

# Low Profile IOT Antenna

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

## Low Profile IOT Antenna



### Low Profile Design

3G/4G/5G, WiFi & GPS/GNSS Functionality

Ideal for M2M and IOT installations

Meets IK10 and IP69K

The Panorama L[G]-7-38[-24-58] range is designed to decrease the lifetime cost of M2M and IOT applications by offering a robust low profile antenna for challenging environments.

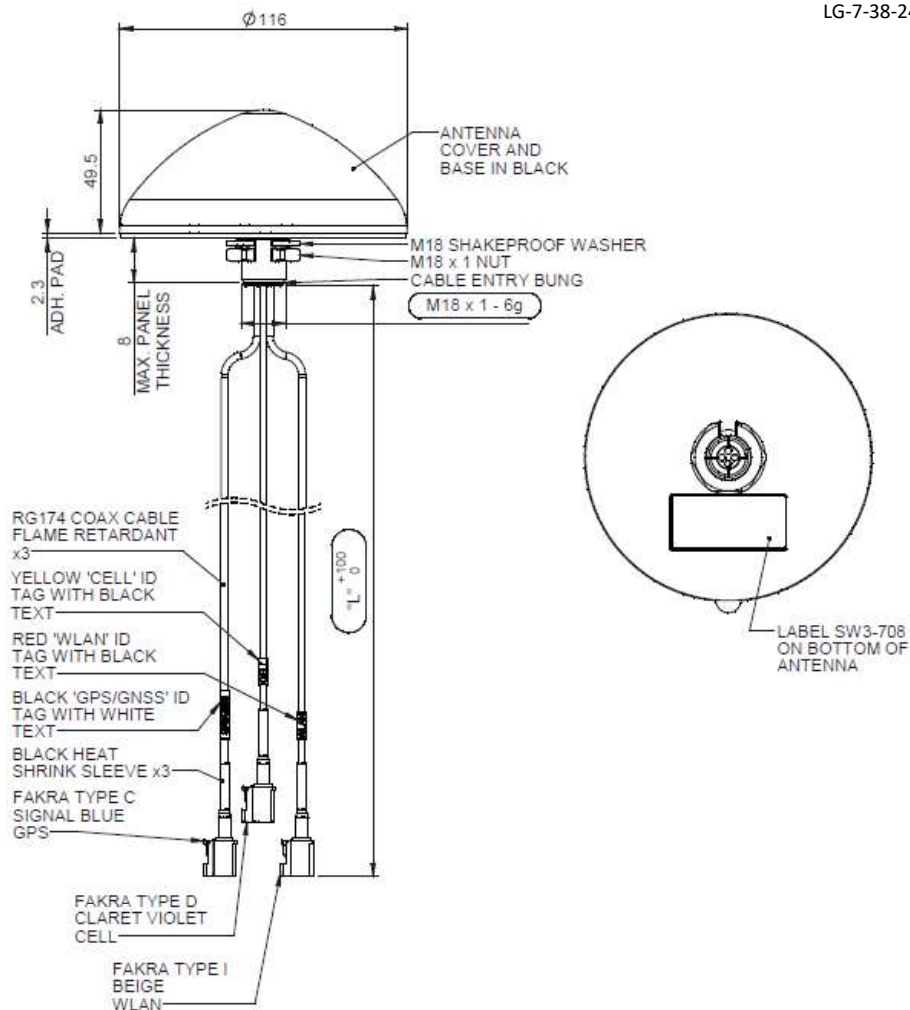
The antenna covers 698-960/1710-3800MHz supporting 3G, 4G and 3.5GHz 5G, optional 2.4/5.0GHz WiFi and optional GPS/GNSS with a 26dB LNA. The efficient element design ensures a high first time connection rate and an ongoing, robust communications link even in many low coverage areas.

The antenna can be installed on conductive or non-conductive panels via the 19mm (3/4") mounting bush and is fitted with Flame Retardant RG174 cables compliant with UN ECE R118 and either FAKRA or SMA connectors.

