



Low Profile 2G/3G/4G Antenna With WiFi And GPS

Rugged Low Profile Design

Wideband LTE-Cellular Element

Optional 2x2 MiMo 2.4 & 4.9-6GHz Wifi

Optional Integrated GPS/GNSS/BEIDOU antenna

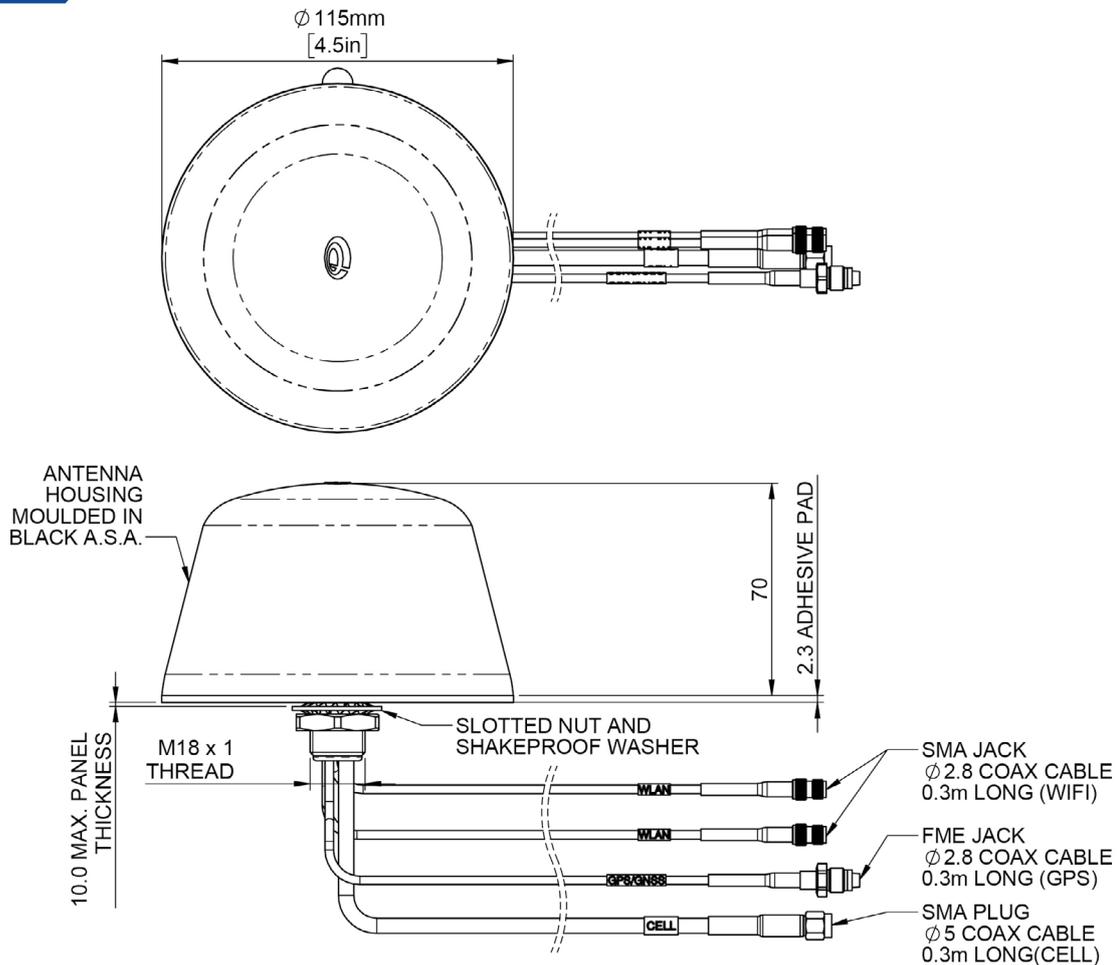
The L[G]E antenna series is a range of low profile antennas incorporating a combination of a wideband cellular element covering 2G/3G and 4G frequencies along with an active GPS/GNSS/BEIDOU patch with 26dB LNA gain and two dual band WIFI elements for 2x2 MiMo operation all in a robust compact housing.

