

### GENERAL DESCRIPTION:

#### 1. High capacity type power Photo MOS.

Can switch a wide range of currents and voltages. Can control various types of loads, from very small loads to a max. 4.5A AC/DC current for sequencers, motors, and lamps.

#### 2. Low on-resistance and high sensitivity.

Low on-resistance of less than Typ. 0.035Ω.

High sensitivity LED operate current of Typ. 3 mA.

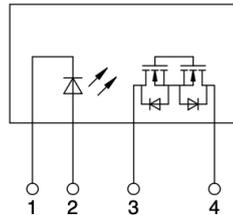
#### 3. AC/DC dual use

Bi-directional control is possible. There is no need to differentiate depending on the load as was necessary with the conventional SSR.

### PIN CONFIGURATION:



LT1 0000V  
AC/DC Type  
(1) Input: DC -  
(2) Input: DC +  
(3) Output: DC or AC  
(4) Output: DC or AC



LT1 0000V(F)  
AC/DC Type  
(1) Input: DC +  
(2) Input: DC -  
(3) Output: DC or AC  
(4) Output: DC or AC

### FEATURES:

- Optically isolated
- Low On - state resistance
- Low input power consumption
- MOSFET output thyristor
- Ultra slim and light weight, Sil terminals type for high density mounting:
- --Size:5.4(W) x 20.3(L) x 12.6(H) mm;
- --Weight: approximately 3.0g

### APPLICATIONS:

- Temperature control system
- Industrial automatic control
- Lighting system
- Office appliance
- Factory appliance
- Traffic signals
- Measuring instruments
- Industrial machines
- Mercury relay replacement

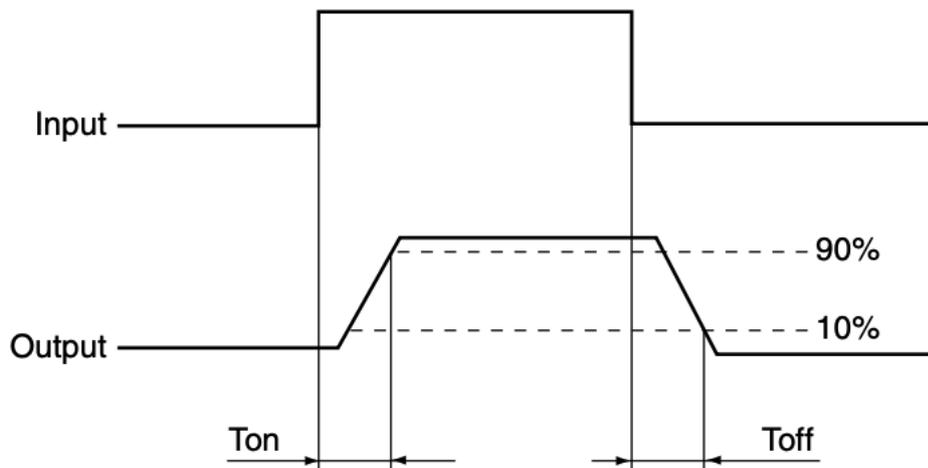
### Absolute Maximum Ratings (Ambient temperature: 25°C)

Item	Symbol	LT11004V(F)	Unit	Remarks
Input	LED Forward Current	I <sub>F</sub>	50	mA
	LED Reverse Voltage	V <sub>R</sub>	5	V
	Peak forward current	I <sub>FP</sub>	1	A f = 100Hz, Duty Ratio = 0.1%
	Power Dissipation	P <sub>in</sub>	75	mW
Output	Load voltage (Peak AC)	V <sub>L</sub>	100	V
	Continuous load current	I <sub>L</sub>	4.5	A Peak AC, DC
	Peak load current	I <sub>peak</sub>	8.0	A 100 ms (1shot), V <sub>L</sub> = DC
	Power dissipation	P <sub>out</sub>	1.6	W
Total power dissipation		P <sub>T</sub>	1.6	W
I/O isolation voltage		V <sub>iso</sub>	2500	V <sub>rms</sub>
Ambient temperature	Operating	T <sub>opr</sub>	-40 to +85	°C (Non-icing at low temperatures)
	Storage	T <sub>stg</sub>	-40 to +100	°C

