Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

IR series

Sealed pushbutton switches • bushing Ø 16 mm •
momentary • standard version

DISTINCTIVE FEATURES

Screw version up to 4 A

Tactile feedback

Sealed to IP67

Illuminated or non-illuminated

Flat round actuator for optional marking

ENVIRONMENTAL SPECIFICATIONS

• Front panel sealing : IP67 according to IEC 60529

• Shock resistance : 100 g according to IEC 512-4, test 6c

• Vibration resistance : 10-500Hz - 10 g according to IEC 512-4, test 6d

• Salt spray : IEC 512-6, test 11f

• Operating temperature : -40°C to +85°C (-40 °F to +185 °F)

ELECTRICAL SPECIFICATIONS

• Max. current/voltage rating with resistive load :
  - Gold plated contacts: Code 4 : 200 mA 48 VDC, 500,000 cycles
                          Code 7 : 5 A 28 VDC, 70,000 cycles
  - Silver contacts (code 2) - screw terminals : 4 A 48 VDC, 500,000 cycles

• Initial contact resistance : 100 mΩ max.

• Insulation resistance : 1 GΩ min. at 500 VDC

• Dielectric strength : 1,500 Vrms

LED COMPONENT SPECIFICATIONS			
LED color	Forward current	Typ. forward voltage	Max. forward voltage
Super red (0S)	20 mA	2.1 V	2.3 V
Yellow (0Y)	20 mA	2.1 V	2.3 V
Green (0G)	20 mA	2.1 V	2.3 V
Blue (0B)	20 mA	3.2 V	3.8 V
White (0W)	20 mA	3.35 V	4.25 V
Red/Green (SG)	20 mA	Red: 1.95 V / green: 2.1 V	2.5 V
Yellow/green (YG)	20 mA	Yellow: 2 V / green: 2.1 V	2.5 V

A resistor must be series-connected by the user.

Resistor value = $\dfrac{\text{supply voltage - LED forward voltage}}{\text{LED forward current}}$

On flying lead versions, the LED resistor
can be integrated by APEM on request.

The company reserves the right to change specifications without notice.

IR series

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⚙ GENERAL SPECIFICATIONS

- Panel thickness : 8 mm (.314) max.
- Total travel : 1.6 mm (.062) ± 0.3 mm
- Typical operating force : 4 N ± 2 N
- Low level or mechanical life : 1,000,000 cycles
- Torque : 0.8 Nm max. applied to nut
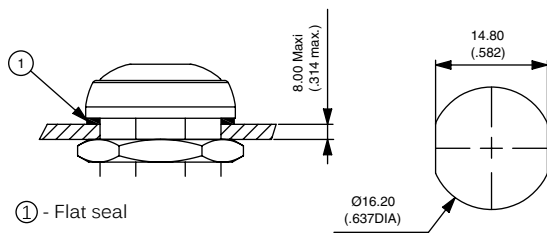- Soldering : 320 °C (608 °F) max. for 3 sec.

📐 MATERIALS

- Case : thermoplastic UL94-V0
- Actuator : polyamide 6/6
- Bushing/bezel : polyamide 6/6
- Contacts : **4** and **7** : silver, gold plated
  2 : silver (screw terminals)
- Multi-wire lead AWG20, section 0.6 mm2
- LED wire : AWG26, section 0.12 mm2
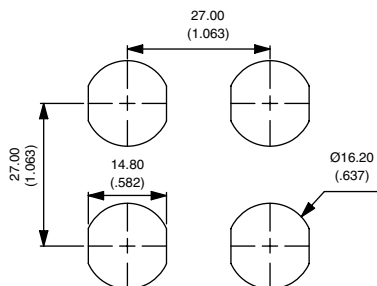- Lens : polycarbonate
- Terminal seal : epoxy

APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.
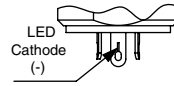
🪛 MOUNTING

PANEL CUT-OUT

① - Flat seal

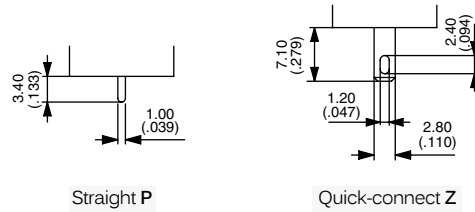8.00 Maxi (.314 max.)

