

NYLON TUBULAR SPACERS

Nylon Spacers for Standard Screw Sizes

- Screw Spacers give users an extremely wide selection of tubular spacers for PCB support in almost any elevation
- Six basic ID/OD combinations with heights ranging from 1/16" (1.6mm) through 1.0" (25.4mm), are available from factory stock or within two weeks
- Such a broad selection permits the user to choose the most suitable sizes for strength, elevation and ease of assembly

Material Specifications:

Natural Nylon, per ASTM D4066 PA225, UL Rated 94V-2

Oxygen Rating Index: Over 23%

Standard Drawing Tolerances:

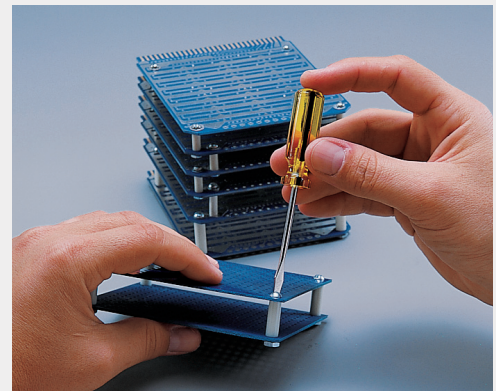
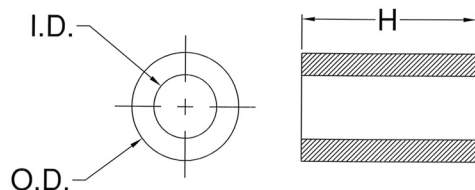
(unless otherwise indicated)

O.D. $\pm .005$ (.13)

I.D. $\pm .005$ (.13)

"H" Dim: 1/16-1/2 (1.6-12.7) is $\pm .005$ (.13)

"H" Dim: 9/16-1.0 (14.3-25.4) is $\pm .010$ (.25)



99XX Series

Color: Natural

Series	Screw Size	I.D.	O.D.	"H" DIM.	Dash No.	Price Code
9913	#2	.091 (2.3)	.187 (4.7)	1/16 (1.6)	-062	U
				1/8 (3.2)	-125	U
				3/16 (4.8)	-187	U
9910	#2	.091 (2.3)	.250 (6.4)	1/4 (6.4)	-250	U
				5/16 (7.9)	-312	U
				3/8 (9.5)	-375	V
9908	#4	.125 (3.2)	.187 (4.7)	7/16 (11.1)	-437	V
				1/2 (12.7)	-500	V
				9/16 (14.3)	-562	V
9911	#4	.125 (3.2)	.250 (6.4)	5/8 (15.9)	-625	W
				3/4 (19.1)	-750	W
				13/16 (20.6)	-812	X
9905	#6	.147 (3.7)	.250 (6.4)	7/8 (22.2)	-875	X
				15/16 (23.8)	-937	X
				1.0 (25.4)	-1000	X

Examples:

9913-250 is for a #2 Screw, O.D. is .187 (4.7)
Length is 1/4 (6.4), price code U.

9910-125 is for a #2 Screw, O.D. is .250 (6.4)
Length is 1/8 (3.2), price code U.

NYLON TUBULAR SPACERS

Nylon Spacers for Standard Screw Sizes

- Screw Spacers give users an extremely wide selection of tubular spacers for PCB support in almost any elevation
- Six basic ID/OD combinations with heights ranging from 1/16" (1.6mm) through 1.0" (25.4mm), are available from factory stock or within two weeks
- Such a broad selection permits the user to choose the most suitable sizes for strength, elevation and ease of assembly



Material Specifications:

Natural Nylon, per ASTM D4066 PA225,
UL Rated 94V-2

Oxygen Rating Index: Over 23%

Standard Drawing Tolerances:

(unless otherwise indicated)

O.D. $\pm .005$ (.13)

I.D. $\pm .005$ (.13)

"H" Dim: 1/16-1/2 (1.6-12.7) is $\pm .005$ (.13)

