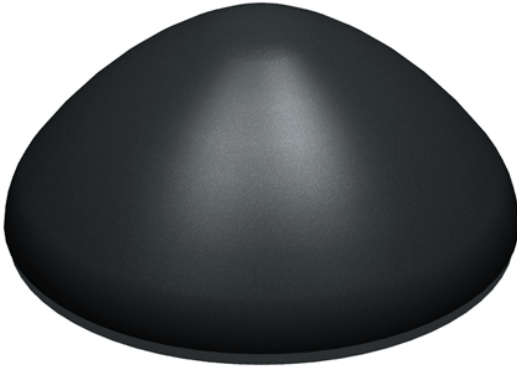


Low Profile IoT Antenna

LP[G]-7-38[-24-58]

PANORAMA ANTENNAS



LP[G]-7-38[-24-58]

- Low Profile - Ground Plane Independent
- 3G/4G/5G - Optional GPS/GNSS & WiFi
- Ideal for M2M and IoT Applications
- Meets IK10 and IP69K

The Panorama LP[G]-7-38[-24-58] range is a cost-effective, robust low profile antenna suitable for IoT & M2M use in hostile environments.

The antenna covers 698-960/1710-3800MHz supporting 2G/3G/4G and 3.5GHz 5G bands, with optional 2.4/5.0GHz WiFi and/or GPS/GNSS with 30dB LNA.

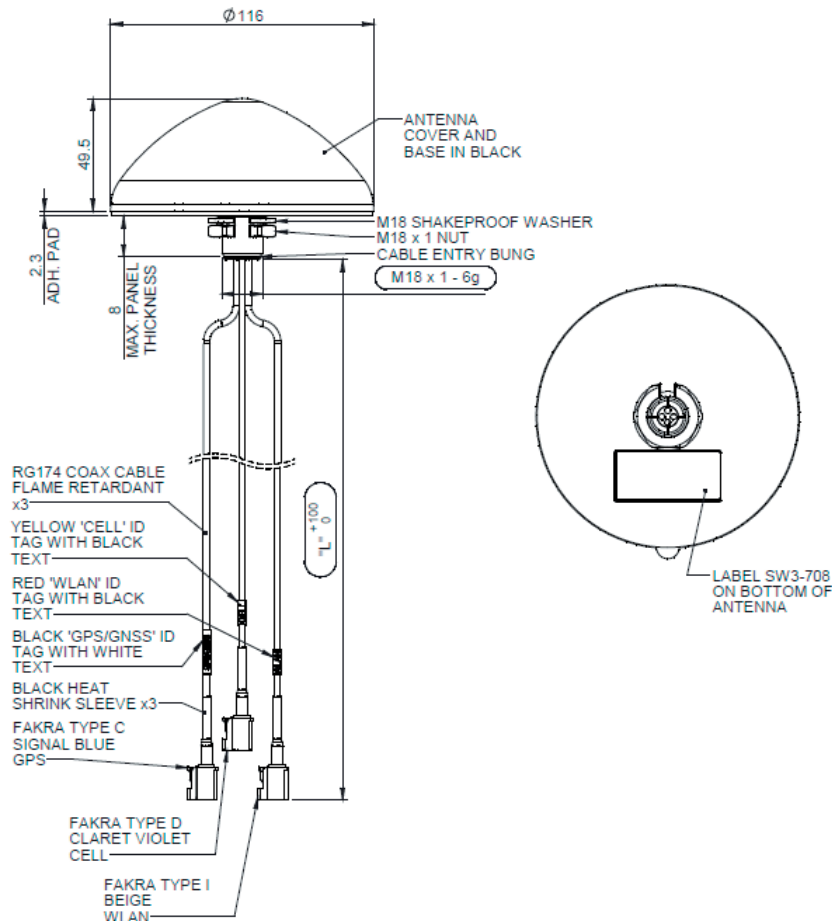
The effective element design ensures a robust communications link, even in areas with poor network coverage.

It can be installed on conductive or non-conductive panels, in a single 19mm (3/4") hole and is fitted with flame retardant RG174 cable(s) compliant with UN ECE R118.03 and available with FAKRA or SMA connectors.

