



- Rear mounting for easier installation
- Latching action metal models
- Fixed or variable panel thickness
- Illuminated or non-illuminated
- Flat actuator for optional marking
- Sealed to IP67

### ENVIRONMENTAL AND GENERAL SPECIFICATIONS

- Degree of protection : IP67
- Temperature range : -40°C to +85°C
- Total travel : 2,5 mm (.098)
- Mechanical life : 200.000 cycles

### ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load : 100mA 24VDC - 200.000 cycles
- Initial contact resistance : 100 mΩ max.
- Insulation resistance : 1 GΩ min. at 500VDC
- Dielectric strength : 1.500 Vrms between terminals  
1.000 Vrms between terminals and frame

#### LED COMPONENT SPECIFICATIONS

LED colour	Forward current	Typ. forward voltage	Max. forward voltage
Super red (LOS)	20mA	1,95V	1,95V
Yellow (LOY)	20mA	2V	2,05V
Green (LOG)	20mA	3,2V	3,70V
Blue (LOB)	20mA	3,2V	4V

A resistor must be series-connected by the user.

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

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

### MATERIALS

- Case : thermoplastic UL94-V0
- Plunger : polyamide
- Bushing/bezel : brass, nickel plated
- Contacts : silver, gold plated
- Multi-wire lead AWG20, section 0,6 mm<sup>2</sup>
- LED wire : AWG26, section 0,12 mm<sup>2</sup>
- Lens : polycarbonate
- Terminal seal : epoxy

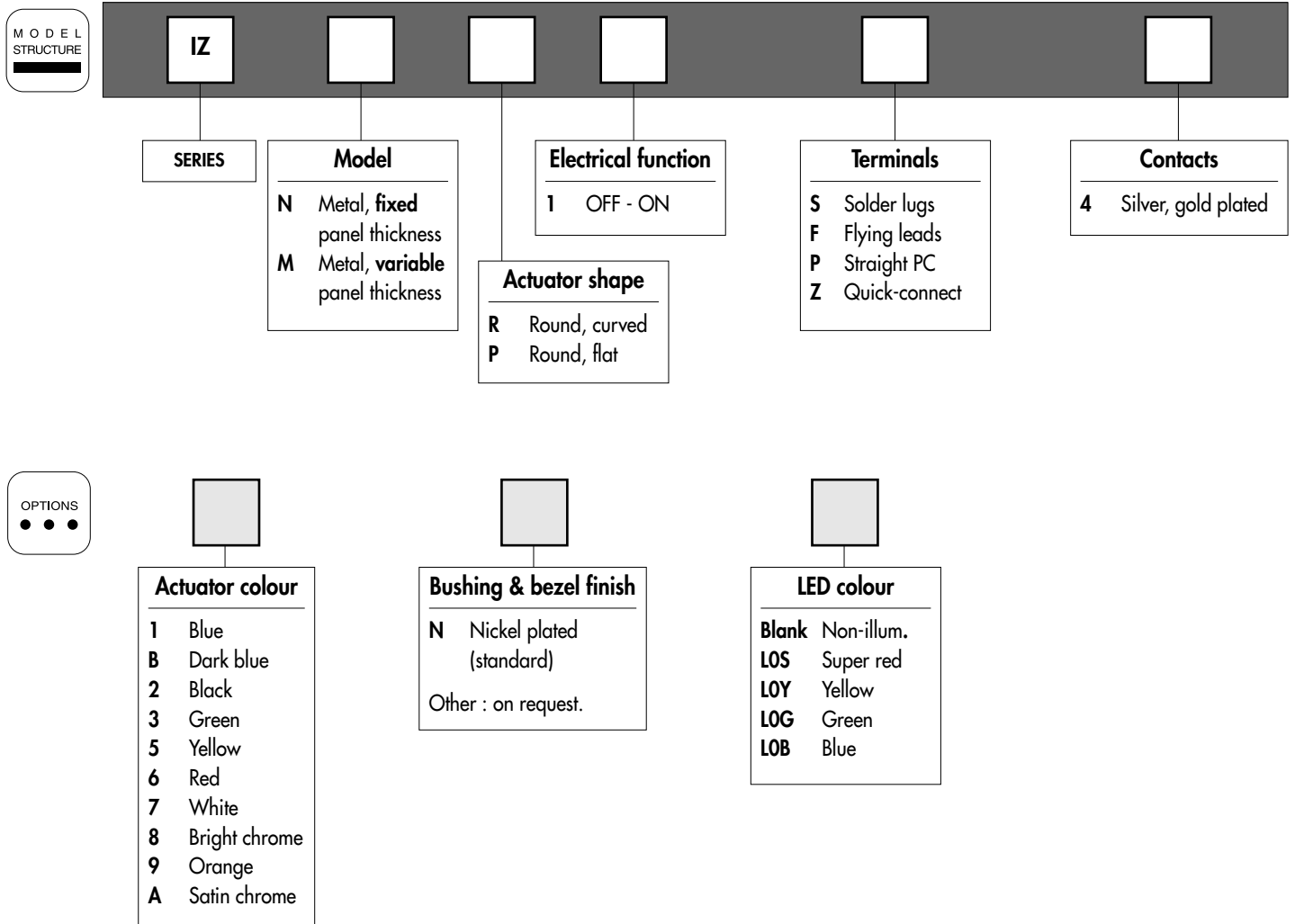
**Dimensions** : First dimensions are in mm while inches are shown as bracketed numbers.

**Tolerance** : The general tolerance for dimensions in this brochure is ± 0,3 (.012).

Overall dimension tolerance is ± 0,5 (.020).

Dimensions, specifications and data shown in this catalogue are subject to change without notice.

