

# CABLE SPECIFICATIONS

## Lab-Flex® 490S

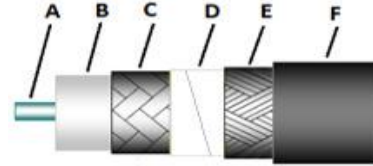


DATA SHEET PART SERIES: Lab-Flex® S

SHEET 1 OF 2

Revision 0916

Lab-Flex® 490S is ideal for high flexure applications requiring low loss cable and durability over flexure. With an 80% velocity expanded PTFE dielectric, Lab-flex 490S cable has 30% lower loss than solid dielectrics of the same size.



### 1.0 Electrical Data

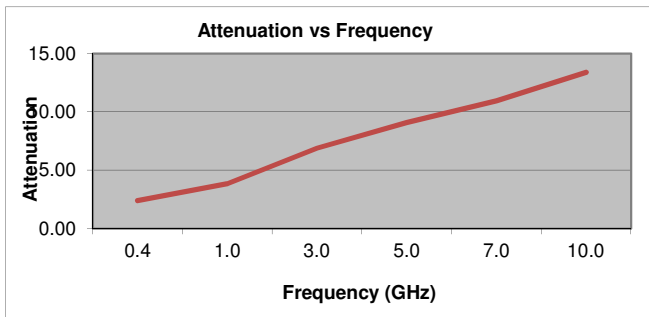
Frequency, Max (GHz)	10.0		
Impedance, nominal (Ω)	50		
Velocity of Propagation (%)	80		
Shielding Effectiveness, 18 GHz (dB/ft)	>-90dB		
Capacitance (pF/ft)	25.5		
Delay (ns/ft), (ns/meter)	1.271	4.173283	
Attenuation k1 (db/100ft) @ 23 deg C	0.116		Attenuation (Typical) at any Frequency =k1 x SqRt (FMHz) + k2 x (FMHz)
Attenuation k2 (db/100ft) @ 23 deg C	0.000179		

### 2.0 Mechanical/Environmental Data

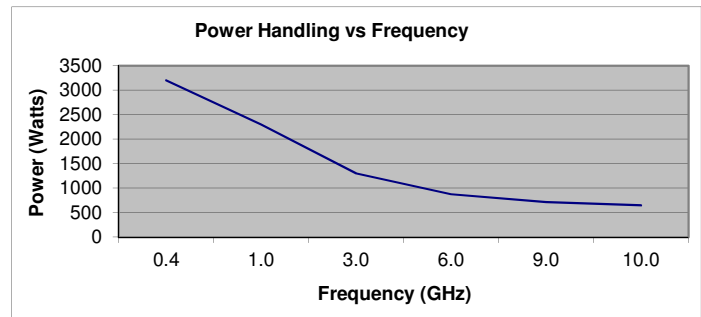
Weight (lbs/100ft), (Kg/100m)	19.20	28.86	
Temperature Range (°C)	-65 to +200		
Minimum Bend Radius (inch), (mm)	2.50	63.50	

### 3.0 Construction Data

Inner Conductor (inch)	A	-	Stranded SPC
Dielectric (inch)	B	-	Expanded PTFE
First Outer Shield (inch)	C	-	SPC Flat Spiral
Second Outer Shield (inch)	D	-	Metalized Film Tape layer
Third Outer Shield (inch)	E	-	SPC Round Braid
Jacket (inch O.D.)	F	0.490	FEP



(dB per 100 feet)



\*CW Power in watts at sea level and 23°C

Frequency GHz	0.4	1.0	3.0	5.0	7.0	10.0
Typical Loss dB/100ft	2.4	3.9	6.9	9.1	11.0	13.4

Frequency GHz	0.4	1.0	3.0	5.0	7.0	10.0
CW Power in Watts	3200.0	2300.0	1300.0	950.0	800.0	650.0

# CABLE SPECIFICATIONS

## Lab-Flex® 490S



DATA SHEET PART SERIES: Lab-Flex® S SHEET 2 OF 2 Revision 0916

### Standard Connectors:

Cable Code	Connector Code	Series	Gender	Type	C-Nut Style*	Body Material*	Body Finish*	Loss per GHz	Frequency Max GHz
490S	NMS	Type-N	(Male)	Straight	H	SS	P	0.01	10
490S	NMR	Type-N	(Male)	R/A	H	SS	P	0.02	10
490S	TMS	TNC	(Male)	Straight	H	SS	P	0.01	10
490S	SCMS	SC	(Male)	Straight	H	SS	P	0.02	10
490S	SMCR	SC	(Male)	R/A	H	SS	P	0.02	10
490S	SCFBS	SC	(Female) Bulkhead	Straight	N/A	SS	P	0.02	10

\* C-nut Style: H= Hex, K=Knurled, HK= Hex Nut & Knurled, B=Bayonet  
 \*Body Materials: B=Brass, SS=Stainless Steel, Be= Beryllium Copper  
 \*Body Finish: N= Nickel, S=Silver, G=Gold, P= Passivated, T= Tri-metal  
 Sex of connector is determined by center pin

### Standard Options:

Cable Code	Option Code	Option Description	Option Details
490S	RoHS	RoHS Compliant	Per EU Directive 2002/95/EC
490S	E/EE	Extended Booting One Side/ Both Sides	
490S	W	Weatherized	

\*for RoHS complaint assemblies (-ROHS) is required to be added to end of standard part number  
 ex. NMS-490S-120.0-NMS-ROHS

### Custom Options:

The above connectors and options the most common types used. Florida RF Labs offers a wide range of cables, connectors and options. If you do not see an option you require please consult the sales department.