

B1 LF - Series

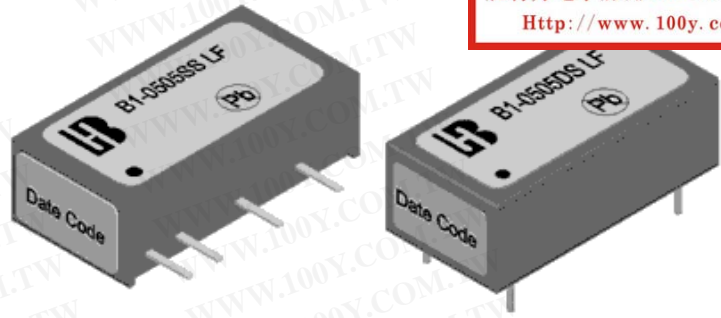
1 Watt Isolated DC-DC Converter

Single / Dual / Dual Separate Output

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

1. Features

- 7 Pin SIL / 14 Pin DIL Package
- Low Ripple And Noise
- Input / Output Isolation 1K Vdc Or 3K Vdc
- 100% Burn-In
- Input Filter With Internal Capacitor
- Custom Design Available
- Net Weight : 2.2 g / 2.7 g Typical
- RoHS Converter Certified By SGS



2. Model Selection Guide

(Specifications typical at Ta= +25 , Nominal input voltage, Rated output current unless otherwise noted)

Model No.	Input Voltage (Vdc)	Output Voltage (Vdc)	Output Current (mA) Max	Input Current @No Load (mA) Typ.	Input Current @Max. Load (mA) Typ.	Output Ripple (mV) Max.	Load Regulation (%) Max.	Efficiency (%)Typ.
1) Single Output SIL Package Style								
B1-0505SS LF	5	5	200	30	253	60	±8	79
B1-0512SS LF		12	84	28	255	100	±8	79
B1-0515SS LF		15	67	28	251	120	±8	80
B1-1205SS LF	12	5	200	18	105	60	±8	79
B1-1212SS LF		12	84	18	104	100	±8	80
B1-1215SS LF		15	67	15	105	120	±8	80
B1-243R3SS LF	24	3.3	303	5	56	50	±8	74
B1-2405SS LF		5	200	4	54	60	±8	77
B1-2412SS LF		12	84	4	55	100	±8	76
B1-2415SS LF		15	67	4	55	120	±8	76
2) Single Output DIL Package Style								
B1-0505DS LF	5	5	200	30	253	60	±8	79
B1-0512DS LF		12	84	28	254	100	±8	79
B1-0515DS LF		15	67	28	250	120	±8	80
B1-1205DS LF	12	5	200	18	105	60	±8	79
B1-1212DS LF		12	84	18	104	100	±8	80
B1-1215DS LF		15	67	15	105	120	±8	80
B1-243R3DS LF	24	3.3	303	5	56	50	±8	74
B1-2405DS LF		5	200	4	54	60	±8	77
B1-2412DS LF		12	84	4	55	100	±8	76
B1-2415DS LF		15	67	4	55	120	±8	76

