Series GW
Ultra-Thin Fully Illuminated Paddles

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: 1.0N
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/s²) 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.
Ultra-Thin Fully Illuminated Paddles

Distinctive Characteristics

World’s smallest fully illuminated paddles 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.

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.
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**TYPICAL SWITCH ORDERING EXAMPLE**

![Switch Diagram]

**DESCRIPTION FOR TYPICAL PADDLE ORDERING EXAMPLE**

**GW12LJPD**

- **Clear Paddle**
- **Amber LED**
- **Straight PC Terminals**
- **SPDT ON-NONE-ON Circuit**

**POLE & CIRCUIT**

<table>
<thead>
<tr>
<th>Pole</th>
<th>Model</th>
<th>Up</th>
<th>Center</th>
<th>Down</th>
<th>Up</th>
<th>Center</th>
<th>Down</th>
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<tbody>
<tr>
<td>SP</td>
<td>GW12</td>
<td>ON</td>
<td>NONE</td>
<td>ON</td>
<td>2-3</td>
<td>OPEN</td>
<td>2-1</td>
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**Throw & Schematics**

Note: Terminal numbers are not actually on the switch. LED circuit is isolated and requires an external power source.

**LED COLORS & SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Colors</th>
<th>Single Color</th>
<th>Bicolor</th>
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<tbody>
<tr>
<td>C</td>
<td>Red</td>
<td>Red/Green</td>
</tr>
<tr>
<td>D</td>
<td>Amber</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>CF</td>
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<table>
<thead>
<tr>
<th>Specification</th>
<th>Single Color</th>
<th>Bicolor</th>
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<tbody>
<tr>
<td>Maximum Forward Current $I_{FM}$</td>
<td>30mA</td>
<td>30mA/25mA</td>
</tr>
<tr>
<td>Typical Forward Current $I_F$</td>
<td>20mA</td>
<td>20mA/20mA</td>
</tr>
<tr>
<td>Forward Voltage $V_F$</td>
<td>2.0V</td>
<td>2.0V/2.1V</td>
</tr>
<tr>
<td>Maximum Reverse Voltage $V_{RM}$</td>
<td>5V</td>
<td>5V/5V</td>
</tr>
<tr>
<td>Current Reduction Rate Above 25°C $\Delta I$</td>
<td>No Current Reduction Rate within Ambient Temperature Range</td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature Range</td>
<td>–25°C ~ +55°C</td>
<td></td>
</tr>
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</table>
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TYPICAL SWITCH DIMENSIONS

Straight PC

GW12LJPC

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

Right Angle PC

GW12LJHD

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

Vertical PC

GW12LVCF

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