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1. PRODUCT DESCRIPTION

Confidex Corona™ is designed to provide discrete visibility for high-value, work-in-process items in demanding environments. The tag was specifically designed to perform in the challenging environments found in the industrial electrophoretic painting processes used in the automotive sector. A typical solution is to use an identification system that employs an RFID tag attached at the very beginning of the car manufacturing process. The tag survives and continues functioning properly throughout the entire car production process while firmly attached to the chassis. Tag can be subjected to several chemical baths, painting and cleansing processes and high temperatures.

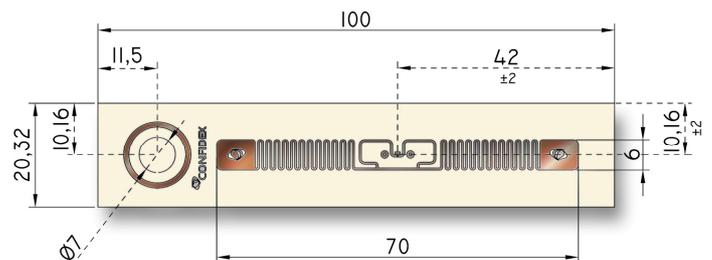
1.1 SPECIFICATION DATA

Device type	Class 1 Generation 2 passive UHF RFID transponder
Air interface protocol	EPCGlobal Class1 Gen2 ISO 18000-6C
Operational frequency	860-960 MHz
IC	NXP UCODE G2XM
EPC memory	240 bit
Extended memory	512 bit
Read range	up to 5-9m / 16-29ft, reader power 2W ERP
Weight	1 g
Material	Transparent plastic film
Delivery format	On reel
Pitch on reel	20.32mm / 0.8"
Amount on reel	2500pcs (default)
Reel core inner diameter	76mm / 3"
Protection class	IP67
Product is RoHS compliant	

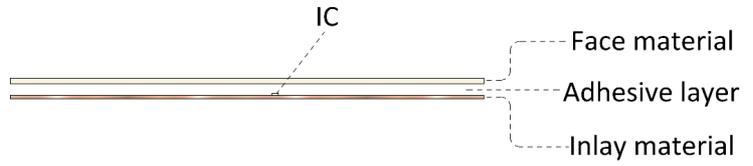
1.2 DIMENSIONS

**General dimensions
(Width x Height x
Thickness)**

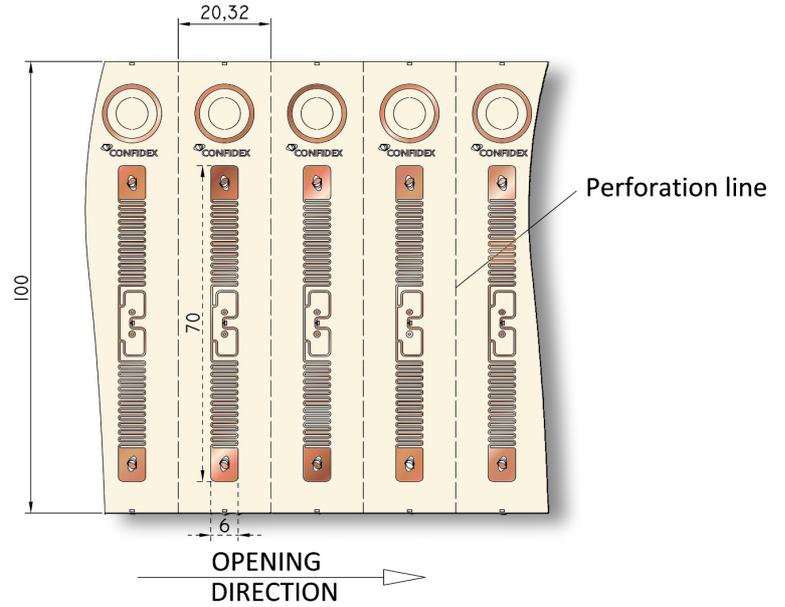
100 mm x 20.32 mm x 0.3 mm (3.93" x 0.80" x 0.01")