B1 LF - Series

1 Watt Isolated DC-DC Converter

Single / Dual / Dual Separate Output

3) Dual Output SIL Package Style								
B1-053R3S LF	5	± 3.3	± 150	30	274	60	± 12	73
B1-0505S LF		± 5	± 100	30	263	60	± 10	76
B1-0512S LF		± 12	± 42	28	255	100	± 8	79
B1-0515S LF		± 15	± 34	28	255	120	± 8	80
B1-1205S LF	12	± 5	± 100	18	104	60	± 8	80
B1-1212S LF		± 12	± 42	18	104	100	± 8	80
B1-243R3S LF	24	± 3.3	± 150	5	56	60	± 8	74
B1-2405S LF		± 5	± 100	4	55	60	± 8	76
B1-2412S LF		± 12	± 42	4	55	100	± 8	76
4) Dual Output DIL Package Style								
B1-053R3D LF	5	± 3.3	± 150	30	274	60	± 12	73
B1-0505D LF		± 5	± 100	30	263	60	± 10	76
B1-0512D LF		± 12	± 42	28	253	100	± 8	79
B1-0515D LF		± 15	± 34	28	250	120	± 8	80
B1-1205D LF	12	± 5	± 100	18	104	60	± 8	80
B1-1212D LF		± 12	± 42	18	104	100	± 8	80
B1-243R3D LF	24	± 3.3	± 150	5	56	60	± 8	74
B1-2405D LF		± 5	± 100	4	55	60	± 8	76
B1-2412D LF		± 12	± 42	4	55	100	± 8	76
5) Dual Separate Output SIL Package Style								
B1-0505S01 LF	5	5 / 5	100 / 100	30	263	60	± 10	76
B1-0515S01 LF		5 / 15	100 / 33	28	250	120	± 8	80
B1-1205S01 LF	12	5 / 5	100 / 100	18	107	60	± 8	78
B1-1212S01 LF		5 / 12	100 / 42	18	104	100	± 8	80
B1-1215S01 LF		5 / 15	100 / 33	18	106	120	± 8	78
B1-2405S01 LF	24	5 / 5	100 / 100	5	54	60	± 8	76
6) Dual Separate Output DIL Package Style								
B1-0505D01 LF	5	5 / 5	100 / 100	30	263	60	± 10	76
B1-0515D01 LF		5 / 15	100 / 33	28	250	120	± 8	80
B1-1205D01 LF	12	5 / 5	100 / 100	18	107	60	± 8	78
B1-1212D01 LF		5 / 12	100 / 42	18	104	100	± 8	80
B1-1215D01 LF		5 / 15	100 / 33	13	106	120	± 8	78
B1-2405D01 LF	24	5 / 5	100 / 100	5	54	60	± 8	76

- Notes:
- Standard output voltage is 3.3V,5V,12V,15V, B1-xxxxSS is for customer design.
 - Load regulation is for output current change from 20% to 100% Max. Load.

3 . Absolute Maximum Ratings

(Exceeding these values may damage the module. These are not continuous operating ratings)

Parameter	Condition	Min.	Typ.	Max.	Unit
Input Absolute Voltage Range	5V Input Model	-0.7	5	7.5	Vdc
	12V Input Model	-0.7	12	15.0	
	24V Input Model	-0.7	24	30.0	
Max. Output Power		---	---	1	W
Output Short Circuit Duration		---	---	1.0	Second
Operation Temperature(Ambient Temperature)	Output Full Load	-40	---	+85	
Storage Temperature		-55	---	+105	

4 . Nominal Input/Output Electrical Specifications

(Specifications typical at Ta= +25 , Nominal input voltage, Rated output current unless otherwise noted)

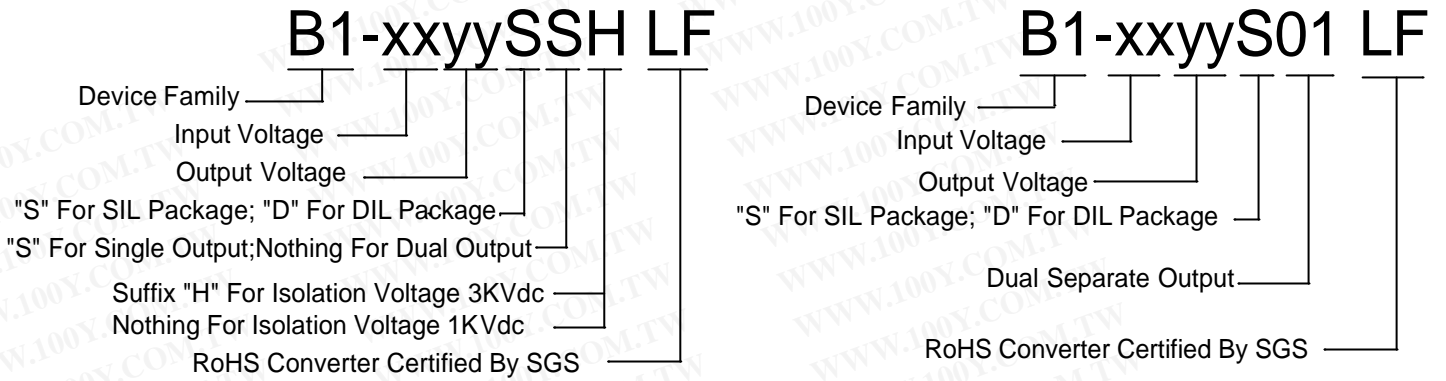
Parameter	Condition	Min.	Typ.	Max.	Unit
Input Voltage Range	5V Input Model	4.5	5	5.5	Vdc
	12V Input Model	10.8	12	13.2	
	24V Input Model	21.6	24	26.4	
Output Voltage Accuracy	Nominal Input	---	---	± 5.0	%
Voltage Balance (Dual Outputs)		---	---	± 1.0	
Switching Frequency		---	110	---	KHz
Temperature Coefficient		---	± 0.01	± 0.02	%/
Isolation Voltage	60 Second / 0.5 mA	1000	---	---	Vdc
		3000	---	---	
Isolation Resistance	500 Vdc	1000	---	---	M
Isolation Capacitance	1KHz / 250mV rms	---	30	---	pF
Max. Line Regulation (Per 1.0 % change in input change)		---	---	1.3	%

