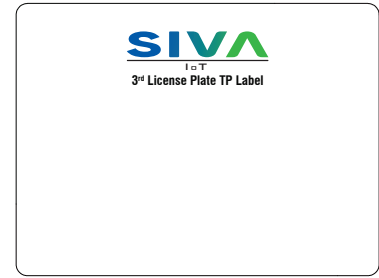


Adhesive Side



Non Adhesive Side

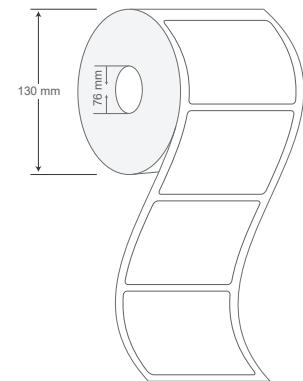
SIVA's 3rd License Plate TP is a non-transferable RAIN (UHF) RFID windshield label, with excellent read and write performance. Labels can be printed and encoded on demand using thermal transfer printers and applied to the interior of the automobile's windshield such that the variable printed information is readable from the outside. In addition, the 3rd License plate windshield labels are Tamper-proof.

The label contains a conductive ink printed antenna and is tuned especially for optimal performance on glass surfaces. This label is IR and UV light resistant and is made using high-quality materials so that it does not expand or contract with changes in temperature.

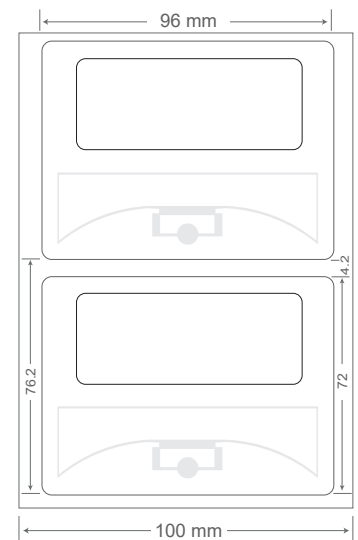
SIVA also offers customised labels as per client specifications.

TYPICAL APPLICATIONS

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



PHYSICAL SPECIFICATION	
Face Stock	Special Plastic film
Label Sizes	72 x 96.0 x 0.2 mm 2.84 x 3.8 x 0.01 in
Adhesive side printable area	30 x 75 mm 1.18 x 2.95 in
Background adhesive	High performance permanent adhesive with excellent bonding to glass
Weight	1.8 gm
Delivery format	On reel
Pitch on reel	76.2 mm / 3 in
Core Inner Diameter	76 mm / 3 in
Roll Outer Diameter	130 mm / 5.18 in



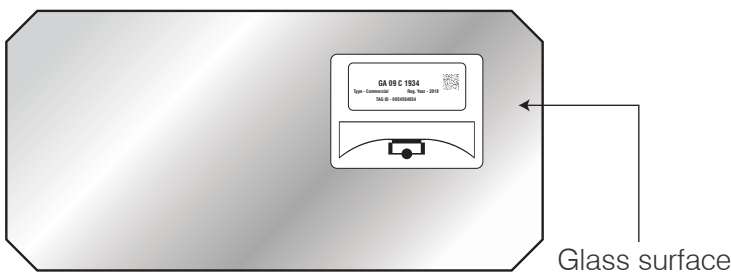
RF SPECIFICATION

Mode of Operation	Passive
Device type	Class 1 Gen 2 Passive UHF RFID transponder
Air interface protocol	EPC Global Class1 Gen2 ISO 18000-6C
Operational frequency	Global 860-960 MHz
IC type*	NXP UCODE DNA
Memory configuration	EPC Size 224 Bits, User Memory 3072 Bits, 96 bits TID with 48 bits Unique serial number
Data Retention	Upto 20 years
Write Cycle Endurance	100,000
Read range (2W ERP)**	ESTI : On glass upto 10m / 32.80 ft FCC : On glass upto 11m / 36.08 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
Water Resistance	IP67
Chemical Resistance	Resistant to chemical solvents and moisture
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

