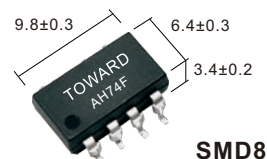
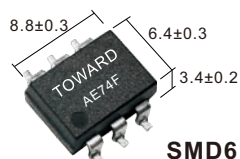
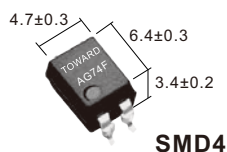
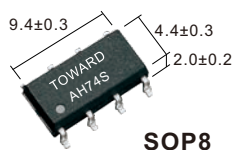
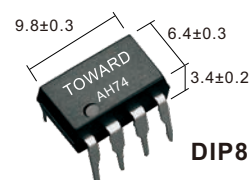
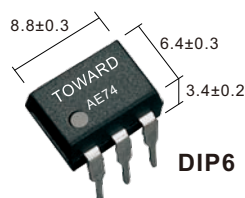
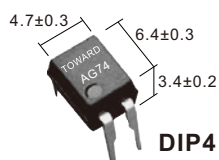
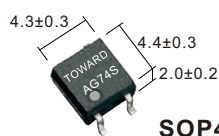


**400V · 1b/2b****Features**

- Contact Form
- Load Voltage
- Operation LED Current
- Load Current
- On-Resistance
- Output Capacitance
- Low Off-State Leakage Current

**1b/ 2b****400 V Max.****3.0mA Max.****90mA Max.****28Ω Typ.****165 pF Typ.****10 μA Max.****Outline:(Unit:mm) pitch:2.54 mm****Terminal Identification 電路結構圖**