5 . General Specification

Parameter	Specification	Condition
Isolation Voltage	1000 / 3000 Vdc	Test Duration 60 Seconds / 0.5 mA
Isolation Resistance	1000 M Min.	@ 500 Vdc
Operating Temperature (1)	-40 ~ +85	@ Ambient Temperature With Natural Convection
Operating Temperature (2)	-40 ~ +95	@ Case Surface Temperature
Storage Temperature	-55 ~ +105	---
Humidity	Up To 90 %	---
Cooling	Free Air Convection	---
Case Type	Plastic	---

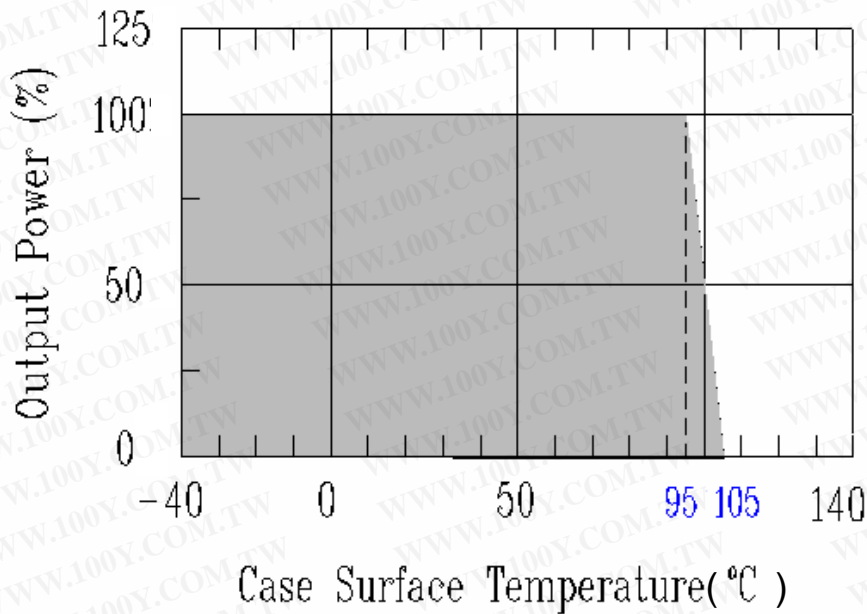


6 . Ordering Information



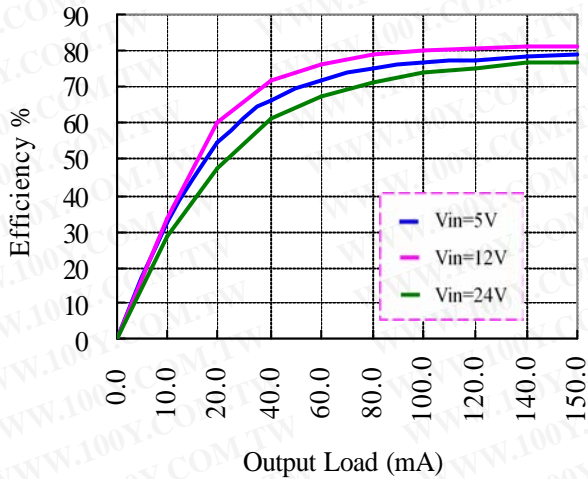
7 . Power Derating Curve

Temperature derating graph

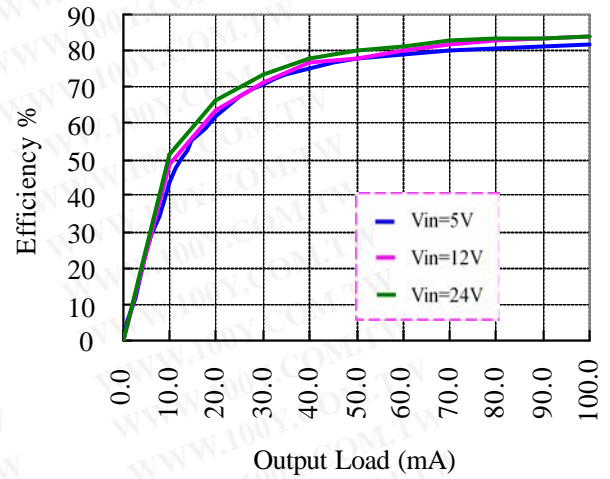


8 . Efficiency & Output Load Chart

