

|                        |      |
|------------------------|------|
| M3096V                 | P. 1 |
| 6/12-LED LOTTO GAME IC |      |

## ■ Description

M3096V is a low voltage 6/12-LED controller IC specially design for lotto game.

The IC requires minimal external components.

## ■ Application Example

- 12 lamps lotto game
  - 6 lamps dice game
  - 10 lamps bingo game
- LED.
- 5 lamps bingo game
  - 2 lamps big or small game
  - 10+2 lamps big or small game
  - Other lotto games

seconds

## ■ Feature

- CMOS technology
- Operating voltage : 1.35~5.00V DC
- Low standby current < 5μA (@3VDC)
- Maximum 12 LED can be connected as :
  - 12 or 6 LED, LCN as center LED, IC will automatically stop after 6
  - 10 or 5 or 2 LED, use power on/off LED will chase sequentially for a few cycles and randomly stop at one
- IC directly drives piezo buzzer and generates sound effect which changes with LED chasing speed
- Single trigger input (High Level)

## ■ Product type

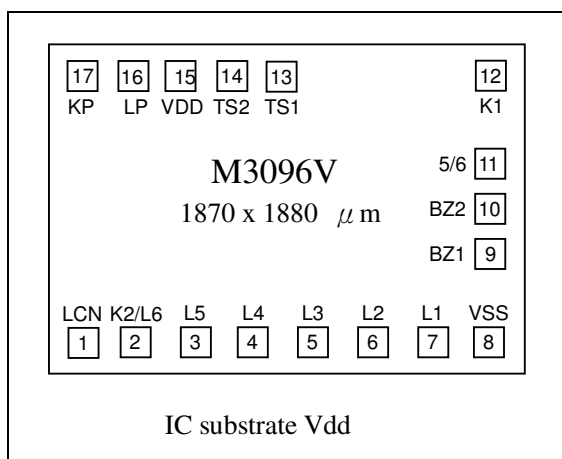
| Part number | Package type |
|-------------|--------------|
| M3096V      | Chip form    |
| 3906P       | 16 pin DIP   |

## ■ Explanation (reference to P.3 application circuits)

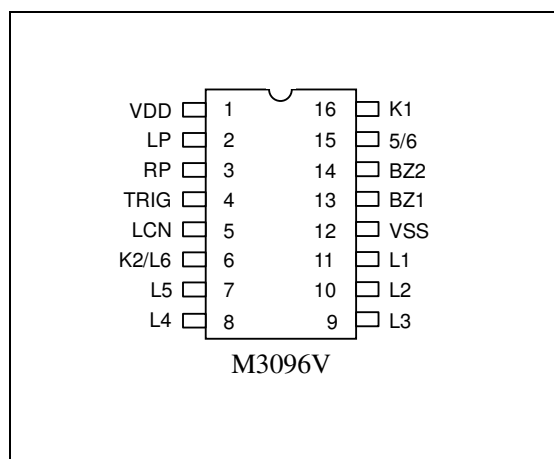
1. 12 or 6 LED + 1 LED (center LCN LED, auto chasing)
  - (1) Holding SW, 12 LED start to flash sequentially. LCN LED flashes indepently.
  - (2) After released SW, 10 and LCN LED start to slow down flashing speed
  - (3) When it stops at one LED, LCN LED keeps flashing.
  - (4) After 10 seconds, all LED turn off. IC enters standby mode. Retriggering SW will re-start the above sequence.
  - (5) IC can be connected as 12 or 6 LED application.
2. 10 or 5 LED + 2 LED ( two center LCN LED, for big or small)
  - (1) Holding SW1, 10 LED start to flash sequentially. Two LCN LED do not flash.
  - (2) After released SW1, 10 LED start to slow down flashing speed.
  - (3) When it stops at one LED. Press SW2, LCN(11<sup>st</sup> and 12<sup>nd</sup>) LED will flash and stop at one.
  - (4) IC can be connected as 5, 10, 2 LED.
  - (5) Using only 11<sup>st</sup> and 12<sup>nd</sup> LED is for 2-LED application.

|                        |      |
|------------------------|------|
| M3096V                 | P. 2 |
| 6/12-LED LOTTO GAME IC |      |

### ■ IC bonding pad diagram



### ■ 16 pin DIP package



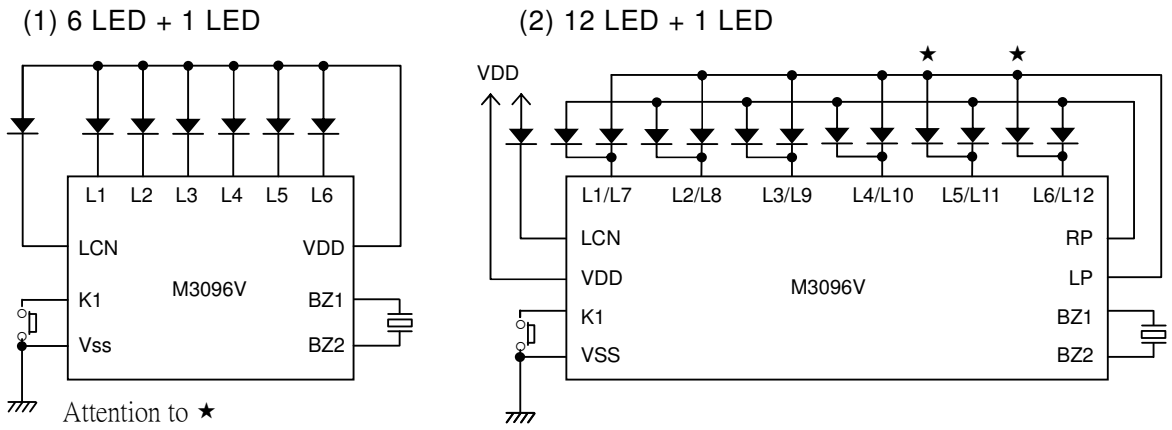
### ■ Pin description

| Pad | DIP | Symbol | Function                             |
|-----|-----|--------|--------------------------------------|
| 1   | 5   | LCN    | Center LED output                    |
| 2   | 6   | K2/L6  | SW2 key input or LED6/LED12 output   |
| 3   | 7   | L5     | LED5/LED11 output                    |
| 4   | 8   | L4     | LED4/LED10 output                    |
| 5   | 9   | L3     | LED3/LED9 output                     |
| 6   | 10  | L2     | LED2/LED8 output                     |
| 7   | 11  | L1     | LED1/LED7 output                     |
| 8   | 12  | Vss    | Negative power supply                |
| 9   | 13  | BZ1    | Buzzer output port 1                 |
| 10  | 14  | BZ2    | Buzzer output port 2                 |
| 11  | 15  | 5/6    | 5(10)/6(12) LED output selection pin |
| 12  | 16  | K1     | SW1 key input                        |
| 13  | --  | TEST1  | Test pin (internal use)              |
| 14  | --  | TEST2  | Test pin (internal use)              |
| 15  | 1   | Vdd    | Positive power supply                |
| 16  | 2   | LP     | Left output                          |
| 17  | 3   | RP     | Right output                         |

|                        |      |
|------------------------|------|
| M3096V                 | P. 3 |
| 6/12-LED LOTTO GAME IC |      |

# ■ Application Circuit

## A. Auto power off (lotto game)



## B. Power will not turn off automatically (bingo game)