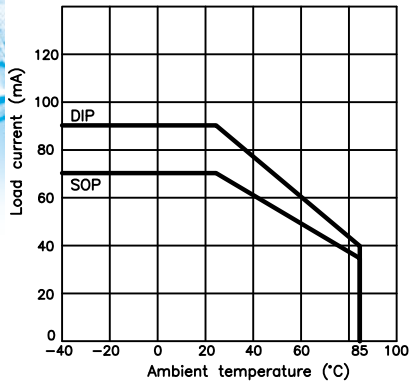
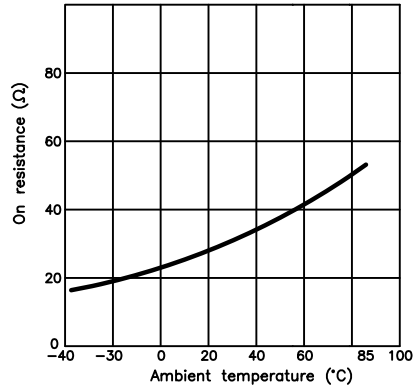
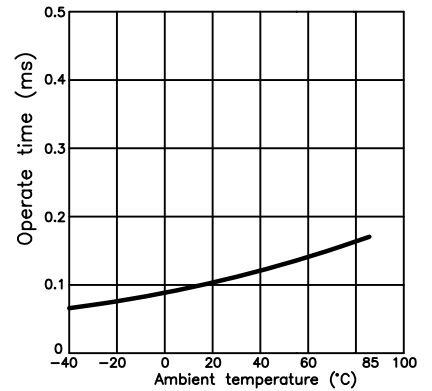
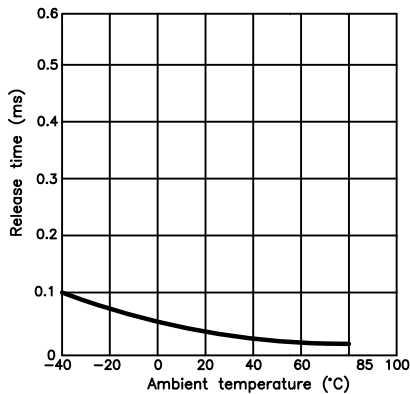
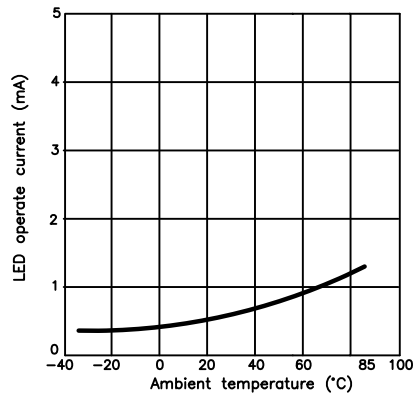
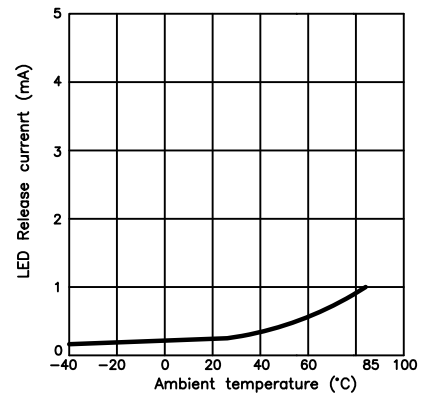
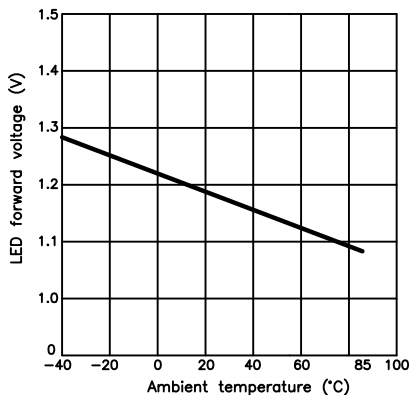
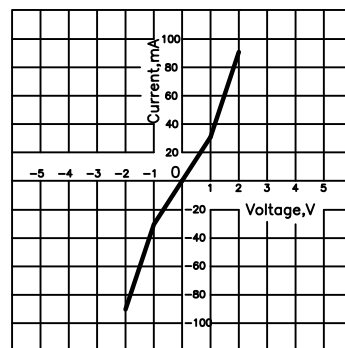
| Terminal Identification                                    |                                                                                            |                                                                    |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| AG74(F)(S)                                                 | AE74(F)                                                                                    | AH74(F)(S)                                                         |
| <p>4 3<br/>1 2<br/>(+) (-)</p>                             | <p>6 5 4<br/>1 2 3<br/>(+) (-)</p>                                                         | <p>8 7 6 5<br/>1 2 3 4<br/>(+) (-) (+) (-)</p>                     |
| 1: Anode (LED)<br>2: Cathode (LED)<br>3,4: Drain (MOS FET) | 1: Anode (LED)<br>2: Cathode (LED)<br>3: NC<br>4,6: Drain (MOS FET)<br>5: Source (MOS FET) | 1,3: Anode (LED)<br>2,4: Cathode (LED)<br>5,6,7,8: Drain (MOS FET) |

