

LGE-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

2.4 & 4.9-6GHz WiFi Element

Integrated GPS/GNSS/BEIDOU antenna

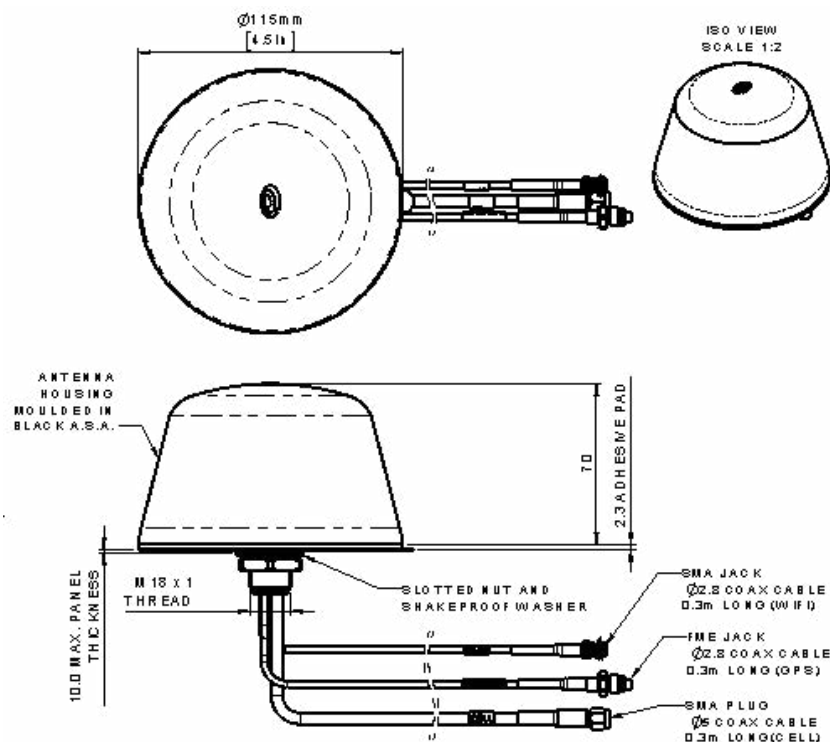
The LG[P]E antenna series is a range of low profile antennas incorporating a combination of wideband cellular elements covering 2G/3G and 4G frequencies along with an active GPS patch with 26dB LNA gain and a dual band WiFi element in a robust compact housing.

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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Part No.

LGE 7-27-24-58

Electrical Data

Frequency Range (MHz)	Element 1	1560-1612
	Element 2	698-960 / 1700-2700
	Element 3	2.4/ 4.9-6GHz
Operational Bands	Element 1	GPS / GNSS / BEIDOU
	Element 2	LTE / Cellular
	Element 3	WIFI / 802.11 a/b/g/n
Peak Gain: Isotropic	Element 2	698-960MHz 4dBi
		1710-2700MHz 6dBi
	Element 3	2dBi
Typical VSWR	Element 2	≤ 2.5:1
	Element 3	≤ 2.5:1
Polarisation	Vertical	
Impedance	50Ω	
Max Input Power (W)	50	

GPS Data

Frequency Range (MHz)	1560-1612
VSWR	<2.0:1 ± 4MHz
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

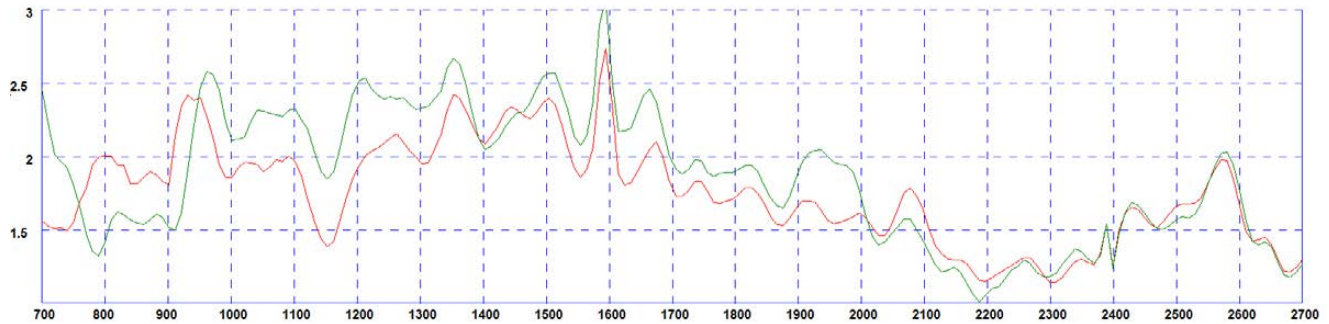
Mounting type	Panel mount
Max panel thickness	0.4" (10mm)
Mounting hole	3/4" (19mm)