"H" Dim: 9/16-1.0 (14.3-25.4) is $\pm .010$ (.25)

mm Chart

Series	1mm .039	2mm .079	3mm .118	4mm .158	5mm .197	6mm .236	7mm .276	8mm .315	9mm .354	10mm .394	11mm .433	12mm .472
9905	9905-1mm	9905-2mm	9905-3mm	9905-4mm	9905-5mm	9905-6mm	9905-7mm	9905-8mm	9905-9mm	9905-10mm	9905-11mm	9905-12mm
9908	9908-1mm	9908-2mm	9908-3mm	9908-4mm	9908-5mm	9908-6mm	9908-7mm	9908-8mm	9908-9mm	9908-10mm	9908-11mm	9908-12mm
9910	9910-1mm	9910-2mm	9910-3mm	9910-4mm	9910-5mm	9910-6mm	9910-7mm	9910-8mm	9910-9mm	9910-10mm	9910-11mm	9910-12mm
9911	9911-1mm	9911-2mm	9911-3mm	9911-4mm	9911-5mm	9911-6mm	9911-7mm	9911-8mm	9911-9mm	9911-10mm	9911-11mm	9911-12mm
9912	9912-1mm	9912-2mm	9912-3mm	9912-4mm	9912-5mm	9912-6mm	9912-7mm	9912-8mm	9912-9mm	9912-10mm	9912-11mm	9912-12mm
9913	9913-1mm	9913-2mm	9913-3mm	9913-4mm	9913-5mm	9913-6mm	9913-7mm	9913-8mm	9913-9mm	9913-10mm	9913-11mm	9913-12mm
Price Code	U	U	U	U	U	U	U	V	V	V	V	V

Series	13mm .512	14mm .551	15mm .591	16mm .630	17mm .669	18mm .709
9905	9905-13mm	9905-14mm	9905-15mm	9905-16mm	9905-17mm	9905-18mm
9908	9908-13mm	9908-14mm	9908-15mm	9908-16mm	9908-17mm	9908-18mm
9910	9910-13mm	9910-14mm	9910-15mm	9910-16mm	9910-17mm	9910-18mm
9911	9911-13mm	9911-14mm	9911-15mm	9911-16mm	9911-17mm	9911-18mm
9912	9912-13mm	9912-14mm	9912-15mm	9912-16mm	9912-17mm	9912-18mm
9913	9913-13mm	9913-14mm	9913-15mm	9913-16mm	9913-17mm	9913-18mm
Price Code	V	V	W	W	W	W

Series	19mm .748	20mm .787	21mm .827	22mm .868	23mm .906	24mm .945
9905	9905-19mm	9905-20mm	9905-21mm	9905-22mm	9905-23mm	9905-24mm
9908	9908-19mm	9908-20mm	9908-21mm	9908-22mm	9908-23mm	9908-24mm
9910	9910-19mm	9910-20mm	9910-21mm	9910-22mm	9910-23mm	9910-24mm
9911	9911-19mm	9911-20mm	9911-21mm	9911-22mm	9911-23mm	9911-24mm
9912	9912-19mm	9912-20mm	9912-21mm	9912-22mm	9912-23mm	9912-24mm
9913	9913-19mm	9913-20mm	9913-21mm	9913-22mm	9913-23mm	9913-24mm
Price Code	W	X	X	X	X	X

- Simple Pre-Assembly Convenience Saves Handling
- Firm Retention Assured
- 5 Standard Sizes in Lengths from .050" - 1.250" (.76 - 31.8) in .005" (.127) Increments

SELF-RETAINING PVC SCREW SPACERS

- Simple Pre-Assembly Convenience Saves Handling
- Firm Retention Assured
- 5 Standard Sizes in Lengths from .050" - 1.250" (.76 - 31.8) in .005" (.127) Increments

Material Specifications:

Gray Rigid PVC material, UL Rated 94V-0

Oxygen Rating Index: Over 45%

Standard Drawing Tolerances:

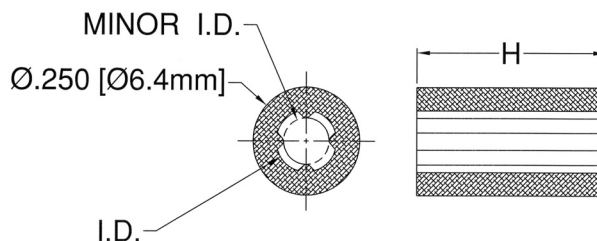
(unless otherwise indicated)

O.D. $\pm .005$ (.13)

I.D. $\pm .005$ (.13)

"H" Dim: 1/16-1/2 (1.6-12.7) is $\pm .005$ (.13)

