General Specifications

Electrical Capacity (Resistive Load)

Logic Level: 0.4VA maximum @ 28V AC/DC maximum
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)

Other Ratings

Contact Resistance: 50 milliohms maximum
Insulation Resistance: 500 megohms minimum @ 250V DC
Dielectric Strength: 250V AC minimum between contacts for 1 minute minimum
Mechanical Life: 500,000 operations minimum
Electrical Life: 500,000 operations minimum
Nominal Operating Force: **Standard:** 1.5 ±0.5 Newtons
High: 2.5N ±0.8 Newtons
Stroke: 1.5mm (.059″)

Materials & Finishes

Actuator: Silicon rubber
Case: Polycarbonate resin
Base: Glass fiber reinforced polyamide resin
Movable Contact: Silver over nickel with gold plating
Stationary Contacts: Brass with gold plating
Switch Terminals: Brass with gold plating

Environmental Data

Operating Temperature Range: –25°C through +50°C (–13°F through +122°F) for Illuminated
–25°C through +70°C (–13°F through +158°F) for Nonilluminated
Humidity: 90 ~ 95% humidity for 96 hours @ 40°C (104°F)
Vibration: 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock: 50G (490m/s^2) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Installation

Cap Installation Force: 5.0N maximum downward force on actuator

PCB Processing

Soldering: Wave Soldering: 270°C maximum @ 6 seconds maximum
Manual Soldering: 390°C maximum @ 4 seconds maximum
Cleaning: These devices are not process sealed. Hand clean locally using alcohol based solution.

Standards & Certifications

The NP01 Series 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

Soft touch actuation achieved by mechanical silicon rubber structure.

Distinct, long stroke of 1.5mm (.059″).

Entire cap is fully illuminated with single or bicolor LED.

Compact design with dimension of 12.5mm (.492″) from PC board to top of cap.

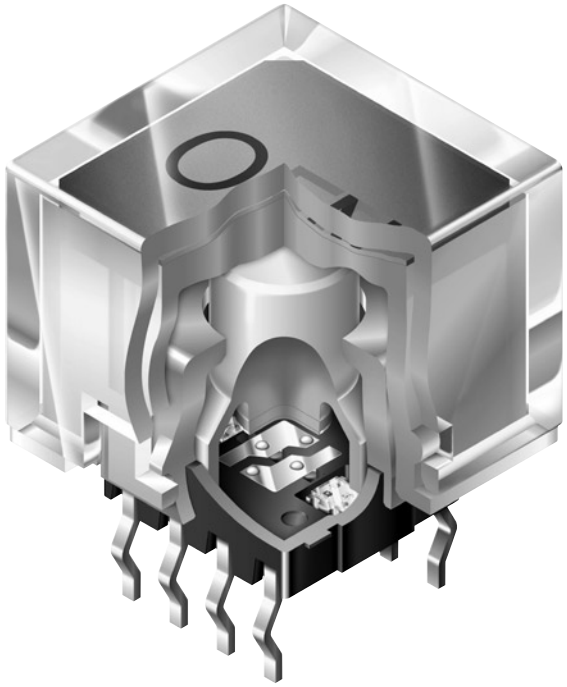
Alternating legend options (patent pending) with bicolor LED.

Available in both high (2.5N) or standard (1.5N) operating force.

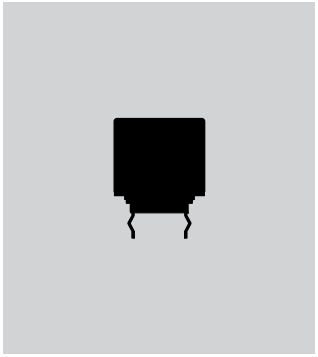
Gold plated contacts provide high reliability.

Crimped terminals ensure secure PC mounting and prevent dislodging during soldering.

Molded-in terminals prevent entry of flux, solvents, and other contaminants.