14.80 (.582)

Ø16.20 (.637DIA)

MATRIX MOUNTING

27.00 (1.063)

27.00 (1.063)

14.80 (.582)

Ø16.20 (.637)

👂 TERMINALS

ILLUMINATED MODELS

LED Cathode (-)

NON-ILLUMINATED MODELS

3.40 (.133)

1.00 (.039)

Straight **P**

7.10 (.279)

2.40 (.094)

1.20 (.047)

2.80 (.110)

Quick-connect **Z**
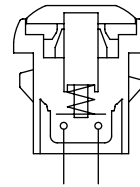
⚡ ELECTRICAL FUNCTIONS
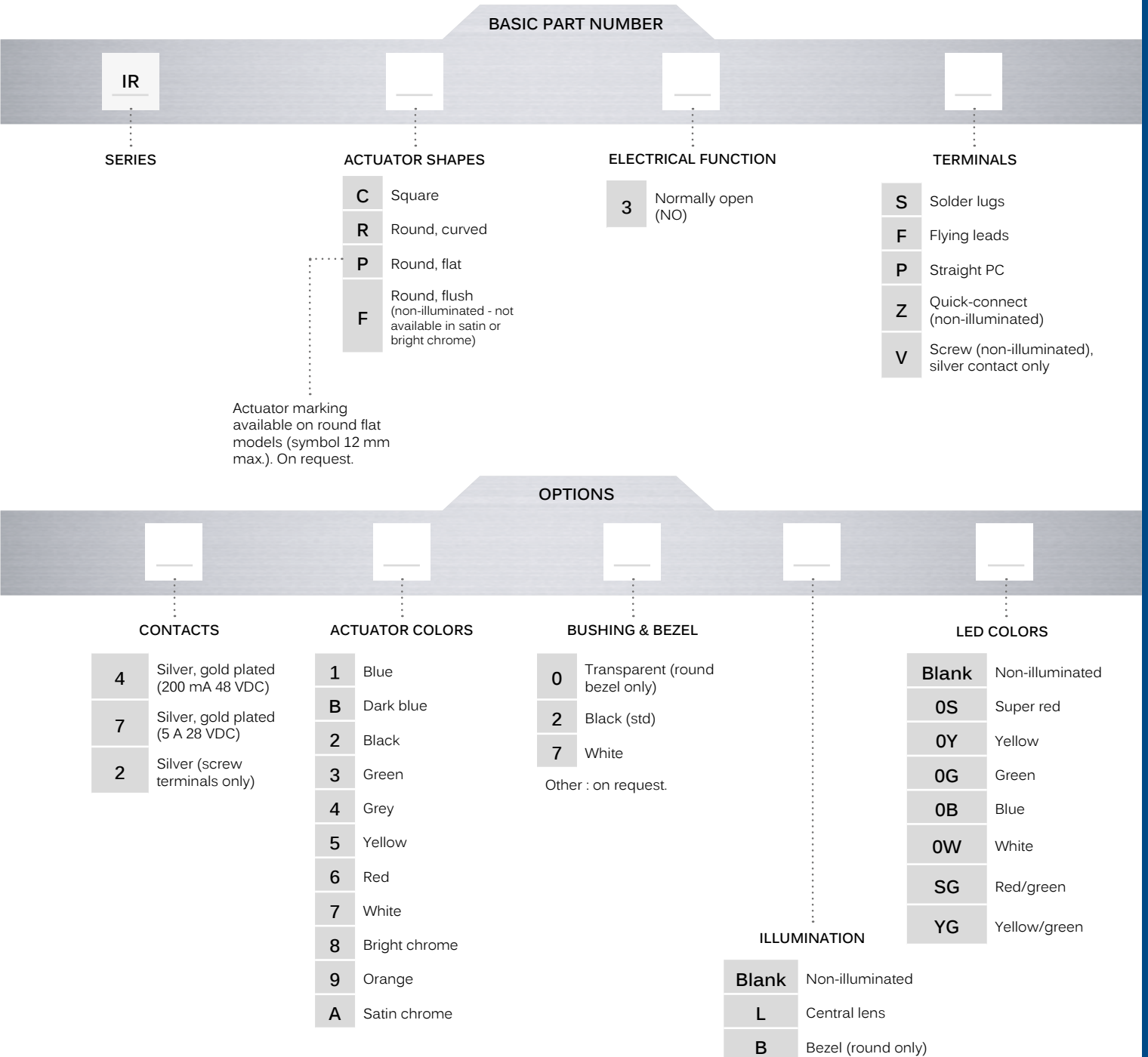
ILLUMINATED MODELS
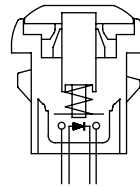
Function 3 (NO)

