

# General Specifications

## 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:** 1.70N  
**Travel:** Pretravel .035" (0.9mm); Overtravel .008" (0.2mm); Total Travel .043" (1.1mm)

## Materials & Finishes

**Plunger:** Polyamide  
**Case:** Glass fiber reinforced polyamide  
**Sealing Rings:** Nitrile butadiene rubber  
**Movable Contact:** Phosphor bronze with gold plating  
**Stationary Contacts:** Phosphor bronze with gold plating  
**Base:** Glass fiber reinforced polyamide  
**Switch Terminals:** Phosphor bronze with gold plating  
**Lamp 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 ~ 500Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 15 minutes; 3 right angled directions for 2 hours  
**Shock:** 50G (490m/s<sup>2</sup>) acceleration (tested in 6 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:** Automated alcohol based cleaning recommended, 5 minutes maximum. Do not use high-purity alcohol (50% alcohol or more) or organic solvent. High alcohol solution can damage clear plastic. See Cleaning specifications in Supplement section.

## Standards & Certifications

The GB Series illuminated pushbuttons 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

Fully illuminated plunger for highly visible status indication with single color LED in red, green, or amber.

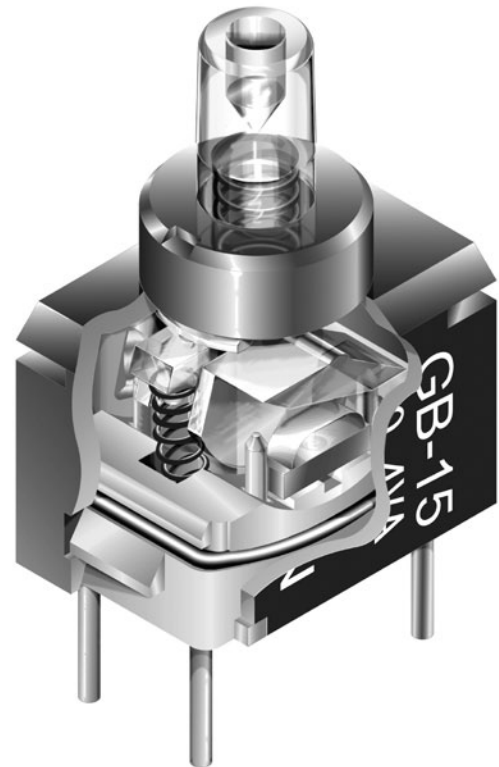
Ultra-miniature size allows high density mounting, and extremely light weight makes these switches ideal for handheld equipment.

Totally sealed body construction prevents contact contamination and allows time- and money-saving automated soldering and cleaning. Insert-molded terminals lock out flux, solvents, and other contaminants.

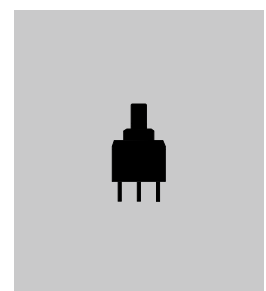
Award-winning STC contact mechanism with benefits unavailable in conventional mechanisms: smooth, positive detent actuation, increased contact stability, and unparalleled logic-level reliability. (Additional STC details in Terms & Acronyms; see Supplement section.)

.100" x .100" (2.54mm x 2.54mm) terminal spacing conforms to standard PC board grid spacing. Round terminals facilitate easier through-hole mounting on PC boards.

Nonilluminated pushbuttons available and shown in the Pushbutton section.



Actual Size

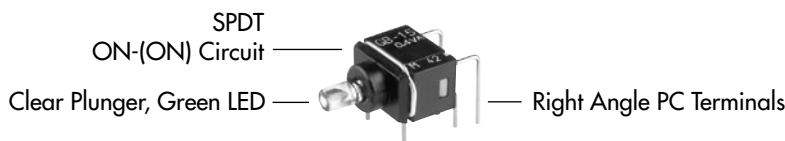


### TYPICAL SWITCH ORDERING EXAMPLE

|               |                                     |                 |                                                                |                                                  |          |
|---------------|-------------------------------------|-----------------|----------------------------------------------------------------|--------------------------------------------------|----------|
| <b>GB</b>     | <b>1</b>                            | <b>5</b>        | <b>J</b>                                                       | <b>H</b>                                         | <b>F</b> |
| <b>Pole</b>   | <b>Circuit</b>                      | <b>Actuator</b> | <b>PC Terminals</b>                                            | <b>LEDs</b>                                      |          |
| <b>1</b> SPDT | <b>5</b> ON (ON)<br>( ) = Momentary | <b>J</b> Clear  | <b>P</b> Straight<br><b>H</b> Right Angle<br><b>V</b> Vertical | <b>C</b> Red<br><b>D</b> Amber<br><b>F</b> Green |          |

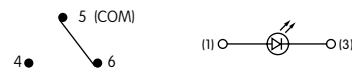
### DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

