



# COM - TECH

A DIVISION OF SEMITRONICS CORP.  
MOSFET DRIVER

## CT - 202D

### FEATURES

- Active gate discharge circuitry
- Optical isolation
- High isolation voltage
- High Efficiency
- Logic Circuit Compatible

### APPLICATIONS

- High side switching
- Solid state relays
- Process Controls
- Robotics
- Automatic Test Equipment
- Automotive Applications
- Programmable Controllers, etc.

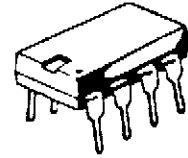
### DESCRIPTION

The CT - 202D is an isolated photovoltaic Mosfet driver used when a high degree of electrical isolation is required. The driver can isolate the Mosfet from more sensitive control circuitry and enable the source and drain connections to reach any potential within the range of the isolation voltage. High photo efficiency produces fast turn on. An external resistor connected between the gate and source of the Mosfet will discharge the gate and keep it turned off when there is no led input.

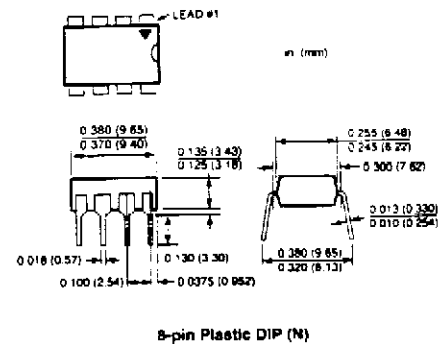
The typical input circuit is a limiting resistor connected in series with the input Led. When activated, infrared energy is optically coupled to a photovoltaic diode array producing a voltage which charges the gate of the Mosfet being driven. When current to the led is turned off the gate of the Mosfet is discharged and held in a low impedance state.

The CT - 202D is packaged in a 8 pin plastic dip package, other package types and high rel versions are available, please consult our sales department for additional information.

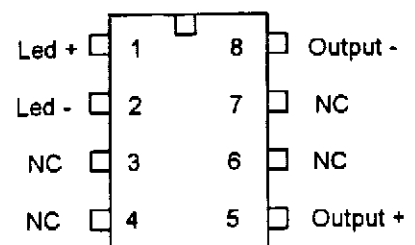
### 8 PIN PLASTIC DIP



### PACKAGE OUTLINE



### PIN DIAGRAM



### Absolute Maximum Ratings

Led Forward Current	Steady State .....	50 ma
Led Forward Current	Peak 10 % Duty Cycle .....	75 ma
Led Reverse Voltage	Reverse Current , -10 ua .....	5 V
Output Voltage	Open Circuit .....	16 V
Output Current	I Led = 50ma .....	75 ua
Operating Temperature	.....	0 C to +85C
Storage Temperature	.....	- 50 C to +125 C
Isolation Voltage	.....	2500 V DC

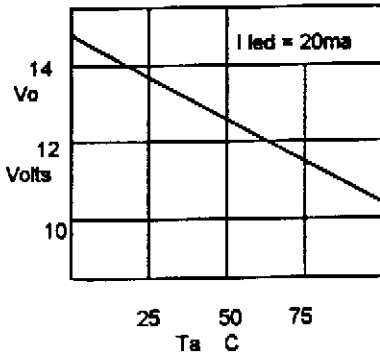
**Electrical Characteristics** .....

25 C unless otherwise noted

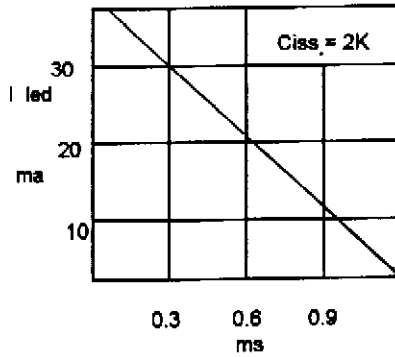
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Short Circuit current	Isc	I Led = 10 ma , Vo = 0 V	10	13		ua
		I Led = 20 ma , Vo = 0 V	20	23		ua
		I Led = 30 ma , Vo = 0 V	30	35		ua
Open Circuit Voltage	Voc	I Led = 10 ma	13.0	3.5		V
		I Led = 20 ma	13.5	13.7		V
		I Led = 30 ma	14.0	14.5		V
Led Forward Voltage	Vf led	I Led = 20ma		1.3	1.5	V
Led Reverse Current	Ir Led	Vr = -5V	- 5.0	-0.1		ua
Isolation Voltage	Viso	All input pins to all output pins	2500			V DC

**Typical characteristics**

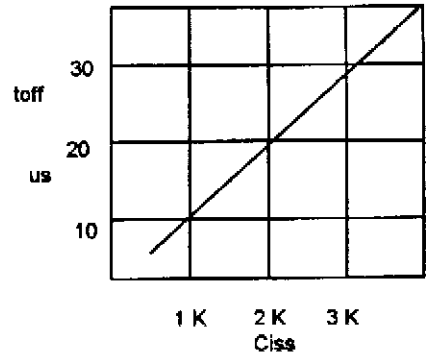
Vo vs Temperature



Turn On Time vs I led , RL=5m



Turn off Time vs Ciss, RL=5m



**Typical Applications**

