

1. LED { 直插LED 长正短负
贴片LED

1° 普通发光二极管工作电压为 $1.6V \sim 2.1V$ 工作电流 $1 \sim 20mA$

2. LED闪烁

```
#include <reg52.h>
void delay(int ms)
{
    unsigned int i, j;
    for(i=0; i<ms; i++)
    {
        for(j=0; j<124; j++);
    }
}

sbit P10 = P1^0;
void main(void)
{
    P10 = 0;
    delay(100);
    P10 = 255;
}
```

{ 软件仿真
硬件仿真

3. 流水灯

标准库函数: `<intrins.h>`

{ 字符型循环左移 `_crol_`
`_crol_(a, 1)`
字符型循环右移 `_cror_`

```
#include <reg52.h>
#include <intrins.h>
```

```
#define uint unsigned int
#define uchar unsigned char
```

```
uchar temp;
```

```
void delay(uint ms)
{
```

```
    uint i, j;
```

```
    for(i = 0; i < ms; i++)
    {
```

```
        for(j = 0; j < 124; j++);
    }
```

```
}
```

```
void main( )
```

```
{    temp = 0xfe;
```

```
    P1 = temp;
```

```
    delay(100);
```

```
    while(1)
```

```
    {    temp = _crol_(temp, 1);
```

```
        P1 = temp;
```

```
        delay(100);
```

```
    }
```

```
}
```