

# DATA SHEET

**SUNGMUN CODE :** GSER-10MS-TR  
**DESCRIPTION :** MINI ROTARY DIP SWITCH

## **SUNGMUN ELECTRONICS CO., LTD.**

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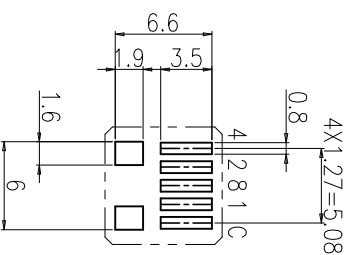


REV. NO.	DATE	REVISION	DR	CH	APP
△	24.04.17	DIN ISO-2768-1m tolerance applied	W/R KYUNG	K.N KIM	W.J LEE

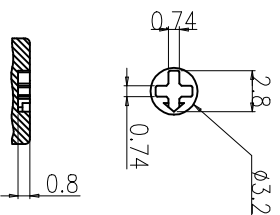
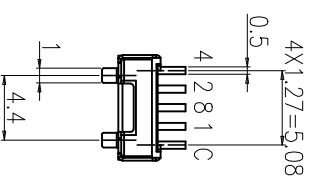
## SPECIFICATION

1. Rating : 100mA, DC 5V (Switching)  
100mA, DC 50V (None-Switching)
2. Contact Resistance : 100mΩ Max
3. Insulation Resistance : 100MΩ Min at DC 100V
4. Operating Force : 200gf·cm Max
5. Life cycle : 25,000 steps
6. Sealing : IP67 (Dust & Water proof)
7. Packing : 70pcs Tube / 580pcs Reel Packing

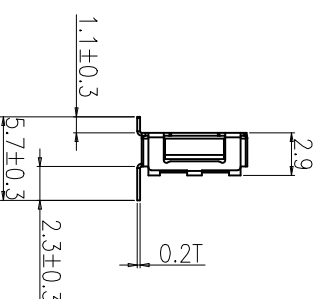
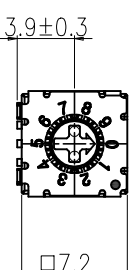
Reel Coded									
	C	1	2	4	8				
0	●								0
1	●	●							1
2	●		●						2
3	●			●					3
4	●				●				4
5	●	●							5
6	●			●					6
7	●		●						7
8	●					●			8
9	●							●	9



P.C.B DIMENSION



ACTUATOR



DRAWN/DESIGNED		CHECKED		APPROVED		G.TOL		TITLE	
H.S LEE		K.N KIM		W.J LEE		83/A		COMPACT ROTARY DIP SWITCH	
2023-09-25		2023-09-25		2023-09-25		UNIT		MODEL NO.	
DIN ISO-2768-1m		3-6		6-30		mm		GSE-10MS	
Ranges		0.5-3		30-120		SCALE		GSE-10MS-04	
Tolerance		±0.1		±0.2		N:S		DRAW NO.	
		±0.1		±0.3		SIZE		REV.	
		±0.1		±0.5		A4		04	

## 1. Style:

This specification describes "Compact Mini Rotary Dip Switch" which is G series.

1.1 Operating / Storage Temperature Range : -40°C ~ +85°C

## 2. Rating:

2.1 None-Switching : 100 mA, DC 50V

2.2 Switching : 100 mA, DC 5V

3. Type of Actuation : Rotating

## 4. Electrical Characteristics

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
4-1	Visual Examination	By visual examination check without any out pressure & testing.	There shall be no defects that affect the serviceability of the product.
4-2	Contact Resistance	① To be measured between the two terminals associated with each switch pole. ② Measurements shall be made with a 1kHz shall current contact resistance meter.	100mΩ max. (initial)
4-3	Insulation Resistance	100V DC	100 MΩ min.
4-4	Dielectric withstanding Voltage	250V AC(50Hz or 60Hz)shall be applied between all the adjacent terminal and between the terminal and the frame for 1 minute.	There shall be no breakdown or flashover.

## 5. Mechanical Characteristics

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
5-1	Operation Force	Operating direction shall be clockwise or counter clockwise direction	200gf•cm max (1.96N•cm max)
5-2	Operation Life	Measurements shall be made following the test set forth below: 1)100mA, 5V DC resistive load 2)Rate of operation: 15~20 cycles/ minute 3)Step of operation: 10,000 steps	1)As shown in item 3,4 2)Contact Resistance: 200mΩ max 3)Final-after test

