

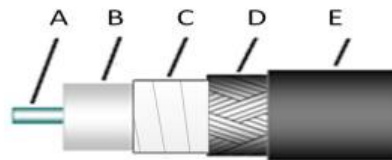
# CABLE SPECIFICATIONS

## Lab-Flex® 160S



DATA SHEET    PART SERIES: Lab-Flex® S    SHEET 1 OF 2

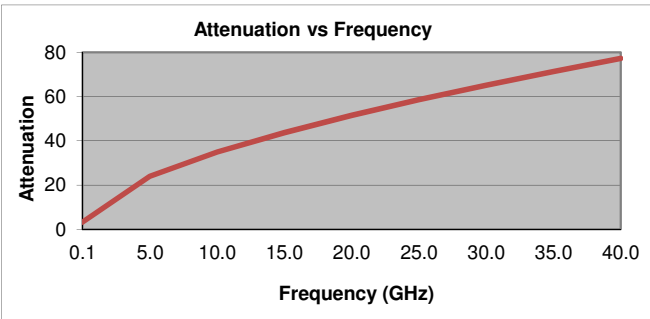
Lab-Flex® 160S is our lowest loss, phase stable 40 GHz cable. With a stranded center conductor, this high performance cable is ideal for high frequency test applications. Standard options include armorization, armor/weatherized, and weatherization for protection under extreme test conditions.



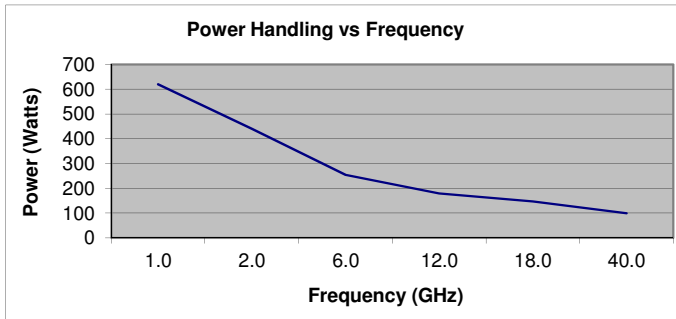
1.0 Electrical Data			
Frequency, Max (GHz)	40.0		
Impedance, nominal (Ω)	50		
Velocity of Propagation (%)	77		
Shielding Effectiveness, 18 GHz (dB/ft)	>-100dB		
Capacitance (pF/ft)	26.2		
Delay (ns/ft), (ns/meter)	1.3	4.268504	
Attenuation k1 (db/100ft) @ 23 deg C	0.31		Attenuation (Typical) at any Frequency =k1 x SqRt (FMHz) + k2 x (FMHz)
Attenuation k2 (db/100ft) @ 23 deg C	0.00038		

2.0 Mechanical/Environmental Data			
Weight (lbs/100ft), (Kg/100m)	2.80	4.21	
Temperature Range (°C)	-55 to +135		
Minimum Bend Radius (inch), (mm)	0.75	19.05	

3.0 Construction Data			
Inner Conductor (inch)	A	-	Stranded SC
Dielectric (inch)	B	-	Extruded PTFE
First Outer Shield (inch)	C	-	SC foil
Second Outer Shield (inch)	D	-	Round Braid SC
Jacket (inch O.D.)	E	0.160	Yellow FEP



(dB per 100 feet)



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

Frequency GHz	1.0	12.0	18.0	26.0	32.0	40.0
Typical Loss dB/100ft	9.7	37.8	47.9	59.8	67.9	78.0

Frequency GHz	1.0	2.0	6.0	12.0	18.0	40.0
CW Power in Watts	620.0	440.0	254.0	180.0	147.0	99.0

# CABLE SPECIFICATIONS

## Lab-Flex® 160S



DATA SHEET PART SERIES: Lab-Flex® S

SHEET 2 OF 2

### Standard Connectors:

Cable Code	Connector Code	Series	Gender	Type	C-Nut Style*	Body Material*	Body Finish*	Loss per GHz	Frequency Max GHz
160S	SMS	SMA	(Male)	Straight	H	SS	P	0.01	18
160S	SMR	SMA	(Male)	R/A	H	SS	P	0.02	18
160S	MMS	2.4mm	(Male)	Straight	H	SS	P	0.01	40
160S	KMS	2.9mm	(Male)	Straight	H	SS	P	0.01	40
160S	KMR	2.9mm	(Male)	R/A	H	SS	P	0.02	40
160S	NMS	Type-N	(Male)	Straight	H	SS	P	0.011	18
160S	S3K	3.5mm	(Male)	Straight	H	SS	P	0.01	35

\* C-nut Style: H= Hex, K=Knurled, HK= Hex Nut & Knurled

\*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
160S	+/-2.8PS	Phase Match	Standard Tolerance of +/-2.8PS
160S	RoHS	RoHS Compliant	Per EU Directive 2002/95/EC
160S	W	Weatherized	Weatherized Jacket (With Pel-Seal)
160S	D/DD	Dust Cap one side/Both Sides	
160S	E/EE	Extended Booting One Side/ Both Sides	
160S	AW	Armor and weatherized jacket	
160S	A	Armor	

\*for RoHS complaint assemblies (-ROHS) is required to be added to end of standard part number

ex. NMS-160S-120.0-NMS-ROHS

\*for phase matched assemblies (+/-2.8PS) is require to be added to the end of standard part number

ex. NMS-160S-120.0-NMS+/-2.8PS

### 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.