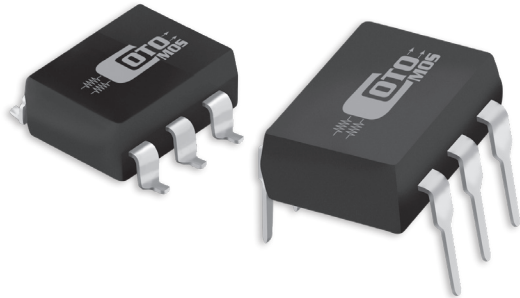


## Description

The CT140 and CS140 combine Coto quality and economy in an industry standard 6 pin DIP package. Both the CT140 and the CS140 offer high voltage switching and high load current. The CT140 utilizes a thru hole lead configuration, while the CS140 offers a surface mount option when the application requires it. Both relays are ideally suited to the needs of Test and Measurement, Solar, and Battery Management.

## Device Package



## Features

- ▶ Contact Form: 1A
- ▶ Load Voltage: 1500V Maximum
- ▶ Operation LED Current: 5.0mA Maximum
- ▶ Load Current: 45mA A(AC), 50mA B(DC), 75mA C(DC)
- ▶ 3750 / 5000 Vrms InputOutput Isolation
- ▶ Output Capacitance: 58pF Typical
- ▶ Low Off-State Leakage Current: 10µA Maximum

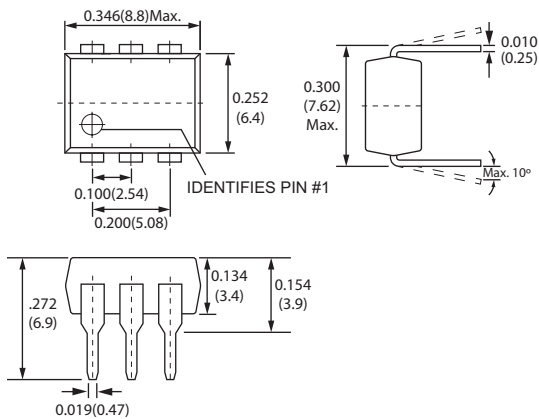
## Applications

- ▶ Telecommunications (PC, Electronic notepad).
- ▶ Measuring and testing equipment.
- ▶ Industrial control.
- ▶ Automatic meter reading device.
- ▶ High inspection machine Arc-Free with no snubbing circuits

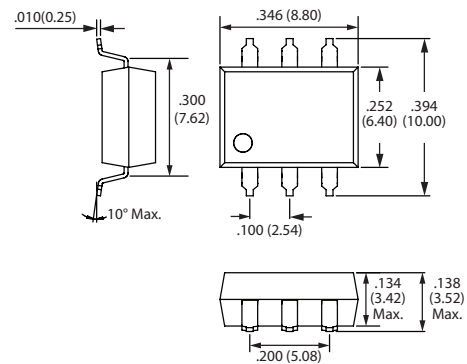
## DIMENSIONS

*in Inches (Millimeters)*

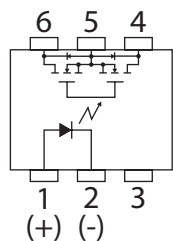
CT140



CS140

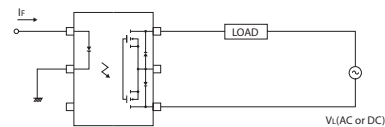


### Terminal Identification

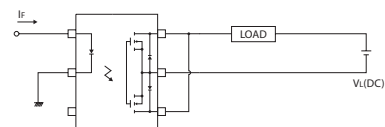


- |                  |                      |
|------------------|----------------------|
| 1: Anode (LED)   | 4,6: Drain (MOS FET) |
| 2: Cathode (LED) | 5: Source (MOS FET)  |
| 3: NC            |                      |