### Overview



### ABOUT THIS SERIES

On the following pages, you will find successively :  
model structure of switches and options in the same order as in above chart

**Dimensions** : first dimensions are in mm while inches are shown as bracketted numbers.



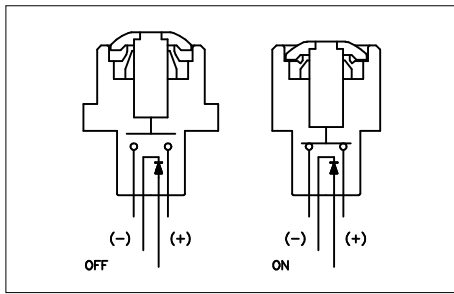
**NOTICE** : please note that not all combinations of above numbers are available.  
Refer to the following pages for further information.



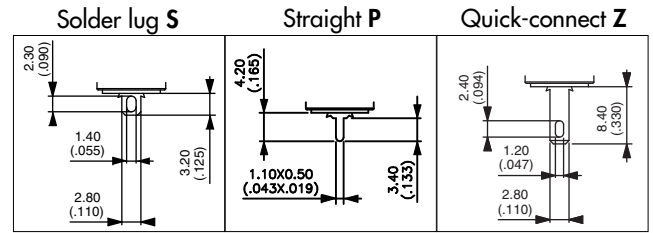
**Mounting accessories** : Standard hardware supplied :  
- IZN : 1 castellated nickel plated brass nut U6911 + 1 O-ring  
- IZM : 1 castellated nickel plated brass nut U6911 + 1 silicone flat seal + 1 hex nut 19 mm (.748) across flats U4116.



**Packaging unit** : 25 pieces for flying lead models - 40 pieces for other models



- Four LED colours
- Tin plated LED terminals
- Gold plated contacts



**MODEL STRUCTURE**

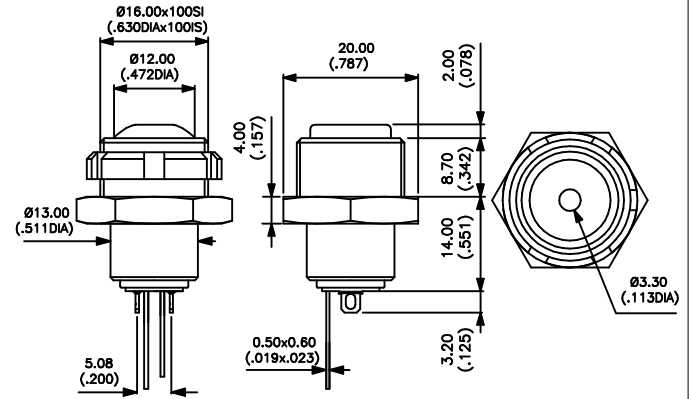


Plunger marking available on IZ•P models (symbol 10 mm max.). On request.

### Fixed panel thickness - solder lug terminals



- Curved actuator **IZNR1S4** OFF - ON
- Flat actuator **IZNP1S4** OFF - ON

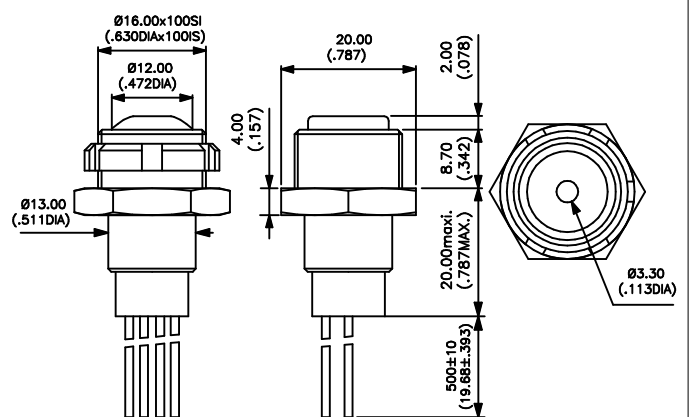


Also available with straight PC terminals : **IZN•1P4** & quick-connect terminals : **IZN•1Z4**.

### Fixed panel thickness - flying lead terminals



- Curved actuator **IZNR1F4** OFF - ON
- Flat actuator **IZNP1F4** OFF - ON

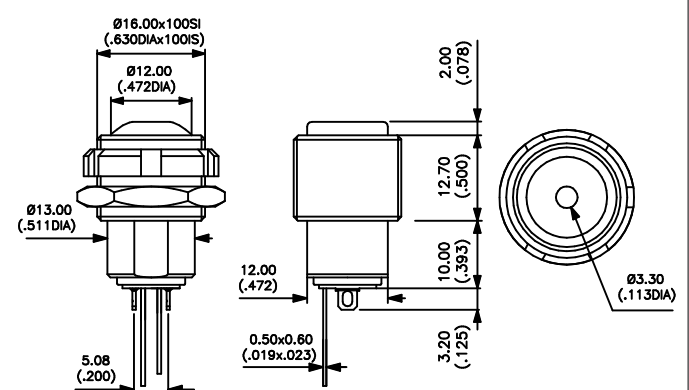


Wire colours : black : contact,  
red : LED anode(+), blue : LED cathode (-)

### Variable panel thickness - solder lug terminals



- Curved actuator **IZMR1S4** OFF - ON
- Flat actuator **IZMP1S4** OFF - ON



Also available with straight PC terminals : **IZM•1P4** & quick-connect terminals : **IZM•1Z4**.