## Absolute Maximum Ratings 絕對最大定格 (Ambient Temperature 周圍溫度 : 25°C)

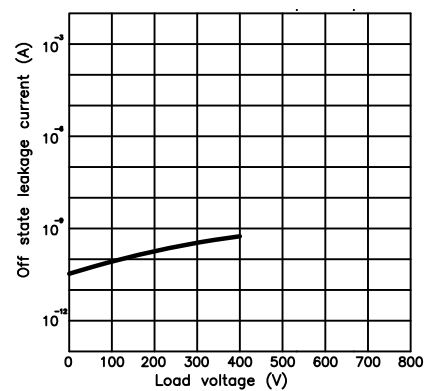
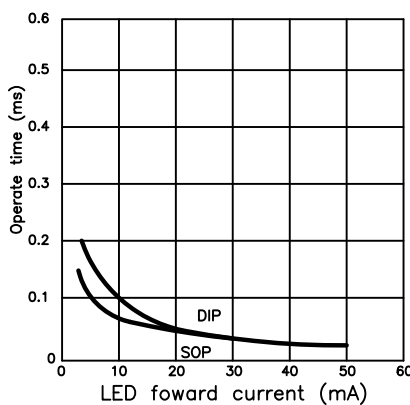
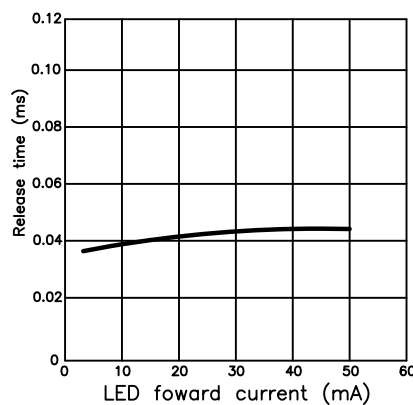
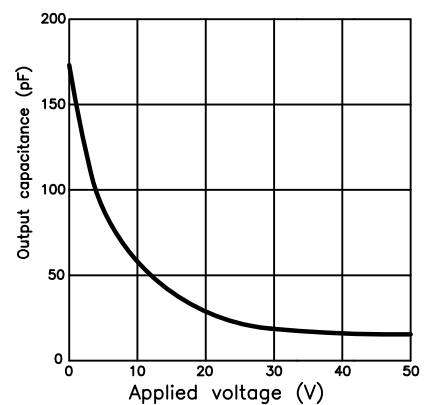
| Item                                                |                                              | Symbol            | Value                |      |                    |      |                |
|-----------------------------------------------------|----------------------------------------------|-------------------|----------------------|------|--------------------|------|----------------|
| Outline Package                                     |                                              |                   | SOP 4/8              |      | DIP 4/8<br>SMD 4/8 |      | DIP 6<br>SMD 6 |
|                                                     |                                              |                   | 1CH                  | 2CH  | 1CH                | 2CH  | 1CH            |
| Input<br>輸入                                         | Continuous LED Current 連續的LED電流              | I <sub>F</sub>    | 50mA                 |      |                    |      |                |
|                                                     | Peak LED Current LED的峰值電流(f=100 Hz, duty=1%) | I <sub>FP</sub>   | 500mA                |      |                    |      |                |
|                                                     | LED Reverse Voltage 逆向的LED電壓                 | V <sub>R</sub>    | 5V                   |      |                    |      |                |
|                                                     | Input Power Dissipation 容許損失                 | P <sub>In</sub>   | 75mW                 |      |                    |      |                |
| Output<br>輸出                                        | Load Voltage 負荷電壓                            | V <sub>L</sub>    | 400V (AC peak or DC) |      |                    |      |                |
|                                                     | Load Current 負荷電流 (mA)                       | I <sub>L</sub>    | 70                   | 60   | 90                 | 80   | 90             |
|                                                     | Peak Load Current 峰值負荷電流 (1 ms, 1 shot) (mA) | I <sub>Peak</sub> | 400                  | 400  | 400                | 400  | 400            |
|                                                     | Output Power Dissipation 電流損耗 (mW)           | P <sub>Out</sub>  | 300                  | 450  | 450                | 600  | 450            |
| Total Power Dissipation 全損耗 (mW)                    |                                              | P <sub>T</sub>    | 350                  | 500  | 500                | 650  | 500            |
| I/O Breakdown Voltage 入/出力間絕緣電壓 (V <sub>rms</sub> ) |                                              | V <sub>I/O</sub>  | 1500                 | 1500 | 1500               | 1500 | 1500           |
| Operating Temperature 使用時周圍溫度                       |                                              | T <sub>Opr</sub>  | -40°C ~ +85°C        |      |                    |      |                |
| Storage Temperature 周圍保存溫度                          |                                              | T <sub>Stg</sub>  | -40°C ~ +100°C       |      |                    |      |                |

