

H11AV1X, H11AV2X, H11AV3X
H11AV1, H11AV2, H11AV3

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-54151736
勝特力电子(深圳) 86-755-83298787
Http://www.100y.com.tw



**OPTICALLY COUPLED
ISOLATOR
PHOTOTRANSISTOR OUTPUT**

APPROVALS

- UL recognised, File No. E91231
- 'X' SPECIFICATION APPROVALS
- VDE 0884 in 3 available lead form :-
- STD
- G form
- SMD approved to CECC 00802
- Certified to EN60950 by the following Test Bodies :-
Nemko - Certificate No. P01102464
Fimko - Certificate No. FI18166
Semko - Reference No. 0202037/01-22
Demko - Certificate No. 311158-01
- BSI approved - Certificate No. 8001

DESCRIPTION

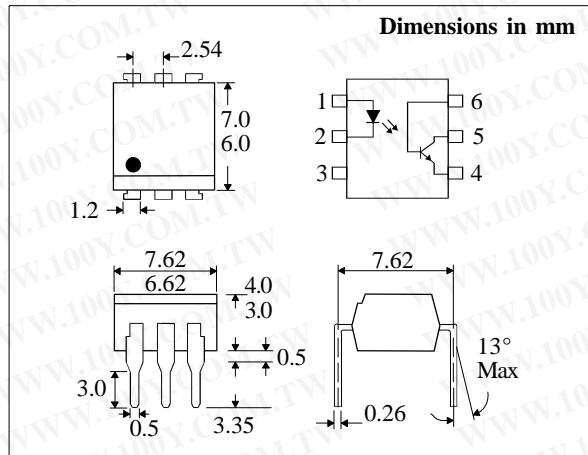
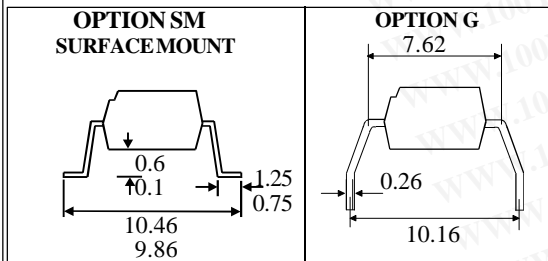
The H11AV series of optically coupled isolators consist of infrared light emitting diode and NPN silicon photo transistor in a standard 6 pin dual in line plastic package.

FEATURES

- Options :-
10mm lead spread - add G after part no.
Surface mount - add SM after part no.
Tape&reel - add SMT&R after part no.
- High Isolation Voltage (5.3kV_{RMS}, 7.5kV_{PK})
- High BV_{CEO} (70V min)
- All electrical parameters 100% tested
- Custom electrical selections available

APPLICATIONS

- DC motor controllers
- Industrial systems controllers
- Measuring instruments
- Signal transmission between systems of different potentials and impedances



**ABSOLUTE MAXIMUM RATINGS
(25°C unless otherwise specified)**

| | |
|---|------------------|
| Storage Temperature | -55°C to + 150°C |
| Operating Temperature | -55°C to + 100°C |
| Lead Soldering Temperature (1/16 inch (1.6mm) from case for 10 secs) | 260°C |

INPUT DIODE

| | |
|-------------------|-------|
| Forward Current | 60mA |
| Reverse Voltage | 6V |
| Power Dissipation | 105mW |

OUTPUT TRANSISTOR

| | |
|---|-------|
| Collector-emitter Voltage BV _{CEO} | 70V |
| Collector-base Voltage BV _{CBO} | 70V |
| Emitter-collector Voltage BV _{ECO} | 6V |
| Power Dissipation | 160mW |

POWER DISSIPATION

| | |
|--|-------|
| Total Power Dissipation | 200mW |
| (derate linearly 2.67mW/°C above 25°C) | |

ISOCOM COMPONENTS LTD
Unit 25B, Park View Road West,
Park View Industrial Estate, Brenda Road
Hartlepool, Cleveland, TS25 1YD
Tel: (01429) 863609 Fax : (01429) 863581

ISOCOM INC
1024 S. Greenville Ave, Suite 240,
Allen, TX 75002 USA
Tel: (214)495-0755 Fax: (214)495-0901
e-mail info@isocom.com
http://www.isocom.com