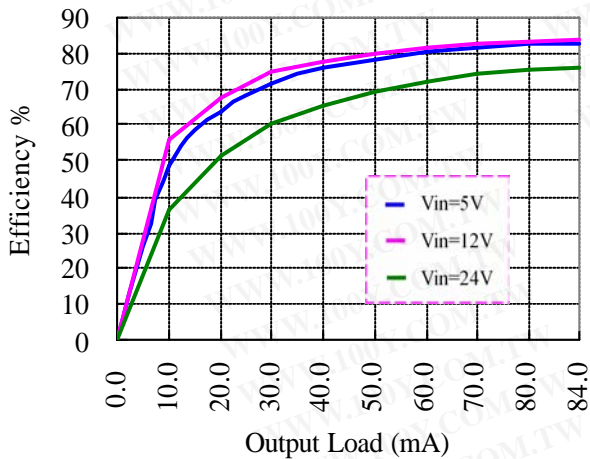
Vout = 3.3 Vdc



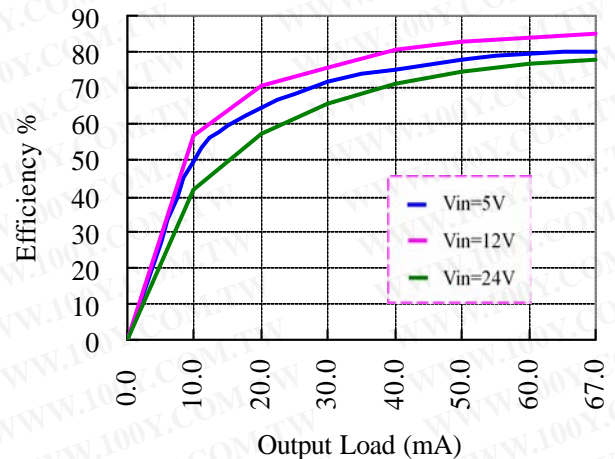
Vout = 5 Vdc



Vout = 12 Vdc

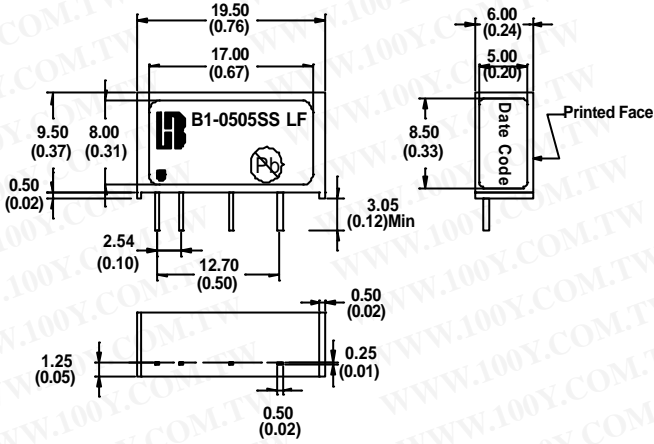


Vout = 15 Vdc



9 . Mechanical Dimension

SIL Package Style

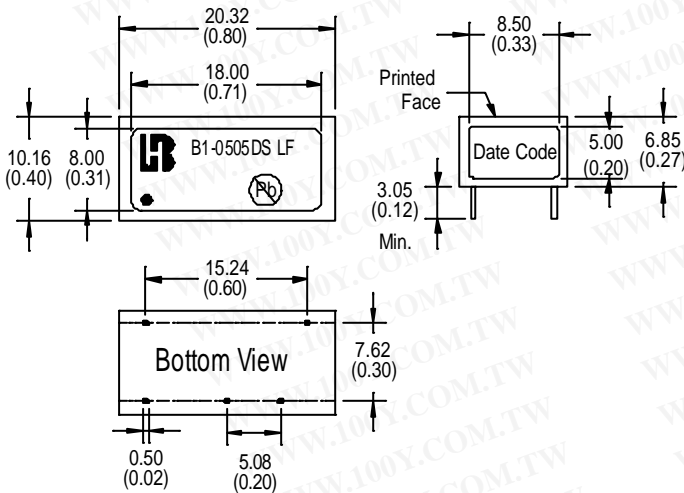


Pin	Dual Output		Pin	Single Output	
	1K Vdc	3K Vdc		1K Vdc	3K Vdc
1	+Vin	+Vin	1	+Vin	+Vin
2	-Vin	-Vin	2	-Vin	-Vin
3	No Pin	No Pin	3	No Pin	No Pin
4	-Vo		4	-Vo	
5	Common	-Vo	5	No Pin	-Vo
6	+Vo	Common	6	+Vo	No Pin
7	No Pin	+Vo	7	No Pin	+Vo

Units : mm (inch)

Tolerance : 0.xx ± 0.25(0.xx ± 0.01)

DIL Package Style



Pin	1K Vdc-Single		Pin	3K Vdc-Single		Pin
1	-Vin	+Vin	14	-Vin	+Vin	14
2	No Pin	No Pin	13	No Pin	No Pin	13