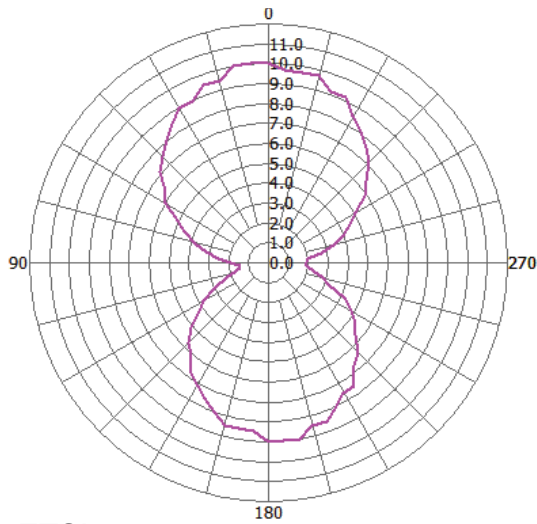
Part Number

- RF.LI.WS.3LP.DNA

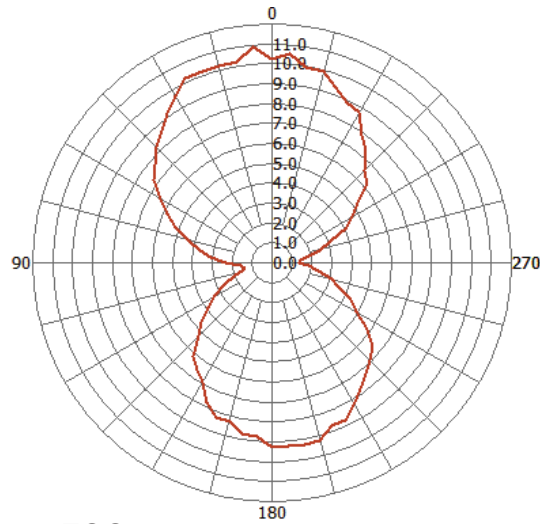
Roll Sizes

- 1000 Labels per Roll / 4 Rolls per Carton

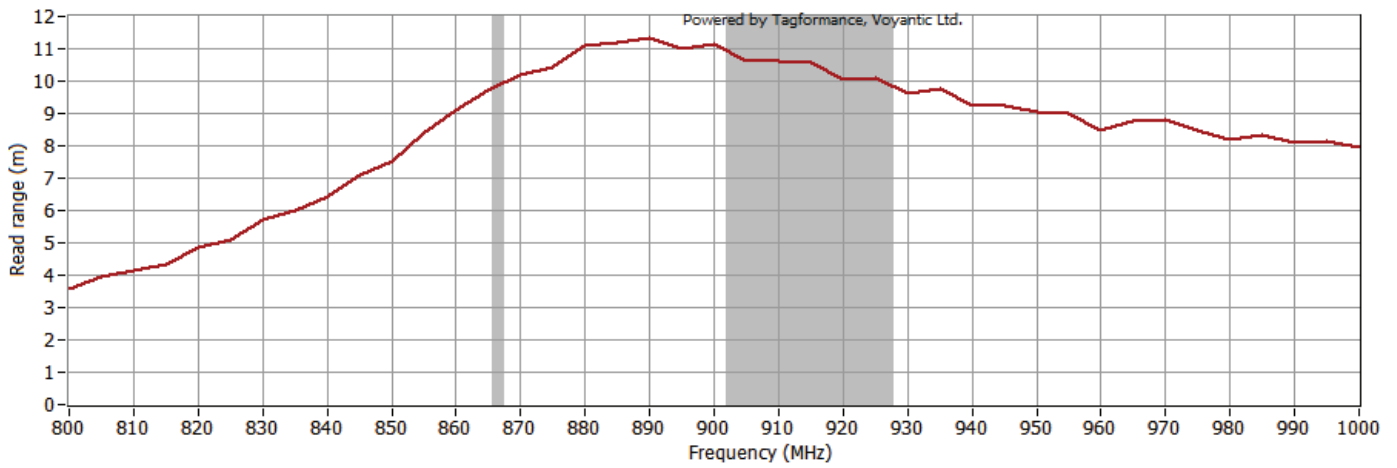
RADIATION PATTERN & READ RANGE GRAPH



ETSI



FCC



* 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 : 230221.01