LGEM-7-27-24-58

Low Profile LTE, WiFi & GPS

03/06/2015 v.1

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

Rugged Low Profile Design

Wideband LTE-Cellular Element

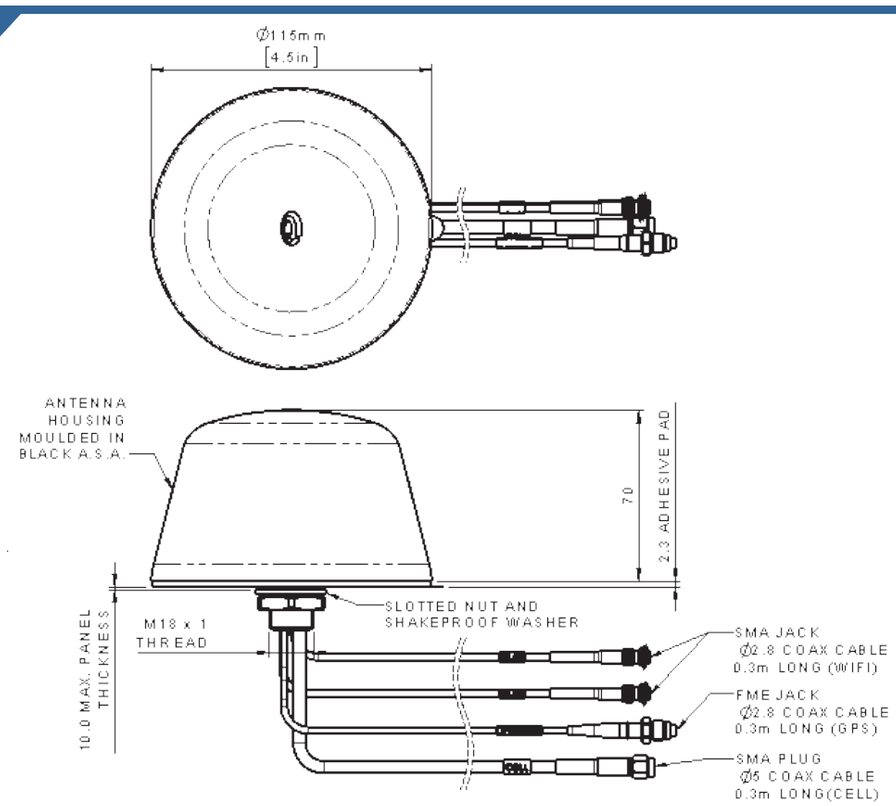
2x2 MiMo 2.4 & 4.9-6GHz Wifi/WIMAX

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

Technical Drawing



PANORAMA ANTENNAS

Panorama Antennas Ltd
Frogmore, London, SW18 1HF, United Kingdom

T: +44 (0)20 8877 4444
F: +44 (0)20 8877 4477
E: sales@panorama-antennas.com
www.panorama-antennas.com

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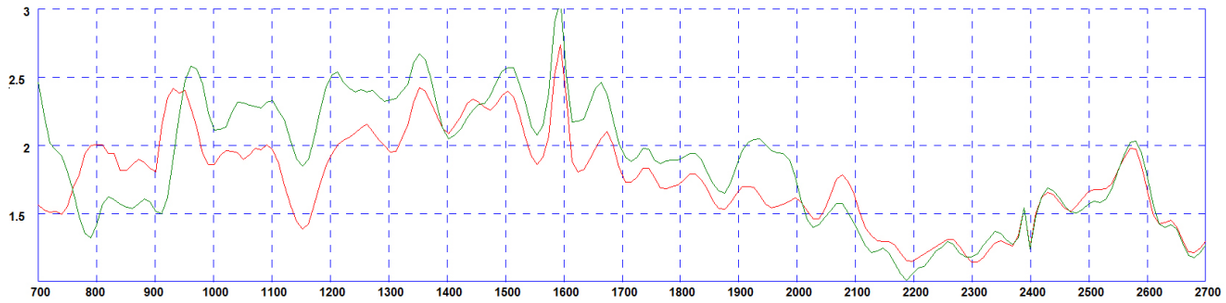
Product Data

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
		1710-2170MHz	5dBi
		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.

