

# General Specifications

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

## B Electrical Capacity (Resistive Load)

**Logic Level:** 0.4VA maximum @ 28V AC/DC maximum  
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)  
Note: Find additional explanation of operating range in Supplement section.

## Other Ratings

**Contact Resistance:** 80 milliohms maximum  
**Insulation Resistance:** 500 megohms minimum @ 500V DC  
**Dielectric Strength:** 500V AC minimum for 1 minute minimum  
**Mechanical Life:** 50,000 operations minimum  
**Electrical Life:** 50,000 operations minimum  
**Nominal Operating Force:** 1.0N  
**Angle of Throw:** 28°

## Materials & Finishes

**Actuator:** Polycarbonate resin (UL94V-0)  
**Case:** Glass fiber reinforced polyamide (UL94V-0)  
**Sealing Ring:** Nitrile butadiene rubber  
**Base:** Glass fiber reinforced polyamide  
**Movable Contact:** Phosphor bronze with gold plating  
**Stationary Contact:** Phosphor bronze with gold plating  
**Terminals:** Phosphor bronze with gold plating

## Environmental Data

**Operating Temperature Range:** -25°C through +55°C (-13°F through +131°F)  
**Humidity:** 90 ~ 95% humidity for 240 hours @ 40°C (104°F)  
**Vibration:** 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 5 minutes; 3 right angled directions for 2 hours  
**Shock:** 50G (490m/s<sup>2</sup>) acceleration (tested in 3 right angled directions, with 5 shocks in each direction)

## PCB Processing

**Soldering:** Wave Soldering recommended. See Profile A in Supplement section.  
Manual Soldering: See Profile A in Supplement section.  
**Cleaning:** These devices are not process sealed. Hand clean locally using alcohol based solution.

## Standards & Certifications

**Flammability Standard:** UL94V-0 actuator & case

The GW Series illuminated paddles have not been tested for UL recognition or CSA certification. These switches are designed for use in a low-voltage, low-current, logic-level circuit. When used as intended in a logic-level circuit, the results do not produce hazardous energy.

# Distinctive Characteristics

World's smallest fully illuminated paddles (patent pending) for highly visible status indication; LEDs available in red, green, or amber for single color and red/green for bicolor.

Specially designed switching mechanism provides crisp actuation feedback to positively indicate circuit transfer (patent pending).

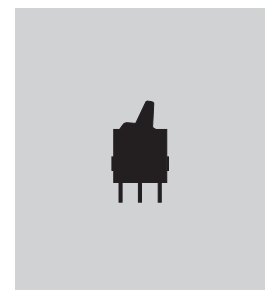
Insert molded terminals prevent entry of flux and other contaminants.

Award-winning STC contact mechanism with benefits unavailable in conventional mechanisms: smoother, positive detent actuation, increased contact stability, and unparalleled logic-level reliability. (Additional STC details in Terms & Acronyms; see Supplement section.)

.100" x .100" (2.54mm x 2.54mm) terminal spacing conforms to standard PC board grid spacing for straight and angle mounting.

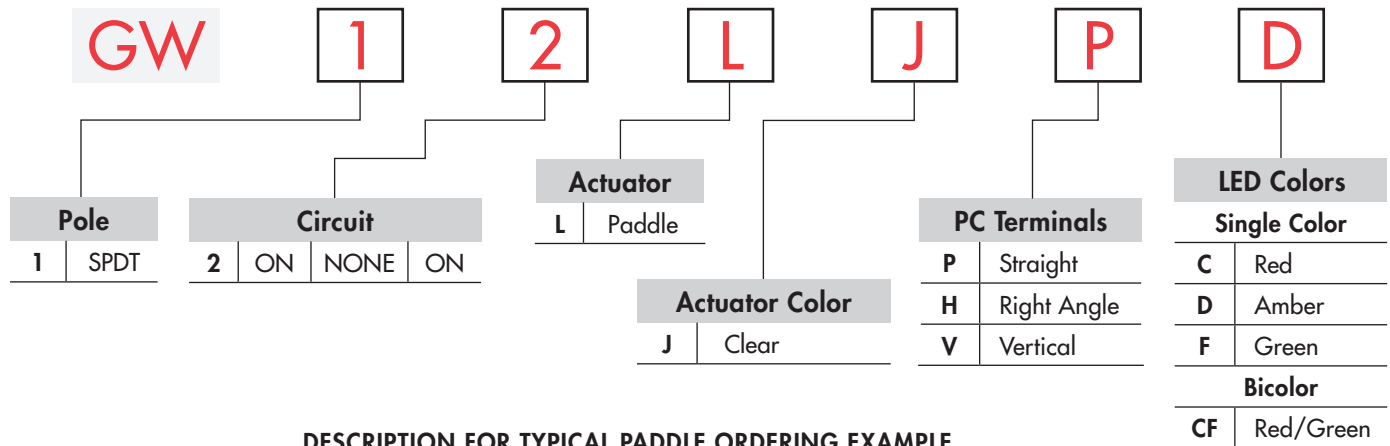


Actual Size



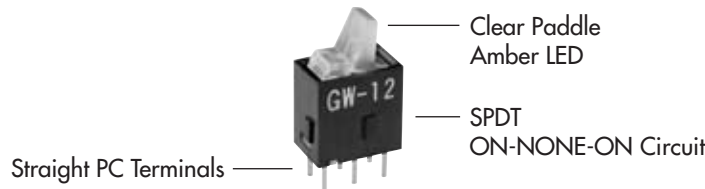
|                  |
|------------------|
| Toggles          |
| <b>B</b> Rockers |
| Pushbuttons      |
| Illuminated PB   |
| Programmable     |
| Keylocks         |
| Rotaries         |
| Slides           |
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| Tilt             |
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| Indicators       |
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| Supplement       |