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)
WIFI / WiMAX Cable	Type	RG174
	Diameter	0.1" (2.8mm)
	Length	1' (0.3m)
	Termination	SMA (female)

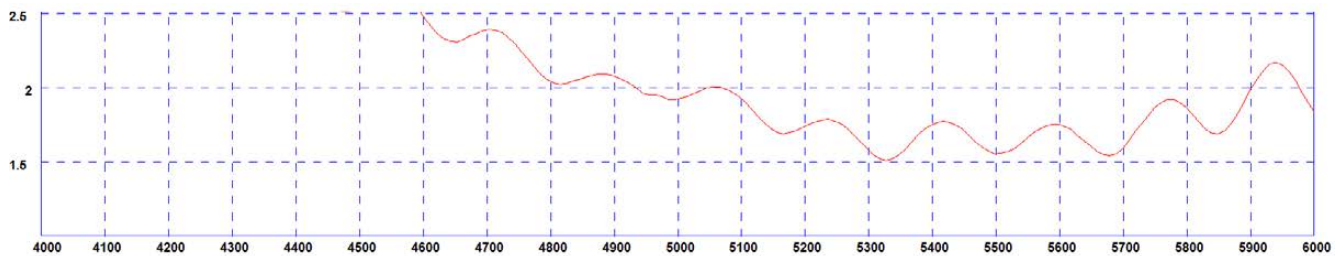
We recommend the customer uses Panorama CS29 extension cables for 2G/3G/4G, CS32 extension cables for WLAN and RG174 or CS23 for GPS.

Typical VSWR cellular / LTE element 2*



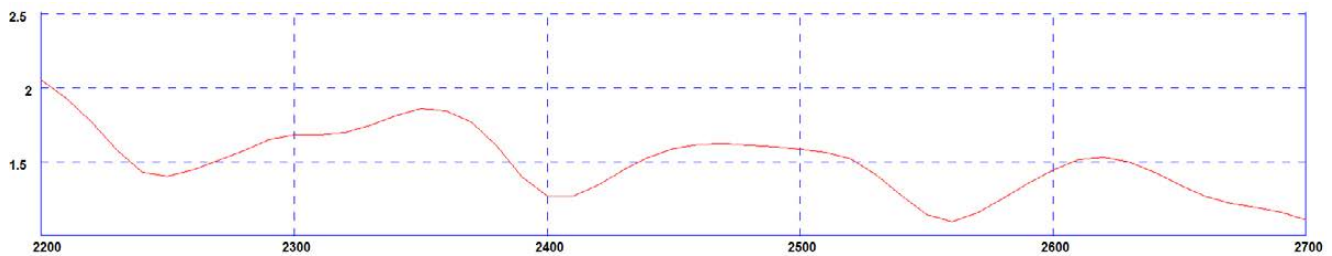
* Red VSWR measured in on a 400x400mm (1.3' x 1.3') ground plane without extension cables.
Green VSWR measured in free space without extension cables.

Typical VSWR WLAN element 3 - 5.8GHz*

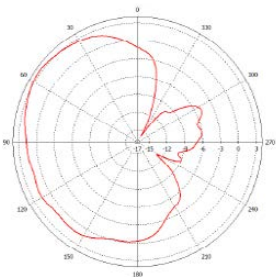


* VSWR measured with 0.5m (1.5') of RG174 cable.

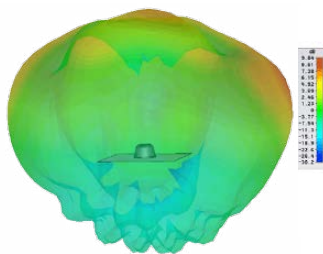
Typical VSWR WLAN element 3 - 2.4GHz*



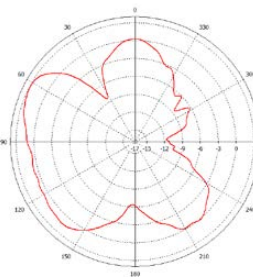
* VSWR measured with 0.5m (1.5') of RG174 cable.