NON-ILLUMINATED MODELS

Function 3 (NO)

IR series

Sealed pushbutton switches • bushing Ø 16 mm • momentary • standard version

BUILD YOUR PART NUMBER

BASIC PART NUMBER

| IR | | | |

SERIES

ACTUATOR SHAPES

C	Square
R	Round, curved
P	Round, flat
F	Round, flush (non-illuminated - not available in satin or bright chrome)

Actuator marking available on round flat models (symbol 12 mm max.). On request.

ELECTRICAL FUNCTION

3	Normally open (NO)

TERMINALS

S	Solder lugs
F	Flying leads
P	Straight PC
Z	Quick-connect (non-illuminated)
V	Screw (non-illuminated), silver contact only

OPTIONS

CONTACTS

4	Silver, gold plated (200 mA 48 VDC)
7	Silver, gold plated (5 A 28 VDC)
2	Silver (screw terminals only)

ACTUATOR COLORS

1	Blue
B	Dark blue
2	Black
3	Green
4	Grey
5	Yellow
6	Red
7	White
8	Bright chrome
9	Orange
A	Satin chrome

BUSHING & BEZEL

0	Transparent (round bezel only)
2	Black (std)
7	White

Other : on request.

ILLUMINATION

Blank	Non-illuminated
L	Central lens
B	Bezel (round only)

LED COLORS

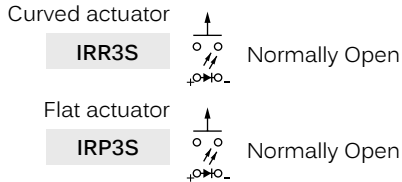| Blank	Non-illuminated
0S	Super red
0Y	Yellow
0G	Green
0B	Blue
0W	White
SG	Red/green
YG	Yellow/green

ABOUT THIS SERIES

On the following pages, you will find successively basic part numbers of switches and options in the same order as in above chart.

Notice : please note that not all combinations of above numbers are available. Refer to the following pages for further information.

A sealing boot is available to protect the switches against frost and sand (P/N U7125). Round models only. See "Sealing Boot" section of website.

Mounting accessories : Standard hardware supplied : 1 hex nut 19 mm (.748) across flats and 1 flat seal. Hex nut P/N U6715.
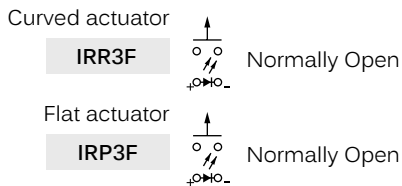
IR series

Sealed pushbutton switches • bushing Ø 16 mm •
momentary • standard version
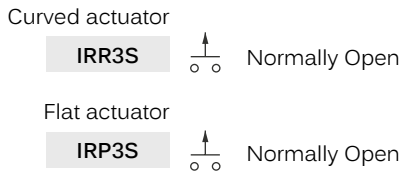
ROUND - ILLUMINATED
SOLDER LUG TERMINALS

Curved actuator

| IRR3S | Normally Open |

Flat actuator

| IRP3S | Normally Open |

Also available with straight PC terminals : **IR•3P.**
LED color is indicated by the bottom of the switch.
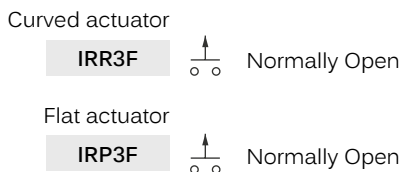
ROUND - ILLUMINATED
FLYING LEAD TERMINALS

Curved actuator

| IRR3F | Normally Open |

Flat actuator

| IRP3F | Normally Open |

Wire colors : black : NO contact, red : LED anode (+), blue : LED cathode (-)

