

# IDCycle®

## RFID Recyclable Cup

IDCycle®CUP-568



### 1. Product Overview

IDCycle® RFID Recyclable Cup is an RFID inlay chip-type product designed to improve the efficiency of the waste management and recycling process. The RFID inlay chip in the Recyclable cup is compatible with EPC Global Gen2v2 and ISO/IEC 18000-6C international communication protocols. It is compatible with most RFID readers and systems on the market, which is very convenient and easy for users. RFID recyclable cups are suitable for use in areas such as catering, vending machines and public spaces.



### Key Features

#### Durability

Withstand 50+ drops tests of 1.2m height

#### Cup Volume

568ml (1 Pint)

#### Frequency Band

UHF 860-960 MHz

#### International Standard

ISO/IEC 18000-6C, EPC Global Gen2v2.1

#### EPC Memory

96 bits

#### TID Memory

48 bits

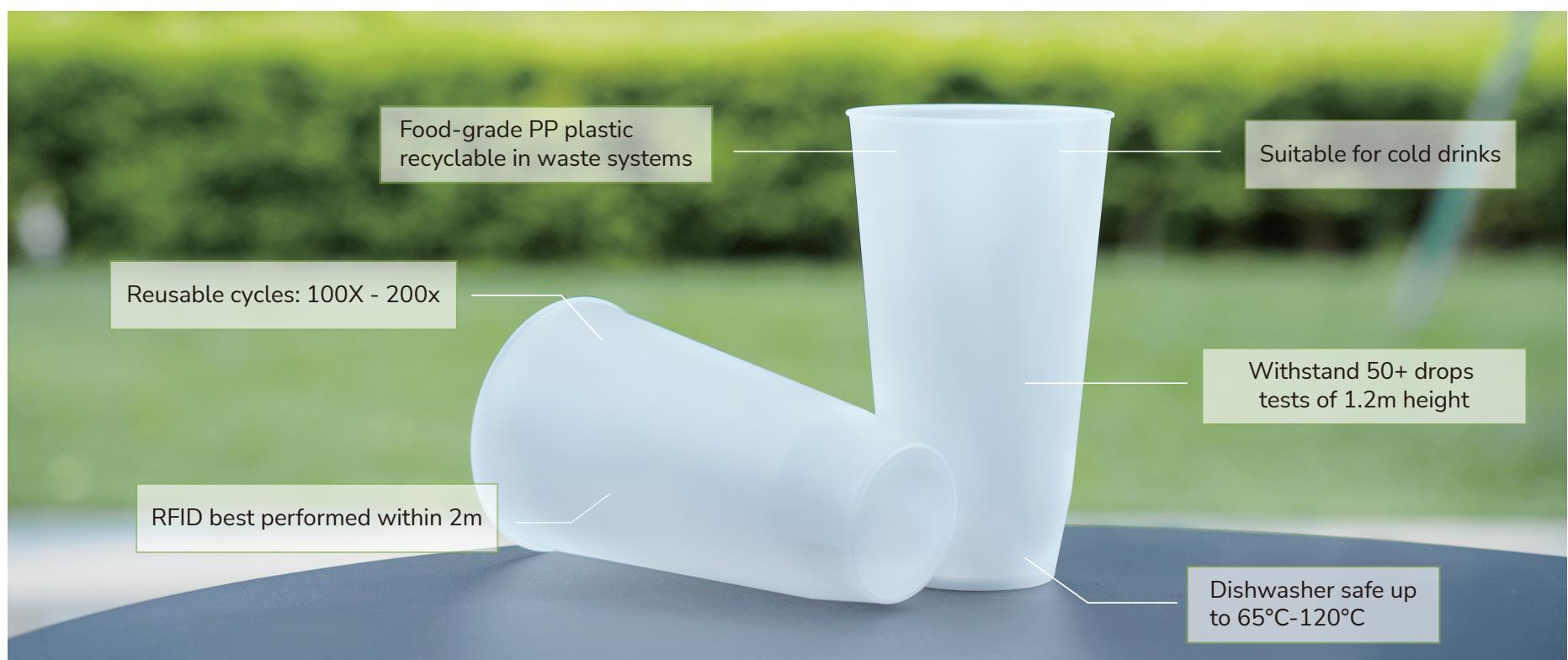
#### Read Range

Stable detected within 2m

In the catering industry, customers return used RFID recyclable cups by scanning them at an RFID cup recycling machine. When the machine reads the chip information, it sends this data to the back-end system and updates the machine's status, such as the number of cups stored and available for rent. Merchants can also set incentives, linking customer accounts to the RFID recyclable cups. When customers return the cup, the machine reads their account information and automatically updates their reward points, enhancing customer loyalty and providing additional benefits.