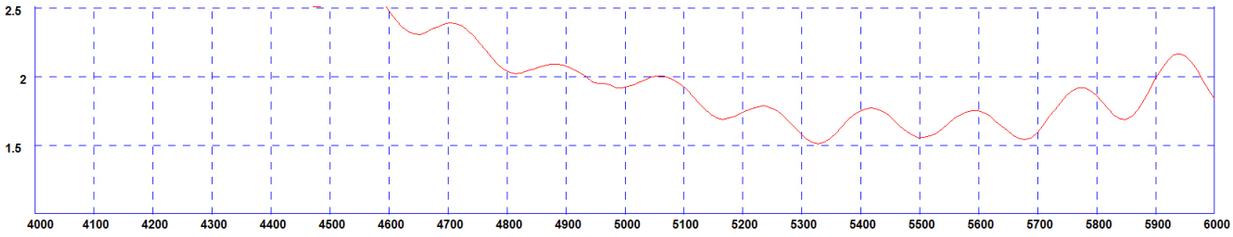
Product Data

Typical VSWR cellular / LTE element 2*



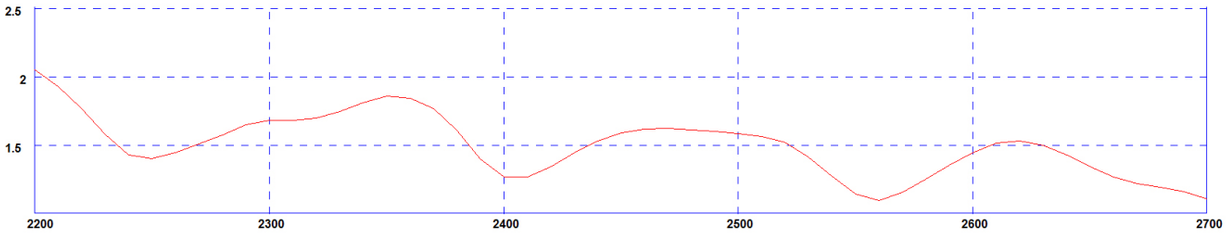
* Red VSWR measured in on a 400 x400mm (1.3' x 1.3') ground plane without extension cables.
Green VSWR measured in free space without extension cables.

Typical VSWR WLAN element 3 - 5.8GHz*

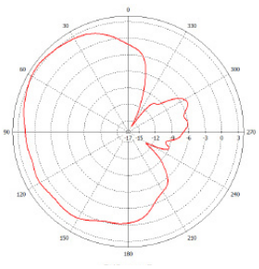


* VSWR measured with 0.5m (1.5') of RG174 cable.

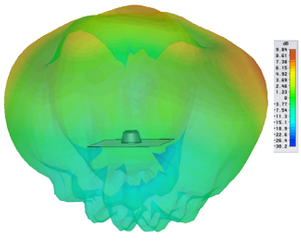
Typical VSWR WLAN element 3 - 2.4GHz*



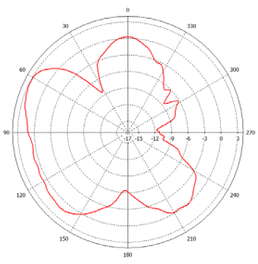
* VSWR measured with 0.5m (1.5') of RG174 cable.



