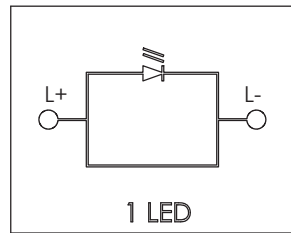
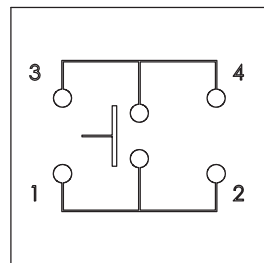
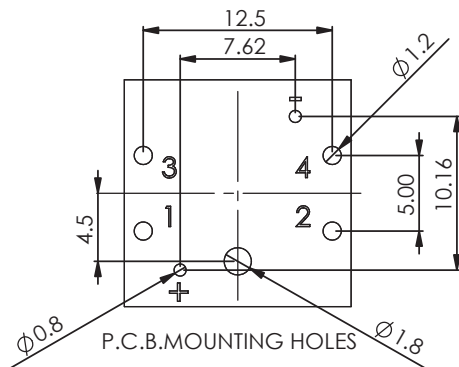
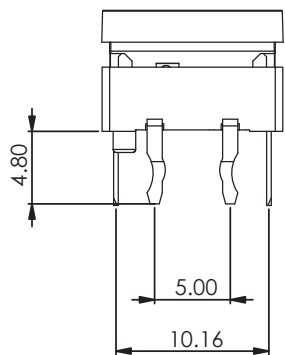
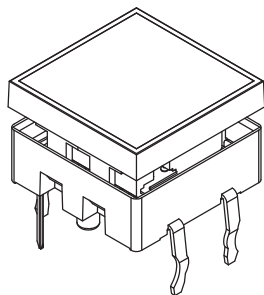
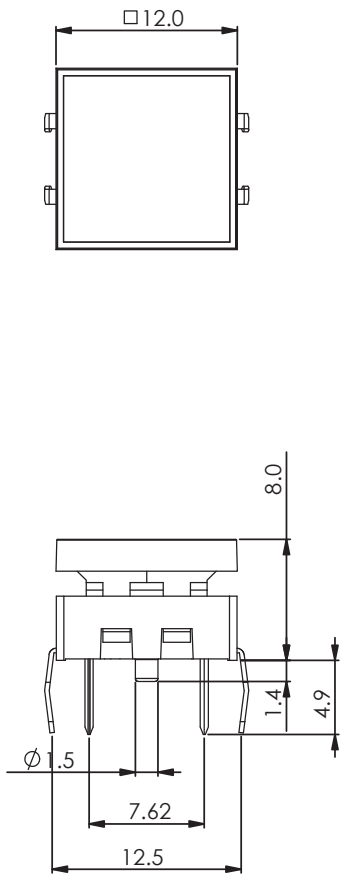
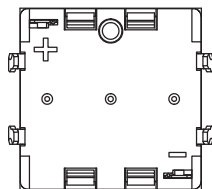


General Specifications

Circuit	:SPST
Current Rating	:50mA @ 12VDC
Contact Resistance	:100mOhm Max.(initial)
Insulation Resistance	:100MOhm Min.
Operating Force	:300gf ± 50gf
Total Travel	:0.3mm±0.1mm
Operating Life	:5,000,000 cycles Min.
Operating Temperature	:-25 deg.~+60 deg.
Solder Specifications	:260 deg. for 3 seconds



LED CONFIGURATION



修訂版			
區域	描述	日期	核准
喜威達企業股份有限公司 SWEETA PRODUCTS CORPORATION			
TITLE: 圖名		TSPL-12-G-S	
說明:		TSPL12P-3-S3-00 TSPL12P tact switch, Green Cap, Green Led	
TOLERANCES:		圖框 : 05-DR-01	UNIT : mm
		版本EDITION	A/
		SHEET 1 OF 1	