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

### Technical Drawing

LG-7-38-24-58-3FK Shown



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## 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
<b>Electrical Data</b>				
Frequency Range (MHz)	Element 1	698-960/1710-3800		
	Element 2	2400-2485/4900-6000		
	Element 3	1562-1612		
Peak Gain†	Element 1: 698-960MHz	1dBi		
	Element 1: 1710-3800MHz	6dBi		
	Element 2: 2.4GHz	7dBi		
	Element 2: 5.0GHz	7dBi		
Typical VSWR	<2.5:1			
Polarisation	Vertical			
Pattern	Omni-directional			
Impedance	50Ω			
Max input power (W)	20			
<b>GPS/GNSS Data</b>				
Frequency Range (MHz)	1562-1612Mhz			
LNA Gain (dB)	26dB			
Typical Current (mA)	15			
Typical Voltage	3-5 VDC			
<b>Mechanical Data</b>				
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			
<b>Mounting Data</b>				
Fixing	Panel mount 19mm (3/4")			
<b>Cable Data</b>				
Cable 1: Cellular	Cable Type	RG174 (meets UN ECE 118)		
	Diameter (mm)	2.8 (0.11")		
	Length (m)	3 (10')	1 (3' 3")	
	Termination	SMA(m)	FAKRA D (Burgundy) Jack	FAKRA D (Burgundy) Jack
Cable 2: WiFi	Cable Type	RG174 (meets UN ECE 118)		
	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
Cable 3: GPS/GNSS	Cable Type	RG174 (meets UN ECE 118)		
	Diameter (mm)	2.8 (0.11")		
	Length (m)	3 (10')	1 (3' 3")	
	Termination	SMA(m)	FAKRA C (Blue) Jack	FAKRA C (Blue) Jack

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

\*\*When properly installed

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Part No.		LG-7-38-3SP	LG-7-38-3FK	LG-7-38-1FK	LG-7-38-1SP
<b>Electrical Data</b>					
Frequency Range (MHz)	Element 1	698-960/1710-3800			
	Element 3	1562-1612			
Peak Gain†	Element 1: 698-960MHz	1dBi			
	Element 1: 1710-3800MHz	6dBi			
Typical VSWR	<2.5:1				
Polarisation	Vertical				
Pattern	Omni-directional				
Impedance	50Ω				
Max input power (W)	20				
<b>GPS/GNSS Data</b>					
Frequency Range (MHz)	1562-1612Mhz				
LNA Gain (dB)	26dB				
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Material	Lexan EXL 9330 (UL94-V0)				
Colour	Black				
IK rating**	IK10				
Ingress Protection**	IP69K				
<b>Mounting Data</b>					
Fixing	Panel mount 19mm (3/4")				
<b>Cable Data</b>					
Cable 1: Cellular	Cable Type	RG174 (meets UN ECE 118)			
	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)			
	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.

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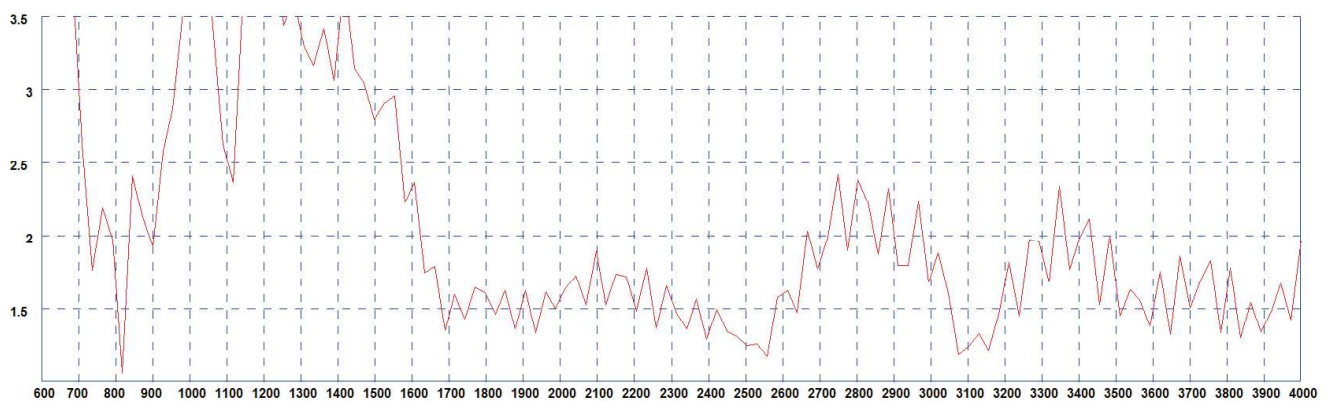
Part No.	LP-7-38-3SP	LP-7-38-3FK	LP-7-38-1FK	LP-7-38-1SP	
<b>Electrical Data</b>					
Frequency Range (MHz)	Element 1		698-960/1710-3800		
Peak Gain†	Element 1: 698-960MHz		1dBi		
	Element 1: 1710-3800MHz		6dBi		
Typical VSWR	<2.5:1				
Polarisation	Vertical				
Pattern	Omni-directional				
Impedance	50Ω				
Max input power (W)	20				
<b>Mechanical Data</b>					
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				
<b>Mounting Data</b>					
Fixing	Panel mount 19mm (3/4")				
<b>Cable Data</b>					
	Cable Type	RG174 (meets UN ECE 118)			
Cable 1: Cellular	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)