Cross section

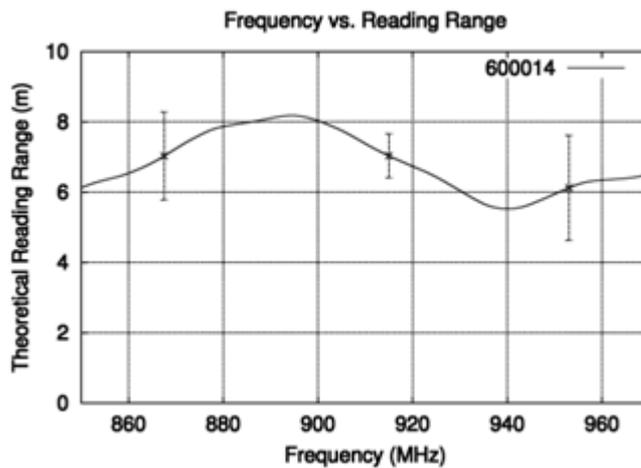


Delivery in reel format



1.3 ELECTRICAL PERFORMANCE

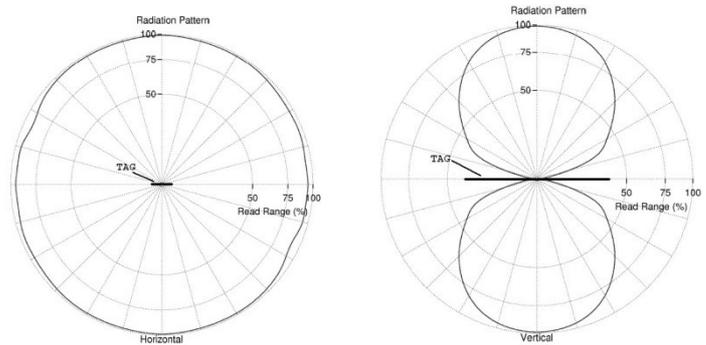
Corona G2XM



Presented reading ranges are calculated values in non-reflective environment, in where antennas with optimum directivity are used with maximum allowed operating power: EU 865-868 MHz (2W ERP), US 902-928 MHz (4W EIRP), and JPN 952-954MHz (4W EIRP).

1.4 RADIATION PATTERNS

Estimated radiation pattern when tag orientation towards reader antenna is optimized.



1.5 RESISTANCE AGAINST ENVIRONMENTAL CONDITIONS*

Typically values are valid for all tag versions. If not, applicable IC versions are marked

Operating temperature	-35°C to +65°C / -31°F to +149°F
Ambient temperature	-35°C to +200°C / -35°F to +392°F (tested 10 times 0,5 h) +220°C / 428°F at 0,5 h duration
Storage condition	+20°C / 50% RH
Water resistance	Good, tested for 5 hours in 1 meter deep water
Chemical resistance	No physical or performance changes in: - Salt water (salinity 10%), tested in 168h exposure - NaOH (10%, pH 13), tested in 168h exposure - Sulfuric acid (10%, pH 2), tested in 168h exposure - Acetone, tested in 30min exposure - Motor oil, tested in 168h exposure
Expected lifetime	Years in normal operating conditions

* Values in the table are the best recommendations; resistance against environmental conditions depends on the combination of all influencing factors, exposure duration and chemical concentrations. Thus, product's final suitability for certain environmental conditions is recommended to be tested. Contact Confidex for more specific information.

1.6 SUPPORTED SERVICES

There is several personalization options available for Confidex Corona™ in order to “fine tune” the tag to match with the application requirements:

- Pre-encoding
- Ink-jet printing

For exact specifications, please refer “Personalization Datasheet”.

1.7 INFORMATION OF USED MATERIALS

Surface and back side material	Designed to have good resistance against high temperature and chemicals. Product is inkjet printable.
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1.8 POSSIBLE APPLICATIONS

Hang-tag

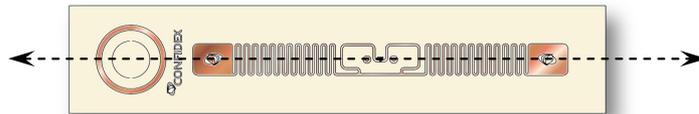
Work-in process follow-up

2. INSTALLATION INSTRUCTIONS

2.1 LABEL ORIENTATION AND APPLICATION

Confidex Corona™ is a free air tag, which best performance is achieved when it's not applied close to any material.

Tag polarization is along the tag's longest dimension



Mechanical attachment:

Screws (>8 mm)

- Corona tag has $\varnothing 7\text{mm}$ hole in its other end for fixing purposes. Use minimum 8mm screws, but notice that no metal part should be in contact with the tag antenna.

In between metal plates etc.

- Tag can also be attached by inserting it in the middle of two metal parts/plates. For ensuring the best performance, fix the tag from its narrow end and avoid metal touching the tag antenna.
Note: if tag is attached in between metal plates from its long side the performance will decrease.



2.2 PROTECTION OF TAG DURING USAGE

Minimum bending diameter of the Confidex Corona is defined to be 50mm. Do not bend the label above the limit. Never touch on the location of the IC. IC chip is sensitive electrical component and can be damaged if unexpected pressure is applied on the chip. Try to avoid mechanical impacts to the Confidex Corona. IC and antenna may be damaged due to mechanical shocks.

2.3 RECOMMENDED OPERATION CONDITIONS

Although the Confidex Corona is tested to be resistant in certain environmental conditions it is recommend installing the label into the place, which is protecting the label against contaminations and mechanical shocks. Reliability of the Confidex Corona is defined to be its maximum if label is positioned in such safe place. Mechanical shocks should be avoided especially after heat cycles.

3. ORDER INFORMATION

Product number	Product name
600014	Corona NXP G2XM

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