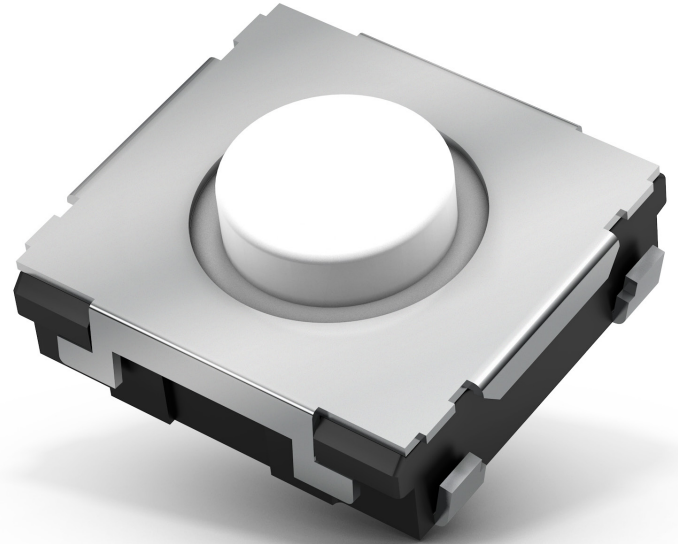


How-To Design Guide For Light Touch Switches

When researching Switches for an application, refer to the following design factors and recommendations to ensure the Switch is best suited for a device. Panasonic has extensive experience in designing and optimizing Light Touch Switches.



LIGHT TOUCH SWITCH TYPES

Panasonic offers an array of Light Touch Switches in various direction, push position and size types to provide flexibility in the design process. Side push Switches are available in SMD type, half dive and edge mount types. Panasonic also offers some of the world's smallest top push and side push type Switches for all compact designs. Once the Switch type is determined, make sure it has the appropriate tactile feel, push force and travel for the application it is serving. Let's start with travel and click ratios.

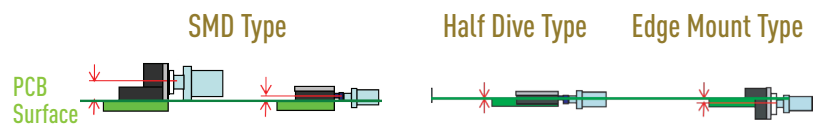
TRAVEL AND CLICK RATIOS

The click ratio of a Switch refers to the relationship between the Switch's actuation force (the force users need to exert on the Switch for it to be recognized) and travel (the distance users experience before contact is made).

A high ratio gives a crisper Switch feel while a short travel distance allows the Switch to respond quickly. These two features are ideal for portable consumer devices like smartphones or wearable technologies that need to respond quickly to the user's touch.

Direction Switches

Panasonic offers both Top Push Type and Side Push Type Light Touch Switches.



Push Position Switches

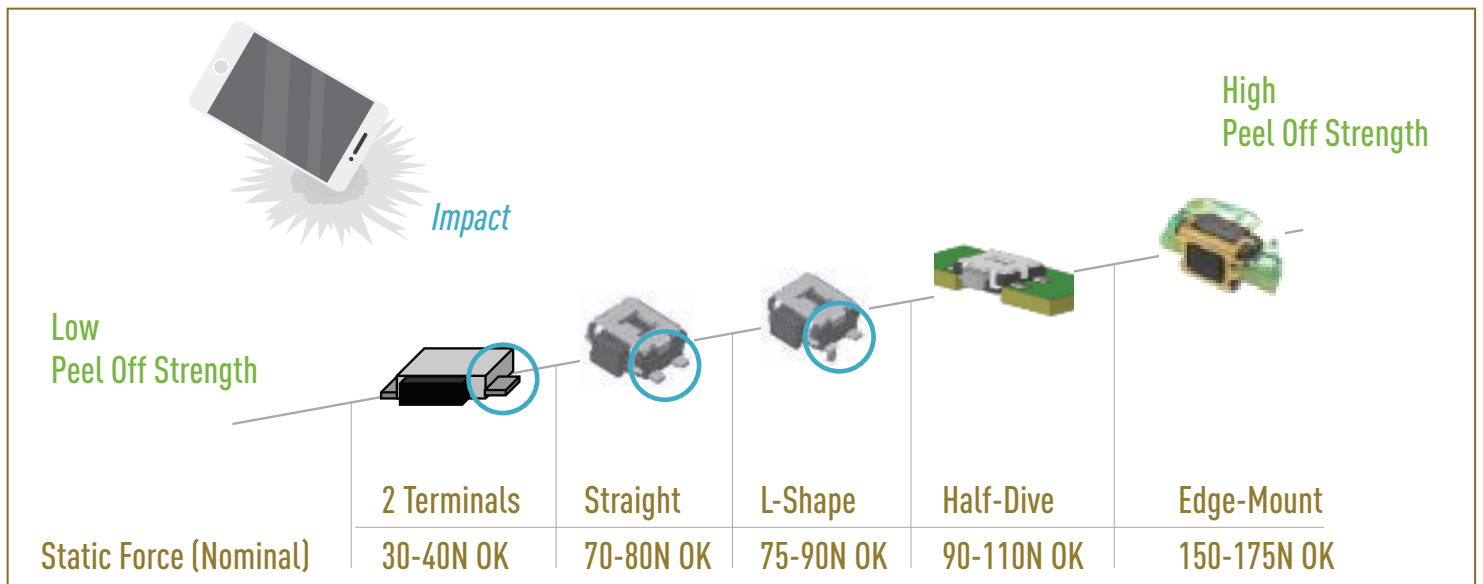
Side Push Switches are available in SMD Type, Half Dive and Edge Mount Types.



Small Footprint Switches

Panasonic provides one of the world's smallest Light Touch Switches in both Top Push Type and Side Push Type.





In contrast, designers regularly use Switches with lower click ratios and longer travel distances for automotive applications, since drivers wouldn't want to accidentally activate them while driving.

CLICK SOUND CONTROL

While click sound might appear at first glance to have little impact on overall performance, it is actually quite important and can add to or detract from the user's experience with a device. Sometimes it's better to have a highly audible click sound, while other designs will benefit from something a little more subtle.

LONGEVITY AND RELIABILITY

For reference, Switches with a lower click ratio or lower push force also offer a lower click sound. Switches allow users to activate and operate various electronics devices, so ensuring they offer high durability and leverage a long life cycle is crucial when selecting an option for a particular application. Several factors contribute to Switch durability, and we'll go through a few of them.

PEEL OFF STRENGTH

Peel off strength refers to the Switch's ability to withstand impact. If the user drops the device, the Switch should not peel off the board. Notably, Panasonic Switches offer one of the highest peel off strengths in the industry, and there are several mounting constructions available to enhance this particular feature.

IP67 RATING

Ingress of contaminants is one of the main reasons behind key failure, so an important factor in Switch longevity is its ability to withstand water ingress. Handheld electronics and wearables, for instance, are often exposed to some level of water, sunscreen or lotion. In these cases, Switches should meet IP67 Standards for protection against dust and liquid infiltration. Unlike many IP67 tactile Switches in the market, Panasonic's IP67 rated Light Touch Switches maintain the sharp, crisp tactile feel preferred for these applications.

Panasonic Light Touch Switches are carefully fine-tuned to deliver optimum performance. Keep the above factors in mind to accelerate the decision-making process.

Learn more about Panasonic Light Touch Switches by visiting <http://bit.ly/2uNBKsX>