Designed to be tough yet cost effective the antennas are completely enclosed in a moulded housing made from weather and impact resistant plastic. The range is supplied with short fly leads and can be kitted with Panorama Antennas' low loss extension cables in various lengths

This antenna does not require a ground plane, and maintains a high level of performance even when mounted on a non-metallic surface.

Technical Drawing

LGE-7-27-24-58 shown

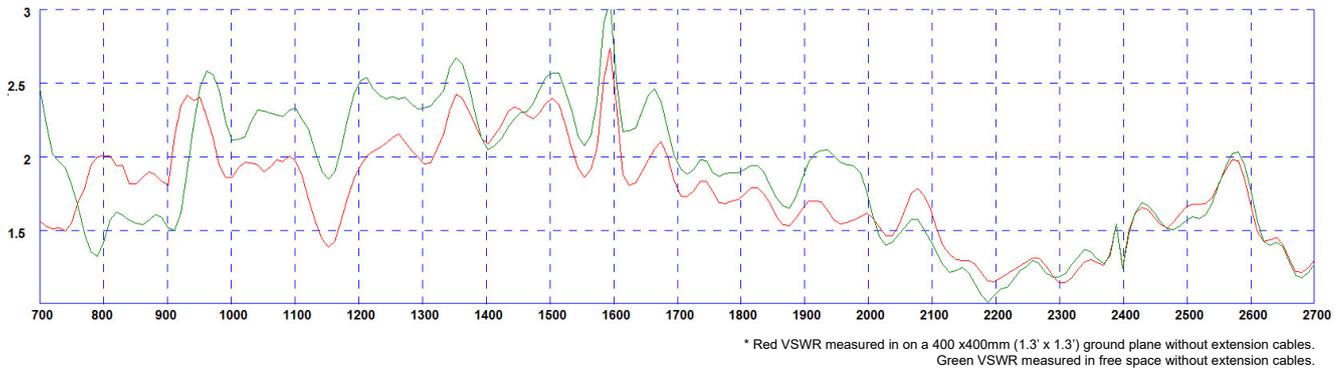


Part No.	LPE-7-27	LGE-7-27	LGE-7-27-24-58	LGEM-7-27-24-58	
Electrical Data					
Frequency Range (MHz)	Element 1	-	1560-1612 (GPS/GNSS/Beidou)		
	Element 2	698-960/1710-2700MHz			
	Elements 3 & 4	-	-	2.4 / 4.9-6GHz (WiFi / 802.11 a/b/g/n)	
Peak Gain†	698-960MHz	4dBi			
	Element 2	1710-2170MHz	5dBi		
	1710-2700MHz	6dBi			
	2300-2700MHz	6dBi			
	Element 3 & 4	2.4GHz	-	-	5dBi
	Element 3 & 4	5.8GHz	-	-	9dBi
Typical VSWR*	Element 2	< 2.5:1			
	Elements 3 & 4	< 2.5:1			
Polarisation	Vertical				
Impedance	50Ω				
Max input power (W)	50				
GPS/GNSS Data					
Frequency Range (MHz)	1562-1612MHz				
VSRM	<2.0:1				
Gain: LNA	26dB				
Polarisation	Right Hand Circular				
Operating Voltage	3 -5V DC (fed via coax)				
Current	Typical 15mA				
Mechanical Data					
Dimensions (mm)	Height	2.8" (70mm)			
	Diameter	4.5" (115mm)			
Operating Temp (°C)	-22° / 176°F (-30° / +80°C)				
Material	PC				
Colour	Black				
Ingress Protection	IP66				
Mounting Data					
Mounting type	Panel mount				
Max panel thickness	0.4"(10mm)				
Mounting hole	3/4" (19mm)				
Cable Data					
GPS Cable	Type	RG174			
	Diameter	0.11" (2.8mm)			
	Length	1' (0.3m)			
	Termination	FME (female)			
Cell / LTE Cable	Type	CS29 (double shielded RG58)			
	Diameter	0.2"(5mm)			
	Length	1' (0.3m)			
	Termination	SMA (male)			
2x WiFi / WiMAX Cable	Type	RG174			
	Diameter	0.11" (2.8mm)			
	Length	1' (0.3m)			
	Termination	SMA (female)			