"H" Dim: 9/16-1.0 (14.3-25.4) is $\pm .010$ (.25)



mm Chart

Series	Screw Size	2mm .079	3mm .118	4mm .158	5mm .197	6mm .236	7mm .276	8mm .315
SRS-1	4	SRS-1-2mm	SRS-1-3mm	SRS-1-4mm	SRS-1-5mm	SRS-1-6mm	SRS-1-7mm	SRS-1-8mm
SRS-2	6 (M3.5)	SRS-2-2mm	SRS-2-3mm	SRS-2-4mm	SRS-2-5mm	SRS-2-6mm	SRS-2-7mm	SRS-2-8mm
SRS-3	8	SRS-3-2mm	SRS-3-3mm	SRS-3-4mm	SRS-3-5mm	SRS-3-6mm	SRS-3-7mm	SRS-3-8mm
SRS-4	M3	SRS-4-2mm	SRS-4-3mm	SRS-4-4mm	SRS-4-5mm	SRS-4-6mm	SRS-4-7mm	SRS-4-8mm
SRS-5	M4	SRS-5-2mm	SRS-5-3mm	SRS-5-4mm	SRS-5-5mm	SRS-5-6mm	SRS-5-7mm	SRS-5-8mm
Price Code		W	W	X	X	Y	Y	Z

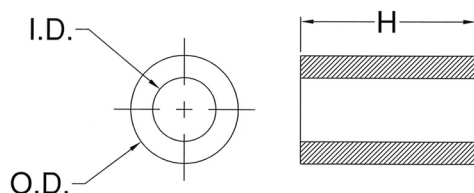
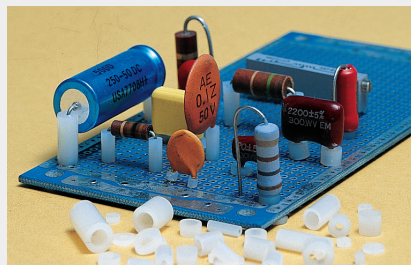
Series	Screw Size	9mm .354	10mm .394	11mm .433	12mm .472	13mm .512	14mm .551	15mm .591	16mm .630
SRS-1	4	SRS-1-9mm	SRS-1-10mm	SRS-1-11mm	SRS-1-12mm	SRS-1-13mm	SRS-1-14mm	SRS-1-15mm	SRS-1-16mm
SRS-2	6 (M3.5)	SRS-2-9mm	SRS-2-10mm	SRS-2-11mm	SRS-2-12mm	SRS-2-13mm	SRS-2-14mm	SRS-2-15mm	SRS-2-16mm
SRS-3	8	SRS-3-9mm	SRS-3-10mm	SRS-3-11mm	SRS-3-12mm	SRS-3-13mm	SRS-3-14mm	SRS-3-15mm	SRS-3-16mm
SRS-4	M3	SRS-4-9mm	SRS-4-10mm	SRS-4-11mm	SRS-4-12mm	SRS-4-13mm	SRS-4-14mm	SRS-4-15mm	SRS-4-16mm
SRS-5	M4	SRS-5-9mm	SRS-5-10mm	SRS-5-11mm	SRS-5-12mm	SRS-5-13mm	SRS-5-14mm	SRS-5-15mm	SRS-5-16mm
Price Code		Z	ZZ	ZZ	ZZ	ZZZ	ZZZ	ZZZ	ZZZ

Series	Screw Size	17mm .669	18mm .709	19mm .748	20mm .787	21mm .827	22mm .868	23mm .906	24mm .945
SRS-1	4	SRS-1-17mm	SRS-1-18mm	SRS-1-19mm	SRS-1-20mm	SRS-1-21mm	SRS-1-22mm	SRS-1-23mm	SRS-1-24mm
SRS-2	6 (M3.5)	SRS-2-17mm	SRS-2-18mm	SRS-2-19mm	SRS-2-20mm	SRS-2-21mm	SRS-2-22mm	SRS-2-23mm	SRS-2-24mm
SRS-3	8	SRS-3-17mm	SRS-3-18mm	SRS-3-19mm	SRS-3-20mm	SRS-3-21mm	SRS-3-22mm	SRS-3-23mm	SRS-3-24mm
SRS-4	M3	SRS-4-17mm	SRS-4-18mm	SRS-4-19mm	SRS-4-20mm	SRS-4-21mm	SRS-4-22mm	SRS-4-23mm	SRS-4-24mm
SRS-5	M4	SRS-5-17mm	SRS-5-18mm	SRS-5-19mm	SRS-5-20mm	SRS-5-21mm	SRS-5-22mm	SRS-5-23mm	SRS-5-24mm
Price Code		ZZZ	ZZZ	ZZZ	ZZZZ	ZZZZ	ZZZZ	ZZZZ	ZZZZ