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

\*\*When properly installed

## Electrical Data

Typical VSWR - Element 1\*



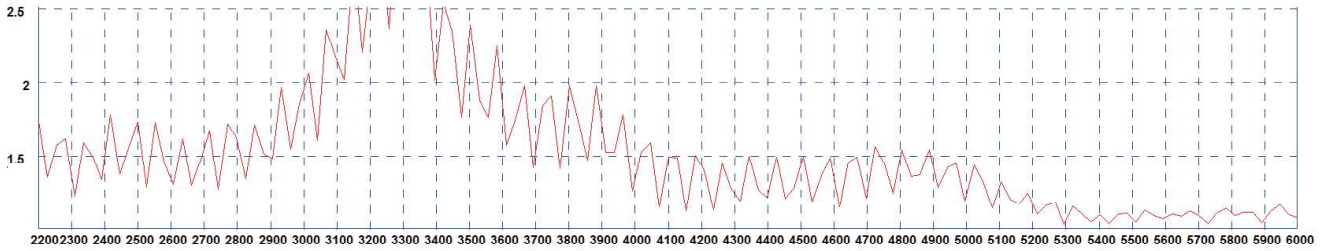
\*VSWR measured in free space with 1.25m (4'1") of RG174 cable

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

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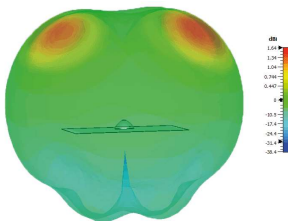
Typical VSWR - Element 2\*



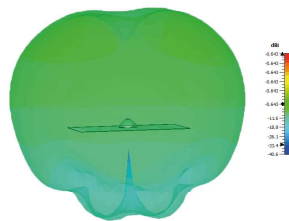
\*VSWR measured in free space with 1.25m (4'1") of RG174 cable

## 3D Patterns - Element 1

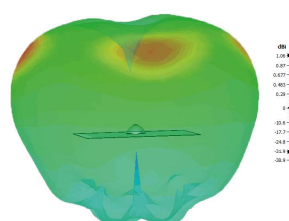
Typical 3D Pattern Side -700MHz



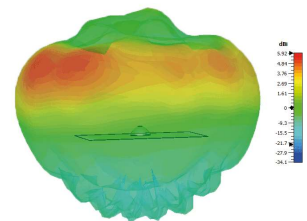
Typical 3D Pattern Side -800MHz



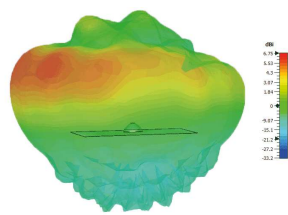
Typical 3D Pattern Side -900MHz



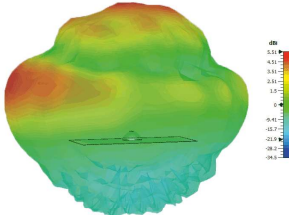
Typical 3D Pattern Side -1800MHz



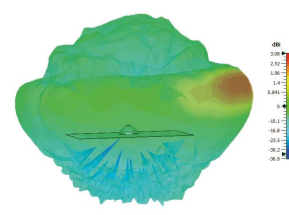
Typical 3D Pattern Side -2100MHz



Typical 3D Pattern Side -2600MHz

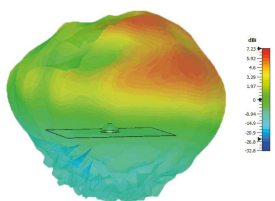


Typical 3D Pattern Side -3600MHz

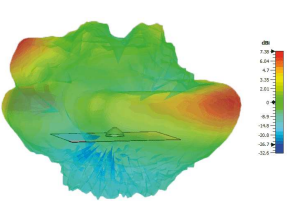


## 3D Patterns Element 2

Typical 3D Pattern Side -2400MHz



Typical 3D Pattern Side -5400MHz



## Typical Pattern Element 3

Typical E-Plane 1575MHz