## Electrical Specifications LED順向電壓 (Ambient Temperature 周圍溫度 : 25°C)

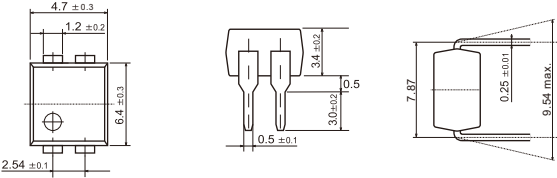
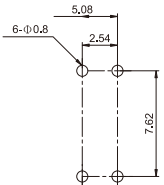
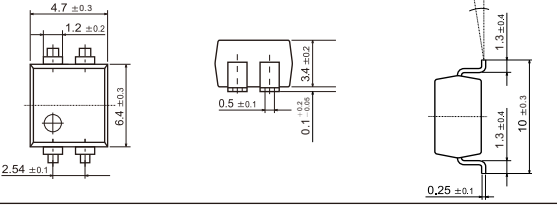
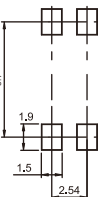
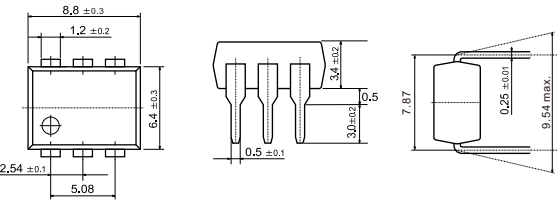
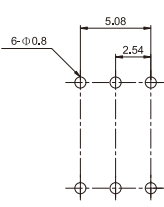
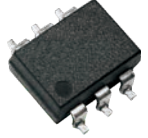
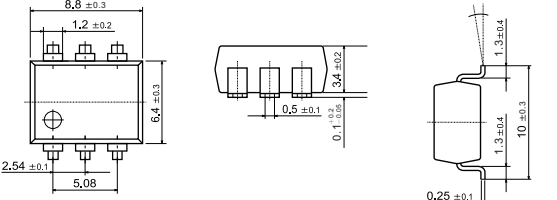
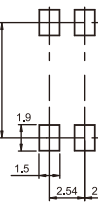
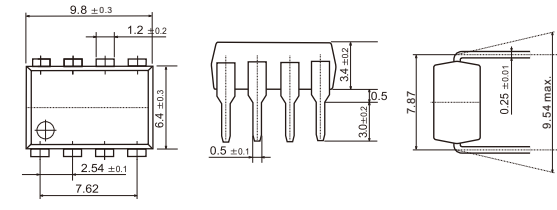
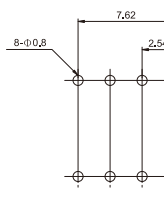
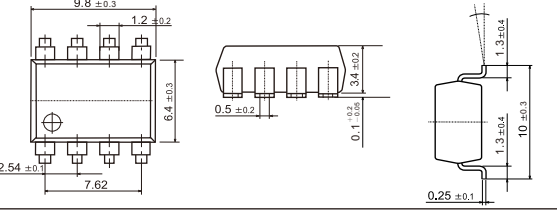
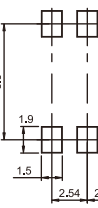
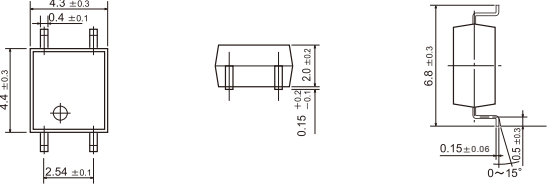
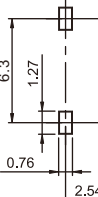
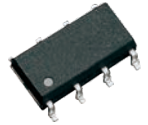
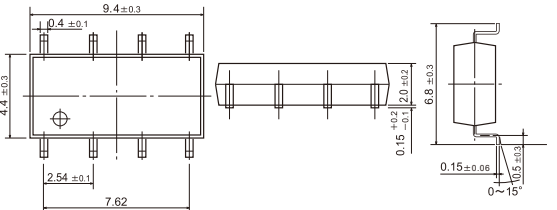
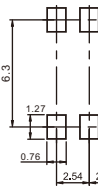
| Item               |                                      | Symbol             | MIN.            | TYP. | MAX. | Units | Conditions                                                                  |
|--------------------|--------------------------------------|--------------------|-----------------|------|------|-------|-----------------------------------------------------------------------------|
| Input<br>輸入        | LED Forward Voltage LED順向電壓          | V <sub>F</sub>     | 1.0             | 1.17 | 1.5  | V     | I <sub>F</sub> =10mA                                                        |
|                    | Operation LED Current LED的動作電流       | I <sub>F Op</sub>  |                 | 0.9  | 3.0  | mA    |                                                                             |
|                    | Recovery LED Voltage LED的恢復電壓        | V <sub>F Rec</sub> | 0.5             | 1    |      | V     |                                                                             |