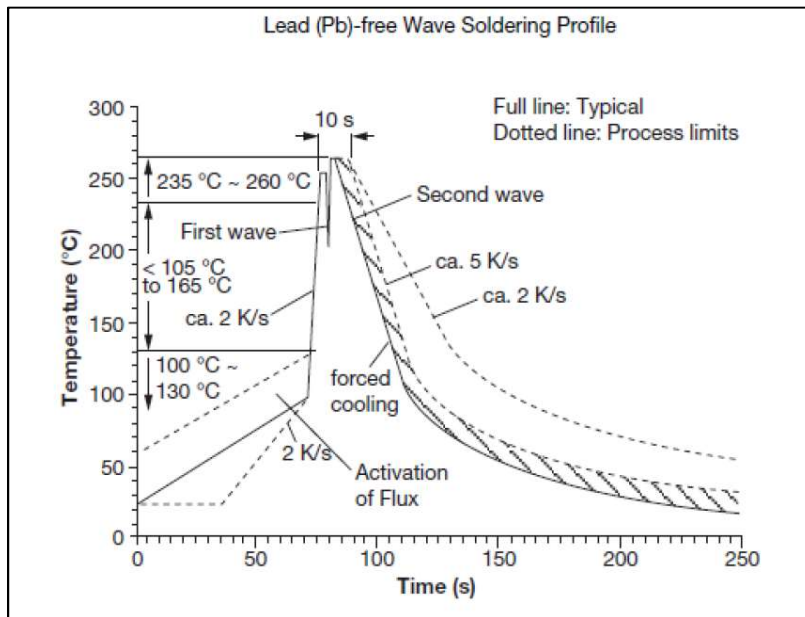
## 6. Environmental Characteristics

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
6-1	Resistance Low Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made: 1)Temperature: -40°C ±3°C 2)Time: 96 hours	1)As shown in item 4-3, 4-4, 5-1 2)Contact Resistance: 200mΩ max
6-2	Resistance High Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made: 1)Temperature: 85°C ±2°C 2)Time: 96 hours	1)As shown in item 4-3, 4-4, 5-1 2)Contact Resistance: 200mΩ max
6-3	Resistance Humidity	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made: 1)Temperature: 40°C ±2°C 2)Relative humidity: 90~95% 3)Time: 240 hours	1)As shown in item 4-4, 5-1 2)Contact Resistance: 200mΩ max 3)Insulation Resistance: 10 MΩ min

