

GPS

The **Laser Clear*** transparent antenna is an innovation bought about by the need for discreet and high performance antennas used on wireless communication systems.

This planar and transparent antenna, designed to be mounted inside the windshield, has been engineered to give exceptional performance for GPS reception. The connector at the antenna end has a built-in microchip low noise amplifier (LNA) to boost the gain at the source by 23dB.

Its patented construction uses a conductive element on a clear and flexible substrate. The proprietary connector interfaces the antenna with RG174 coaxial cable for flexible installation ease.



“If you haven’t seen our Laser Clear products, then we’ve done a good job”

www.laser-antenna.com

TRANSPARENT

hence virtually invisible. Using our patented and proprietary manufacturing procedure, which forms a conductive circuit on a clear polyester backing.

THEFT & VANDAL PROOF

being mounted on the inside of the windshield there is no opportunity for theft or vandalism. No problems with wind noise or car wash problems.

EXCELLENT PERFORMANCE

compared to in-vehicle mounted GPS antennas is achieved through the geometry of the printed circuit artwork and the direct connection of the antenna to the coaxial cable. Being mounted on the windshield gives this antenna a large “view” of the sky and satellites , a feature not possible by dashboard mount antenna systems.

LOW NOISE AMPLIFIER (LNA)

in addition to the passive gain (4.5dBi) of the antenna, the connector at the antenna end has a built-in LNA to boost the gain by an additional 23dB.

* Naming rights for OEM and other situations available

Features of this antenna are covered by

US Patent No.: 6,252,550 and 6,407,706 B2 **South Africa Patent No.:** 2002 / 5065

EU Patent No.: 0 903 805 **New Zealand Patent No.:** 519 721

Patent Pend.: Australia, China, Japan

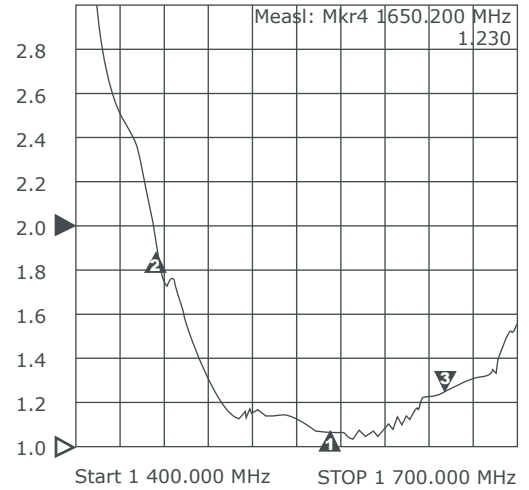
Electrical

- Radiator:** 2 x full-wave loop with common center element @ 1575MHz.
- Bandwidth:** >50MHz
- Antenna Gain:** (Passive) 4.5dBi
- LNA Gain:** (Active) 23dB
- System Gain:** 27.5dB = Antenna + LNA
- VSWR:** << 1.2:1 @ Band Centers
- LNA Operating Voltage:** +3 ~ +5v

Mechanical

- Radiating Element:** Copper plated (10~15um) silver ink track.
- Substrate:** Clear Polyester/Mylar film (180um). Not affected by UV.
- Adhesive/Dielectric:** 3M 467 Epoxy. This adhesive gets stronger over time and is not affected by UV.

- ▶ 1: Reflection SWR 0.2 / Ref 1.000
- ▶ 2: Transmission Log Mag 10.0 dB / Ref 0.00 dB



1: Mkr (MHz)	2: Mkr (MHz) dB
1: 1575.0000	1.036
2: 1455.8000	1.888
3> 1650.2000	1.230

VSWR

