GL Series

Flexible Low Loss
Microwave Cable Assembly

GigaLane GL Series cable assemblies perform in the range of frequency usage that is applicable up to 40 GHz. Center conductor consists of Stranded and Solid center conductor. By using Low density PTFE (extruded) dielectric, a value of the lowest insertion loss is extracted. These are specialized in providing excellent shielding effectiveness, flexibility and durability and supplied in fields of Commercial, Military RF & microwave airborne systems, Test & Measurement applications (Lab & Production line, Anechoic Chamber).
GigaLane provides two types of Neck type for GL cable assembly. One is sleeve type to strengthen the neck area of connector and gives a comfort grip which provides easiness in assembling connectors. Another is shrink tube type which is suitable for applying to small space.

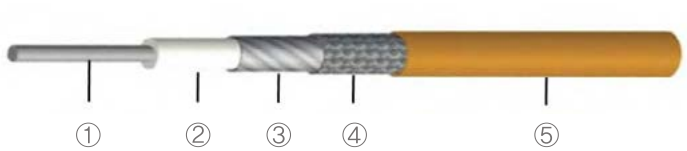
GL140s Cable

Gigalane

▶ Features and benefits

- Frequency ranges from DC to 40 GHz
- Low Loss and Flexibility
- Durability
- Low density PTFE(extruded) dielectric
- Excellent shielding effectiveness and return loss
- Cost-efficient

▶ Cable Design



Description		Diameter (mm)
① Center conductor	Silver-plated copper wire, stranded	19 / 0.2
② Dielectric	Low density PTFE(extruded)	-
③ Inner shield	Silver-plated copper tape	-
④ Outer shield	Silver-plated copper braid	-
⑤ Jacket	Extruded FEP	4.10

Electrical

Impedance	50 Ω
Operating frequency	40 GHz
Capacitance	86 pF/m
Velocity of propagation	77 % nom.
Time delay	4.35 ns/m
RF leakage (dB)	<-100
Dielectric constant	1.7
Phase stability vs. flexure (@ 18 GHz Max.)	4°
IL stability vs. flexure(dB @ minimum BR)	± 0.3
Phase stability vs. temp. (deg / GHz / m) (- 40 ~ 80°)	< 2°

Mechanical & Environmental

Minimum bend radius (mm)	19.05
Weight (g/m)	50
Temperature	- 45℃ to + 125℃

Suitable Connectors

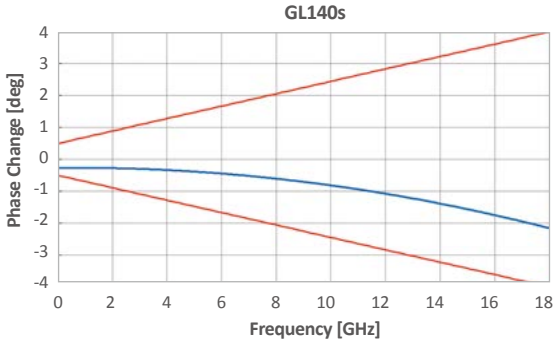
Cable selection			Standard Connector selection					Max. VSWR		
			SMA type		N type		2.92mm type	Connector		
P/N	Frequency	Attenuation (dB/m)	Straight	R/A	Straight	R/A	Straight	ST to ST	ST to R/A	R/A to R/A
CGL141 (GL140sB02)	6 GHz	0.88	SMS114	SMR114	NMS114 NMS114B*	NMR114	-	1.15	1.25	1.25
GL140sC	18 GHz	1.62	SMS122 SMS122B*	-	-		-	1.25	-	-
GL140sD	26.5 GHz	1.98	SMS115 SMS115B*	-	-		-	1.25	-	-
GL140sE	40 GHz	2.52	-	-	-		KMS116 KMS116B*	1.43	-	-

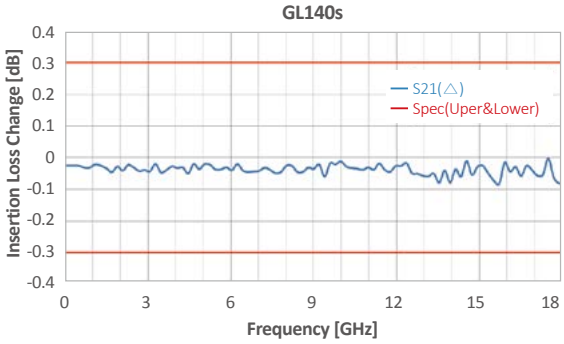
* Please refer to connector drawing on p97

* xxx xxxB : Shrink Tube Type ex) SMS114B

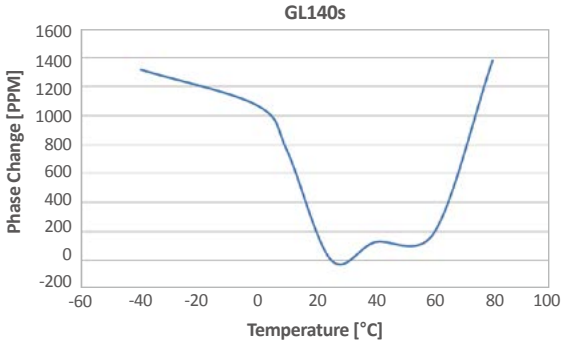
GL140s Cable

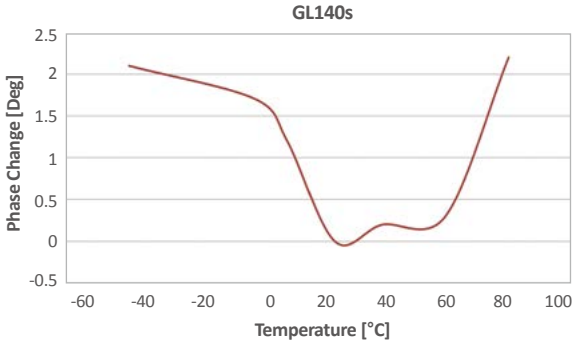
▶ Cable Insertion & Stability with Flexure



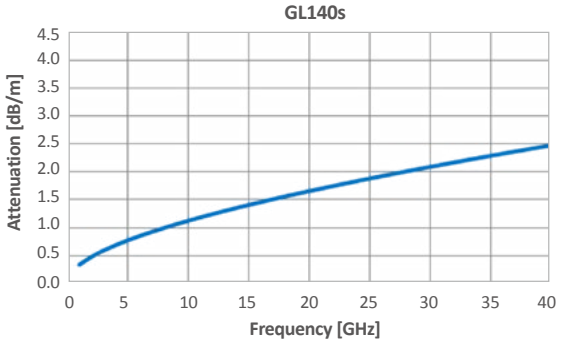


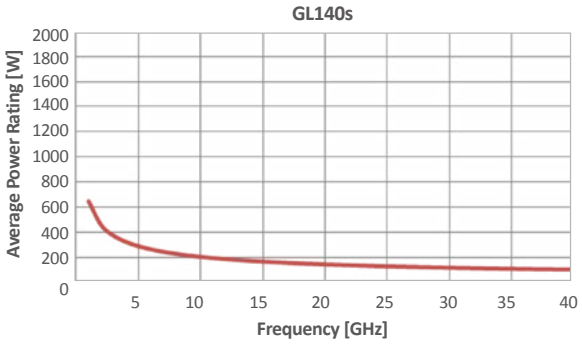
▶ Cable Phase Stability with Temperature





▶ Cable Attenuation & Power





▶ Test Result