# IZ series

Preliminary

Rear mounted sealed pushbutton switches - bushing Ø 16 - metal - latching

Illuminated

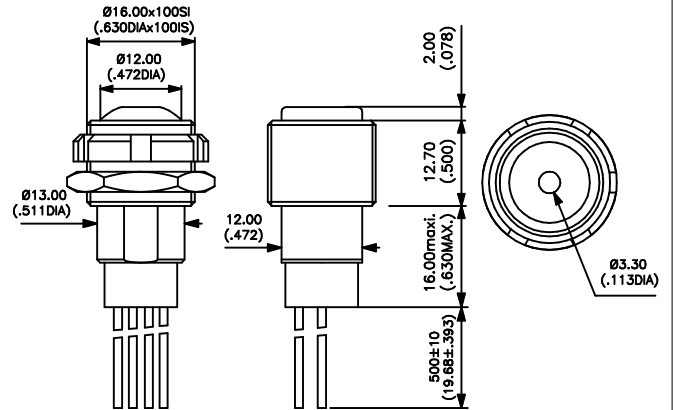
## Variable panel thickness - flying lead terminals



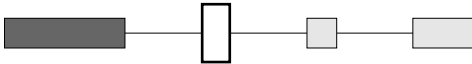
Curved actuator  
**IZMR1F4** OFF - ON

Flat actuator  
**IZMP1F4** OFF - ON

Wire colours : black : contact,  
red : LED anode(+), blue : LED cathode (-)

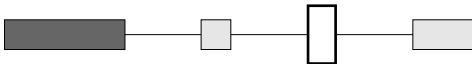


### ACTUATOR COLOUR



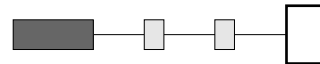
1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow - 6 : red - 7 : white - 8 : bright chrome - 9 : orange  
A : satin chrome

### BUSHING AND BEZEL COLOUR

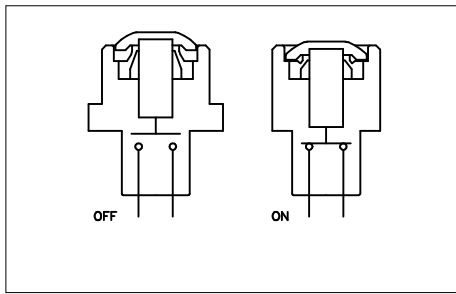


N : nickel plated (standard)  
Other : on request.

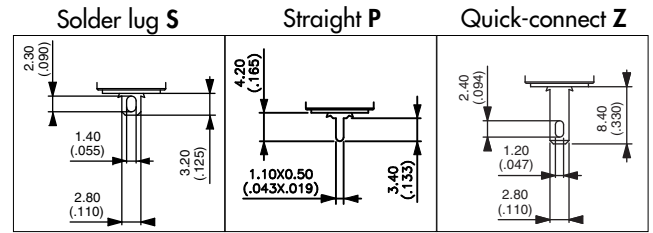
### LED COLOUR



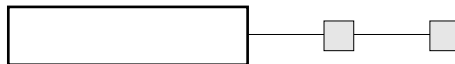
LOS : super red - LOY : yellow - LOG : green  
LOB : blue



- Gold plated contacts



**MODEL STRUCTURE**



Plunger marking available on IZ•P models (symbol 10 mm max.). On request.

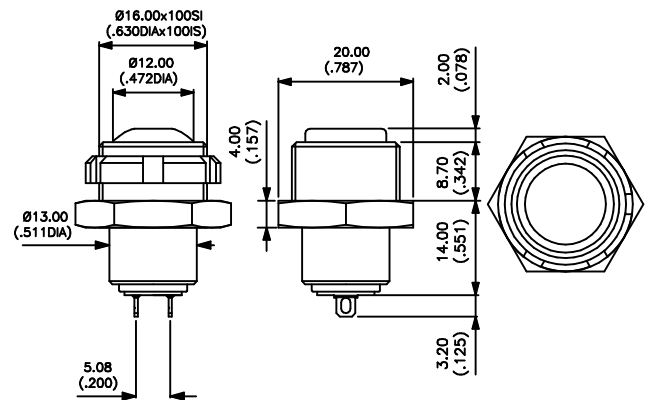
**Fixed panel thickness - solder lug terminals**



Curved actuator  
**IZNR1S4**      OFF - ON

Flat actuator  
**IZNP1S4**      OFF - ON

Also available with straight PC terminals :  
**IZN•1P4** & quick-connect terminals : **IZN•1Z4**.



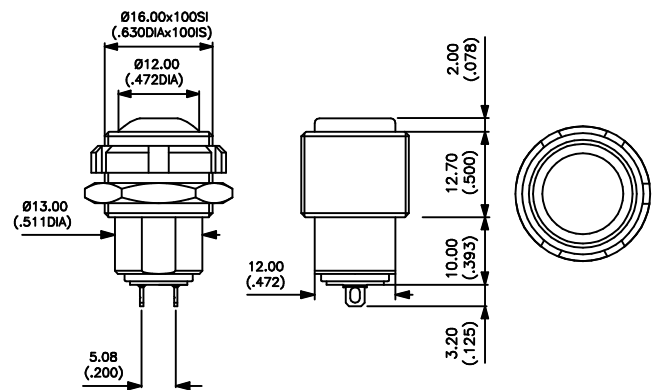
**Variable panel thickness - solder lug terminals**



Curved actuator  
**IZMR1S4**      OFF - ON

Flat actuator  
**IZMP1S4**      OFF - ON

Also available with straight PC terminals :  
**IZM•1P4** & quick-connect terminals : **IZM•1Z4**.



For FLYING LEAD versions, refer to previous pages (illuminated models). Non-illuminated have 2 wires only.

**ACTUATOR COLOUR**



1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow - 6 : red - 7 : white - 8 : bright chrome - 9 : orange  
A : satin chrome

**BUSHING AND BEZEL COLOUR**



N : nickel plated (standard)  
Other : on request.