The antenna range is certified to both IK10 and IP69K, when correctly installed, meeting the most stringent vandalism and ingress protection standards.

Technical Drawing

Part No. LG-7-38-24-58-3FK Shown



Low Profile IoT Antenna

LP[G]-7-38[-24-58]

PANORAMA ANTENNAS

Product Data

Part No.		LG-7-38-24-58-3SP	LG-7-38-24-58-3FK	LG-7-38-24-58-1FK	LG-7-38-24-58-1SP
Electrical Data					
Frequency Range (MHz)	Elements 1	698-960/1710-3800			
	Element 2	2400-2485/4900-6000			
	Element 3	1562-1612			
Peak Gain†	Elements 1: 698-960MHz	1dBi			
	Element 1: 1710-3800MHz	6dBi			
	Element 2: 2.4GHz	7dBi			
	Element 2: 5GHz	7dBi			
Typical VSWR	<2.5:1				
Polarisation	Vertical				
Pattern	Omni-directional				
Impedance	50Ω				
Max input power (W)	20				
GPS/GNSS Data					
Frequency Range (MHz)	1562-1612MHz				
LNA Gain (dB)	30dB				
Typical Current (mA)	<20mA				
Typical Voltage	3-5 VDC				
Mechanical Data					
Dimensions (mm)	Height	49.5 (1.94")			
	Diameter	116 (4.56")			
Operating Temp (°C)	-40° / +85°C (-40° / 185°F)				
Material	Lexan EXL 9330 (UL94-V0)				
Colour	Black				
IK rating**	IK10				
Ingress protection**	IP69K				
Mounting Data					
Fixing	Panel mount M18 Bush				
Cable Data					
Cable 1: Cellular	Cable Type	RG174 (meets UN ECE 118.03)			
	Diameter (mm)	2.8 (0.11")			
	Length (m)	3 (10')		1 (3'3")	
	Termination	SMA (m)	FAKRA D (Burgundy) Jack	FAKRA D (Burgundy) Jack	SMA (m)
Cable 2: WiFi	Cable Type	RG174 (meets UN ECE 118.03)			
	Diameter (mm)	2.8 (0.11")			
	Length (m)	3 (10')		1 (3'3")	
	Termination	SMA Rev Pol	FAKRA I (Beige) Jack	FAKRA I (Beige) Jack	SMA Rev Pol
Cable 3: GPS/GNSS	Cable Type	RG174 (meets UN ECE 118.03)			
	Diameter (mm)	2.8 (0.11")			
	Length (m)	3 (10')		1 (3'3")	
	Termination	SMA (m)	FAKRA C (Blue) Jack	FAKRA C (Blue) Jack	SMA (m)

† Peak gain shown simulated in CST microwave studio on a 1mx1m (3'x3') ground plane excluding cable loss.

**When properly installed

Low Profile IoT Antenna

LP[G]-7-38[-24-58]

PANORAMA ANTENNAS

Part No.		LG-7-38-3SP	LG-7-38-3FK	LG-7-38-1FK	LG-7-38-1SP
Electrical Data					
Frequency Range (MHz)	Elements 1	698-960/1710-3800			
	Element 3	1562-1612			
Peak Gain†	Elements 1: 698-960MHz	1dBi			
	Element 2: 1710-3800MHz	6dBi			
Typical VSWR		<2.5:1			
Polarisation		Vertical			
Pattern		Omni-directional			
Impedance		50Ω			
Max input power (W)		20			
GPS/GNSS Data					
Frequency Range (MHz)		1562-1612MHz			
LNA Gain (dB)		30dB			
Typical Current (mA)		<20mA			
Typical Voltage		3-5 VDC			
Mechanical Data					
Dimensions (mm)	Height	49.5 (1.94")			
	Diameter	116 (4.56")			
Operating Temp (°C)		-40° / +85°C (-40° / 185°F)			
Material		Lexan EXL 9330 (UL94-V0)			
Colour		Black			
IK rating**		IK10			
Ingress protection**		IP69K			
Mounting Data					
Fixing		Panel mount M18 Bush			
Cable Data					
Cable 1: Cellular	Cable Type	RG174 (meets UN ECE 118.03)			
	Diameter (mm)	2.8 (0.11")			
	Length (m)	3 (10')		1 (3'3")	
	Termination	SMA (m)	FAKRA D (Burgundy) Jack	FAKRA D (Burgundy) Jack	SMA (m)
Cable 2: GPS/GNSS	Cable Type	RG174 (meets UN ECE 118).03			
	Diameter (mm)	2.8 (0.11")			
	Length (m)	3 (10')		1 (3'3")	
	Termination	SMA (m)	FAKRA C (Blue) Jack	FAKRA C (Blue) Jack	SMA (m)