ROUND - NON-LLUMINATED
SOLDER LUG TERMINALS

Curved actuator

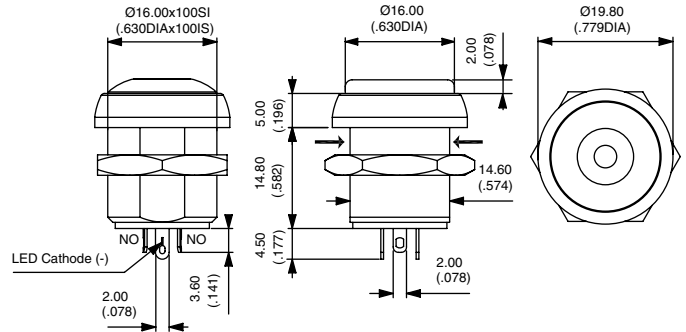| IRR3S | Normally Open |

Flat actuator

| IRP3S | Normally Open |

Also available with straight PC terminals : **IR•3P**
and quick-connect terminals : **IR•3Z.**

ROUND - NON-LLUMINATED
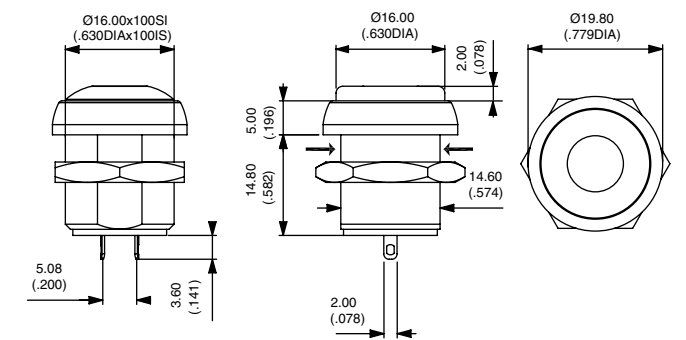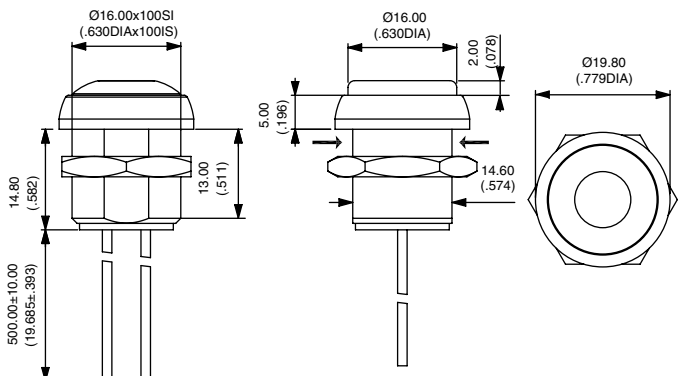## FLYING LEAD TERMINALS

Curved actuator

| IRR3F | Normally Open |

Flat actuator

| IRP3F | Normally Open |

→ FLAT

Ø16.00x100SI (.630DIAx100IS)
Ø16.00 (.630DIA)
Ø19.80 (.779DIA)
2.00 (.078)
5.00 (.196)
14.80 (.582)
14.60 (.574)
4.50 (.177)
LED Cathode (-)
NO   NO
2.00 (.078)
3.60 (.141)
2.00 (.078)

→ FLAT

Ø16.00x100SI (.630DIAx100IS)
Ø16.00 (.630DIA)
Ø19.80 (.779DIA)
2.00 (.078)
5.00 (.196)
13.00 (.511)
23.00 (.905)
14.60 (.574)
500.00±10.00 (19.685±.393)

→ FLAT

Ø16.00x100SI (.630DIAx100IS)
Ø16.00 (.630DIA)
Ø19.80 (.779DIA)
2.00 (.078)
5.00 (.196)
14.80 (.582)
14.60 (.574)
5.08 (.200)
3.60 (.141)
2.00 (.078)

→ FLAT

Ø16.00x100SI (.630DIAx100IS)
Ø16.00 (.630DIA)
Ø19.80 (.779DIA)
2.00 (.078)
5.00 (.196)
14.80 (.582)
13.00 (.511)
14.60 (.574)
500.00±10.00 (19.685±.393)

