

General

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

Logic Level (gold): 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.

Contact Resistance: 80 milliohms maximum
Insulation Resistance: 500 megohms minimum @ 500V DC
Dielectric Strength: 500V AC minimum for 1 minute minimum
Mechanical Life: 100,000 operations minimum for momentary;
Electrical Life: 100,000 operations minimum
Nominal Operating Force: 1.8N
Travel: Pretravel .051 (1.3mm); Overtravel .020 (0.5mm); Total Travel .071 (1.8mm)

Housing: Glass fiber reinforced polyamide
Base: Glass fiber reinforced polyamide
Movable Contact: Phosphor bronze with gold plating
Switch Terminals: Phosphor bronze with gold plating
Lamp Terminals: Steel with silver plating

Operating Temperature Range: 25°C through +50°C (13°F through +122°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 1 minute; 3 right angled directions for 2 hours
Shock: 50G (490m/s²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

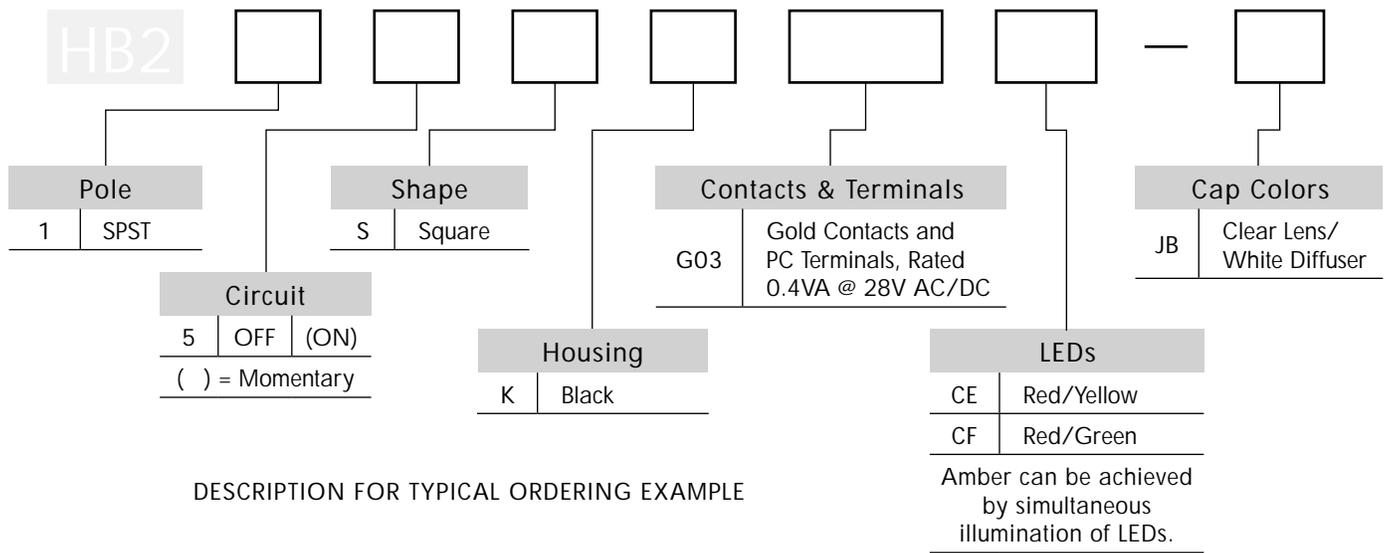
Cap Installation Force: 15.0N (3.37 lbf) maximum downward force on cap

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

The HB2 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.

Subminiature Audio/Video Pushbuttons

TYPICAL SWITCH ORDERING EXAMPLE



DESCRIPTION FOR TYPICAL ORDERING EXAMPLE



POLE & CIRCUIT

Pole	Model	Plunger Position () = Momentary		Connected Terminals		Throw & Switch/Lamp Schematics
		Normal	Down	Normal	Down	
SP	HB215	OFF	(ON)	OPEN	1-2	SPST

Notes: Switch terminals are not marked on the switch. Red LED terminal is marked with R. Lamp circuit is isolated and requires external power source.

