

DATA SHEET

SUNGMUN CODE : GSDR-16MS-TR
DESCRIPTION : MINI ROTARY DIP SWITCH

SUNGMUN ELECTRONICS CO., LTD.

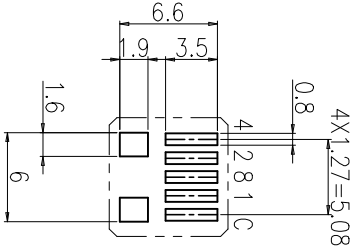
Address 301-302,Bucheon Technopark 345, Seokcheon-ro, Ojeong-gu
Bucheon-si, Gyeonggi-do, Korea
TEL. +82-32-328-1941~4
FAX +82-32-328-1945
E-mail sungmun@sungmun.co.kr
Website www.sungmun.com



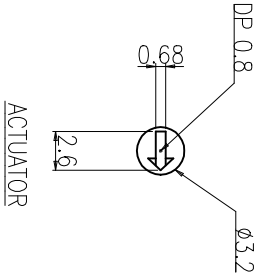
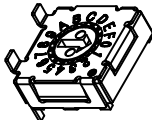
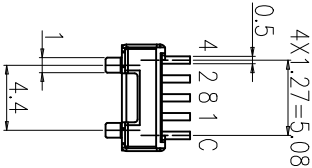
REV. NO.	DATE	REVISION	DR	CH	APP
	24.01.26	DIN ISO-2768-1m tolerance applied	W.R KYUNG	K.N KIM	W.J LEE

SPECIFICATION

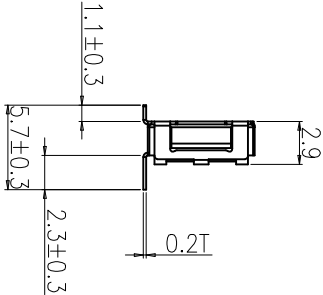
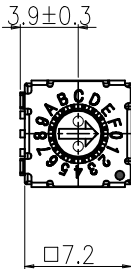
1. Rating : 100mA, DC 5V (Switching)
100mA, DC 50V (None-Switching)
2. Contact Resistance : 100mΩ Max
3. Insulation Resistance : 100MΩ Min at DC 100V
4. Operating Force : 200gf Max
5. Life cycle : 25,000 steps
6. Sealing : IP67 (Dust & Water proof)
7. Packing : 70pcs Tube / 580pcs Reel Packing



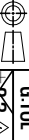
P.C.B DIMENSION



ACTUATOR



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		
10	●		●		●	A		
11	●	●	●		●	B		
12	●			●	●	C		
13	●	●		●	●	D		
14	●		●	●	●	E		
15	●	●	●	●	●	F		

A	Din ISO-2768-1m										COMPACT ROTARY DIP SWITCH				
	DRAW/DESIGNED		CHECKED		APPROVED				TITLE		REV.				
	S.M KIM		J.P ROH		K.I LEE		UNIT		MODEL NO.						
							mm		GSDR-16MS						
RANGES										G.TOL					
TOLERANCE										SCALE					
0.5-3 3-6 6-30 30-120 120-400										N:S					
±0.1 ±0.1 ±0.2 ±0.3 ±0.5										A4					
SUNGUMUN ELECTRONICS CO.,LTD										DRAW NO.		GSDR-16MS-04		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