**Electrical Characteristics** (Ambient temperature: 25°C)

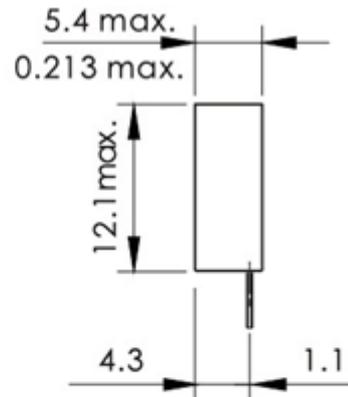
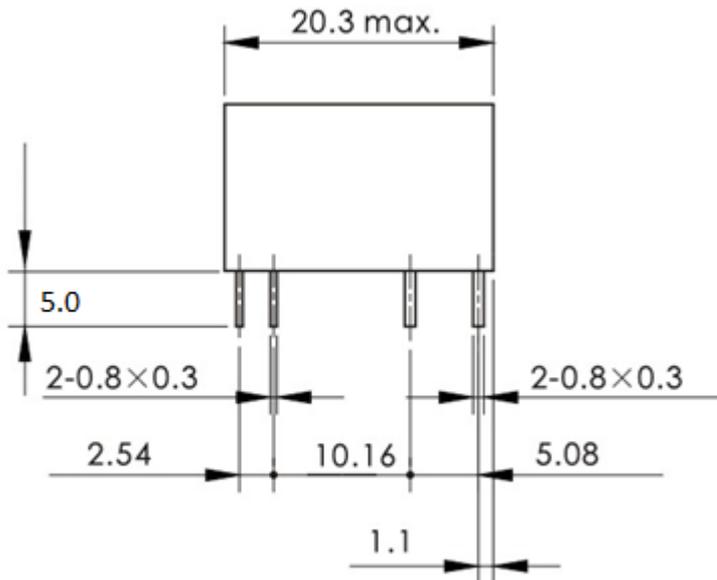
Item		Symbol	LT11004V(F)	Unit	Condition
Input	LED Operate Current	Typical	1.0	mA	$I_L = 100 \text{ mA}$
		Maximum	3.0	mA	$V_L = 10 \text{ V}$
	LED Turn off Current	Minimum	0.4	mA	$I_L = 100 \text{ mA}$
		Typical	0.9	mA	$V_L = 10 \text{ V}$
	LED Dropout Voltage	Typical	1.25	V	$I_F = 50 \text{ mA}$
		Maximum	1.5	V	
Output	On resistance	Typical	0.035	$\Omega$	$I_F = 10 \text{ mA}$
		Maximum	0.06	$\Omega$	$I_L = \text{Max. Within } 1 \text{ s}$
	Off state leakage current	Maximum	10	$\mu\text{A}$	$I_F = 0 \text{ mA } V_L = \text{Max.}$
Transfer characteristics	Turn on time*	Typical	0.8	ms	$I_F = 10 \text{ mA}$
		Maximum	3.0	ms	$I_L = 100 \text{ mA}$ $V_L = 10 \text{ V}$
	Turn off time*	Typical	0.1	ms	$I_F = 10 \text{ mA}$
		Maximum	1.0	ms	$I_L = 100 \text{ mA}$ $V_L = 10 \text{ V}$
	I/O capacitance	Typical	0.8	pF	$f = 1 \text{ MHz}$
		Maximum	1.5	pF	$V_B = 0 \text{ V}$
Initial I/O isolation resistance	Minimum	Riso	1000	M $\Omega$	500 V DC
Max. operating frequency	Maximum	---	0.5	cps	$I_F = 10 \text{ mA}$ Duty factor = 50% $I_L = \text{Max.}, V_L = \text{Max.}$