† Peak gain shown simulated in CST microwave studio on a 1mx1m (3'x3') ground plane excluding cable loss.

**When properly installed

Low Profile IoT Antenna

LP[G]-7-38[-24-58]

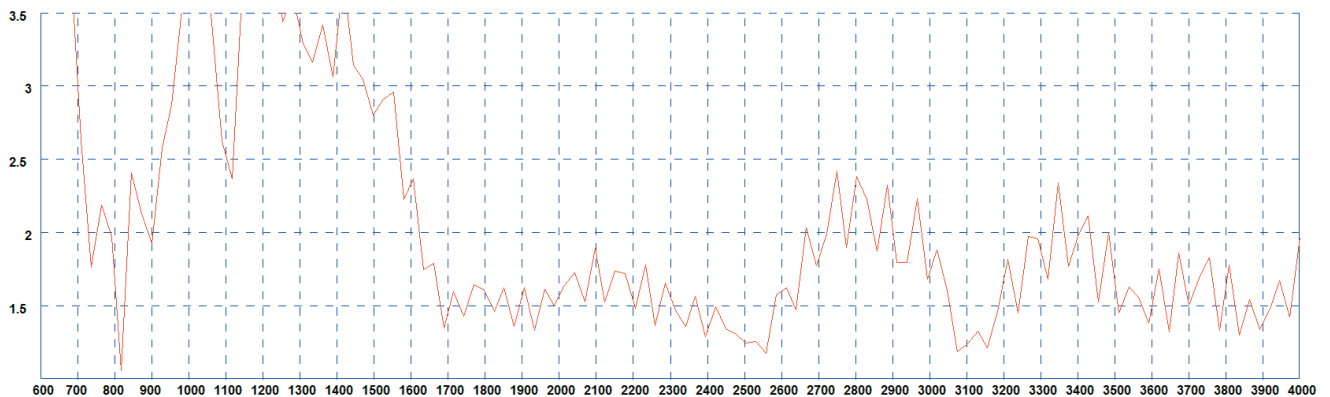
Part No.	LP-7-38-3SP	LP-7-38-3FK	LP-7-38-1FK	LP-7-38-1SP
Electrical Data				
Frequency Range (MHz)	Elements 1		698-960/1710-3800	
Peak Gain†	Elements 1: 698-960MHz		1dBi	
	Element 2: 1710-3800MHz		6dBi	
Typical VSWR	<2.5:1			
Polarisation	Vertical			
Pattern	Omni-directional			
Impedance	50Ω			
Max input power (W)	20			
Mechanical Data				
Dimensions (mm)	Height	49.5 (1.94")		
	Diameter	116 (4.56")		
Operating Temp (°C)	-40° / +85°C (-40° / 185°F)			
Material	Lexan EXL 9330 (UL94-V0)			
Colour	Black			
IK rating**	IK10			
Ingress protection**	IP69K			
Mounting Data				
Fixing	Panel mount M18 Bush			
Cable Data				
Cable 1: Cellular	Cable Type	RG174 (meets UN ECE 118.03)		
	Diameter (mm)	2.8 (0.11")		
	Length (m)	3 (10')		1 (3')
	Termination	SMA (m)	FAKRA D (Burgundy) Jack	FAKRA D (Burgundy) Jack

† Peak gain shown simulated in CST microwave studio on a 1mx1m (3'x3') ground plane excluding cable loss.