### TYPICAL SWITCH ORDERING EXAMPLE



### DESCRIPTION FOR TYPICAL PADDLE ORDERING EXAMPLE

**GW12LJPD**



### POLE & CIRCUIT

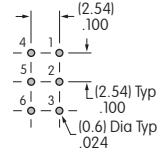
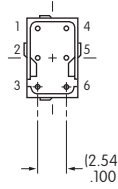
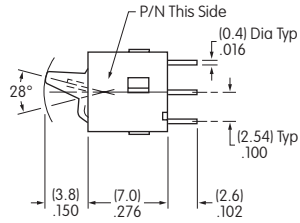
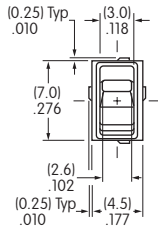
| Pole | Model | Paddle Position |        |      | Connected Terminals |        |      | Throw & Schematics  |
|------|-------|-----------------|--------|------|---------------------|--------|------|---|
|      |       | Up              | Center | Down | Up                  | Center | Down |   |
| SP   | GW12  | ON              | NONE   | ON   | 2-3                 | OPEN   | 2-1  | Note: Terminal numbers are not actually on the switch. LED circuit is isolated and requires an external power source.<br>Single Color |
|      |       |                 |        |      |                     |        |      |   |

### LED COLORS & SPECIFICATIONS

LEDs are an integral part of the the switch and not available separately. The electrical specifications shown are determined at a basic temperature of 25°C. If the source voltage exceeds the rated voltage, a ballast resistor is required. The resistor value can be calculated by using the formula in the Supplement section.

|                                   | Colors       | Single Color   |            |            | Bicolor         |
|-----------------------------------|--------------|--|------------|------------|-----------------|
|                                   |              | C<br>Red   | D<br>Amber | F<br>Green | CF<br>Red/Green |
| Forward Peak Current              | $I_{FM}$     | 30mA   | 30mA       | 25mA       | 30mA/25mA       |
| Typical Forward Current           | $I_F$        | 20mA   | 20mA       | 20mA       | 20mA/20mA       |
| Forward Voltage                   | $V_F$        | 2.0V   | 2.0V       | 2.1V       | 2.0V/2.1V       |
| Reverse Peak Voltage              | $V_{RM}$     | 5V   | 5V         | 5V         | 5V/5V           |
| Current Reduction Rate Above 25°C | $\Delta I_F$ | 0 – No Current Reduction Rate within Ambient Temperature Range |            |            |                 |
| Ambient Temperature Range         |              | -25°C ~ +55°C  |            |            |                 |

## TYPICAL SWITCH DIMENSIONS



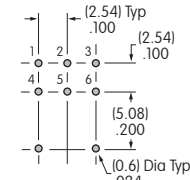
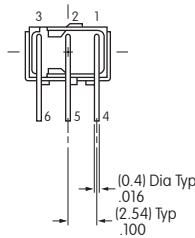
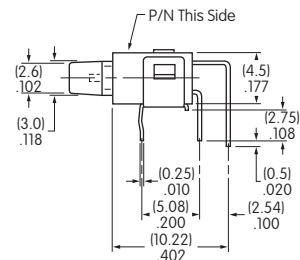
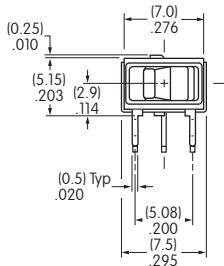
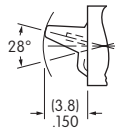
### Straight PC



5 & 6 are LED terminals; 4 is a support pin on single color models & an LED terminal on bicolor models.

**GW12LJPC**

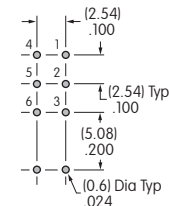
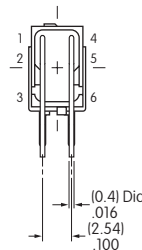
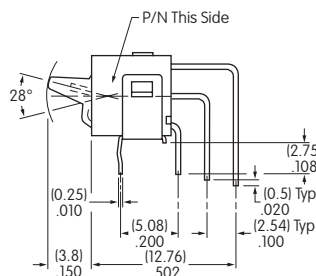
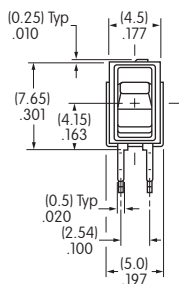
### Right Angle PC



5 & 6 are LED terminals; 4 is a support pin on single color models & an LED terminal on bicolor models.

**GW12LJHD**

### Vertical PC



5 & 6 are LED terminals; 4 is a support pin on single color models & an LED terminal on bicolor models.

**GW12LJVCF**



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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