IR series

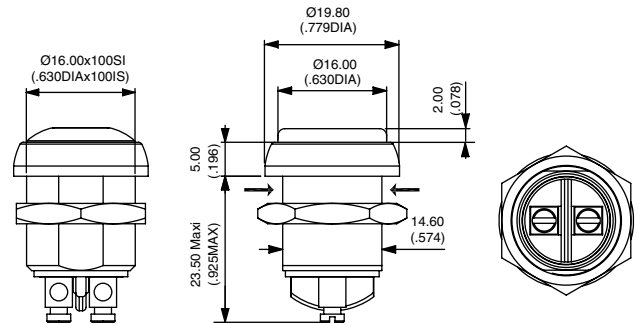Sealed pushbutton switches • bushing Ø 16 mm • momentary • standard version

ROUND - NON-LLUMINATED SCREW TERMINALS

Curved actuator

IRR3V   Normally Open

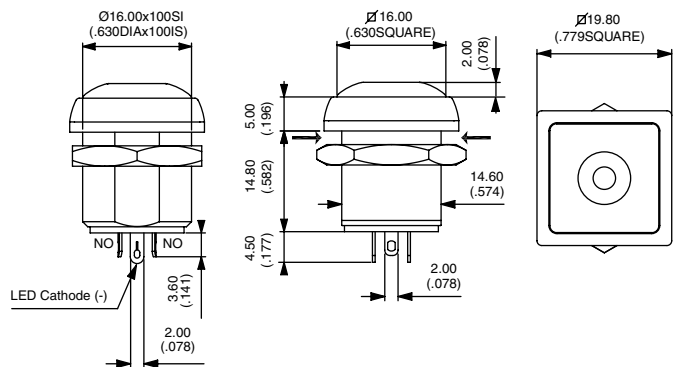Flat actuator

IRP3V   Normally Open

→ FLAT

Ø19.80
(.779DIA)

Ø16.00x100SI
(.630DIAx100IS)

Ø16.00
(.630DIA)

2.00
(.078)

5.00
(.196)

14.60
(.574)

23.50 Maxi
(.925MAX)

SQUARE - ILLUMINATED SOLDER LUG TERMINALS

IRC3S   Normally Open

Also available with straight PC terminals : **IRC3P.**
LED color is indicated by the bottom of the switch.

→ FLAT

Ø16.00x100SI
(.630DIAx100IS)

Ø16.00
(.630SQUARE)

2.00
(.078)

Ø19.80
(.779SQUARE)

5.00
(.196)

14.80
(.582)

14.60
(.574)

4.50
(.177)

NO   NO

LED Cathode (-)

3.60
(.141)

2.00
(.078)

2.00
(.078)

SQUARE - ILLUMINATED FLYING LEAD TERMINALS

IRC3F   Normally Open

Wire colors : black : NO contact, red : LED anode (+), blue : LED cathode (-)

→ FLAT

Ø16.00x100SI
(.630DIAx100IS)

Ø16.00
(.630SQUARE)

2.00
(.078)

5.00
(.196)

23.00
(.905)

14.60
(.574)

13.80
(.543DIA)

500.00±10.00
(19.685±.393)
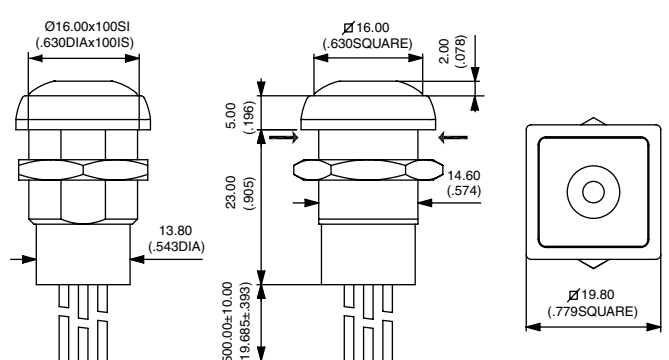
Ø19.80
(.779SQUARE)