# I<sup>Z</sup> series

Preliminary

## Rear mounted sealed pushbutton switches - bushing Ø 16 - momentary

Distinctive features and specifications



- Rear mounting for easier installation
- Momentary models
- Illuminated or non-illuminated
- Flat actuator for optional marking
- Sealed to IP67
- Screw version available up to 4A

### ENVIRONMENTAL AND GENERAL SPECIFICATIONS

- Degree of protection : IP67
- Temperature range : -40°C to +85°C
- Total travel : 1,7 mm (.067)
- Mechanical life : 1.000.000 cycles

### ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
  - Gold plated silver contacts (code 4) :  
200mA 48VDC - 200mA 250VAC
  - Silver contacts (code 2) - screw terminals : 2A 250VAC - 4A 48VDC
- Electrical life at full load : 500.000 cycles
- Initial contact resistance : 100 mΩ max.
- Insulation resistance : 1 GΩ min. at 500VDC
- Dielectric strength : 1.000 Vrms 50 Hz

### LED COMPONENT SPECIFICATIONS

LED colour	Forward current	Typ. forward voltage	Max. forward voltage
Super red (LOS)	20mA	2,1V	2,3V
Yellow (LOY)	20mA	2,1V	2,3V
Green (LOG)	20mA	2,1V	2,3V
Blue (LOB)	20mA	3,2V	3,8V
White (LOW)	20mA	3,35V	4,25V

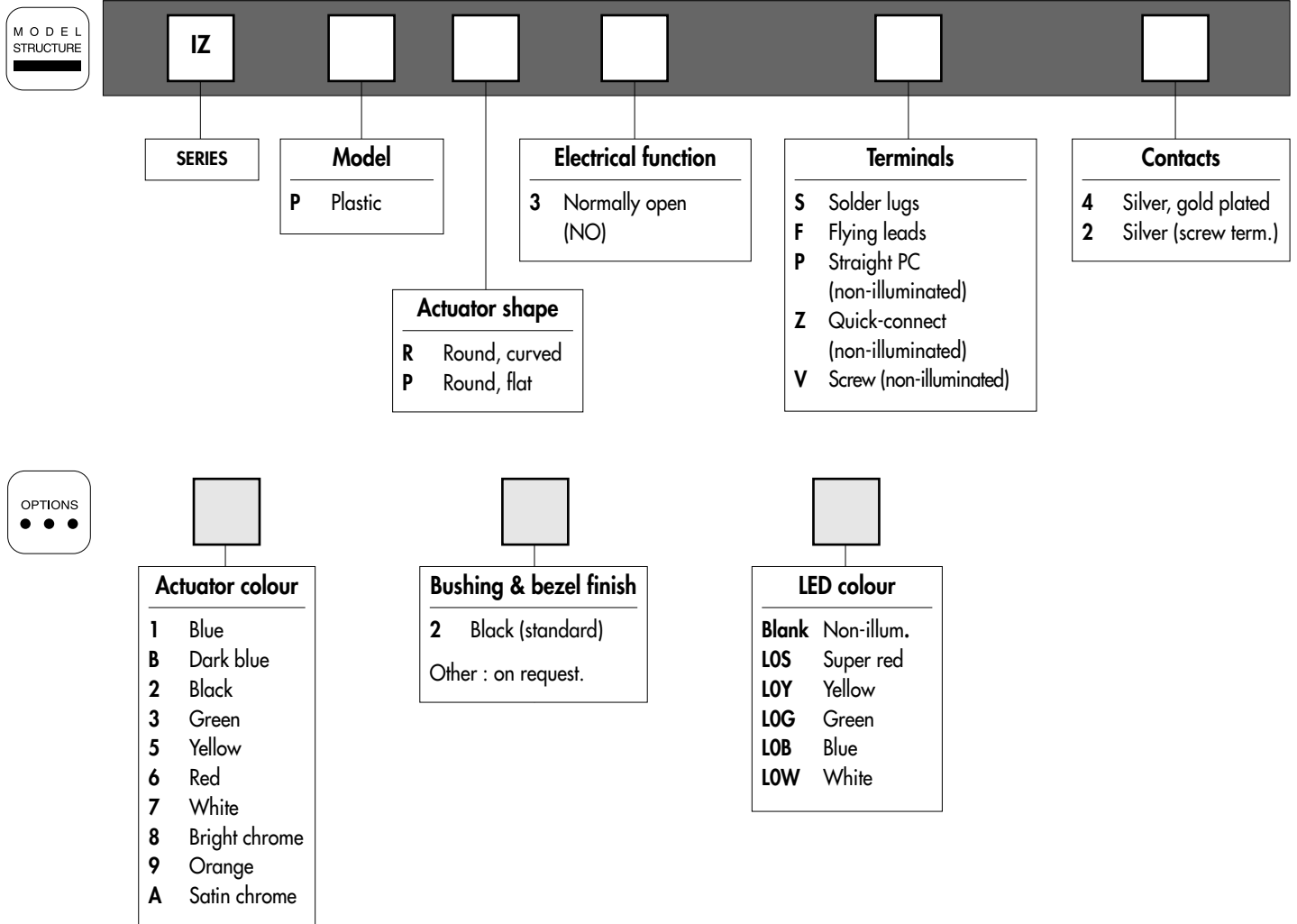
A resistor must be series-connected by the user.

