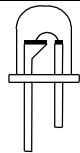




## 4 PATTERN DISPLAY

## 8 LED FLASH

## 閃爍圖形 IC

| LED FLASH |                                                                                     |
|-----------|-------------------------------------------------------------------------------------|
| M1163     |  |

### FEATURES 功能敘述

- Operating voltage 2.4 ~ 5.5VOLT.
- Use external R,C oscillator.
- LED output source current driver.
- $\overline{\text{TG}}$  : Detector the DC motor speed via reed switch or Hall effect IC active low , motor counterclockwise.
- Display 4 pattern sequentially , customer's display pattern can be programmed by change one MASK layer.

| P/N     | LIST      |
|---------|-----------|
| M1163-1 | Love Day  |
| M1163-2 | Holiday   |
| M1163-3 | Every Day |

### APPLICATION 產品應用

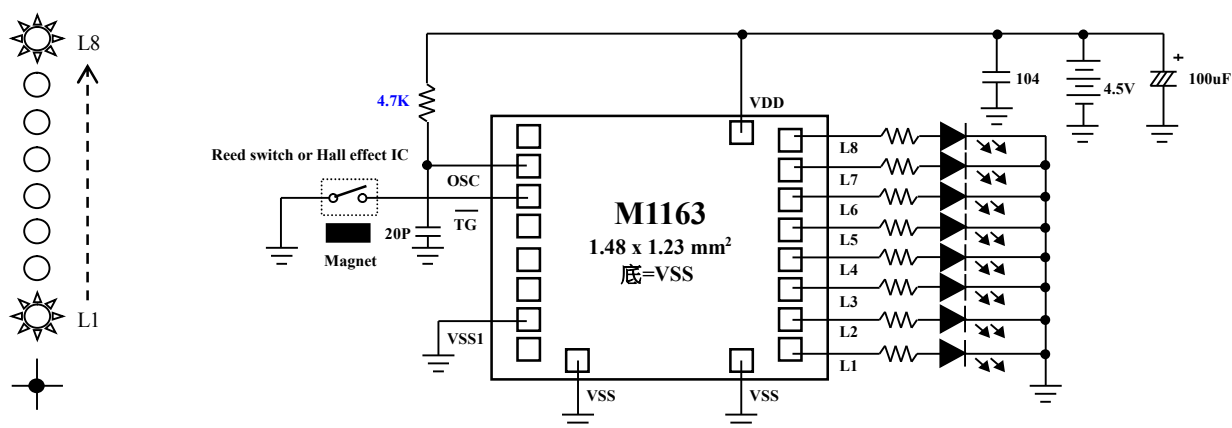
- Blinking LED , Function indicator , Xmas decoration , Toys.

### ELECTRICAL CHARACTERISTICS 電氣規格

( @V<sub>DD</sub>=4.5V unless otherwise specified )

| Characteristics            | Sym.             | Min. | Typ. | Max. | Unit | REMARKS                                                               |
|----------------------------|------------------|------|------|------|------|-----------------------------------------------------------------------|
| 工作電壓 Operating Voltage     | V <sub>DD</sub>  | 2.4  | 4.5  | 5.5  | V    |                                                                       |
| 工作電流 Operating Current     | I <sub>OP</sub>  | —    | 0.1  | 0.5  | mA   | No load                                                               |
| 推動電流 Driving Current       | I <sub>OH</sub>  | —    | -10  | —    | mA   | @ V <sub>DS</sub> =1.2V                                               |
| 振盪頻率 Oscillator Frequency  | F <sub>OSC</sub> | —    | 4.0  | —    | MHz  | External OSC $\pm 10\%$ TOL. R <sub>osc</sub> =4.7K $\Omega$ , C=20pF |
| 工作溫度 Operating Temperature | Temp.            | 0    | 25   | 60   | °C   |                                                                       |

### APPLICATION DIAGRAM 參考電路圖



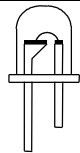
The center of a circle



4 PATTERN DISPLAY

8 LED FLASH

閃爍圖形 IC

| LED FLASH |  |
|-----------|-------------------------------------------------------------------------------------|
| M1163     |                                                                                     |

## DISPLAY PATTERN

### M1163-1 : Love Day

♥ SEXY LADY ♥  
¥ ¥ COME ON ¥ ¥  
♥ MISSING YOU ♥  
♥ I LOVE YOU ♥

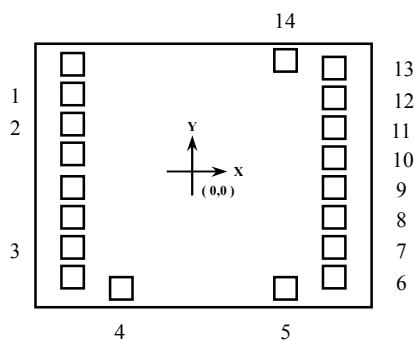
### M1163-2 : Holiday

☺ MERRY X'MAS ☺  
☺ HAPPY TIME ☺  
HAPPY NEW YEAR  
GO! GO! GO!

### M1163-3 : Every Day

HELLO! ☺ ☺ ☺ ☺  
HOW ARE YOU  
GIVE ME FIVE  
THANK YOU!!!

## PAD ASSIGNMENT & POSITION



UNIT : um

| No. | NAME | X      | Y      | No. | NAME | X      | Y      |
|-----|------|--------|--------|-----|------|--------|--------|
| 1   | OSC1 | 530.4  | -332.7 | 8   | L3   | -530.4 | 165.7  |
| 2   | TG   | 530.4  | -212.7 | 9   | L4   | -530.4 | 33.3   |
| 3   | VSS1 | 530.4  | 292.2  | 10  | L5   | -530.4 | -86.7  |
| 4   | VSS  | 324.8  | 487.7  | 11  | L6   | -530.4 | -219.1 |
| 5   | VSS  | -329.7 | 487.7  | 12  | L7   | -530.4 | -339.1 |
| 6   | L1   | -530.4 | 418.1  | 13  | L8   | -530.4 | -471.5 |
| 7   | L2   | -530.4 | 285.7  | 14  | VDD  | -329.7 | -490.5 |

\* CHIP SIZE ~ 1.48 X 1.23 mm<sup>2</sup>

\* IC substrate should be connected to VSS in PCB (PCB 上 IC 必須接 VSS)

\*All specs and applications shown above subject to change without prior notice.

( 以上電路及規格僅供參考,本公司得逕行修正 )