**When correctly installed

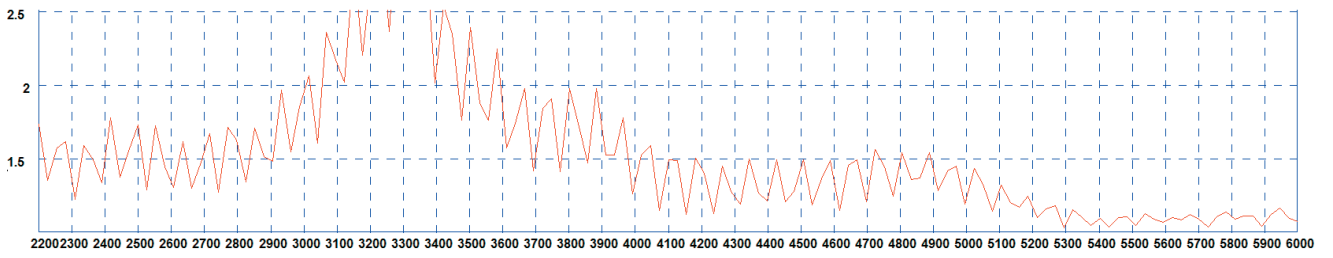
Electrical Data - Cell

Typical VSWR - Element 1*



* VSWR measured in free space with 1.25m (4'1") of RG174 cable

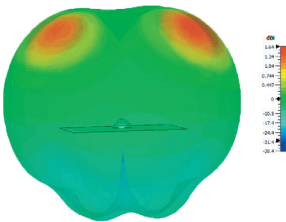
Typical VSWR - Element 2*



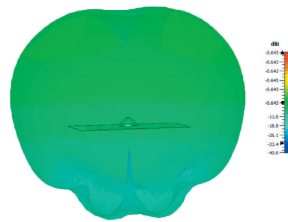
*VSWR measured in free space with 1.25m (4'1") of RG174 cable

3D Patterns - Element 1

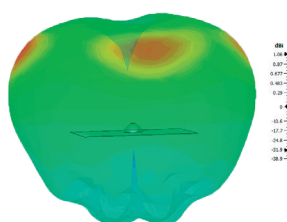
Typical 3D Pattern Side - 700MHz



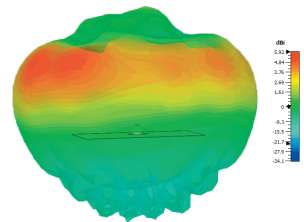
Typical 3D Pattern Side - 800MHz



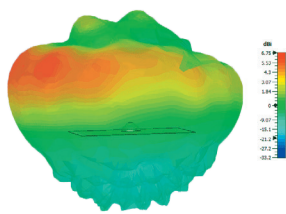
Typical 3D Pattern Side - 900MHz



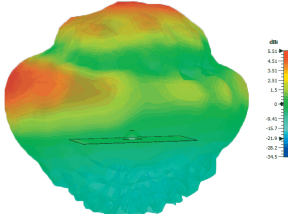
Typical 3D Pattern Side - 1800MHz



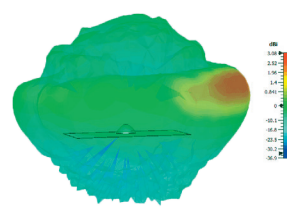
Typical 3D Pattern Side - 2100MHz



Typical 3D Pattern Side - 2600MHz

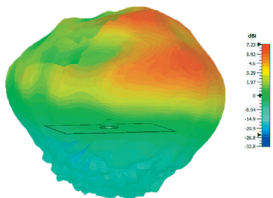


Typical 3D Pattern Side - 3600MHz

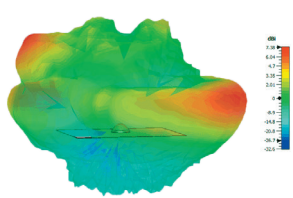


3D Patterns Element 2

Typical 3D Pattern Side - 2400MHz



Typical 3D Pattern Side - 5400MHz



Typical Pattern Elements 3

Typical E-Plane 1575MHz

