

LGEM-7-27-24-58

Low Profile LTE, WiFi & GPS

22/09/2015 v.1

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

Rugged Low Profile Design

Wideband LTE-Cellular Element

2x2 MiMo 2.4 & 4.9-6GHz Wifi/WIMAX

Integrated GPS/GNSS/BEIDOU antenna



The LG[P]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.

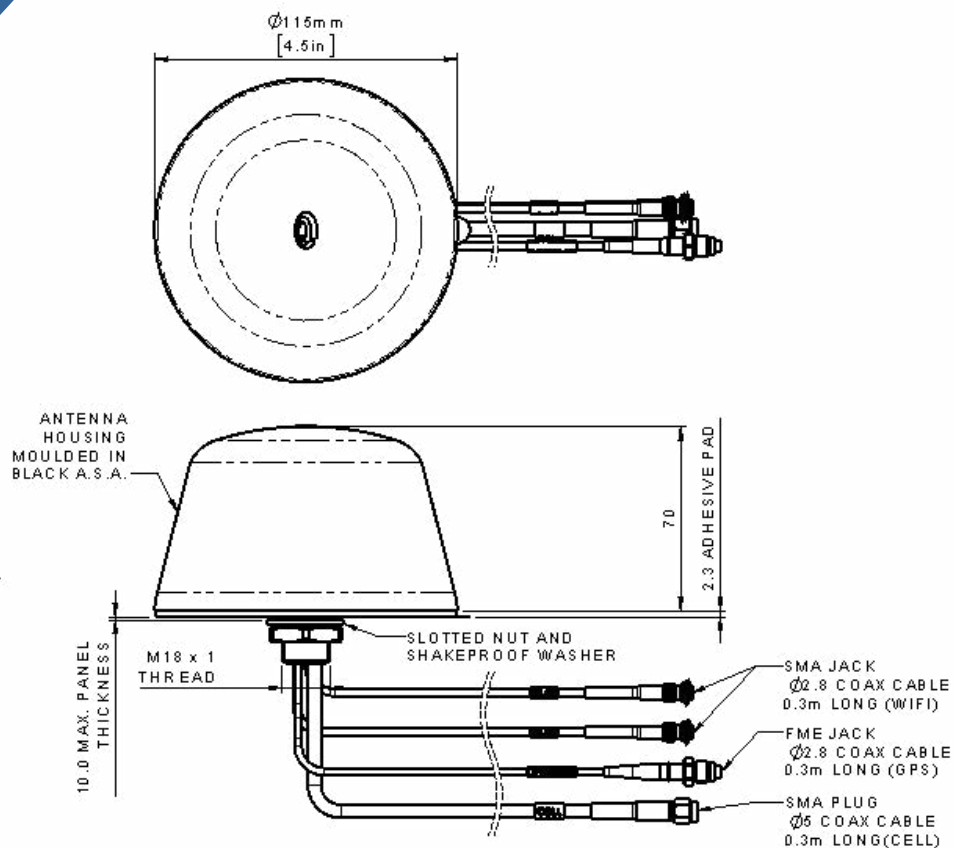
Designed to be tough yet cost effective the antennas are completely enclosed in a moulded housing made from weather and impact resistant plastic.

The range is supplied with short fly leads and can be kitted with Panorama Antennas' low loss extension cables in various lengths

Ground Plane Independent

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



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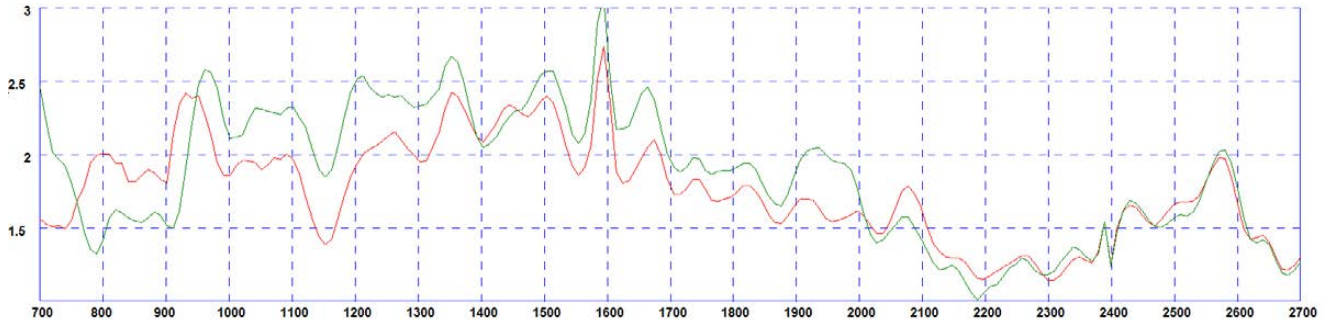
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Part No.		
LGEM-7-27-24-58		
Electrical Data		
Frequency Range (MHz)	Element 1	1560-1612 (GPS/GNSS/Beidou)
	Element 2	698-960 / 1700-2700 (LTE / Cellular)
	Elements 3 & 4	2.4 / 4.9-6GHz (WiFi / 802.11 a/b/g/n)
Peak Gain*	Element 2	698-960MHz 4dBi
	Element 2	1710-2170MHz 5dBi
	Element 2	2300-2700MHz 6dBi
	Elements 3 & 4	2dBi
Typical VSWR	Element 2	< 2.5:1
	Elements 3 & 4	< 2.5:1
Polarisation	Vertical	
Impedance	50Ω	
Max Input Power (W)	50	
GPS Data		
Frequency Range (MHz)	1560-1612	
VSWR	<2.0:1	
Gain: LNA	26dB	
Polarisation	Right Hand Circular	
Operating Voltage	3 -5V DC (fed via coax)	
Current	Typical 15mA	
Mechanical Data		
Dimensions	Height	2.8" (70mm)
	Diameter	4.5" (115mm)
Operating Temp	-22° / 176°F (-30° / +80°C)	
Material	A.S.A	
Colour	Black	
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)