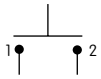
Actual Size



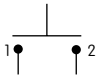
Subminiature Smooth Actuation Pushbuttons ◀ *NEW*

POLE & CIRCUIT

Illuminated Models

Pole	Model	Plunger Position ( ) = Momentary		Connected Terminals		Throw & Switch Schematic
		Normal	Down			Notes: Switch is marked with LC1, 1, L3, L4, L1, L2, 2, LC2. Lamp circuit is isolated and requires an external power source.
SP	**NP0115AG03L** **NP0115HG03L**	OFF	(ON)	Normally Open	1-2	SPST 

Nonilluminated Models

Pole	Model	Plunger Position ( ) = Momentary		Connected Terminals		Throw & Switch Schematic
		Normal	Down			Note: Switch is marked with LC1, 1, L3, L4, L1, L2, 2, LC2.
SP	**NP0115AG03N** **NP0115HG03N**	OFF	(ON)	Normally Open	1-2	SPST 

OPERATING FORCE

A **Standard Nominal Operating Force**
1.5 ±0.5N
Switch base is Black

H **High Nominal Operating Force**
2.5 ±0.8N
Switch base is Gray

CONTACTS, TERMINALS, & RATING

G03 **Gold Contacts** **Straight PC Terminals** **0.4VA maximum @ 28V AC/DC maximum**

ILLUMINATION

L **Illuminated**

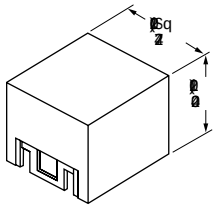
N **Nonilluminated**

CAP TYPES & COLORS (CONTINUED)

Solid Color Cap for Nonilluminated

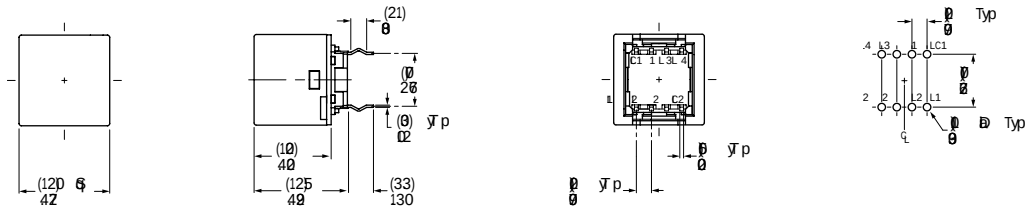
AT3024
12mm Square Cap

Material:
Polycarbonate Resin



A	Black	**C**	Red
B	White	**H**	Gray

TYPICAL SWITCH DIMENSIONS



NP0115HG03LF-JF

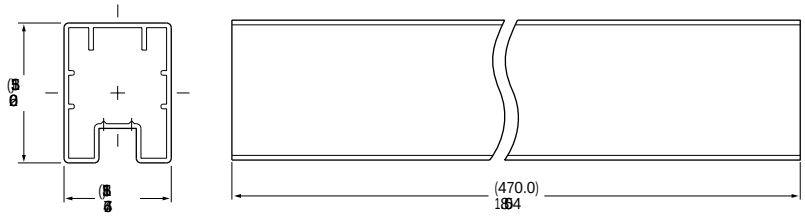
PACKAGING

No Code

Partitioned Tray
Any quantity. No code is required. Switches may be packaged with or without caps installed.

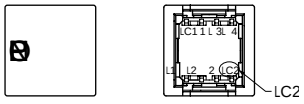
S

Stick-Tube Packaging
50 pieces per stick
Switches must be ordered in 50-piece increments when stick-tube packaging is selected. This packaging is for the switch body only. Caps will be packaged separately.



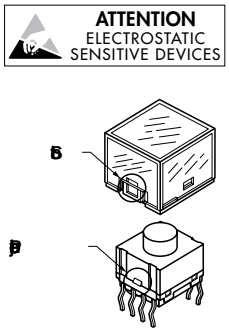
LEGEND ORIENTATION

Top View Bottom View



Orient cap with legend as shown here, and "LC2" at lower right of switch body.
Orders for switches with legends will be assembled as illustrated.

PRECAUTIONS FOR HANDLING & STORAGE

1. NP01 Pushbuttons are electrostatically sensitive. To prevent damage to LED, devices must be properly isolated from static electricity.
2. Once the cap is installed onto the switch body, it cannot be removed.
3. When assembling cap, align projection on switch body to slot on inside of cap. (Refer to illustration at right.)
4. * Legends may be printed on the lens with laser etch, screen print or pad print methods. Epoxy based ink is recommended.
5. Do not use excessive force during installation on PC board or for cap installation.

* NKK Switches can provide custom legends for caps. Contact factory for more information.