**\*Turn on/Turn off time**

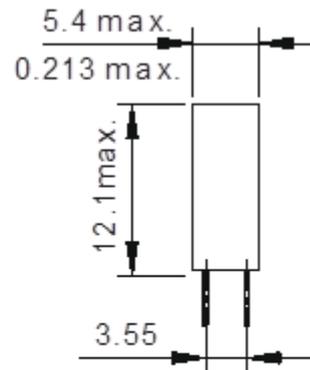
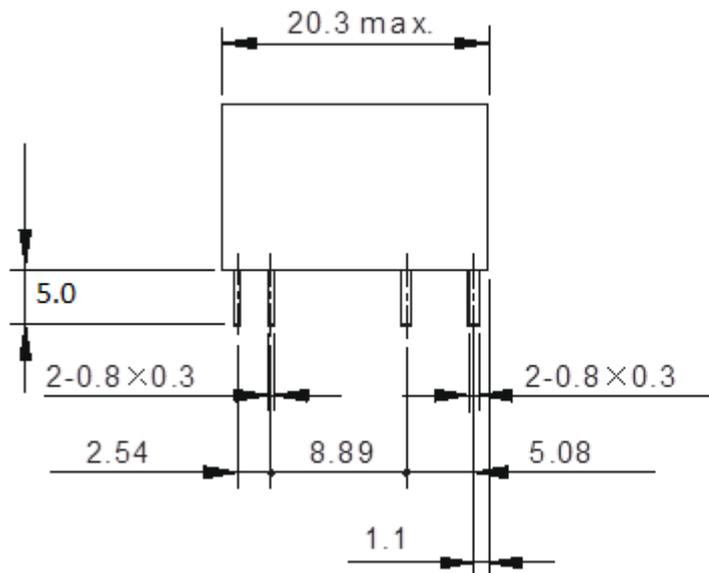


**Dimensions (Unit:mm)**

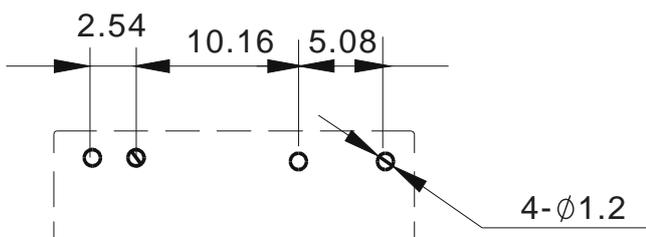
LT10000V



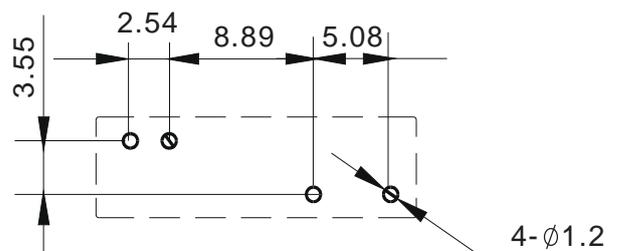
LT10000V (F)



**P.C.B Layout (Bottom View)( Unit:mm)**



LT1 0000V

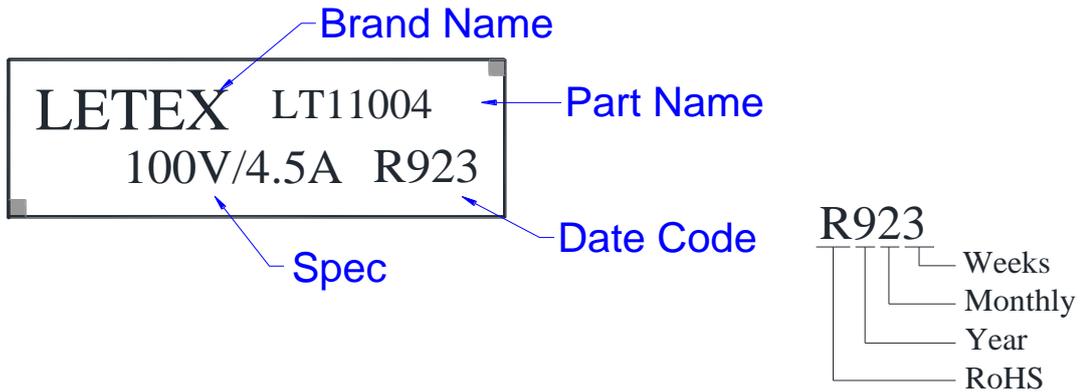


LT1 0000V (F)

**Macking (Bottom View):**

## Marking

(Each photo MOS Relay shall be marked with the following information)



- Note:
1. Devices are pockets in accordance with EIA standard EIA-481-A and specifications given above.
  2. Packaging: 1 Box 100 pcs