0.000°±0.25°	0.000±0.005		NAME	DATE
0.00°±0.5°	0.00±0.05	DRAWN	A-BI Houng	11/23/2011
0.0°±1°	0.0±0.2	CHK'D		
0°±2°	0±0.5	APPV'D		
ANGULAR:	LINEAR:	最後修訂日期 Last Save Date		
		圖框 : 05-DR-01		
		UNIT : mm		

喜威達企業股份有限公司

SWEETA PRODUCTS CORPORATION

General		
switch type	Tactile or pushbutton or Rotary or slide or Rock or selector	Tactile
Illuminated style	Full face or spot or without LED	Full face
Terminal type	DIP(through hole) or SMD or hand Soldering	DIP(through hole)
Operating temperature range	Normal humidity, normal press	-25℃ to 60℃
Contact arrangement	Circuit configuration	1 poles 1 throws (SPST)
Rating	Load ability	DC 12 V ; 50 mA
Outside dimension	Shall conform to the assembly drawings. (W*D*H)	Plase see drawing
Contact Resistance	Applying a static load twice the actuating 300g force to the center of the stem, measurements shall be made with low-current contact resistance meter.	100milli ohm Max(initial)
Insulation Resistance	Measurements shall be made following application of DC 100 V potential across terminals and across terminals and frame for one minute.	100Meg ohm min.
Dielectric with standing voltage	AC 250 V (50Hz or 60Hz) shall be applied across terminals and across terminals and frame for one minute.	There shall be no breakdown.
Operating Force	Placing the switch such that the direction of switch operation is vertical, the force to withstand a pull applied opposite to the direction of stem operation.	300gf±50gf
Total traver	Placing the switch such that direction of switch operation is vertical and then applying a static load twice the actuating force to the center of the stem, the travel distance for the stem to come to a stop shall be measured.	0.3±0.1mm
Operating life	With resistive load. Rate of operation: 5 to 6 operations per minute.	5,000,000Cycles Min.
Solder specifications		
Wave solder	Through holes type	260±5 °C / 3sec..

Packaged		
Minimum Package Quantity (MPQ)	Quantity	110pieces
	Plastic Tray / Taping reel / Plastic bag / Carton	Plastic Tray

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SWEETA PRODUCTS CORPORATION

Material

Part name	Material
CAP	Polycarbonate(PC)
Housing	Polyamide(PA)
Base	Polyamide(PA)
Lamp Term.	Phosphor bronze(PBS) with gold plating
Action Dome	Phosphor bronze(PBS) with Silverplating
End Term.	Brass with gold plating

LED Characteristics

The electrical specifications shown are determined at a basic temperature of 25°C.if the source voltage exceeds the rated voltage of LED,a ballast resistor must be connected in series with the LED.

Single color	Forward voltage VF(V)at If=20mA			Dominant Wavelength λ dom(nm)			Luminous intensity Iv(mcd)at If=20mA			Power dissipation Pd(mW)
	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
Red	--	2.0	--	--	640	--	6.5	--	18	75

Reverse voltage Vr(V)max.	Reverse current Ir (uA) at Vr =5V	Forward current If(mA)max.
5V	100uA	30mA

Notes:

1. LED circuit is isolated and requires external power source.
2. LED an integral part of the switch.
3. Emitting color:±20%
4. Forward voltage:±0.1V
5. Liminous intensity/luminous flux: ±20%

CAUTION:LED is static sensitive devices Not to be handled by unauthorised personnel.

WE reserve the right to modify technical data.

Safety Precautions

• Precautions for Correct Use

Electrical Standards

All use the Switch within the rated voltage and current ranges, otherwise the Switch may have a shortened life expectancy, radiate heat, or burn out. This particularly applies to the instantaneous voltages and currents when Switching.

Storage Precautions

To prevent degradation, such as discoloration, in the terminals during storage, do not store the Switch in locations that are subject to the following conditions.