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

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

### MATERIALS

- Case : thermoplastic UL94-V0
- Plunger : polyamide
- Bushing/bezel : polyamide
- Contacts :
  - 4 : silver, gold plated
  - 2 : silver (screw terminals)
- Multi-wire lead AWG20, section 0,6 mm<sup>2</sup>
- LED wire : AWG26, section 0,12 mm<sup>2</sup>
- Lens : polycarbonate
- Terminal seal : epoxy



### ABOUT THIS SERIES

On the following pages, you will find successively :  
model structure of switches and options in the same order as in above chart

**Dimensions** : first dimensions are in mm while inches are shown as bracketted numbers.



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



**Mounting accessories** : Standard hardware supplied : 1 castellated black plastic nut U4249 and 1 silicone flat seal.



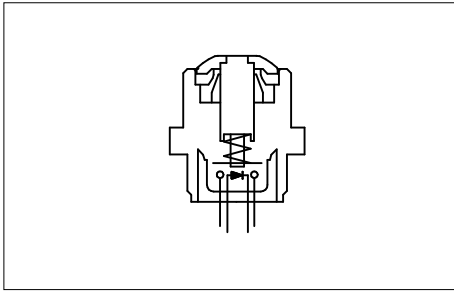
**Packaging unit** : 25 pieces for flying lead models - 40 pieces for other models

# IZ series

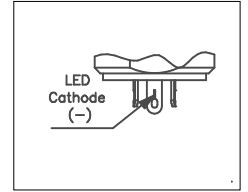
Preliminary

## Rear mounted sealed pushbutton switches - bushing Ø 16 - momentary

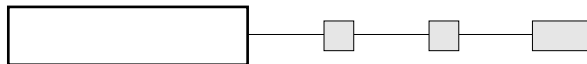
Illuminated



- Five LED colours
- Tin plated LED terminals
- Gold plated contacts



MODEL STRUCTURE



Plunger marking available on IZPP models (symbol 10 mm max.). On request.

### Solder lug terminals

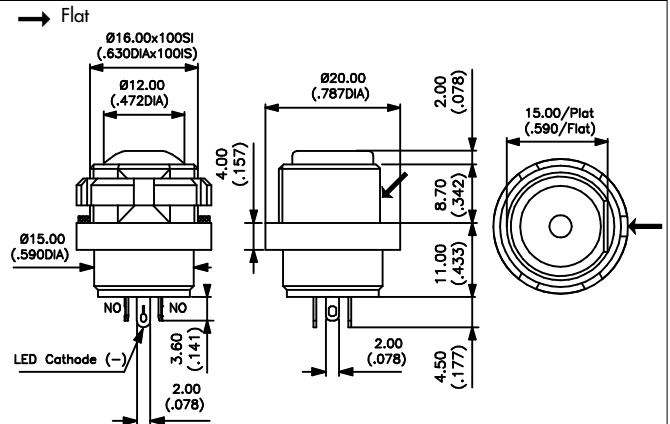


Curved actuator  
**IZPR3S4**

Normally Open

Flat actuator  
**IZPP3S4**

Normally Open



### Flying lead terminals - momentary



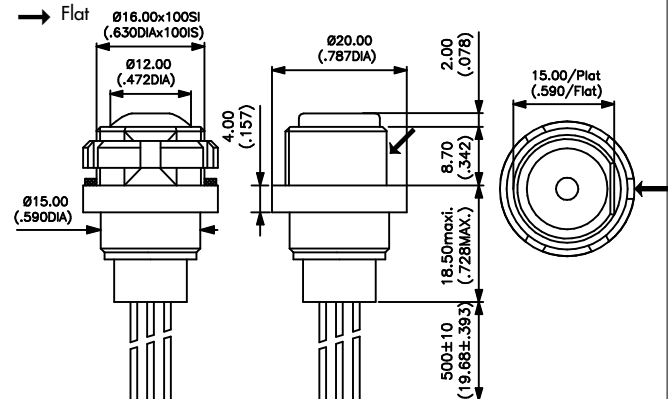
Curved actuator  
**IZPR3F4**

Normally Open

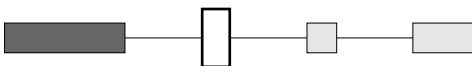
Flat actuator  
**IZPP3F4**

Normally Open

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

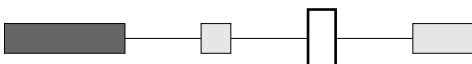


### ACTUATOR COLOUR



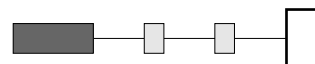
1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow - 6 : red - 7 : white - 8 : bright chrome - 9 : orange  
A : satin chrome

### BUSHING AND BEZEL COLOUR



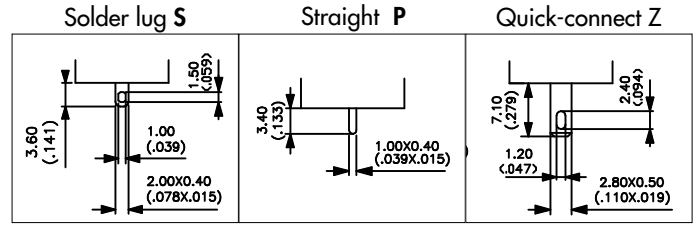
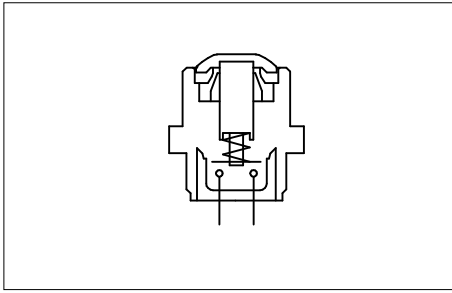
2 : black (standard)  
Other : on request.

### LED COLOUR

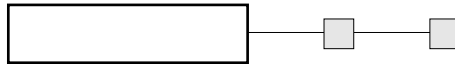


LOS : super red - LOY : yellow - LOG : green  
LOB : blue - LOW : white





MODEL  
STRUCTURE

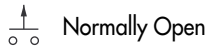


Plunger marking available on IZPP models (symbol 12 mm max.). On request.