3			12			12
4	No Pin	-Vo	11	No Pin	-Vo	11
5	No Pin	No Pin	10	No Pin	-Vo	10
6		+Vo	9		+Vo	9
7	NC	No Pin	8	NC	+Vo	8

Pin	1K Vdc-Dual		Pin	3K Vdc-Dual		Pin
1	-Vin	+Vin	14	-Vin	+Vin	14
2	No Pin	No Pin	13	No Pin	No Pin	13
3			12			12
4	No Pin	-Vo	11	No Pin	-Vo	11
5	No Pin	No Pin	10	No Pin	-Vo	10
6		+Vo	9		Common	9
7	NC	Common	8	NC	+Vo	8

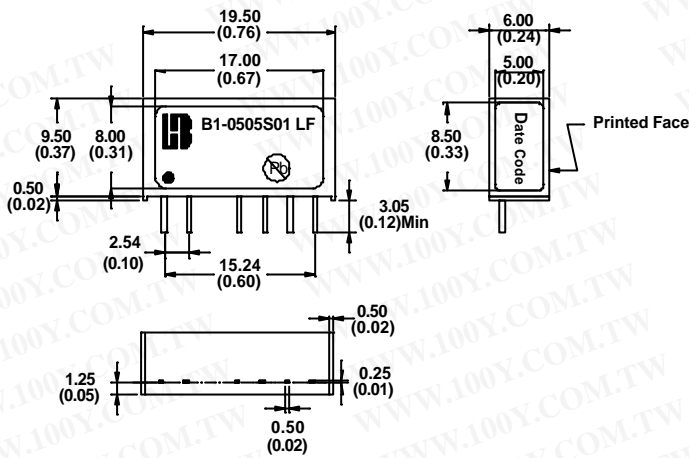
Units : mm (inch)

Tolerance : 0.xx ± 0.25(0.xx ± 0.01)

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Dual Separate Output SIL Package Style

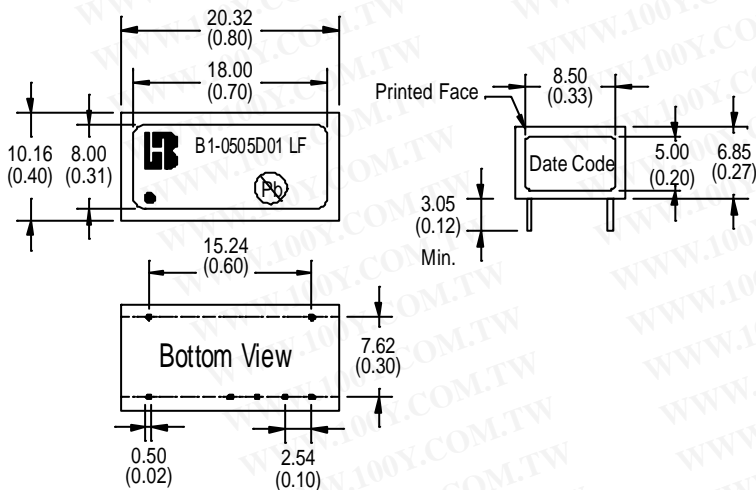


Pin	1K Vdc - Dual Separate
1	+Vin
2	-Vin
3	No Pin
4	+Vo1
5	-Vo1
6	+Vo2
7	-Vo2

Units : mm (inch)