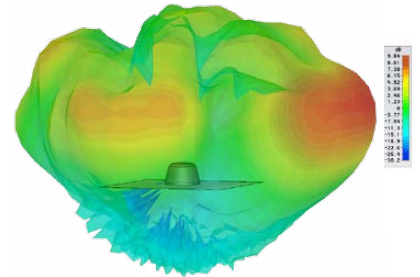
H-Plane - WLAN (2.4GHz)



3D Pattern - WLAN (2.4GHz)

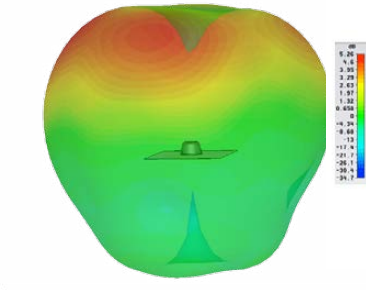


H-Plane WLAN (5.4GHz)

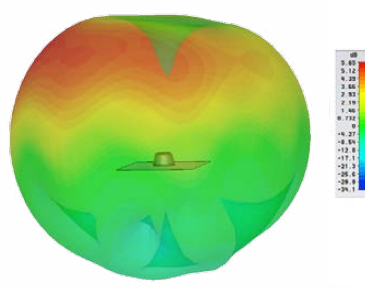


3D Pattern WLAN (5.4GHz)

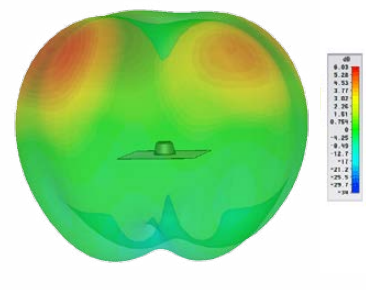
Typical 3D Pattern - Element 2 700MHz



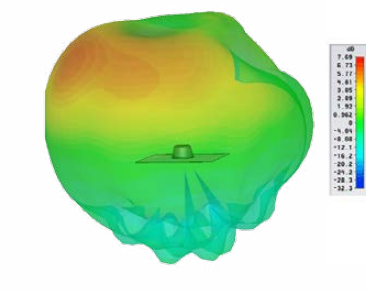
Typical 3D Pattern - Element 2 800MHz



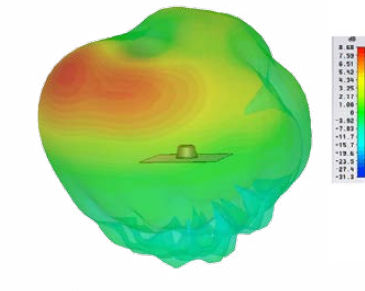
Typical 3D Pattern - Element 2 900MHz



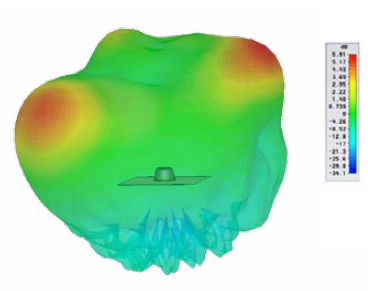
Typical 3D Pattern - Element 2 1800MHz



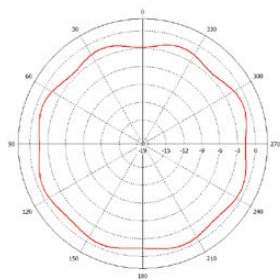
Typical 3D Pattern - Element 2 2000MHz



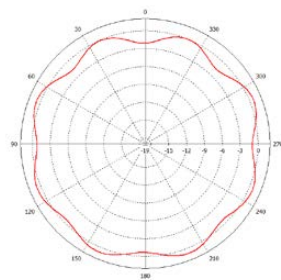
Typical 3D Pattern - Element 2 2600MHz



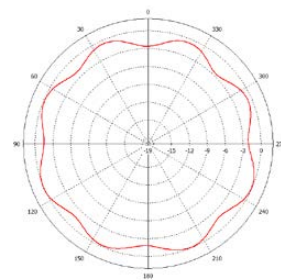
Typical H-Plane (700MHz)



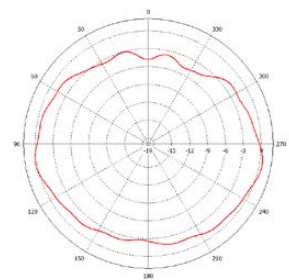
Typical H-Plane (800MHz)



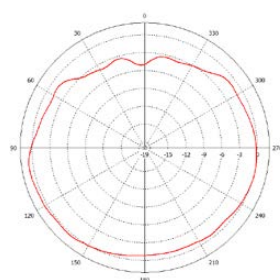
Typical H-Plane (900MHz)



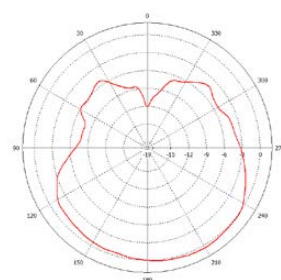
Typical H-Plane (1.7GHz)



Typical H-Plane (1.9GHz)



Typical H-Plane (2.7GHz)



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

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