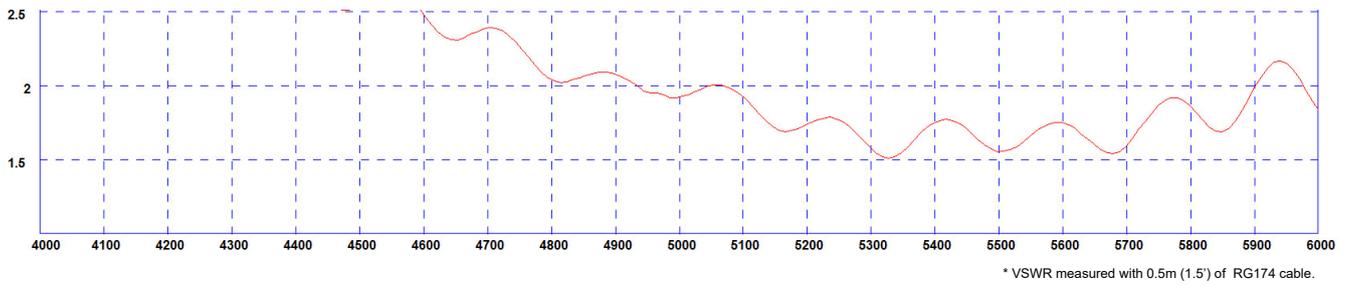
† Peak Gain simulated in CST microwave studio without cable loss.

Electrical Data - Cell

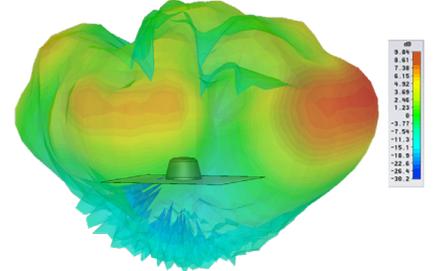
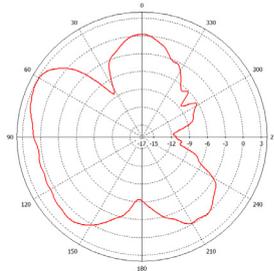
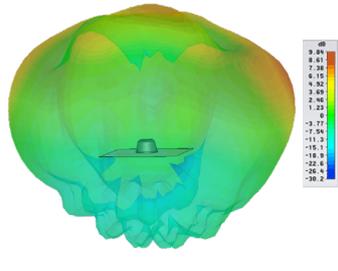
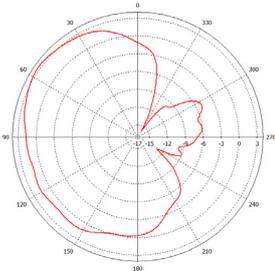
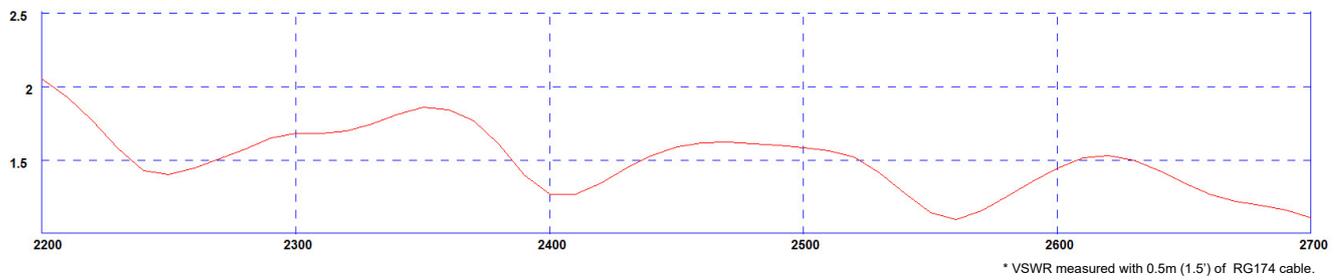
Typical VSWR cellular / LTE element 2*



Typical VSWR WLAN element 3 - 5.8GHz*



Typical VSWR WLAN element 3 - 2.4GHz*



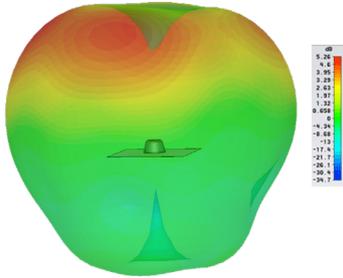
H-Plane - WLAN (2.4GHz)

