

# SMART RFID LABELS UHF FOAM TRANSPONDER – DUMBEL

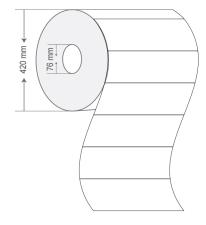


SIVA's RAIN(UHF) RFID foam transponders are ready to apply foam backed race timing tags on marathon bibs and are designed to ensure athletes receive the most accurate measurement of their timings while they race.

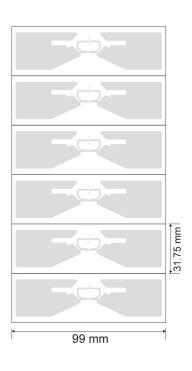
With capabilities of custom printing and encoding, these race timing foam tags are supplied in roll form. The tag houses a finely tuned antenna to counter the detuning effect produced due to its close proximity from the human body. The tags come in 3mm & 4mm foam thickness variants.

# **TYPICAL APPLICATIONS**

- Marathons and Ultrathons
- Sprint Races



PHYSICAL SPECIFICATION		
Face Stock	Foam	
Label Sizes	99 x 31.75 x 3.0 mm / 4mm 3.89 x 1.25 x 0.11 in / 0.15 in	
Adhesive	High performance parmanent adhesive	
Weight	1.167 gm	
Delivery format	Roll form	
No. of Labels/ Reel	1000 pcs	
Label Pitch	37.25 mm / 1.46 in	
Core inner diameter	76 mm / 3 in	
Outer diameter	3mm Foam: 420 mm / 16.53 in	



RF SPECIFICATION	
Mode of Operation	Passive
Device type	Class 1 Gen 2 Passive UHF RFID Transponder
Air interface protocol	EPC and ISO 18000-63 compliant Gen2 v 2 compliant
Operational frequency	Global 860 - 960 MHz
IC type*	IMPINJ MONZA R6 P
Memory configuration	EPC Size up to 96 Bits, 96 Bits of Serialized TID with 48 Bits Unique Serial Number
Write cycle endurance	100000 cycle
Data Retention	Upto 50 years
Applicable Surface Materials	Non-metallic surfaces
Read range (2W ERP)**	For 3mm Foam: ETSI - Upto 13 m & FCC - Upto 12 m For 4mm Foam: ETSI - Upto 14 m & FCC - Upto 13 m

ENVIRONMENTAL RESISTANCE		
Operating Temperature	-20°C to +70°C / -4°F to +158°F	
Withstands Exposure To	95% humidity, 60°C $\times$ 100 h, 50% humidity, 80°C $\times$ 100 h	
Peak Temperature	+80°C (Label remains securely attached with object. No physical or performance changes observed)	
Adhesive Service Temperature	-20°C to +70°C / -4°F to +158°F	
Recommended Application Temperature	+10°C to +38°C / 50°F to +100.4°F	
Water Resistance	IP68, tested for 5 hours in 1m deep water	
Chemical Resistance	Resistant to chemical solvents and moisture	
Ideal Storage Condition	+23°C / 50% RH	
Expected Lifetime	Years in normal operating conditions	

# **PRODUCT INSTALLATION**



- Ensure the application surface is not uneven and is clean and dry, to obtain maximum bond strength.
- Avoid touching the backside of the label while mounting it.

# **PERSONALIZATION OPTIONS**

### **Pre-encoding**

- Customer specific encoding of EPC or user memory
- · Locking permanently or with password

## **Customized Printing**

• Customer specific layout including logo, text, numbers, barcodes etc.

## **ORDER INFORMATION**

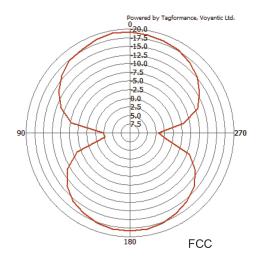
#### **Part Number**

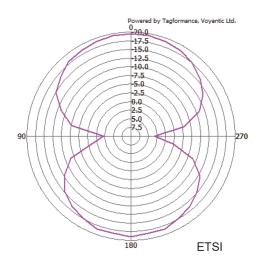
- RF.Li.TT.3FT.Dumbel.R6P.NPT
- RF.Li.TT.4FT.Dumbel.R6P.NPT

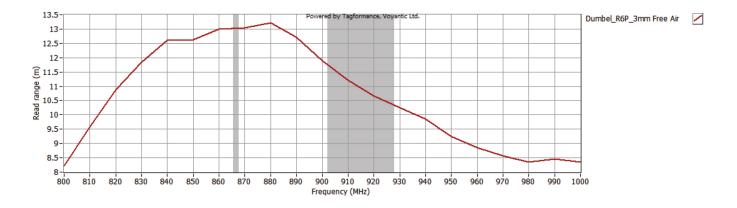
### **Roll Sizes**

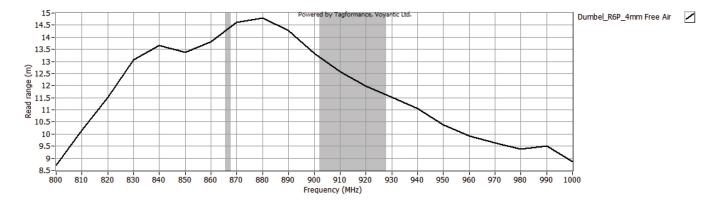
1000 Tags per roll / 1 Rolls per carton

# RADIATION PATTERN AND READ RANGE GRAPH









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<sup>\*</sup> Other IC's available on request

<sup>\*\*</sup> 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.