| Output<br>輸出       | On-Resistance 導通電阻 Drain to Drain    | R <sub>On</sub>    |                 | 28   | 50   | Ω     | I <sub>F</sub> =0mA, I <sub>L</sub> =Rating<br>Time to flow is within 1sec. |
|                    | Off-State Leakage Current 開路狀態時的電流   | I <sub>Leak</sub>  |                 |      | 10   | μA    | I <sub>F</sub> =10mA, V <sub>L</sub> =400V                                  |
|                    | Output Capacitance 輸出端容量             | C <sub>Out</sub>   |                 | 165  |      | pF    | I <sub>F</sub> =10mA, V <sub>L</sub> =0V, f=1MHz                            |
| Transmission<br>傳達 | Operate Time 動作時間                    | T <sub>Off</sub>   |                 | 0.1  | 2.0  | ms    | I <sub>F</sub> =5mA<br>I <sub>L</sub> =Rating<br>(for SOP type)             |
|                    | Release Time 復位時間                    | T <sub>On</sub>    |                 | 0.05 | 0.5  | ms    |                                                                             |
|                    | Operate Time 動作時間                    | T <sub>Off</sub>   |                 | 0.15 | 2.0  | ms    | I <sub>F</sub> =10mA, I <sub>L</sub> =Rating<br>(for DIP/SMD type)          |
|                    | Release Time 復位時間                    | T <sub>On</sub>    |                 | 0.05 | 0.5  | ms    |                                                                             |
| Coupled<br>結合      | I/O Insulation Resistance 輸入/出間的絕緣阻抗 | R <sub>I/O</sub>   | 10 <sup>9</sup> |      |      | Ω     |                                                                             |
|                    | I/O Capacitance 輸入/力端的靜電容量           | C <sub>I/O</sub>   |                 | 1.3  |      | pF    | f=1MHz                                                                      |