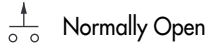
### Solder lug terminals - gold plated contacts



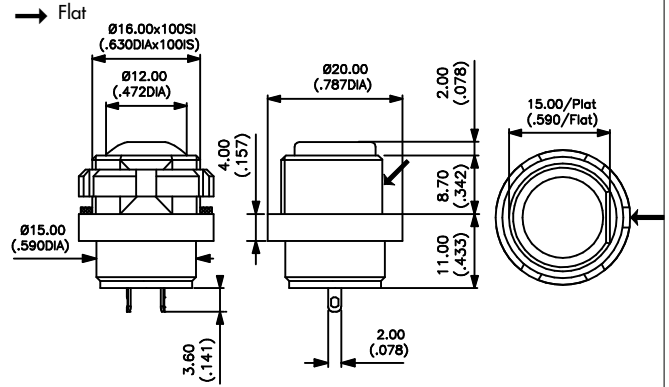
Curved actuator  
**IZPR3S4**



Flat actuator  
**IZPP3S4**



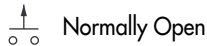
Also available with straight PC terminals :  
**IZP•3P4** and quick-connect terminals : **IZP•3Z4**.



### Sealed flying lead terminals - gold plated contacts



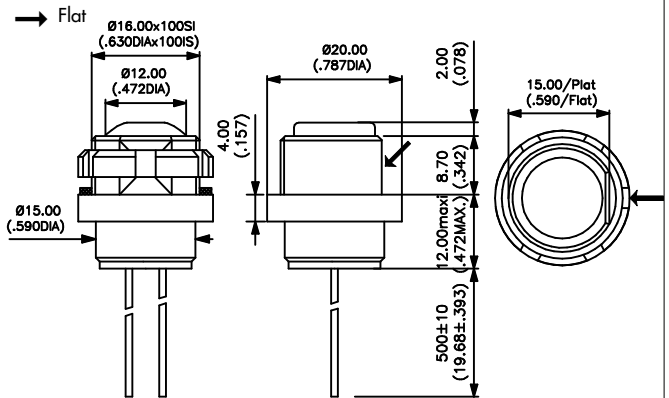
Curved actuator  
**IZPR3F4**



Flat actuator  
**IZPP3F4**



Also available with straight PC terminals :  
**IZP•3P4** and quick-connect terminals : **IZP•3Z4**.



### Screw terminals - silver contacts



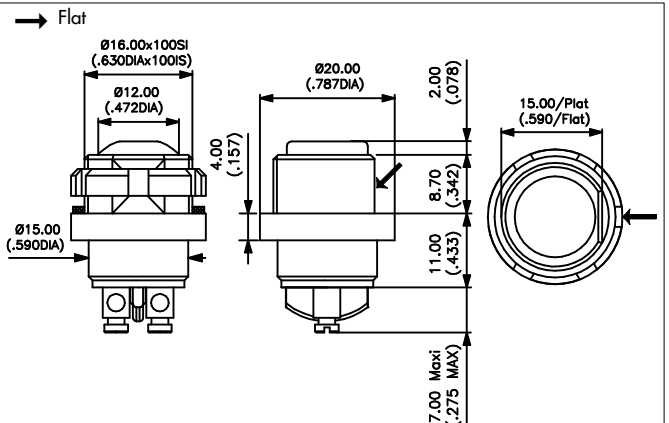
Curved actuator  
**IZPR3V2**



Flat actuator  
**IZPP3V2**



Also available with straight PC terminals :  
**IZP•3P4** and quick-connect terminals : **IZP•3Z4**.



Actuator colour and bushing/bezel colour : select the desired codes on previous page.

# I<sup>Z</sup> series

Preliminary

## Rear mounted sealed pushbutton switches - bushing Ø 16 - latching action

Distinctive features and specifications



- Rear mounting for easier installation
- Latching action models
- Illuminated or non-illuminated
- Flat actuator for optional marking
- Sealed to IP67

### ENVIRONMENTAL AND GENERAL SPECIFICATIONS

- Degree of protection : IP67
- Temperature range : -40°C to +85°C
- Total travel : 2,5 mm (.098)
- Mechanical life : 200.000 cycles

### ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load : 100mA 24VDC - 200.000 cycles
- Initial contact resistance : 100 mΩ max.
- Insulation resistance : 1 GΩ min. at 500VDC
- Dielectric strength : 1.500 Vrms between terminals

### LED COMPONENT SPECIFICATIONS

LED colour	Forward current	Typ. forward voltage	Max. forward voltage
Super red (LOS)	20mA	1,95V	1,95V
Yellow (LOY)	20mA	2V	2,05V
Green (LOG)	20mA	3,2V	3,70V
Blue (LOB)	20mA	3,2V	4V