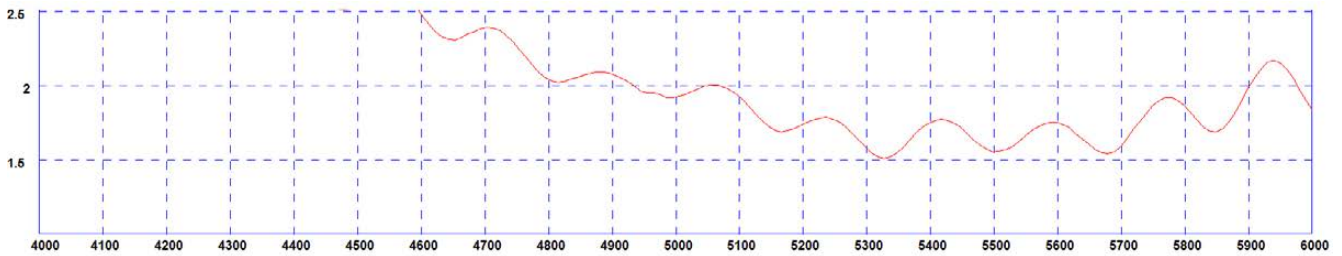
We recommend the customer uses Panorama CS29 extension cables for 2G/3G/4G, CS32 extension cables for WLAN and RG174 or CS23 for GPS.

Typical VSWR cellular / LTE element 2*



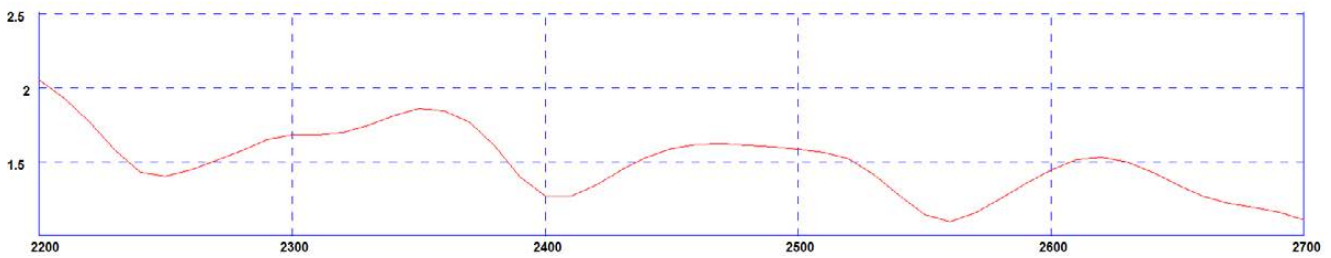
* Red VSWR measured in on a 400 x400mm (1.3' x 1.3') ground plane without extension cables.
Green VSWR measured in free space without extension cables.

Typical VSWR WLAN element 3 - 5.8GHz*

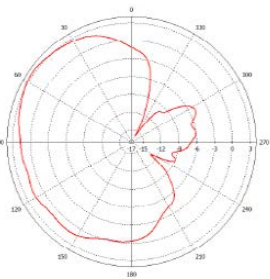


* VSWR measured with 0.5m (1.5') of RG174 cable.

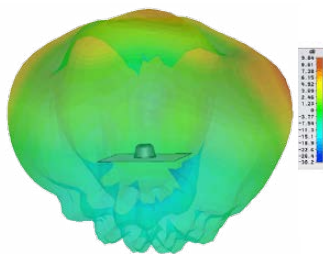
Typical VSWR WLAN element 3 - 2.4GHz*



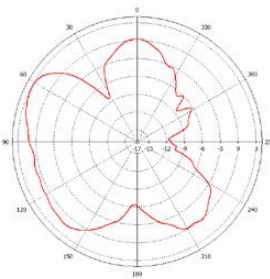
* VSWR measured with 0.5m (1.5') of RG174 cable.