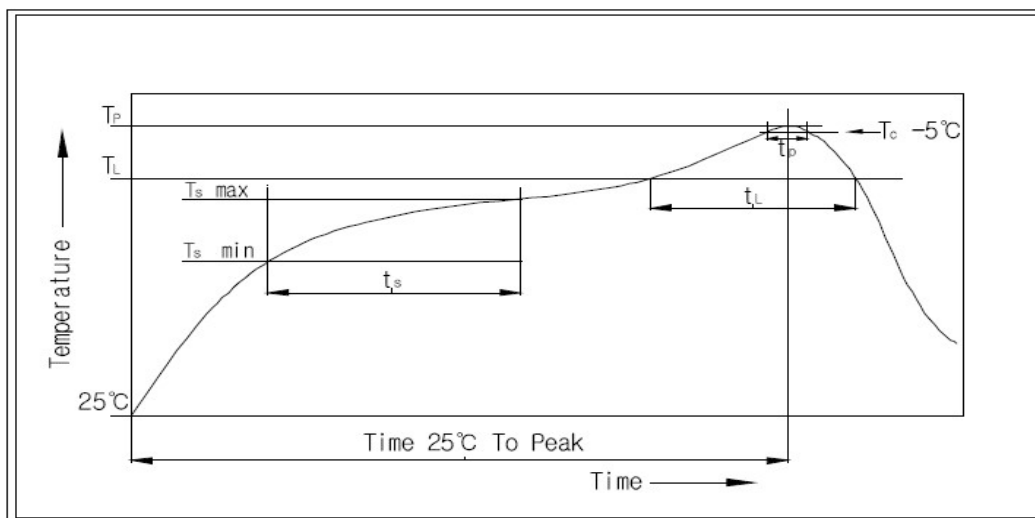
7. This item is "RoHS" Compliant

8. Manual Soldering : Max 350°C, 3 sec.

9. Wave Soldering Conditions:



10. Reflow Soldering Conditions:



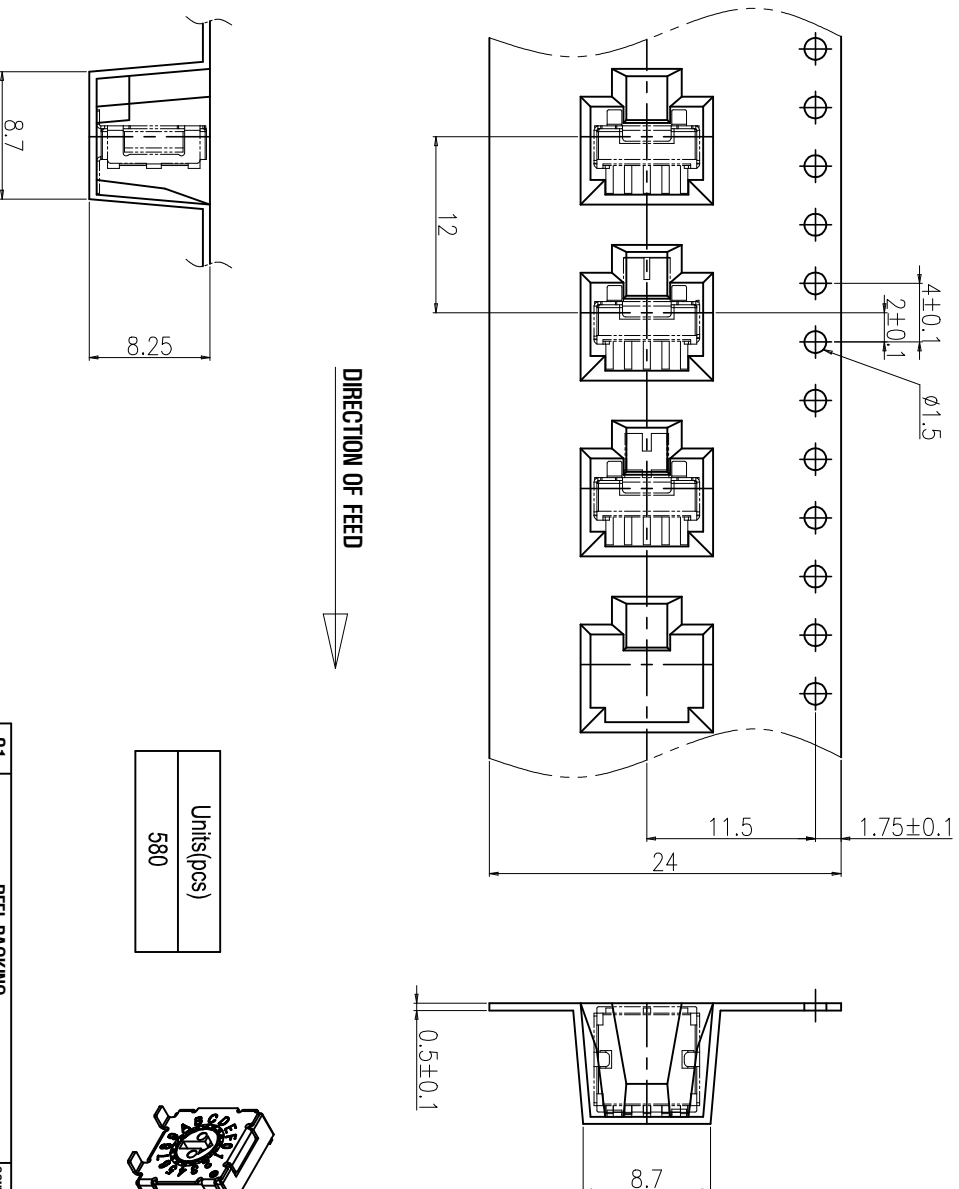
## 10-1 Condition for Soldering

Profile Feature	Pb-Free Assembly
Average Ramp-UP Rate(Ts max to TP)	3°C/second max
Preheat	
- Temperature Min(Ts min)	150°C
- Temperature Max(Ts max)	200°C
- Time (ts min to ts max)	60-180seconds
Time maintained above:	
- Temperature (TL)	217°C
- Time (tL)	60-150seconds
Peak/Classification Temperature(TP)	260°C +0°C/ -5°C
Time within 5°C of actual Peak Temperature(TP)	5~10 seconds
Ramp-Down Rate	6°C/sec max
Time 25°C to Peak Temperature	8 minutes max

REV. NO.	DATE	REVISION	DR	CH	APP
△	26.01.13	Recreation of drawings for unification of drawing formats	K.N.KIM	K.N.KIM	W.J.LEE

### NOTE

1. 제품외관에 유해한 BURR가 없을 것.
2. 제품외관에 뒤들림이나 웬이 없을 것.
3. 크랙이나 갈라짐이 없을 것.
4. 지시없는 치수는 2D 또는 3D DATA 참조할 것.
5. 지시없는 공차는 일반공차 적용할 것.



01	REEL PACKING	CONDUCTIVE POLYESTER	BLACK	580	-
NO.	DESCRIPTION	MATERIAL	COLOR / FINISH	QTY	REMARK
DRAW/DESIGNED	CHECKED	APPROVED	COMPACT ROTARY DIP SWITCH		
JS YANG	W J LEE	K I LEE	REEL PACKING		
2022-02-07	2022-02-07	2022-02-07	UNIT	SCALE	MODEL
			mm	N:S	GS D.E.M.P - MS TYPE
SUNGJUN ELECTRONICS CO.,LTD			SIZE	DRAW	REV.
			A4	NO. CPKTR024-01	01