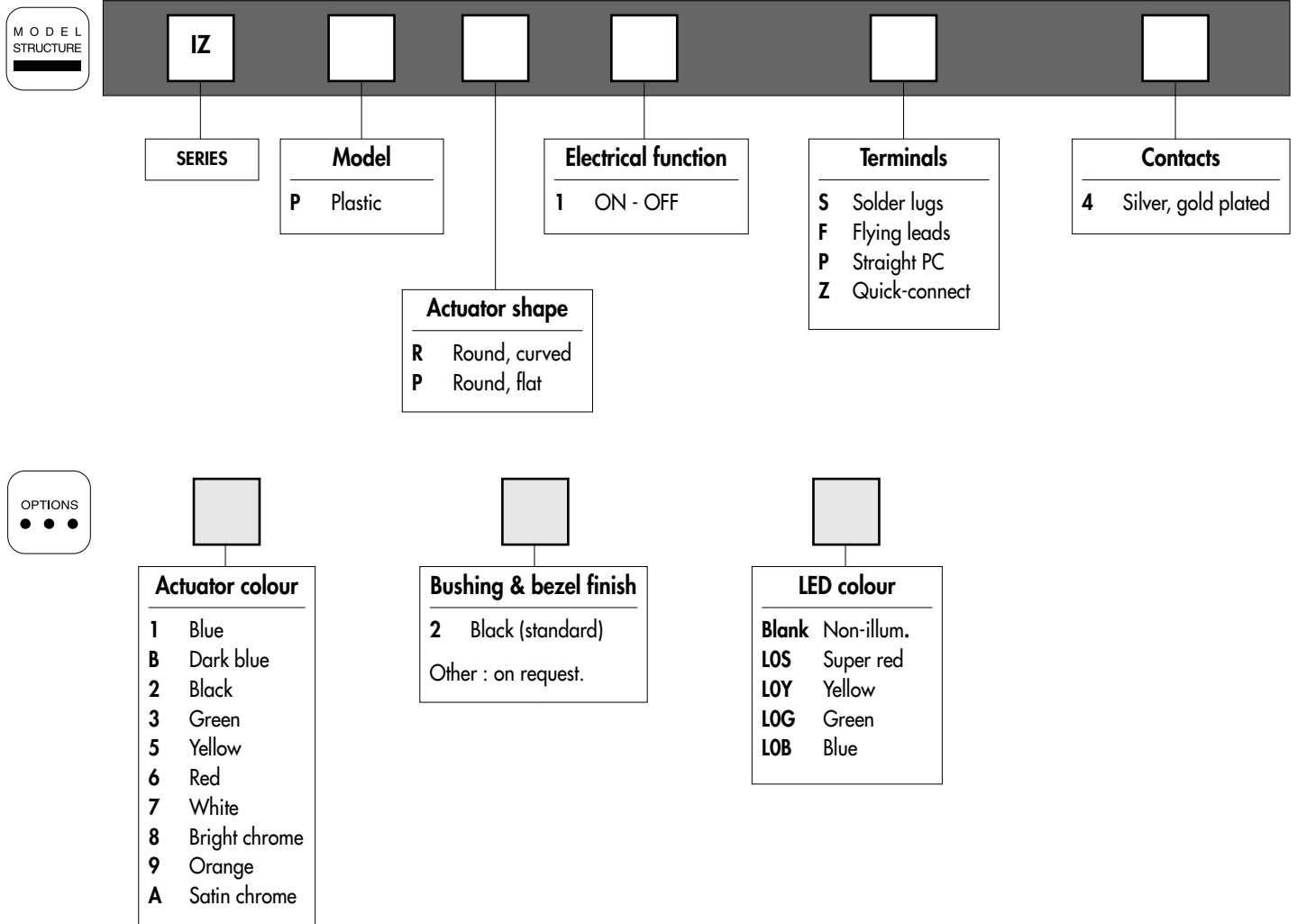
A resistor must be series-connected by the user.

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

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

### MATERIALS

- Case : thermoplastic UL94-V0
- Plunger : polyamide
- Bushing/bezel : polyamide
- Contacts : silver, gold plated
- Multi-wire lead AWG20, section 0,6 mm<sup>2</sup>
- LED wire : AWG26, section 0,12 mm<sup>2</sup>
- Lens : polycarbonate
- Terminal seal : epoxy



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model structure of switches and options in the same order as in above chart

**Dimensions** : first dimensions are in mm while inches are shown as bracketted numbers.



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



**Mounting accessories** : Standard hardware supplied : 1 castellated black plastic nut U4249 and 1 silicone flat seal.



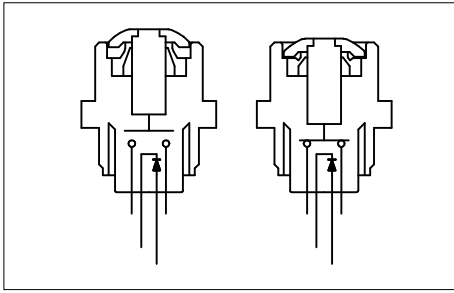
**Packaging unit** : 25 pieces for flying lead models - 40 pieces for other models

# IZ series

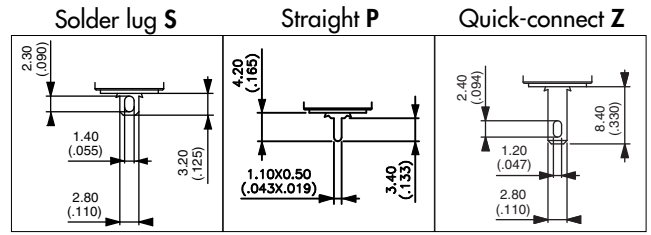
Preliminary

## Rear mounted sealed pushbutton switches - bushing Ø 16 - latching action

Illuminated



- Four LED colours
- Tin plated LED terminals
- Gold plated contacts



### MODEL STRUCTURE



Plunger marking available on IZPP models (symbol 10 mm max.). On request.

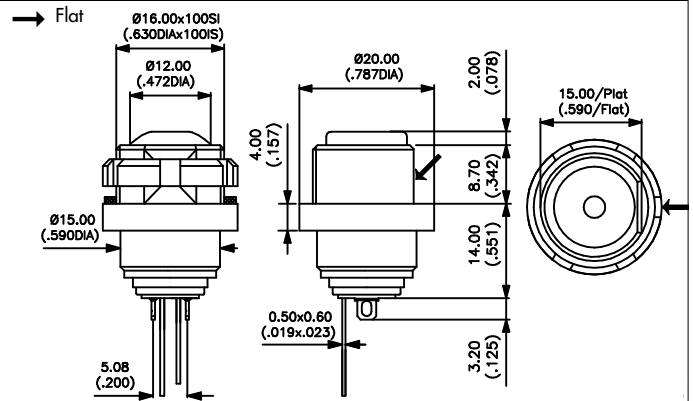
### Solder lug terminals



Curved actuator  
**IZPR1S4** ON - OFF

Flat actuator  
**IZPP1S4** ON - OFF

Also available with straight PC terminals : **IZP•1P4** and quick-connect terminals : **IZP•1Z4**.