NYLON TUBULAR SPACERS

Universal Spacers for Discrete Components

- 4,182 Standard Sizes for "just Right" Fit
- Makes Solder Filletting and Board Cleaning More Effective



Universal Spacers give users an extremely wide selection of tubular spacers for mounting PCB discrete devices in any lead pattern and elevation.

Seventeen basic I.D./O.D. combinations with heights ranging from .030" (.76) through 1.250" (31.8), in .005" (.13) increments are available from factory stock or within two weeks.

Such a broad selection permits the user to choose the most suitable sizes for strength, elevation and ease of assembly, as well as providing for proper filletting and cleaning.

Ordering Information:

9XX XXX

Length Expressed in Inches
(Must be even multiples of .005")
or whole millimeters (example: 2mm)

0.030 = 030 0.750 = 750
0.100 = 100 1.250 = 1.250

Series

900 Series

Color: Natural

Series	"H" DIM.	I.D.	O.D.	A55485/06 M38527/06
901	.030-1.250 (.76-31.8)	.028 (.71)	.085 (2.2)	-029N
902	.030-1.250 (.76-31.8)	.032 (.81)	.125 (3.2)	-031N
903	.030-1.250 (.76-31.8)	.047 (1.2)	.156 (4.0)	-034N
904	.030-1.250 (.76-31.8)	.063 (1.6)	.187 (4.7)	-036N
905	.030-1.250 (.76-31.8)	.147 (3.7)	.250 (6.4)	-041N
906	.030-1.250 (.76-31.8)	.085 (2.2)	.148 (3.8)	-033N
907	.030-1.250 (.76-31.8)	.105 (2.7)	.167 (4.2)	-035N
908	.030-1.250 (.76-31.8)	.125 (3.2)	.187 (4.7)	-038N
910	.030-1.250 (.76-31.8)	.091 (2.3)	.250 (6.4)	-039N
911	.030-1.250 (.76-31.8)	.125 (3.2)	.250 (6.4)	-
912	.030-1.250 (.76-31.8)	.171 (4.3)	.250 (6.4)	-042N
913	.030-1.250 (.76-31.8)	.091 (2.3)	.187 (4.7)	-037N
937	.030-1.250 (.76-31.8)	.090 (2.3)	.125 (3.2)	-
938	.030-1.250 (.76-31.8)	.032 (.81)	.085 (2.2)	-030N
939	.030-1.250 (.76-31.8)	.047 (1.2)	.125 (3.2)	-032N
940	.030-1.250 (.76-31.8)	.063 (1.6)	.156 (4.0)	-
941	.030-1.250 (.76-31.8)	.135 (3.4)	.230 (5.8)	-

"H" Dimension	Price Code for 901, 902, 937, 938, 939	Price Code for 903, 904, 905, 906, 907, 908 910, 911, 912, 913, 940, 941
.030-.075 (.76-1.9)	U	W
.080-.150 (2.0-3.8)	V	W
.155-.230 (4.0-5.8)	W	X
.235-.310 (6.0-7.9)	X	Y
.315-.380 (8.0-9.7)	Y	Z
.385-.495 (9.8-12.6)	Z	ZZ
.500-.750 (12.7-19.1)	ZZ	ZZZ
.755-1.250 (19.2-31.8)	ZZZZ	ZZZZ

Examples:

901-050 is price code U 902-100 is price code V
903-120 is price code W 901-250 is price code X

NYLON TUBULAR SPACERS

Universal Spacers for Discrete Components

- 4,182 Standard Sizes for "just Right" Fit
- Makes Solder Filletting and Board Cleaning More Effective

Material Specifications:

Natural Nylon, per ASTM D4066 PA225 UL Rated 94V-2

Oxygen Rating Index: Over 23%

Standard Drawing Tolerances:

O.D. $\pm .005$ (.13)

I.D. $\pm .005$ (.13)

"H" Dim: .030 - .500 (.76 - 12.7) is $\pm .005$ (.13)