SQUARE - NON-ILLUMINATED SOLDER LUG TERMINALS

IRC3S   Normally Open
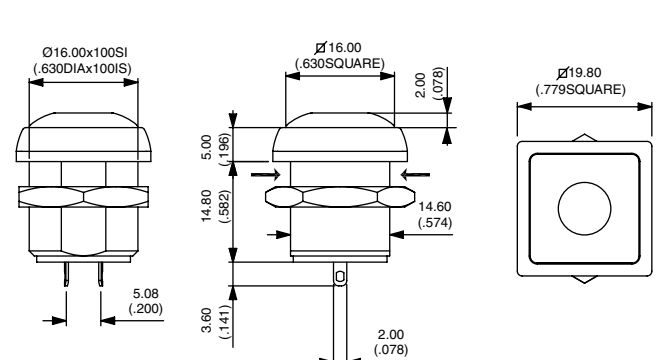
Also available with straight PC terminals : **IRC3P**
and quick-connect terminals : **IRC3Z.**

→ FLAT

Ø16.00x100SI
(.630DIAx100IS)

Ø16.00
(.630SQUARE)

2.00
(.078)

Ø19.80
(.779SQUARE)

5.00
(.196)

14.80
(.582)

14.60
(.574)

5.08
(.200)

3.60
(.141)

2.00
(.078)

IR series

Sealed pushbutton switches • bushing Ø 16 mm •
momentary • standard version

SQUARE - NON-ILLUMINATED
FLYING LEAD TERMINALS

→ FLAT

Ø16.00x100SI
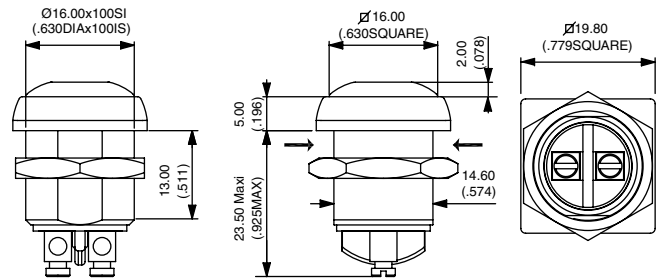(.630DIAx100IS)

Ø16.00
(.630SQUARE)

2.00
(.078)

Ø19.80
(.779SQUARE)

5.00
(.196)

14.80
(.582)

14.60
(.574)

500.00±10.00
(19.685±.393)

| IRC3F | ⊥ oo | Normally Open |

SQUARE - NON-ILLUMINATED
SCREW TERMINALS

→ FLAT

Ø16.00x100SI
(.630DIAx100IS)

Ø16.00
(.630SQUARE)

2.00
(.078)

Ø19.80
(.779SQUARE)

5.00
(.196)

13.00
(.511)

23.50 Maxi
(.925MAX)

14.60
(.574)

| IRC3V | ⊥ oo | Normally Open |

CONTACTS

BASIC P/N

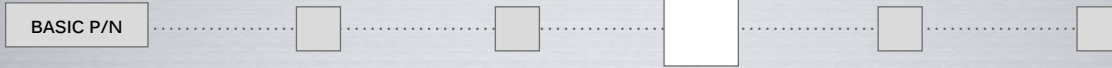| 4 | Silver, gold plated (200 mA 48 VDC) |
| 7 | Silver, gold plated (5 A 28 VDC) |
| 2 | Silver (screw terminals only) |

ACTUATOR COLORS

BASIC P/N

1	Blue
B	Dark blue
2	Black
3	Green
4	Grey
5	Yellow
6	Red
7	White
8	Bright chrome
9	Orange
A	Satin chrome

IR series

Sealed pushbutton switches • bushing Ø 16 mm • momentary • standard version
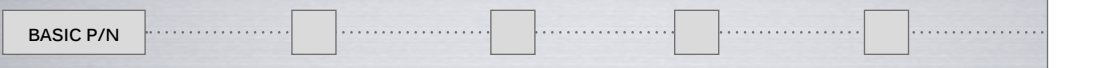
BUSHING AND BEZEL

BASIC P/N

2	Black (standard)
7	White
0	Transparent (round bezel only)

ILLUMINATION

BASIC P/N

| L | Central lens |
| B | Bezel (round only) |

LED COLORS

BASIC P/N

0S	Super red
0Y	Yellow
0G	Green
0B	Blue
0W	White
SG	Red/green
YG	Yellow/green