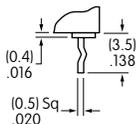
HOUSING SHAPE & COLOR



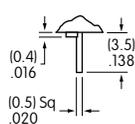
CONTACT MATERIALS, RATINGS & TERMINALS



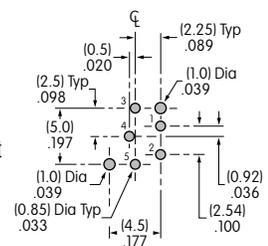
Switch Terminal



Lamp Terminal

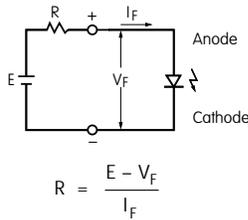


PCB Footprint



Subminiature Audio/Video Pushbuttons

BICOLOR LEDS & SPECIFICATIONS



$$R = \frac{E - V_F}{I_F}$$

Where: R = Resistor Value (Ohms)
 E = Source Voltage (V)
 V_F = Forward Voltage (V)
 I_F = Forward Current (A)

LED is an integral part of the switch.

	Color	Red/Yellow	Red/Green	Unit
Forward Peak Current	I _{FM}	30/30	30/30	mA
Continuous Forward Current	I _F	20/20	20/20	mA
Forward Voltage	V _F	2.0/2.1	2.0/2.1	V
Reverse Peak Voltage	V _{RM}	4/4	4/4	V
Current Reduction Rate Above 25°C	I _F	0.33/0.33	0.33/0.33	mA/°C
Ambient Temperature Range		25° ~ +50°C		

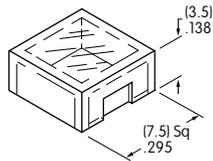
The electrical specifications shown are determined at a basic temperature of 25°C.
 LED circuit is isolated and requires external power source.
 If the source voltage exceeds the rated voltage, a ballast resistor is required.
 The resistor value can be calculated by using the formula in the Supplement section.

CAP COLORS



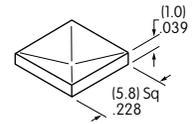
Clear Transparent Lens

AT3081
Square Lens



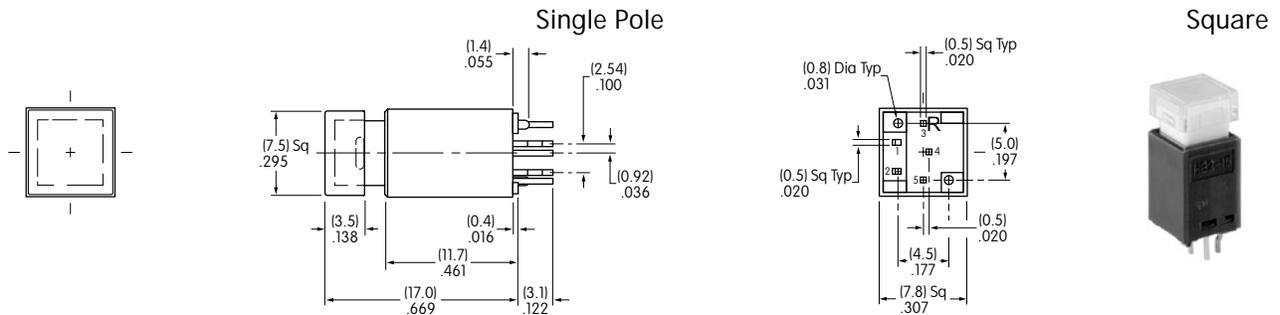
White Translucent Diffuser

AT3082
Square Diffuser



Lens & Diffuser Material: Polycarbonate Lens Finish: Glossy Diffuser Finish: Frosted

TYPICAL SWITCH DIMENSIONS



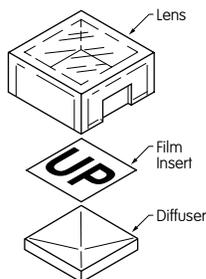
LEGENDS

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

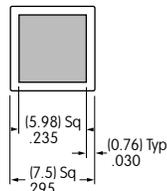
Suggested Printable Area for HB2 Lens & Film Insert

Recommended Methods: Screen Print or Pad Print on Lens; Laser Print on Film Insert.
 Epoxy based ink is recommended.

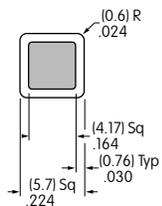
Film Insert: Clear Polyester, 4 mil max. thickness



Lens



Film Insert



Shaded areas are printable areas.

Toggles
Rockers
Pushbuttons
Illuminated PB
Programmable
Keylocks
Rotaries
Slides
Tactiles
Tilt
Touch
Indicators
Accessories
Supplement