"H" Dim: .505 - .750 (12.8 - 19.1) is $\pm .008$ (.20)

"H" Dim: .755 - 1.250 (19.2 - 31.8) is $\pm .015$ (.38)



mm Chart

1mm thru 12mm

Series	1mm .039	2mm .079	3mm .118	4mm .158	5mm .197	6mm .236	7mm .276	8mm .315	9mm .354	10mm .394	11mm .433	12mm .472
901	901-1mm	901-2mm	901-3mm	901-4mm	901-5mm	901-6mm	901-7mm	901-8mm	901-9mm	901-10mm	901-11mm	901-12mm
902	902-1mm	902-2mm	902-3mm	902-4mm	902-5mm	902-6mm	902-7mm	902-8mm	902-9mm	902-10mm	902-11mm	902-12mm
937	937-1mm	937-2mm	937-3mm	937-4mm	937-5mm	937-6mm	937-7mm	937-8mm	937-9mm	937-10mm	937-11mm	937-12mm
938	938-1mm	938-2mm	938-3mm	938-4mm	938-5mm	938-6mm	938-7mm	938-8mm	938-9mm	938-10mm	938-11mm	938-12mm
939	939-1mm	939-2mm	939-3mm	939-4mm	939-5mm	939-6mm	939-7mm	939-8mm	939-9mm	939-10mm	939-11mm	939-12mm
Price Code	U	V	V	W	W	X	X	Y	Y	Z	Z	Z

Series	1mm .039	2mm .079	3mm .118	4mm .158	5mm .197	6mm .236	7mm .276	8mm .315	9mm .354	10mm .394	11mm .433	12mm .472
903	903-1mm	903-2mm	903-3mm	903-4mm	903-5mm	903-6mm	903-7mm	903-8mm	903-9mm	903-10mm	903-11mm	903-12mm
904	904-1mm	904-2mm	904-3mm	904-4mm	904-5mm	904-6mm	904-7mm	904-8mm	904-9mm	904-10mm	904-11mm	904-12mm
905	905-1mm	905-2mm	905-3mm	905-4mm	905-5mm	905-6mm	905-7mm	905-8mm	905-9mm	905-10mm	905-11mm	905-12mm
906	906-1mm	906-2mm	906-3mm	906-4mm	906-5mm	906-6mm	906-7mm	906-8mm	906-9mm	906-10mm	906-11mm	906-12mm
907	907-1mm	907-2mm	907-3mm	907-4mm	907-5mm	907-6mm	907-7mm	907-8mm	907-9mm	907-10mm	907-11mm	907-12mm
908	908-1mm	908-2mm	908-3mm	908-4mm	908-5mm	908-6mm	908-7mm	908-8mm	908-9mm	908-10mm	908-11mm	908-12mm
910	910-1mm	910-2mm	910-3mm	910-4mm	910-5mm	910-6mm	910-7mm	910-8mm	910-9mm	910-10mm	910-11mm	910-12mm
911	911-1mm	911-2mm	911-3mm	911-4mm	911-5mm	911-6mm	911-7mm	911-8mm	911-9mm	911-10mm	911-11mm	911-12mm
912	912-1mm	912-2mm	912-3mm	912-4mm	912-5mm	912-6mm	912-7mm	912-8mm	912-9mm	912-10mm	912-11mm	912-12mm
913	913-1mm	913-2mm	913-3mm	913-4mm	913-5mm	913-6mm	913-7mm	913-8mm	913-9mm	913-10mm	913-11mm	913-12mm
940	940-1mm	940-2mm	940-3mm	940-4mm	940-5mm	940-6mm	940-7mm	940-8mm	940-9mm	940-10mm	940-11mm	940-12mm
941	941-1mm	941-2mm	941-3mm	941-4mm	941-5mm	941-6mm	941-7mm	941-8mm	941-9mm	941-10mm	941-11mm	941-12mm
Price Code	W	W	W	X	X	Y	Y	Z	Z	ZZ	ZZ	ZZ

NYLON TUBULAR SPACERS

Universal Spacers for Discrete Components

- 4,182 Standard Sizes for "just Right" Fit
- Makes Solder Filletting and Board Cleaning More Effective



Material Specifications:

Natural Nylon, per ASTM D4066 PA225 UL Rated 94V-2

Oxygen Rating Index: Over 23%

Standard Drawing Tolerances:

O.D. $\pm .005$ (.13)

