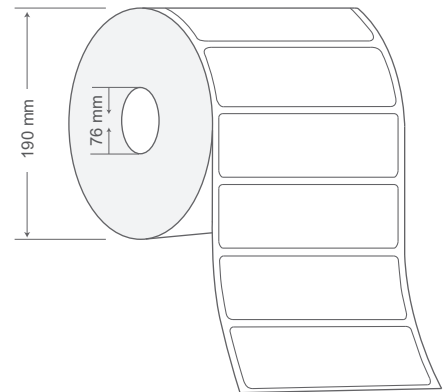


SIVA Windshield TP is a non-transferable tamper-proof windshield RAIN (UHF) RFID label that has been developed especially for automatic vehicle identification applications. Made using high-quality materials, the label does not expand or contract with changes in temperature. The label is tamper-proof, meaning any attempt made to remove the label results in breakage, thereby making it impossible to transfer the label to another vehicle. Made using a unique label construction, it is supplied in roll form as finished labels. It can be encoded and printed with typical RAIN (UHF) RFID thermal transfer printers.

**SIVA also offers customised labels as per client specifications.**

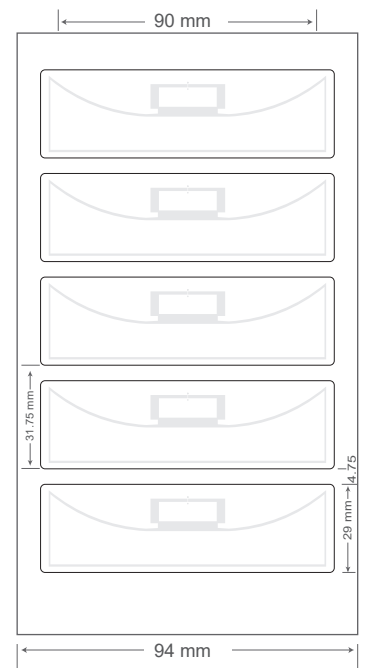
### TYPICAL APPLICATIONS

- Electronic Toll Collection (ETC)
- Parking Management
- Vehicle Access Control
- Electronic Vehicle Registration



### PHYSICAL SPECIFICATION

Face Stock	Printable white PET, resin ribbon is recommended
Label Sizes	90 x 27.0 x 0.2 mm 2.67 x 1.06 x 0.007 in
Adhesive	High performance permanent adhesive with excellent bonding to glass
Weight	0.68 gms
Delivery format	On reel
No. of Labels/ Reel	2000 pcs
Label Pitch	31.75mm / 1.25 in
Core inner diameter	76 mm / 3 in
Roll outer diameter	190 mm / 7.48 in



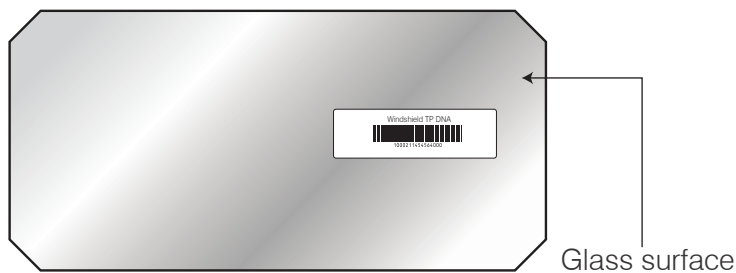
## RF SPECIFICATION

Mode of Operation	Passive
Device type	Class 1 Gen 2 Passive UHF RFID transponder
Air interface protocol	EPC Global Class 1 Gen 2 ISO 18000-6C/63
Operational frequency	Global 860-960 MHz
IC type*	NXP UCODE DNA
Memory configuration	EPC Size Upto 448 Bits, User Memory Upto 3K Bits, 96 bits TID with 48 bits Unique serial number
Data Retention	Upto 50 years
Read range (2W ERP)**	ETSI : On Glass upto 11 m / 36 ft FCC : On Glass upto 11 m / 36 ft
Applicable surface materials	Glass

## ENVIRONMENTAL RESISTANCE

Operating Temperature	-30°C to +85°C / -22°F to +185°F
Withstands Exposure To	Tested at 85°C / 185°F for one month, no change in electrical behavior observed
Peak Temperature	85°C / 185°F
Adhesive Service Temperature	+70°C / 158°F
Recommended Application Temperature	+10°C to +38°C / 50°F to +100.4°F
Chemical Resistance	Resistant to chemical solvents and moisture
Water Resistance	IP67
Ideal Storage Condition	+23°C, 50% RH / +73°F, 50% RH
Expected Lifetime	Years in normal operating conditions

## PRODUCT INSTALLATION



- Ideal application conditions are +23°C (+78°F) / 50% RH. Ensure the application surface is even and is clean and dry, to obtain maximum bond strength. If required, use approved cleaning solvents to clean surface. Bond strength can be improved by applying firm pressure. Avoid touching the exposed label adhesive while mounting it.
- Label's antenna parts should not come in contact with metal to ensure better performance. Also note that metallized UV-protection films effect RFID performance.
- Do not bend the label beyond the prescribed limit. Avoid touching the IC location as well as applying excessive pressure, as it is a sensitive electrical component and might get damaged.