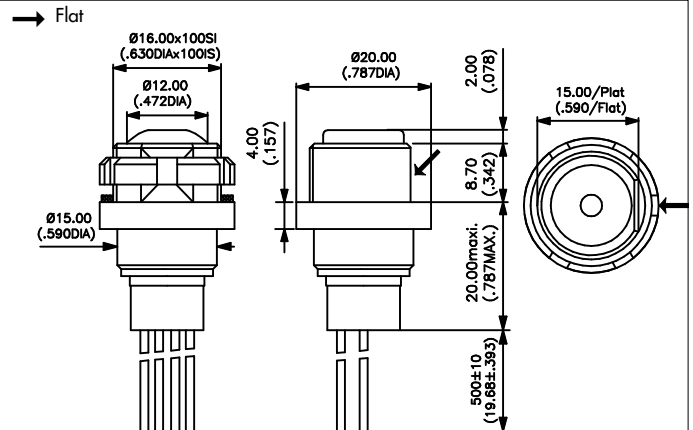
### Sealed flying lead terminals



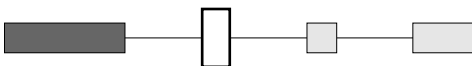
Curved actuator  
**IZPR1F4** ON - OFF

Flat actuator  
**IZPP1F4** ON - OFF

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

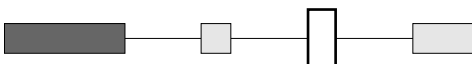


### ACTUATOR COLOUR



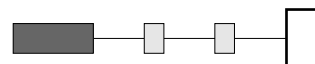
1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow - 6 : red - 7 : white - 8 : bright chrome - 9 : orange  
A : satin chrome

### BUSHING AND BEZEL COLOUR

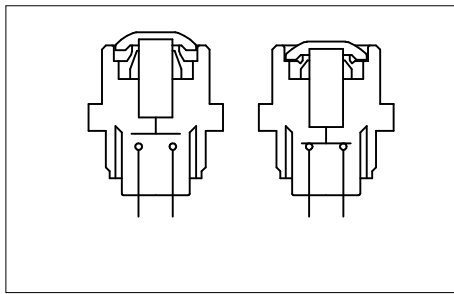


2 : black (standard)  
Other : on request.

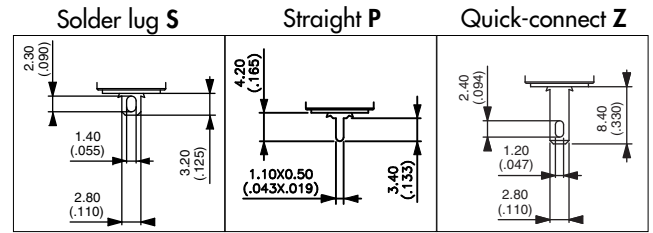
### LED COLOUR



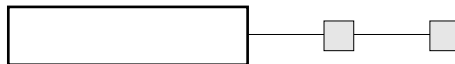
LOS : super red - LOY : yellow - LOG : green  
LOB : blue



- Gold plated contacts



**MODEL STRUCTURE**



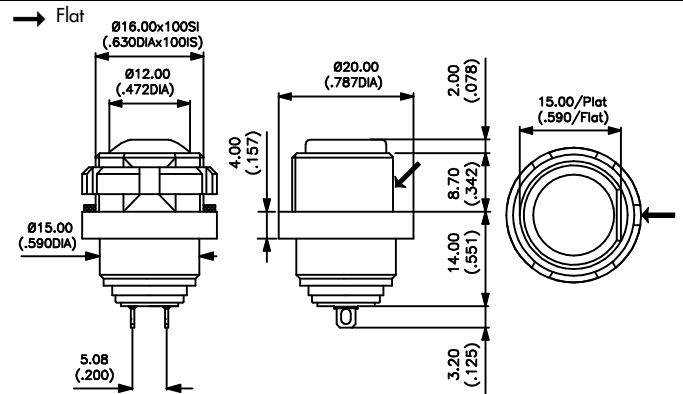
Plunger marking available on IZPP models (symbol 10 mm max.). On request.

**Solder lug terminals**



- Curved actuator **IZPR1S4** ON - OFF
- Flat actuator **IZPP1S4** ON - OFF

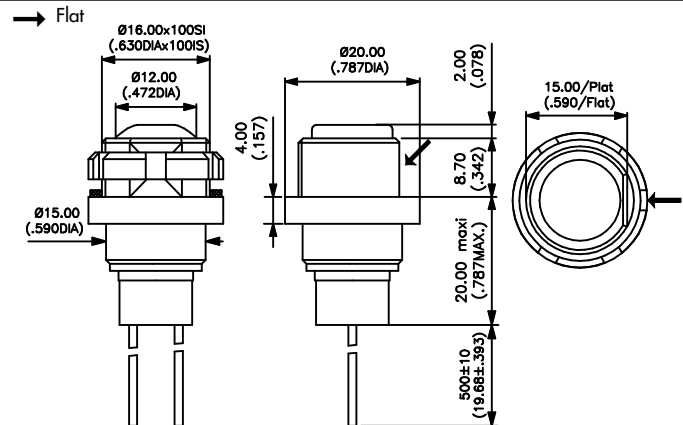
Also available with straight PC terminals : **IZP•1P4** and quick-connect terminals : **IZP•1Z4**.



**Sealed flying lead terminals**



- Curved actuator **IZPR1F4** ON - OFF
- Flat actuator **IZPP1F4** ON - OFF

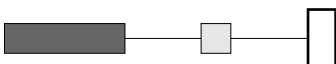


**ACTUATOR COLOUR**



- 1 : blue - B : dark blue - 2 : black - 3 : green - 5 : yellow - 6 : red - 7 : white - 8 : bright chrome - 9 : orange
- A : satin chrome

**BUSHING AND BEZEL COLOUR**



- 2 : black (standard)
- Other : on request.

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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