I.D. $\pm .005$ (.13)

"H" Dim: .030 - .500 (.76 - 12.7) is $\pm .005$ (.13)

"H" Dim: .505 - .750 (12.8 - 19.1) is $\pm .008$ (.20)

"H" Dim: .755 - 1.250 (19.2 - 31.8) is $\pm .015$ (.38)

mm Chart 13mm thru 24mm

Series	13mm .512	14mm .551	15mm .591	16mm .630	17mm .669	18mm .709	19mm .748	20mm .787	21mm .827	22mm .866	23mm .906	24mm .945
901	901-13mm	901-14mm	901-15mm	901-16mm	901-17mm	901-18mm	901-19mm	901-20mm	901-21mm	901-22mm	901-23mm	901-24mm
902	902-13mm	902-14mm	902-15mm	902-16mm	902-17mm	902-18mm	902-19mm	902-20mm	902-21mm	902-22mm	902-23mm	902-24mm
937	937-13mm	937-14mm	937-15mm	937-16mm	937-17mm	937-18mm	937-19mm	937-20mm	937-21mm	937-22mm	937-23mm	937-24mm
938	938-13mm	938-14mm	938-15mm	938-16mm	938-17mm	938-18mm	938-19mm	938-20mm	938-21mm	938-22mm	938-23mm	938-24mm
939	939-13mm	939-14mm	939-15mm	939-16mm	939-17mm	939-18mm	939-19mm	939-20mm	939-21mm	939-22mm	939-23mm	939-24mm
Price Code	ZZ	ZZ	ZZ	ZZ	ZZ	ZZ	ZZ	ZZZZ	ZZZZ	ZZZZ	ZZZZ	ZZZZ

Series	13mm .512	14mm .551	15mm .591	16mm .630	17mm .669	18mm .709	19mm .748	20mm .787	21mm .827	22mm .866	23mm .906	24mm .945
903	903-13mm	903-14mm	903-15mm	903-16mm	903-17mm	903-18mm	903-19mm	903-20mm	903-21mm	903-22mm	903-23mm	903-24mm
904	904-13mm	904-14mm	904-15mm	904-16mm	904-17mm	904-18mm	904-19mm	904-20mm	904-21mm	904-22mm	904-23mm	904-24mm
905	905-13mm	905-14mm	905-15mm	905-16mm	905-17mm	905-18mm	905-19mm	905-20mm	905-21mm	905-22mm	905-23mm	905-24mm
906	906-13mm	906-14mm	906-15mm	906-16mm	906-17mm	906-18mm	906-19mm	906-20mm	906-21mm	906-22mm	906-23mm	906-24mm
907	907-13mm	907-14mm	907-15mm	907-16mm	907-17mm	907-18mm	907-19mm	907-20mm	907-21mm	907-22mm	907-23mm	907-24mm
908	908-13mm	908-14mm	908-15mm	908-16mm	908-17mm	908-18mm	908-19mm	908-20mm	908-21mm	908-22mm	908-23mm	908-24mm
910	910-13mm	910-14mm	910-15mm	910-16mm	910-17mm	910-18mm	910-19mm	910-20mm	910-21mm	910-22mm	910-23mm	910-24mm
911	911-13mm	911-14mm	911-15mm	911-16mm	911-17mm	911-18mm	911-19mm	911-20mm	911-21mm	911-22mm	911-23mm	911-24mm
912	912-13mm	912-14mm	912-15mm	912-16mm	912-17mm	912-18mm	912-19mm	912-20mm	912-21mm	912-22mm	912-23mm	912-24mm
913	913-13mm	913-14mm	913-15mm	913-16mm	913-17mm	913-18mm	913-19mm	913-20mm	913-21mm	913-22mm	913-23mm	913-24mm
940	940-13mm	940-14mm	940-15mm	940-16mm	940-17mm	940-18mm	940-19mm	940-20mm	940-21mm	940-22mm	940-23mm	940-24mm
941	941-13mm	941-14mm	941-15mm	941-16mm	941-17mm	941-18mm	941-19mm	941-20mm	941-21mm	941-22mm	941-23mm	941-24mm
Price Code	ZZZ	ZZZ	ZZZ	ZZZ	ZZZ	ZZZ	ZZZ	ZZZZ	ZZZZ	ZZZZ	ZZZZ	ZZZZ

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru

www.lifeelectronics.ru