Tolerance : 0.xx ± 0.25(0.xx ± 0.01)

Dual Separate Output DIL Package Style



Pin	1K Vdc-Dual Separate		Pin
1	-Vin	+Vin	14
2	No Pin	No Pin	13
3			12
4			11
5			10
6	+Vo2	+Vo1	9
7	NC	-Vo2	8

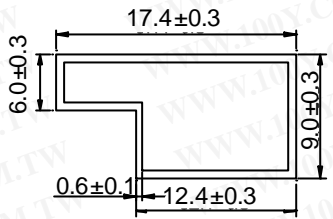
Units : mm (inch)

Tolerance : 0.xx ± 0.25(0.xx ± 0.01)

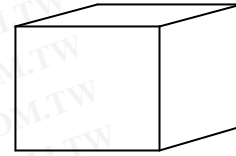
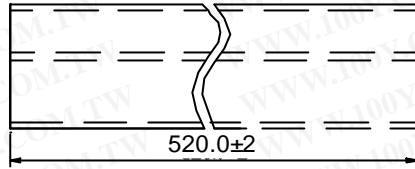
11. Package

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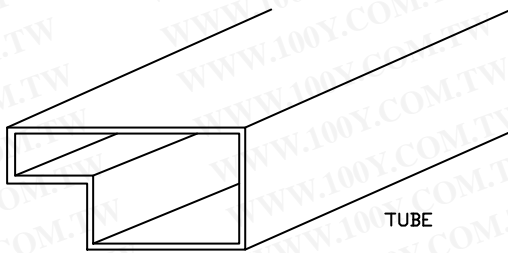
SIL Package Style



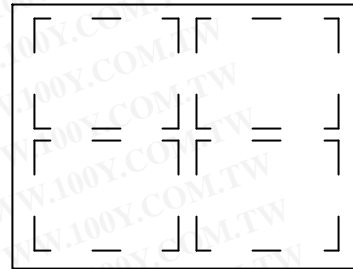
TUBE MECHANICAL DIMENSION



INNER CARTON:565*115*117



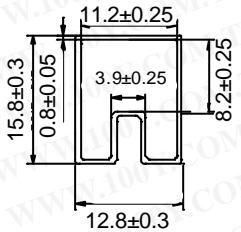
TUBE



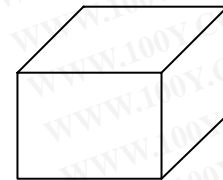
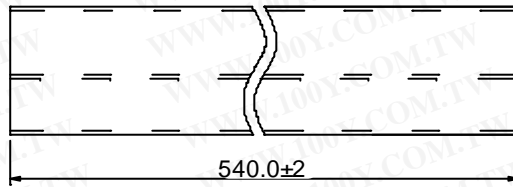
EXPORT CARTON:580*255*265

1. TUBE=25PCS
2. INNER CARTON=50 TUBE=50*25=1250PCS
3. EXPORT CARTON=4 INNER CARTON=4*1250=5000PCS

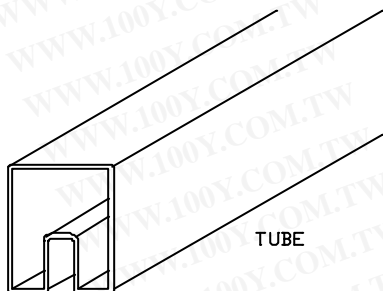
DIL Package Style



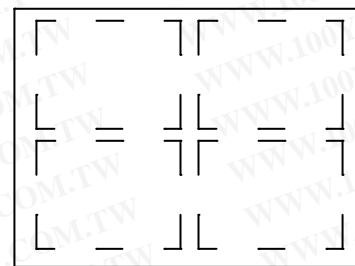
TUBE MECHANICAL DIMENSION



INNER CARTON:575*170*87



TUBE



EXPORT CARTON:583*380*210

1. TUBE=25PCS
2. INNER CARTON=50TUBE=50*25=1250PCS
3. EXPORT CARTON=4 INNER CARTON=4*1250=5000PCS