## PERSONALIZATION OPTIONS

### Pre-encoding

- Customer specific encoding of EPC

### Customized Printing

- Customer specific layout including logo & text, numbers, barcodes etc.

## ORDER INFORMATION

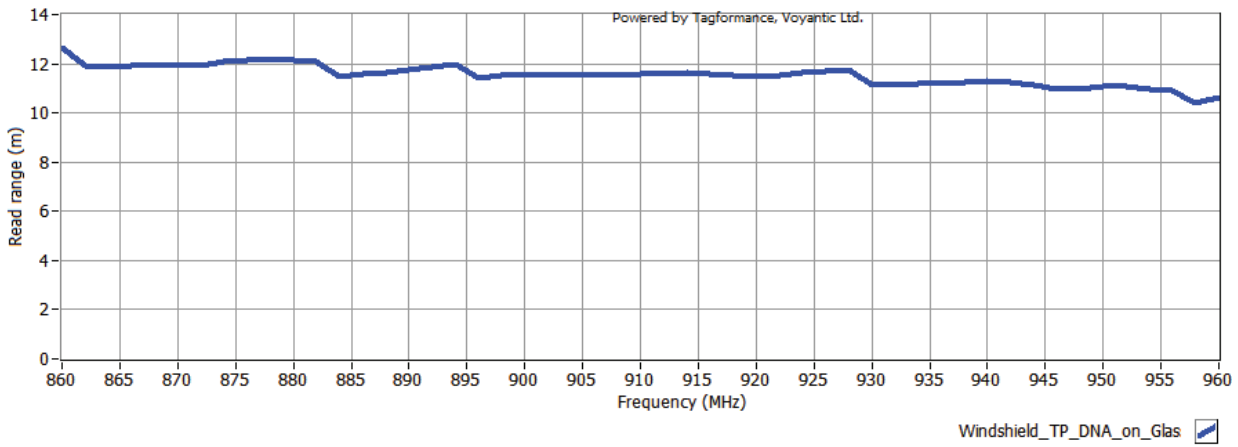
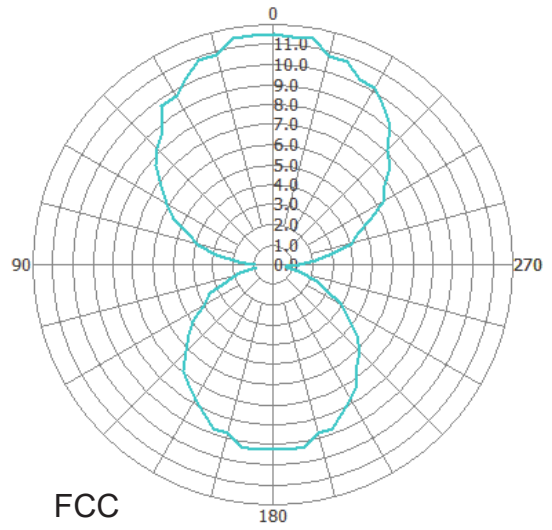
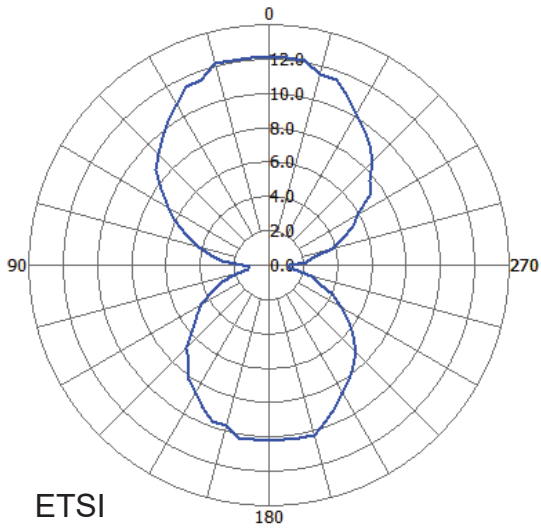
### Part Number

- RF.LI.WS.TP.DNA

### Roll Sizes

- 2000 Labels per Roll / 4 Rolls per Carton

# RADIATION PATTERN & READ RANGE GRAPH



\* Other IC's available on request

\*\* The indicated read range values are measured in our laboratory testing environment, where antennas with optimum directivity are used with maximum allowed operating power. Different surface materials and environments may exhibit different results.



Version : 010321.01