1. High temperature or humidity.
2. Corrosive gases.
3. Direct sunlight.
4. Can't heavy pressure.

Handling

1. The Switch needs to operate the Operating Force & Total travel according to the specification book, otherwise bring about the Switch to damage, electric conduction and fail, shortened life.
2. Do not repeatedly operate the Switch with excessive force.
3. Be sure to set up the Switch so that the plunger will operate in a straight vertical line. A decrease in the life of the Switch or to damage, electric conduction and fail may result if the plunger is pressed off-center or from an angle.

Soldering

1. Soldering Precautions

- Before any kind of soldering, test to confirm that soldering can be performed properly. otherwise the Switch may be deformed by the soldering heat depending on the type of PCB, pattern, or lands of the PCB.
 - Do not solder the Switch more than twice, including rectification soldering. Wait for at least five minutes between the first and second soldering to allow the temperature to return to normal
- Continuous soldering may cause the casing to melt or deteriorate the Switch characteristics.

2. Automatic soldering baths

- Soldering temperature : 260°C max.
- Soldering time : 5 sec. max. for a 1.6mm thick single-side PCB.
- Preheating temperature : 100°C max. (ambient temperature)
- Preheating time: Within 60 sec.

Make sure that no flux will rise above the level of the PCB. If flux overflows onto the mounting surface of the PCB, it may enter the Switch and cause a malfunction.

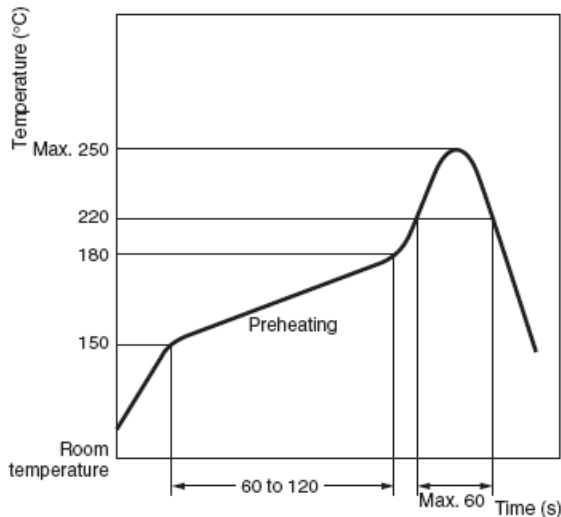
3. Manual soldering

- Soldering temperature: 350°C max.
- Soldering time: 3 sec max. for a 1.6mm thick single-side PCB.

Before soldering the Switch on a PCB, make sure that there is no unnecessary space between the Switch and the PCB.

4.Reflow Soldering

Solder the terminals within the heating curve shown in the following diagram.



Note: The above heating curve applies if the PCB thickness is 1.6mm.

The peak temperature may vary depending on the reflow bath used. Confirm the conditions beforehand.

Do not use an automatic soldering bath for surface-mounted Switches. the soldering gas or flux may enter the Switch and damage the switch's button operation.

Dust Protection

Do not use switches that are not sealed in dust-prone environments. Doing so may cause dust to penetrate inside the switch and cause faulty contact. If a switch that is not sealed must be used in this kind of environment, use a sheet or other measure to protect it against dust.

PCBs

The switch is designed for a 1.6-mm thick, single -side PCB. Using PCBs with a different thickness or using double-sided,through-hole PCBs may result in loose mounting, improper insertion, or poor heat resistance in soldering. These effects will occur, depending on the type of holes and patterns of the PCB.

Therefore, it is recommended that a verification test is conducted before use .

If the PCBs are separated after mounting the Switch, particles from the PCBs may enter the Switch.

If PCB particles or foreign particles form the surrounding environment, workbench, containers, or stacked PCBs become attached to the Switch, faulty contact may result.

Non-washable

Standard switches are not sealed, and cannot be washed. Doing so will cause the washing agent, together with flux or dust particles on the PCB, to enter the Switch, resulting in malfunction.