**GB15JHF**



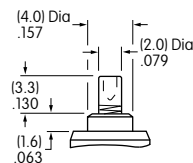
### POLE & CIRCUIT

|      |       | Plunger Position<br>( ) = Momentary |      | Connected Terminals |      | Throw & Switch/Lamp Schematics                                                                                        |
|------|-------|-------------------------------------|------|---------------------|------|-----------------------------------------------------------------------------------------------------------------------|
| Pole | Model | Normal                              | Down | Normal              | Down | Note: Terminal numbers are not actually on the switch. LED circuit is isolated and requires an external power source. |
| SP   | GB15  | ON                                  | (ON) | 5-6                 | 5-4  |                                                                                                                       |



### ACTUATOR

**J** Clear Plunger



### LED COLORS & SPECIFICATIONS

LEDs are an integral part of 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.

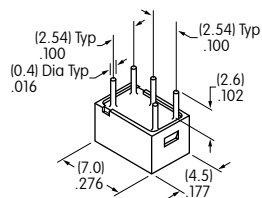
The resistor value can be calculated by using the formula in the Supplement section.

|                                   |              | <b>C</b><br>Red | <b>D</b><br>Amber | <b>F</b><br>Green |
|-----------------------------------|--------------|-----------------|-------------------|-------------------|
| Colors                            |              | Red             | Amber             | Green             |
| Forward Peak Current              | $I_{FM}$     | 30mA            | 30mA              | 25mA              |
| Typical Forward Current           | $I_F$        | 20mA            | 20mA              | 20mA              |
| Forward Voltage                   | $V_F$        | 1.9V            | 1.9V              | 2.1V              |
| Reverse Peak Voltage              | $V_{RM}$     | 5V              | 5V                | 5V                |
| Current Reduction Rate Above 25°C | $\Delta I_F$ | 0.43mA/°C       | 0.43mA/°C         | 0.36mA/°C         |
| Ambient Temperature Range         |              | -25° ~ +55°C    |                   |                   |

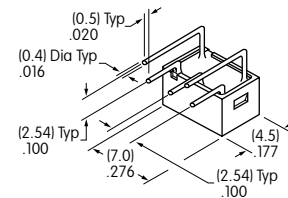
## PC TERMINALS



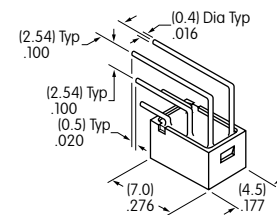
**Straight**



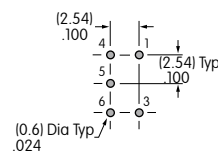
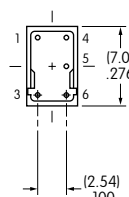
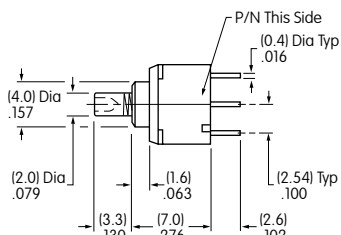
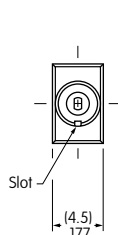
**Right Angle**



**Vertical**



## TYPICAL SWITCH DIMENSIONS



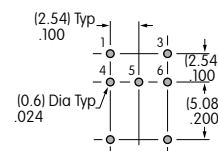
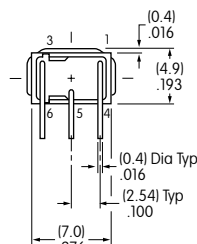
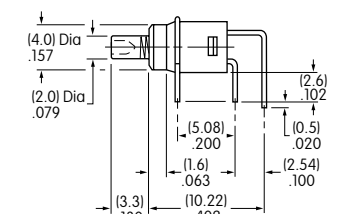
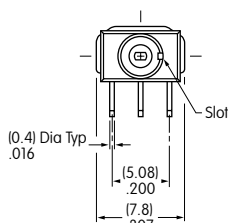
**Straight PC**



Terminals 1 & 3 are lamp terminals.

**GB15JPD**

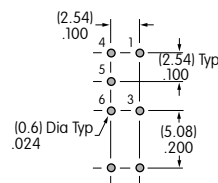
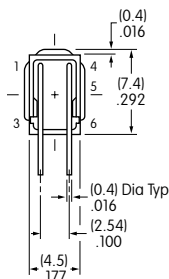
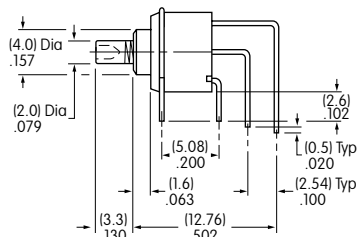
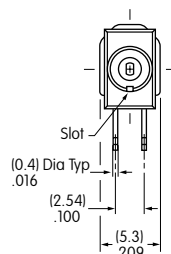
**Right Angle PC**



Terminals 1 & 3 are lamp terminals.

**GB15JHF**

**Vertical PC**



Terminals 1 & 3 are lamp terminals.

**GB15JVC**

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9