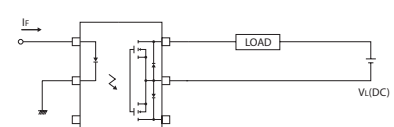
### CONNECTIONS



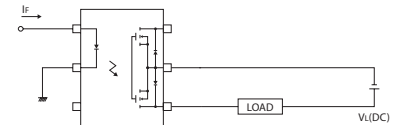
**A** Control bi-directional signal



**C** On-Resistance is 1/2 of B-connection



**B** On-Resistance is 1/2 of A-connection



## Specifications

### Absolute Maximum Ratings

| Parameters                                       |                                      | Symbol     | Rating      | Unit              |
|--|--------------------------------------|------------|-------------|-------------------|
| Input  | Continuous LED Current               | $I_F$      | 50          | mA                |
|  | Peak LED Current (f=100 Hz, duty=1%) | $I_{FP}$   | 1000        | mA                |
|  | LED Reverse Voltage                  | $V_R$      | 5           | V                 |
|  | Input Power Dissipation              | $P_{In}$   | 75          | mW                |
| Output   | Load Voltage                         | $V_L$      | 1500        | V (AC peak or DC) |
|  | Load Current                         | $I_L$      | A           | 45mA (AC)         |
|  |                                      |            | B           | 50mA (DC)         |
|  |                                      |            | C           | 75mA (DC)         |
|  | Peak Load Current                    | $I_{Peak}$ | 180         | mA                |
| Output Power Dissipation                         | $P_{out}$                            | 450        | mW          |                   |
| Total Power Dissipation                          |                                      | $P_T$      | 500         | mW                |
| I/O Breakdown Voltage (RH=60%, 1 min)            |                                      | $V_{I/O}$  | 3750        | Vrms              |
| I/O Breakdown Voltage (suffix-V) (RH=60%, 1 min) |                                      | $V_{I/O}$  | 5000        | Vrms              |
| Operating Temperature                            |                                      | $T_{opr}$  | -40 to +85  | °C                |
| Storage Temperature                              |                                      | $T_{stg}$  | -40 to +100 | °C                |
| Pin Soldering Temperature (10 sec. max)          |                                      | $T_{sol}$  | 260         | °C                |

### Electro-Optical Characteristics

| Parameters        |                              | Symbol     | Conditions                                    | Min.      | Typ.       | Max.       | Unit     |
|-------------------|------------------------------|------------|---|-----------|------------|------------|----------|
| Input             | LED Forward Voltage          | $V_F$      | $I_F=10mA$                                    |           | 1.2        | 1.5        | V        |
|                   | Operation LED Current        | $I_{FON}$  |   | 0.7       | 0.8        | 5.0        | mA       |
|                   | Recovery LED Voltage         | $V_{FOFF}$ |   |           | 0.35       | 0.5        | V        |
| Output            | On-Resistance Drain to Drain | $R_{on}$   | $I_F=10mA, I_L=Rating$<br>$I_F=10mA, I_L<5mA$ |           | 130<br>220 | 200<br>300 | $\Omega$ |
|                   | Off-State Leakage Current    | $I_{LEAK}$ | $I_F=0mA, V_L=1500V$                          |           |            | 10         | $\mu A$  |
|                   | Output Capacitance           | $C_{out}$  | $V_L=0V, f=1MHz$                              |           | 58         |            | pF       |
| Trans-<br>mission | Turn-On Time                 | $T_{ON}$   | $I_F=10mA, I_L=Rating$                        |           | 0.3        | 1.0        | ms       |
|                   | Turn-Off Time                | $T_{OFF}$  |   |           | 0.3        | 0.2        | ms       |
| Coupled           | I/O Isolation Resistance     | $R_{I/O}$  |   | $10^{10}$ |            |            | $\Omega$ |
|                   | I/O Capacitance              | $C_{I/O}$  | $f=1MHz$                                      |           | 0.8        | 1.5        | pF       |

#### Environmental Ratings:

Operating Temp: -40°C to +85°C; Storage Temp: -40 to +100 C.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Solid State Relays - PCB Mount](#) category:*

*Click to view products by [Coto](#) manufacturer:*

Other Similar products are found below :

[M86F-2W](#) [M90F-2Y](#) [G2-1A07-ST](#) [G2-1A07-TT](#) [G2-1B02-TT](#) [G2-DA06-ST](#) [923812OCAS](#) [PLA134S](#) [DS11-1005](#) [AQV210EHJ](#) [AQV212J](#)  
[AQV252GAJ](#) [AQY210ST](#) [AQY221N2SJ](#) [AQY221R2SJ](#) [AQY410SXJ](#) [AQY412EHAJ](#) [EFR1200480A150](#) [901-7](#) [LCA220](#) [LCB110S](#)  
[1618400-5](#) [SR75-1ST](#) [AQH2213AJ](#) [AQV112KLJ](#) [AQV212AJ](#) [AQV212SXJ](#) [AQV238AD01](#) [AQW414TS](#) [AQY221N2SYD01](#)  
[AQY221N2V1YJ](#) [AQY221R2VJ](#) [AQY275AXJ](#) [AQY414SXE01](#) [G2-1A02-ST](#) [G2-1A03-ST](#) [G2-1A03-TT](#) [G2-1A05-ST](#) [G2-1A06-TT](#) [G2-](#)  
[1A23-TT](#) [G2-1B01-ST](#) [G2-1B01-TT](#) [G2-1B02-ST](#) [G2-DA03-ST](#) [G2-DA03-TT](#) [G2-DA06-TT](#) [CPC1333GR](#) [3-1617776-2](#) [CTA2425](#)  
[TLP3131\(F\)](#)