Load current Vs.  
Ambient temperatureOn resistance Vs.  
Ambient temperatureOperate time Vs.  
Ambient temperatureRelease time Vs.  
Ambient temperatureLED operate current Vs.  
Ambient temperatureLED Release current Vs.  
Ambient temperatureLED forward voltage Vs.  
Ambient temperatureVoltage Vs. current characteristics  
of output at MOS portion

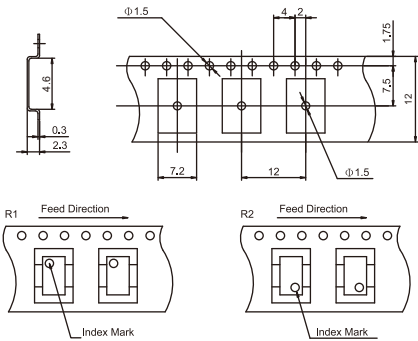
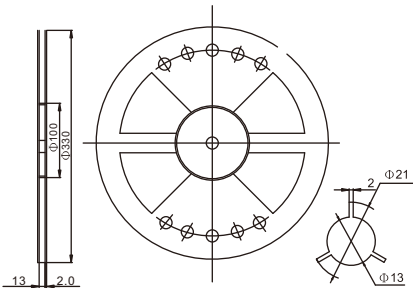
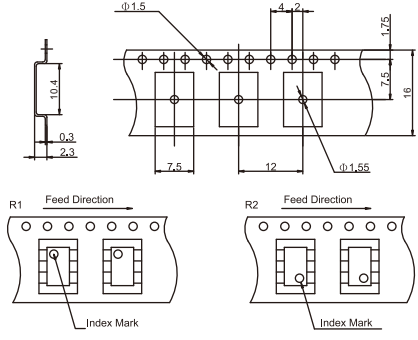
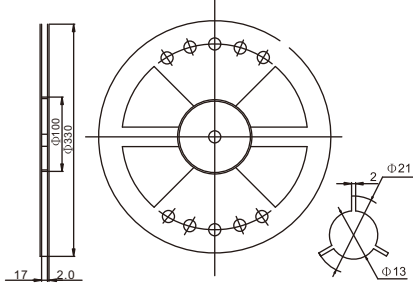
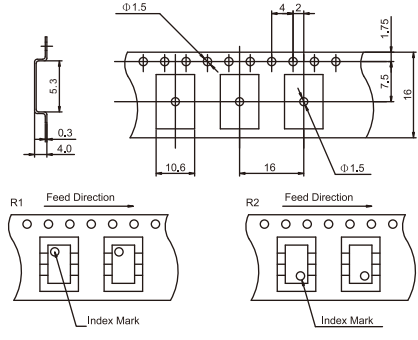
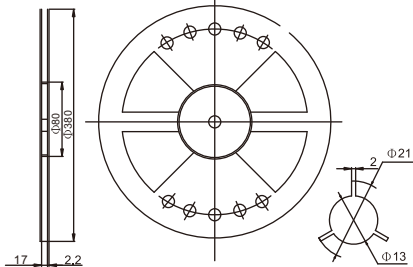
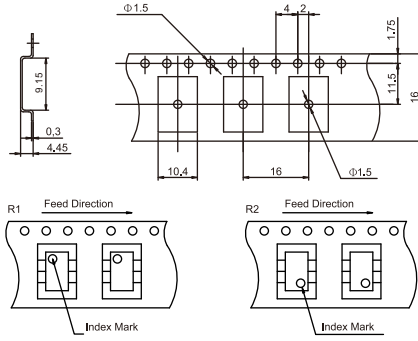
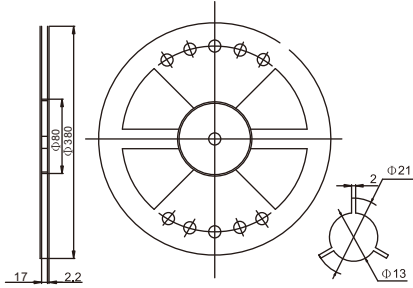
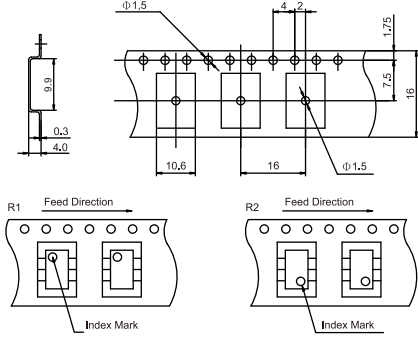
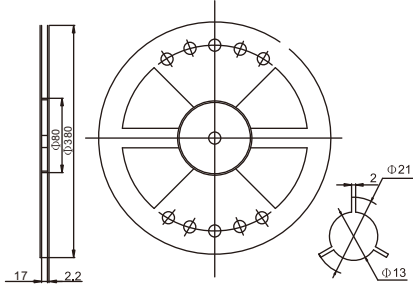
Off state leakage current

LED foward current Vs.  
operate time characteristicsLED foward current Vs.  
Release time characteristicsApplied voltage Vs.  
output capacitance characteristics

