

# PRODUCT DATASHEET

## Steelwave Classic™ Personalization Kit



Thin all-surface-tag solution for returnable transit item tracking with extreme performance.

### ELECTRICAL SPECIFICATION

#### Device type

RAIN RFID / EPCglobal Gen2v2

#### Operational frequency

ETSI 865 - 869 MHz

FCC 902 - 928 MHz

#### IC options and memory configurations

Impinj M780™ - EPC 496 bit; User 128 bit; TID 96 bit

#### EPC memory content

Unique number encoded as a default

#### Read range (2W ERP)\*

M780

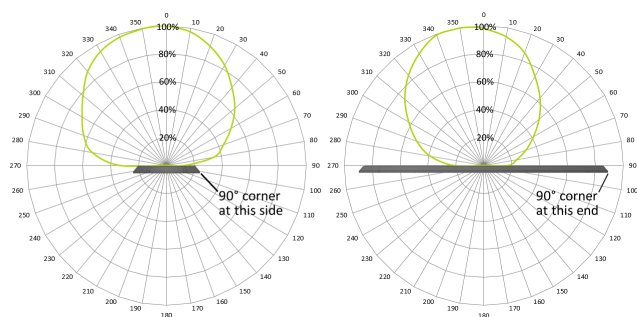
- On metal up to 20 m / 65 ft
- Off metal up to 14 m / 46 ft

#### Applicable surface materials\*

All surfaces.

\* Read ranges are theoretical values that are calculated for non-reflective environment. Different surface materials may influence performance.

### RADIATION PATTERNS



### MECHANICAL SPECIFICATION

#### Mounting plate materials

High quality engineering plastic (Pantone 433U).

#### Background adhesive

High performance acrylic adhesive specifically for metal and painted metal surfaces

#### Weight

12 g

#### Delivery format

Plastic part as single (50pcs per box)

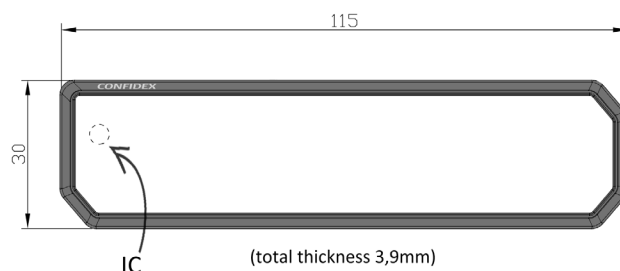
Labels separately on reel (1000pcs per reel)

#### Mounting plate dimensions

115 x 30 x 3,9 mm / 4.53 x 1.18 x 0.15 in

#### Label reel width

112mm



### ENVIRONMENTAL RESISTANCE

#### Operating temperature

-35°C to +85°C / -31°F to +185°F

#### Ambient temperature

-35°C to +85°C / -31°F to +185°F

#### Water resistance

IP68

#### Washing resistance

Tolerates industrial washing with standard solvents. Washing process should be tested in final application.

#### Chemical resistance

No physical or performance changes in:  
 - 168h Sulfuric acid (10%, pH 2) exposure  
 - 168h Motor oil exposure  
 - 168h Salt water (salinity 10%) exposure  
 - 1h NaOH (10%, pH 13) exposure  
 Acetone should be avoided

#### Storage condition

1 year in +20°C / 50% RH (shelf life for adhesive)

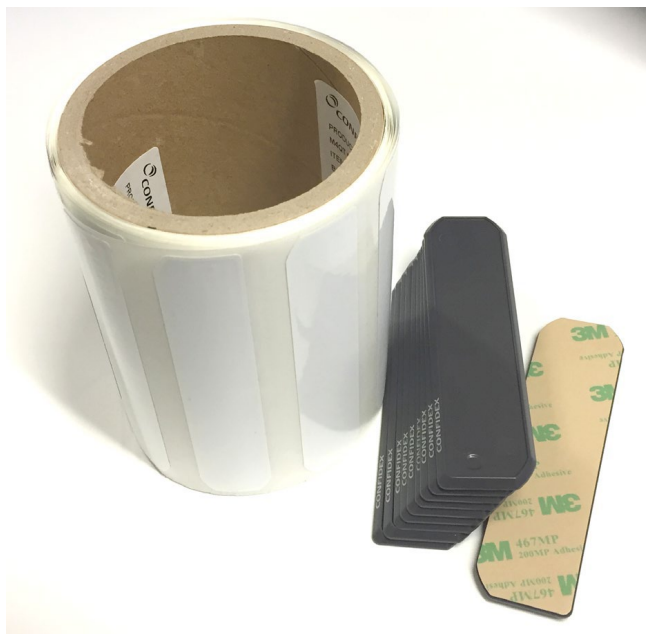
#### Expected lifetime

Years in normal operating conditions

*Values 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 Zebra for more specific information.*

PRODUCT OVERVIEW

RFID labels can be printed and encoded with Zebra RFID printers and must be applied on the plastic part before taken into use. Label is shaped to allow attachment only in one direction. Follow the installation instructions when attaching the RFID label to plastic part as described below.



Ideal application temperature is from +16°C to +38°C (+60°F to +100°F), bond strength can be improved with firm application pressure and moderate heating from +38°C to +54°C (+100°F to +130°F). Application at temperatures below 10°C (50°F) is not recommended. If application is done at temperatures below 10°C (50°F) surface must be extremely clean, dry and it has to be warmed before attaching the tag to achieve best possible adhesion. Keep the tags in warm before attaching.

ORDER INFORMATION

**Zebra part number:** 10041054  
**Product name:** Steelwave Classic™ M780 ETSI Personalization Kit

**Zebra part number:** 10041055  
**Product name:** Steelwave Classic™ M780 FCC Personalization Kit

For additional information and technical support, please contact your Authorized Zebra Reseller or Zebra Technical Support.

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INSTALLATION INSTRUCTIONS

Steelwave Classic™ polarization is along the longest dimension of the tag like shown below.



When attaching the tag ensure the following

- Select a smooth surface without uneven areas below tag
- Avoid touching the background adhesive and IC location

When mounting the tag with its adhesive background, clean and dry the surface for obtaining the maximum bond strength. Typical cleaning solvents are heptane or isopropyl alcohol. Do not use household cleaning solvents that contain oils. Carefully read and follow the manufacturer’s precautions and directions for use when working with solvents.