroscopic flux and does not require cleaning

　B.建议冷却后在单独的局域用 Alpua 564手洗，注意溶剂不要流入组件中。
Cleaning is suggested on isolated areas ,cold cleaning by hand with Alpua 564 is recommended,Care must be taken to avoid solvent entering the keymodule.
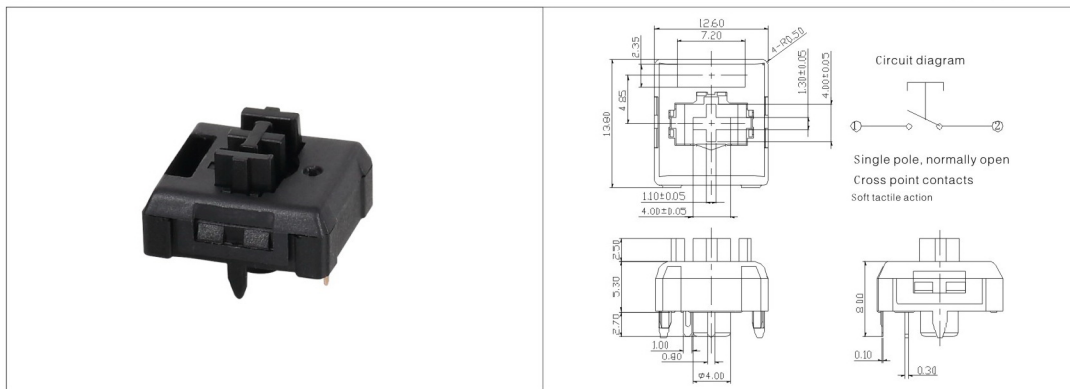
## GT04 系列按键开关订货指引
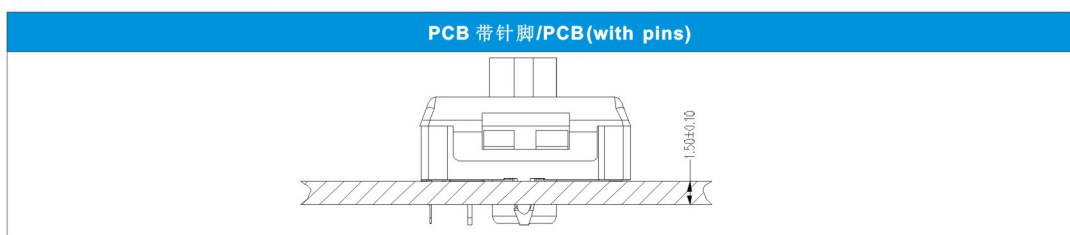## GT04 Series Keyswitch Ordering Instruction

| GT04 | A | 1 | B | N | W |
|---|---|---|---|---|---|
| 开关类别<br>**Switch Type** | 接触材料<br>**Contact Material** | 操作力代码<br>**Code of operating force** | 操作特征和按键类别<br>**Operating Characteristics and Key Stem Style** | LED 二极管<br>**LED Diode** | 安装选择<br>**Mounting Options** |
| GT04系列<br>按键开关<br>**GT04 Series Keyswitch** | A 金合金<br>**Au Alloy** | 1 OF=50±20gf | A 瞬时型、单极、标准型、黑色按键<br>**Momentary,singlpole,standard keyswitch,black key stem** | N 无LED灯/No LED<br>无二极管/No Diode | W 有针脚<br>**With pins** |
| | B 银合金<br>**Ag Alloy** | ... 特殊<br>**Special** | B 瞬时型、单极、触感型、红色按键<br>**Momentary,single pole,tactile feel, Keyswitch,red key stem** | D 无LED灯/No LED<br>带二极管/With Diode | ... 特殊<br>**Special** |
| | ... 特殊<br>**Special** | | ... Special<br>特殊 | F RGB全彩LED灯/<br>**RGB full color LED** | |
| | | | | ... Special<br>特殊 | |

### ■ 尺寸 Dimensions
**单位/Unit:mm**



Circuit diagram

Single pole, normally open
Cross point contacts
Soft tactile action

### ■ 安装方法 Mounting Options

**PCB 带针脚/PCB(with pins)**



### ■ 电路板孔设计 Circuit Board Layouts

◆ PCB 带针脚/PCB(with pins)

| 贴片安装<br>SMD Mounting | 插脚安装<br>DIP Mounting |
|---|---|
| <br>LED 焊点设计<br>LED Soldering Pad Design<br>Φ4.15±0.05<br>Φ1.5±0.05<br>Φ1.4±0.05<br>7.2×2.3±0.05<br>Scale 5:1 | <br>PC board Mounting Hole Dimension<br>1-pole w/Diode<br>Φ4.15±0.05<br>Φ1.5±0.05<br>Φ1.4±0.05<br>Φ0.8±0.05 |