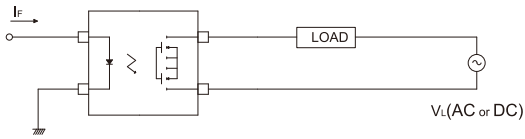
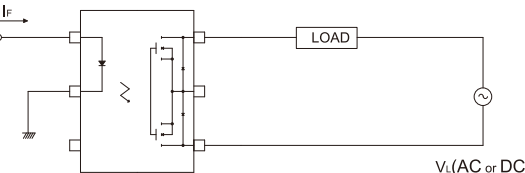
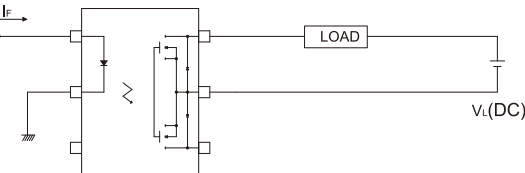
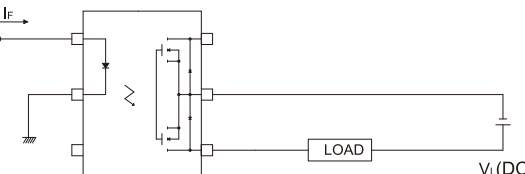
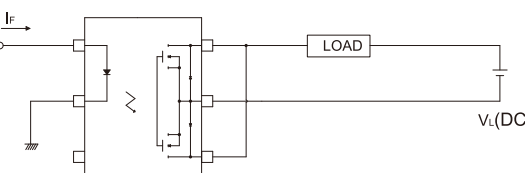
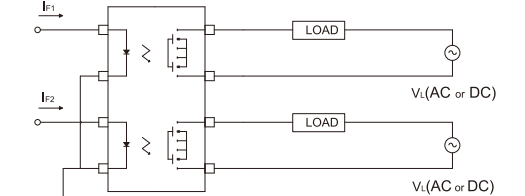
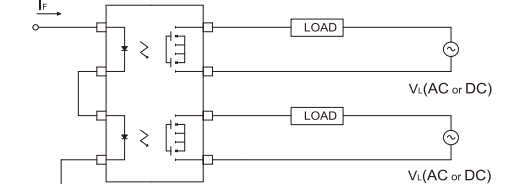
# Package & PC Board Pattern

| Package 包裝                                                                                      | Dimensions 外型尺寸圖                                                                     | PC Board pattern<br>PC 板加工圖                                                                            |
|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
|  <b>DIP4</b>   |    | <br>(Bottom View)   |
|  <b>SMD4</b>   |    | <br>(Top View)      |
|  <b>DIP6</b>  |   | <br>(Bottom View)  |
|  <b>SMD6</b> |  | <br>(Top View)    |
|  <b>DIP8</b> |  | <br>(Bottom View) |
|  <b>SMD8</b> |  | <br>(Top View)    |
|  <b>SOP4</b> |  | <br>(Top View)    |
|  <b>SOP8</b> |  | <br>(Top View)    |

# Packing Specifications

| Package Type<br>包裝類型 | Tape shape & dimensions<br>形狀和尺寸                                                    | Reel shape & dimensions<br>圈帶形狀和尺寸                                                   | Quantity<br>數量 |
|----------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------|
| 4 Pin SOP            |    |    | 1000 pcs       |
| 8 Pin SOP            |   |   | 1000 pcs       |
| 4 Pin SMD            |  |  | 1000 pcs       |
| 6 Pin SMD            |  |  | 1000 pcs       |
| 8 Pin SMD            |  |  | 1000 pcs       |

# Load Connecting Method

| Type<br>類 型 | Load<br>負 荷   | Connection<br>接 續 方 法                                                                | Feature<br>特 長                                           |
|-------------|---------------|--------------------------------------------------------------------------------------|----------------------------------------------------------|
| 4pin        | AC or DC      |    | Control bi-directional signal<br>可控制雙向信號                 |
| 6pin        | A<br>AC or DC |    | Control bi-directional signal<br>可控制雙向信號                 |
|             |               |   | On-Resistance is 1/2 of<br>A-connection<br>導通電阻值是A接法的1/2 |
|             | B<br>DC       |  | 2-Make-contacts<br>(Source Common)                       |
|             | C<br>DC       |  | On-Resistance is 1/2 of<br>B-connection<br>導通電阻值是B接法的1/2 |
| 8pin        | AC or DC      |  | 2 input and 2 output<br>2入力和2出力回路                        |
|             |               |  | 1 input and 2 output<br>1入力和2出力回路                        |