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

| PARAMETER | | MIN | TYP | MAX | UNITS | TEST CONDITION |
|---------------|--|--------------------|-----|---------------|-------------------------------------|--|
| Input | Forward Voltage (V_F) | | 1.2 | 1.5 | V | $I_F = 10\text{mA}$ |
| | Reverse Current (I_R) | | | 10 | μA | $V_R = 6\text{V}$ |
| Output | Collector-emitter Breakdown (BV_{CEO}) (note 2) | 70 | | | V | $I_C = 1\text{mA}$ |
| | Collector-base Breakdown (BV_{CBO}) | 70 | | | V | $I_C = 100\mu\text{A}$ |
| | Emitter-collector Breakdown (BV_{ECO}) | 6 | | | V | $I_E = 100\mu\text{A}$ |
| | Collector-emitter Dark Current (I_{CEO}) | | | 50 | nA | $V_{CE} = 10\text{V}$ |
| Coupled | Current Transfer Ratio (CTR) | | | | | |
| | H11AV1 | 100 | | 300 | % | $10\text{mA } I_F, 10\text{V } V_{CE}$ |
| | H11AV2 | 50 | | | % | $10\text{mA } I_F, 10\text{V } V_{CE}$ |
| | H11AV3 | 20 | | | % | $10\text{mA } I_F, 10\text{V } V_{CE}$ |
| | Collector-emitter Saturation Voltage $V_{CE(SAT)}$ | | | 0.4 | V | $20\text{mA } I_F, 2\text{mA } I_C$ |
| | Input to Output Isolation Voltage V_{ISO} | 5300 7500 | | | V_{RMS} V_{PK} | See note 1 See note 1 |
| | Input-output Isolation Resistance R_{ISO} | 5×10^{10} | | | Ω | $V_{IO} = 500\text{V}$ (note 1) |
| Rise Time, tr | | 2 | | μs | $V_{CC} = 5\text{V}$, fig 1 | |
| Fall Time, tf | | 2 | | μs | $I_F = 10\text{mA}, R_L = 75\Omega$ | |

Note 1 Measured with input leads shorted together and output leads shorted together.
 Note 2 Special Selections are available on request. Please consult the factory.

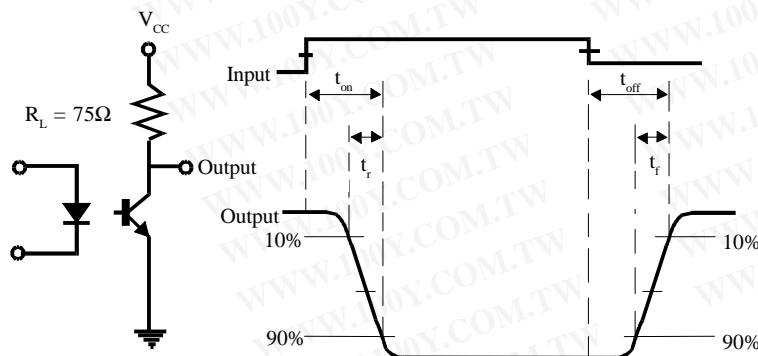
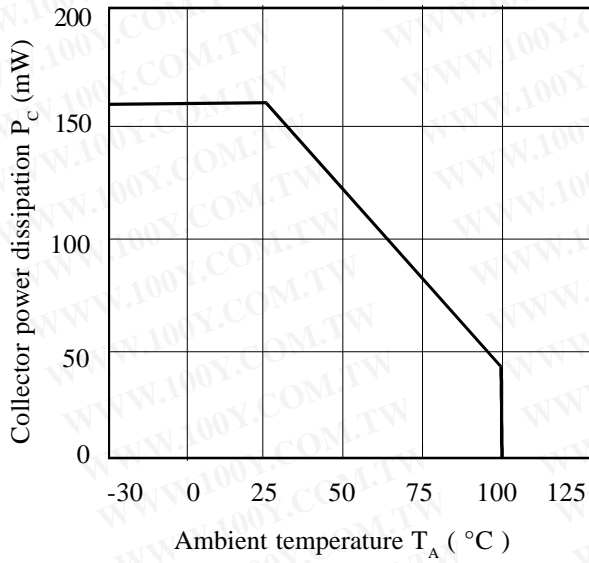
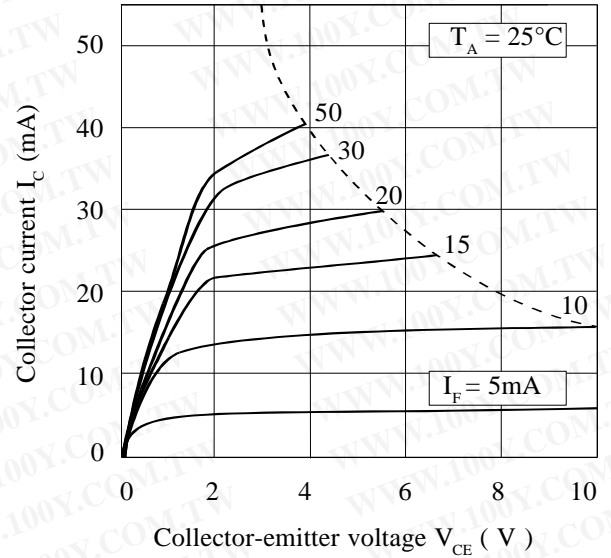


