

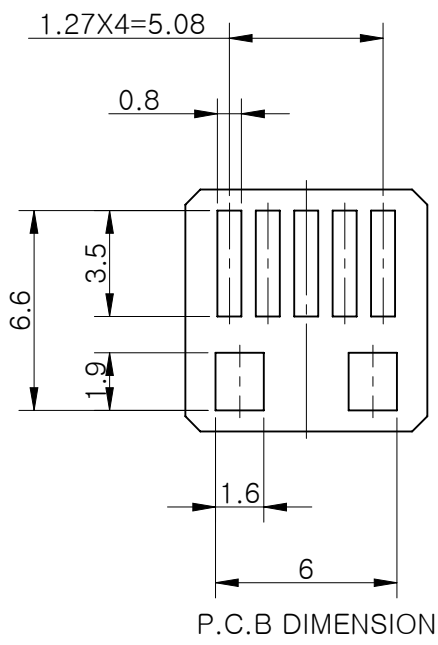
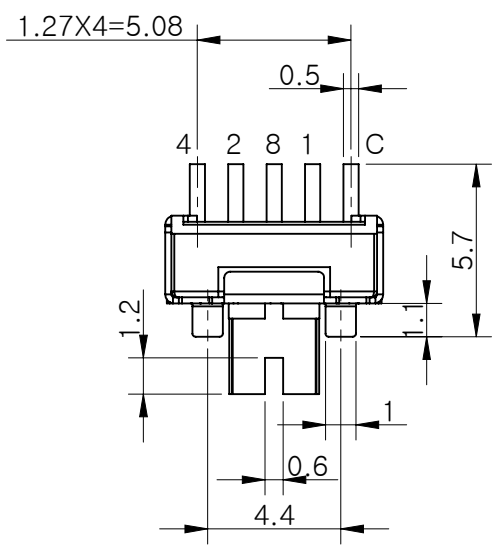
# DATA SHEET

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

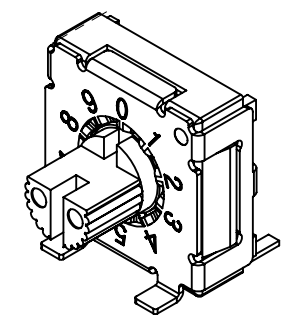
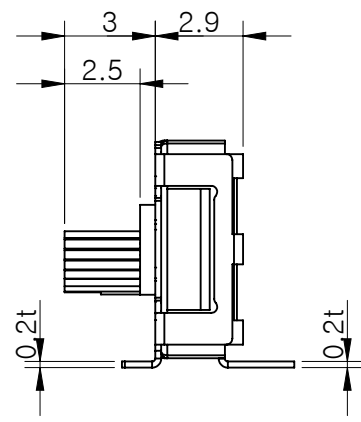
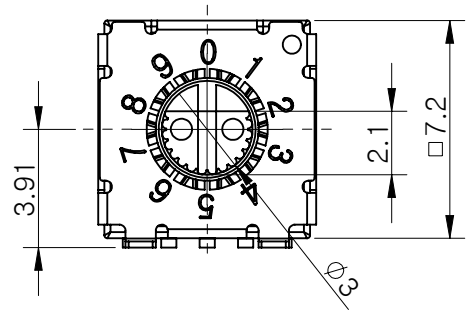
## **SUNGMUN ELECTRONICS CO., LTD.**

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MRK.	DATE	REVISION	SIGN
△			



- Specification
- Rating : 100mA, DC 50V (Switching)  
100mA, DC 50V (None-Switching)
  - Contact Resistance : 100mΩ Max
  - Insulation Resistance : 100MΩ Min
  - Operating Force : 200gf Max
  - Life cycle : 10,000 steps
  - Sealing : Comparable IP67



		Real Code				
		C	1	2	4	8
10 P o s i t i o n	0	●				
	1	●	●			
	2	●		●		
	3	●	●	●		
	4	●			●	
	5	●	●		●	
	6	●		●	●	
	7	●	●	●		
	8	●				●
	9	●	●			●
16 P o s i t i o n	A	●		●		●
	B	●	●	●		●
	C	●			●	●
	D	●	●		●	●
	E	●		●	●	●
	F	●	●	●	●	●

STANDARD LAYOUT

01	COMPACT ROTARY SWITCH				1	-
NO.	DESCRIPTION	MATERIAL	COLOR/FINISH	Q.TY	VENDOR	
DRAW/DESIGNED	CHECKED	APPROVED		TITLE	COMPACT ROTARY SWITCH	
				UNIT	SCALE	MODEL
2017-12-01			mm	4:1	GSMR-10MS	
SUNGUN ELECTRONICS CO.,LTD			SIZE	DRAW NO.	GSMR-10MS-01	1/1
			A4			

### 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

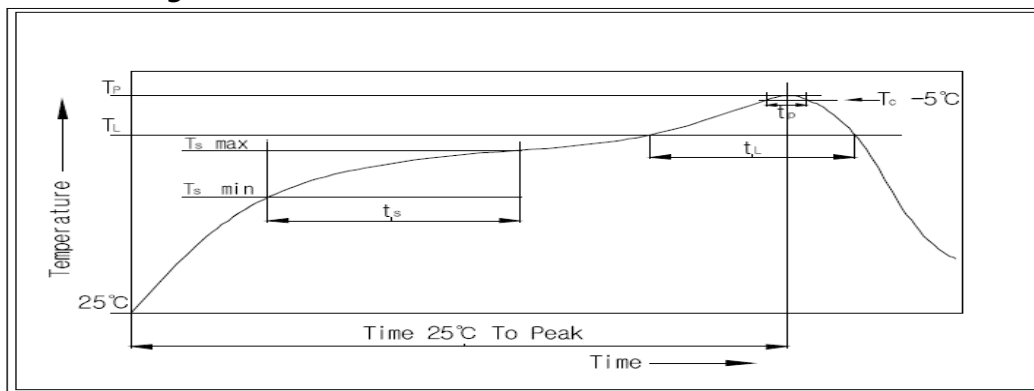
ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
6-1	Resistance Low Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made: 1)Temperature: -40°C ±3°C 2)Time: 96 hours	1)As shown in item 4-3, 4-4, 5-1 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 : Max 280°C, 5 sec.

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