

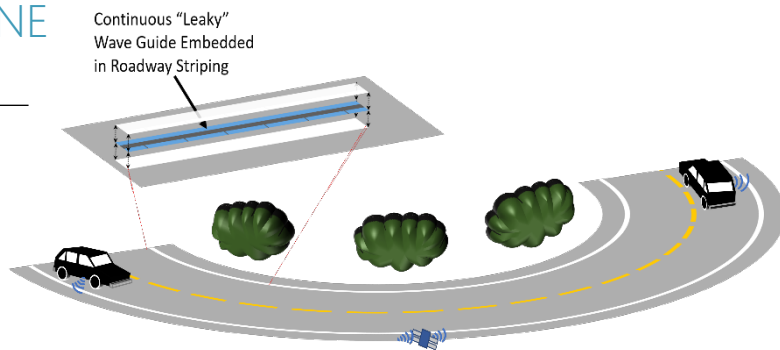


N A N O H M I C S

INTELLIGENT ROAD STRIPING

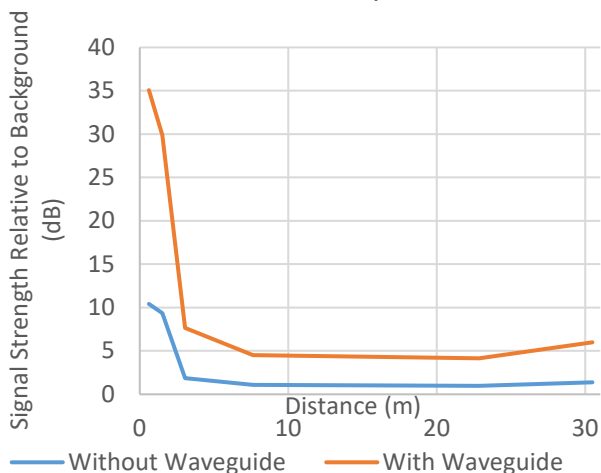
EXTENDED RANGE, PASSIVE CODING, AND OBSCURED LANE MARKING IDENTIFICATION

Nanohmics has developed an innovative all-oxide pavement waveguide that extends transmitter range and allows signal coupling to nearby vehicles or roadside units. The waveguide reduces the path loss by up to 20dB and the roll-to-roll fabrication process makes it ideal for inclusion in roadway striping.



Road markings with integrated waveguide extend RSU transmission around curves and provides passive coding

Attenuation Comparison- 5.9 GHz



FEATURES

- DSRC signal couples thru road stripe
- Ink-based process uses mature coating technologies
- Can be embedded in thermoplastic
- Reel-to-reel fabrication process
- All-oxide weather/corrosion resistant material
- Simple spot repair

CAPABILITIES

- Reduces the number of DSRC infrastructure Roadside Units (RSUs), with potential cost savings
- Allows lane marking to be located even when covered by snow and other obscurations
- Enables long-term, low-cost coded safety alerts on/near roadways
- Increased transmission range with no internal power requirements
- Design can be scaled to operate in multiple bands
- Transmission of signal for White Space spectrum broadband internet and 5G spectrum are potential secondary commercial markets for similar waveguides



TRC Data Collection

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