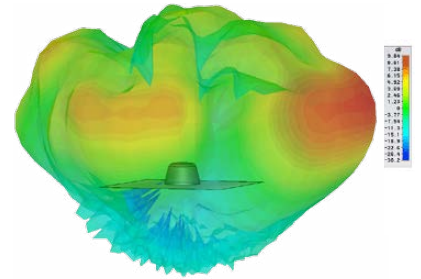
H-Plane - WLAN (2.4GHz)



3D Pattern - WLAN (2.4GHz)

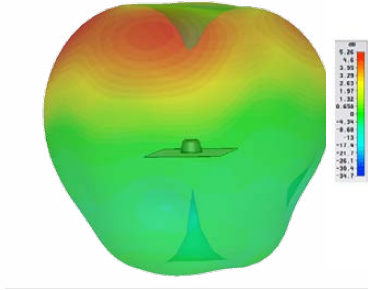


H-Plane WLAN (5.4GHz)

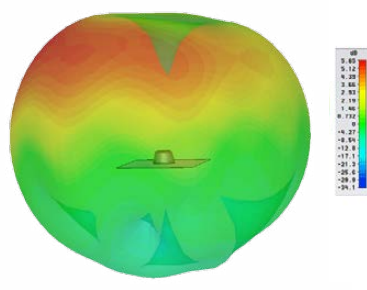


3D Pattern WLAN (5.4GHz)

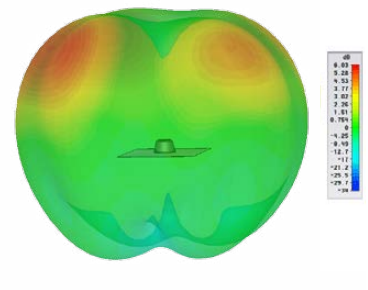
Typical 3D Pattern - Element 2 700MHz



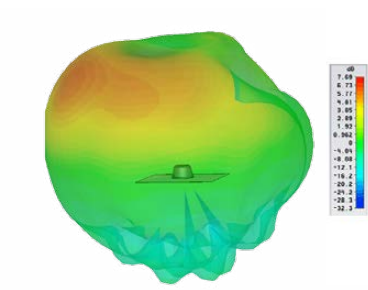
Typical 3D Pattern - Element 2 800MHz



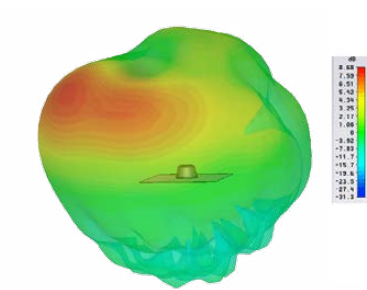
Typical 3D Pattern - Element 2 900MHz



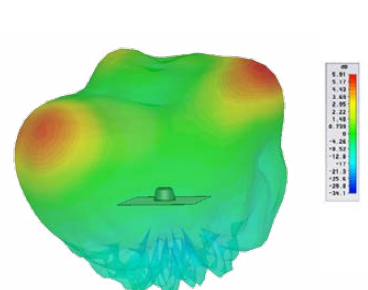
Typical 3D Pattern - Element 2 1800MHz



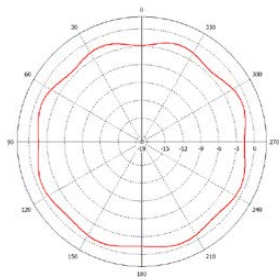
Typical 3D Pattern - Element 2 2000MHz



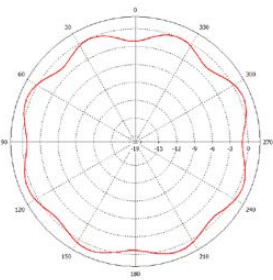
Typical 3D Pattern - Element 2 2600MHz



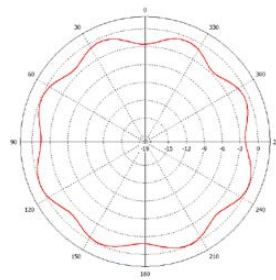
Typical H-Plane (700MHz)



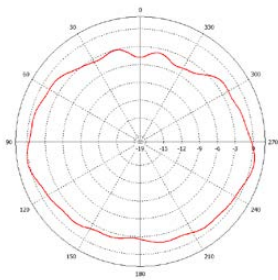
Typical H-Plane (800MHz)



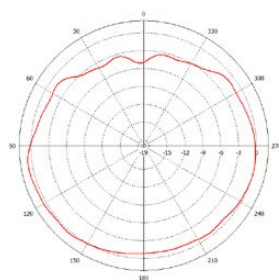
Typical H-Plane (900MHz)



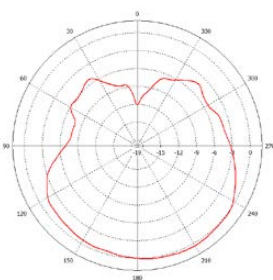
Typical H-Plane (1.7GHz)



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.

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