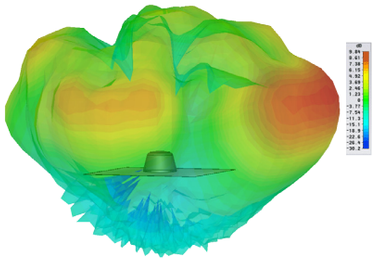
H-Plane - WLAN (2.4GHz)



3D Pattern - WLAN (2.4GHz)

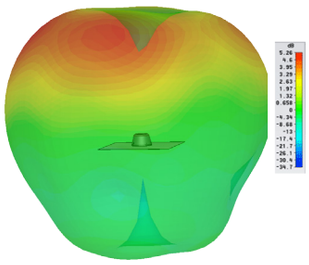


H-Plane WLAN (5.4GHz)

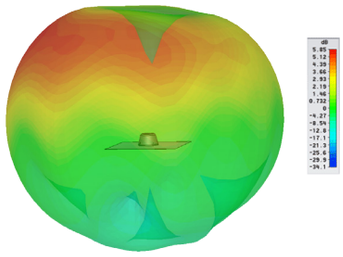


3D Pattern WLAN (5.4GHz)

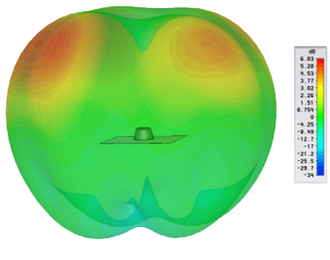
Typical 3D Pattern - Element 2 700MHz



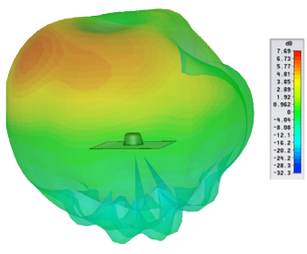
Typical 3D Pattern - Element 2 800MHz



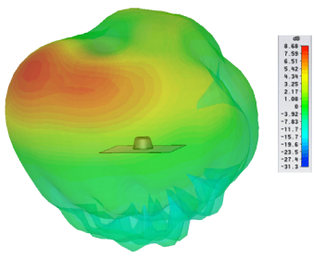
Typical 3D Pattern - Element 2 900MHz



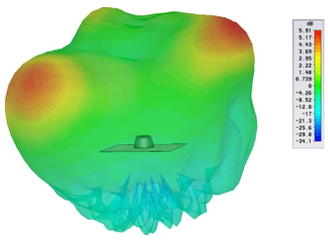
Typical 3D Pattern - Element 2 1800MHz



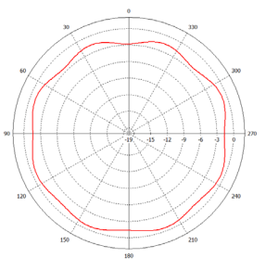
Typical 3D Pattern - Element 2 2000MHz



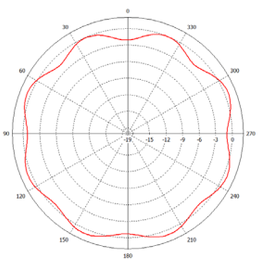
Typical 3D Pattern - Element 2 2600MHz



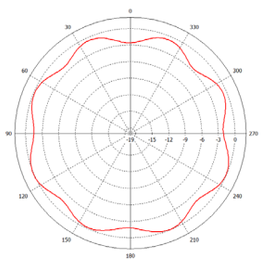
Typical H-Plane (700MHz)



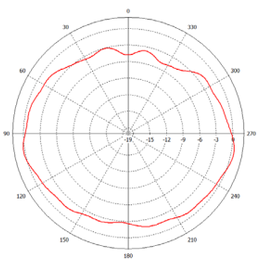
Typical H-Plane (800MHz)



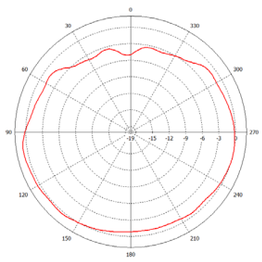
Typical H-Plane (900MHz)



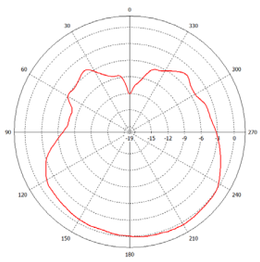
Typical H-Plane (1.7GHz)



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 additonal cable.

Panorama Antennas Ltd
Frogmore, London, SW18 1HF, United Kingdom

T: +44 (0)20 8877 4444
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