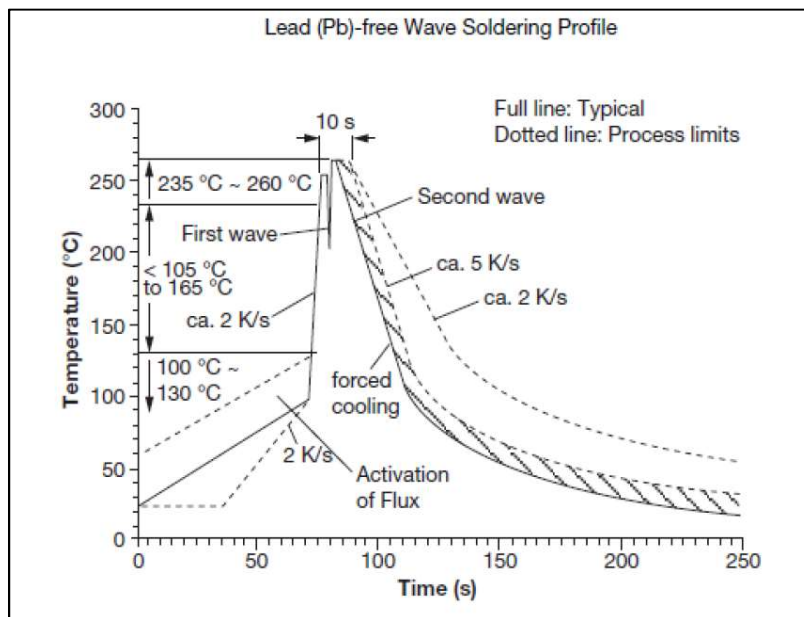
6. Environmental Characteristics

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

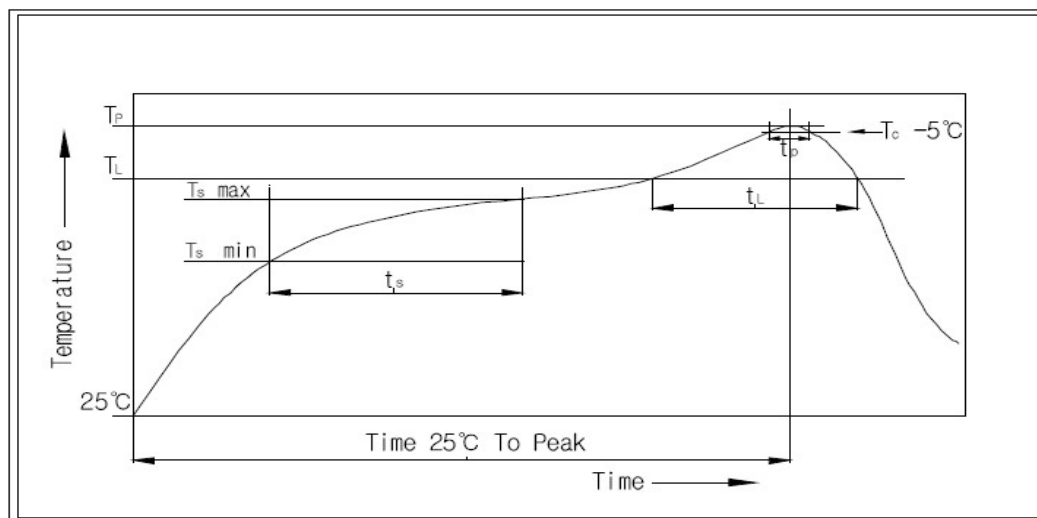
7. This item is "RoHS" Compliant

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

9. Wave Soldering Conditions:



10. Reflow Soldering Conditions:



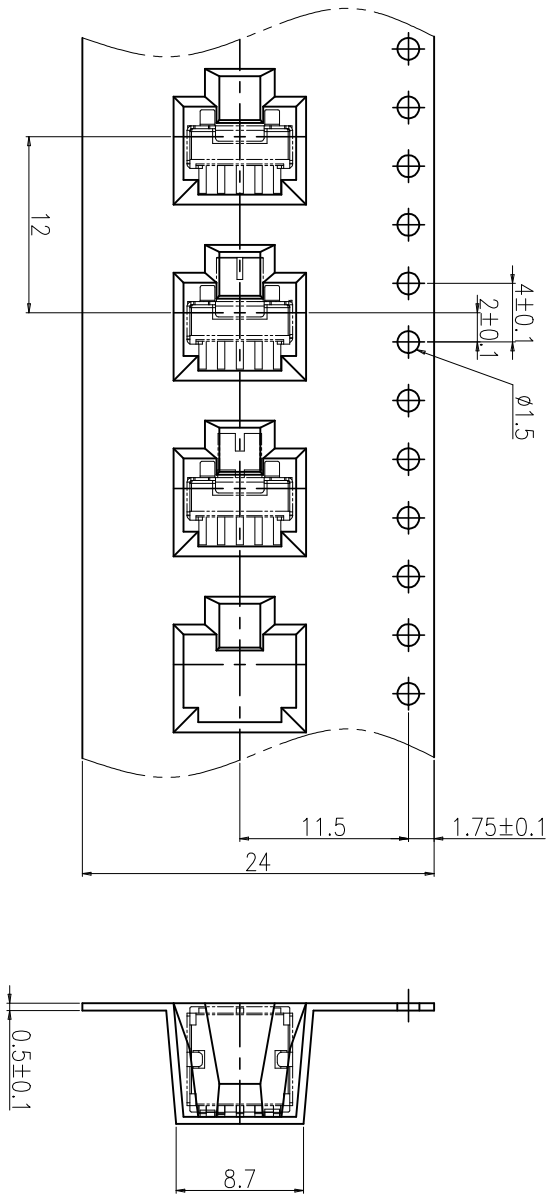
10-1 Condition for Soldering

Profile Feature	Pb-Free Assembly
Average Ramp-UP Rate(Ts max to TP)	3°C/second max
Preheat - Temperature Min(Ts min) - Temperature Max(Ts max) - Time (ts min to ts max)	150°C 200°C 60-180seconds
Time maintained above: - Temperature (TL) - Time (tL)	217°C 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

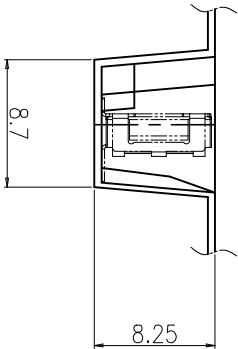
REV NO.	DATE	REVISION	DR	CH	APP
△	26.01.13	Recreation of drawings for unification of drawing formats	K.M.KIM	K.M.KIM	W.J.LEE

NOTE

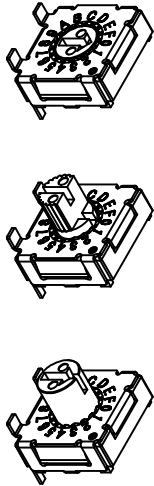
1. 제품외관에 유해한 BURR가 없을것.
2. 제품외관에 뒤들림이나 칠이 없을 것.
3. 크랙이나 갈라짐이 없을것.
4. 지시없는 치수는 2D 또는 3D DATA 참조할것.
5. 지시없는 공차는 일반공차 적용할것.



DIRECTION OF FEED



Units(pcs)
580



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