FIG 1

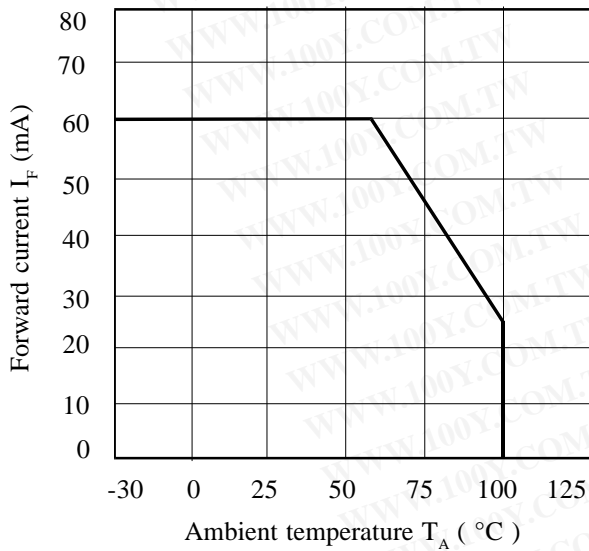
Collector Power Dissipation vs. Ambient Temperature



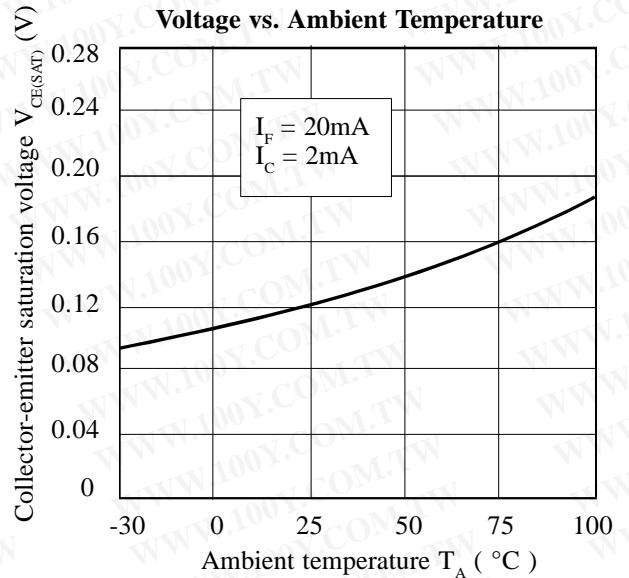
Collector Current vs. Collector-emitter Voltage



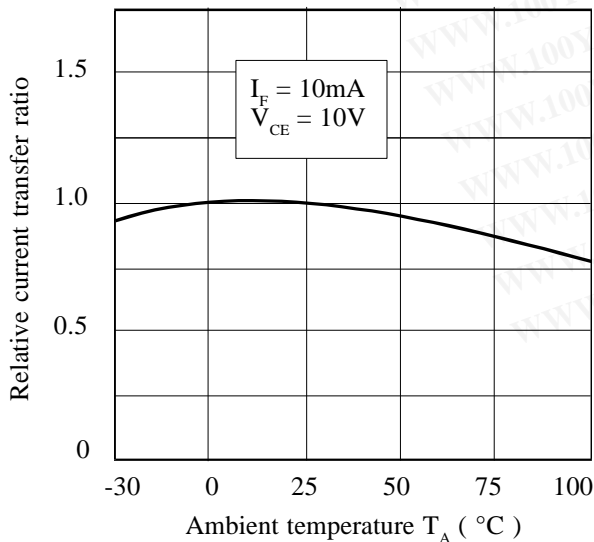
Forward Current vs. Ambient Temperature



Collector-emitter Saturation Voltage vs. Ambient Temperature



Relative Current Transfer Ratio vs. Ambient Temperature



Relative Current Transfer Ratio vs. Forward Current