3D Pattern - WLAN (2.4GHz)

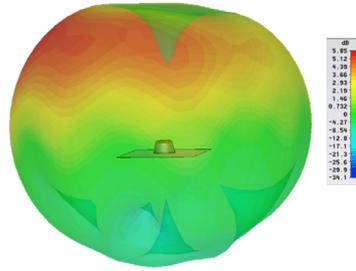
H-Plane WLAN (5.4GHz)

3D Pattern WLAN (5.4GHz)

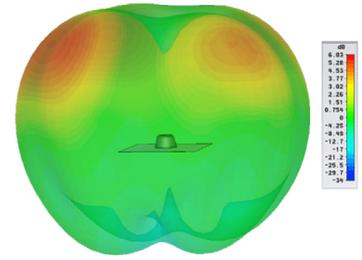
Typical 3D Pattern - Element 2 700MHz



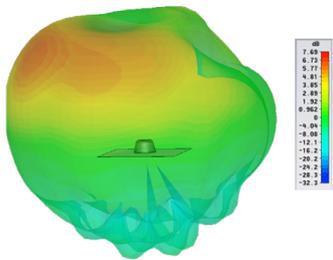
Typical 3D Pattern - Element 2 800MHz



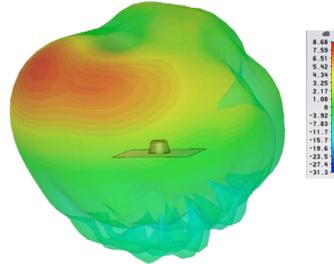
Typical 3D Pattern - Element 2 900MHz



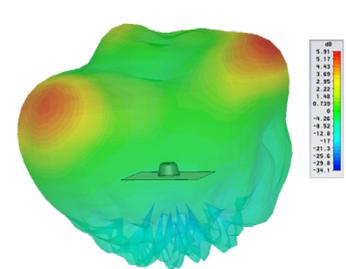
Typical 3D Pattern - Element 2 1800MHz



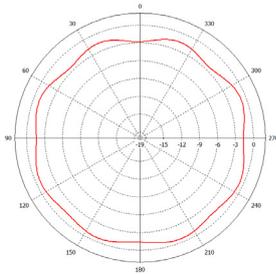
Typical 3D Pattern - Element 2 2000MHz



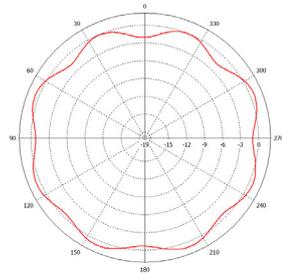
Typical 3D Pattern - Element 2 2600MHz



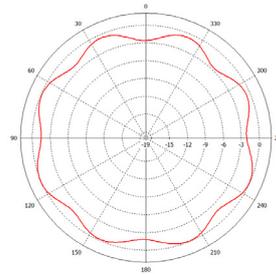
Typical H-Plane (700MHz)



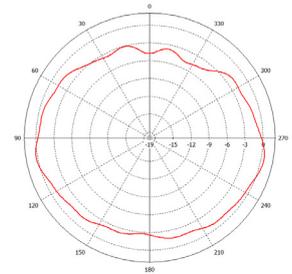
Typical H-Plane (800MHz)



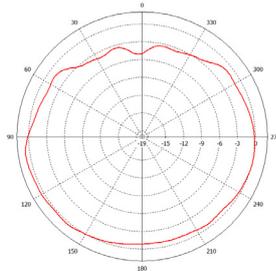
Typical H-Plane (900MHz)



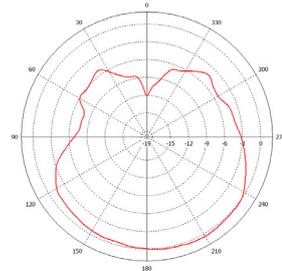
Typical H-Plane (1.7GHz)



Typical H-Plane (1.9GHz)



Typical H-Plane (2.7GHz)



N.B. All pattern and gain measurements taken on a 400 x 400mm (2' x 2') ground plane without additional cable.