In addition, pedestrians can rent cups from the vending machine and return them. When a pedestrian makes a return, the vending machine's RFID sensor will read the chip's information. Based on the account tied to the chip, an online rental refund will be made.





## 2. Product Parameters

### 2.1 Physical Characteristics

SKU	IDCycle®CUP-568
Material	Food-grade Polypropylene (PP) plastic
Cup Volume	568ml (1 Pint)
Weight	63g

### 2.2 Technical Parameters

Operating Frequency	860-960 MHz
Communication Protocol	ISO/IEC 18000-6C, EPC Global Gen2v2.1
Read Range	Stable performed within 2m
Operating Mode	Passive

### 2.3 Chip Characteristics

EPC Memory	96 bits
User Memory	0 bits
TID Memory	96 bits; 96-bit Tag IDentifier (TID) factory-locked
Unique Serial Number	48-bit unique serial number factory-encoded into TID
Read Sensitivity	-24 dBm
Write Sensitivity	-22 dBm

Kill Password	32-bit kill password to permanently disable the tag
Self Adjust	Support
Memory Safeguard	Support
Block Write (2 words, 32-bit)	Yes
Permalock	Support
Write Endurance	100k times
Data Retention	20 years

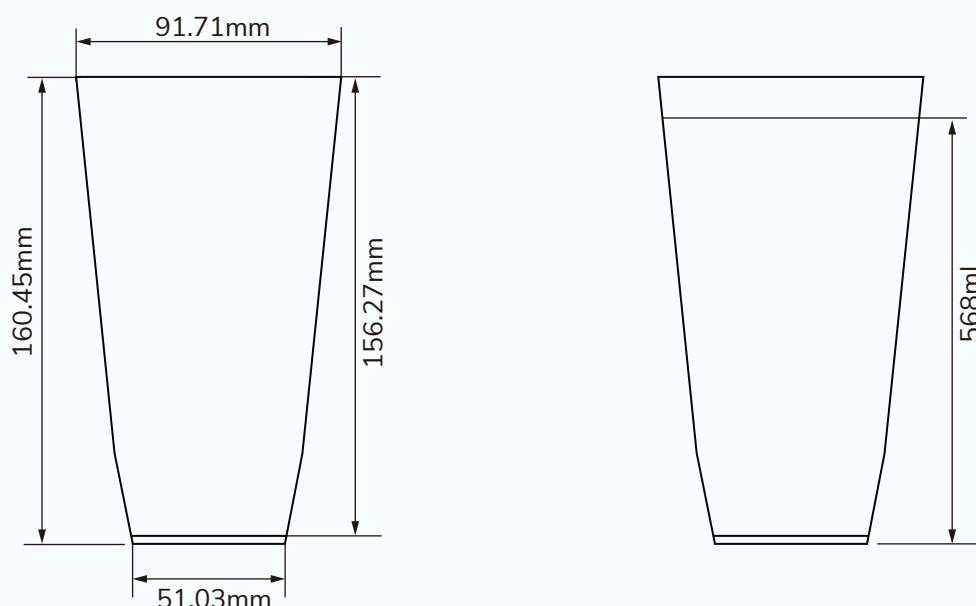
## 2.4 Additional Information

Operating Environment	-20°C to +120°C, 5% to 100% RH
Storage Environment	-20°C to +40°C, 5% to 100% RH
Fields of Application	Cafes and Restaurants, Office, Meeting events, School, Vending and Drinks Machines, Sports venues and Entertainment venues, Public institutions, Hotel, Park.

## 2.5 Packaging

Packing Format	Stacked together, packed in carton
Packing Quantity	10 Cups/set

## 3. Dimensions



IDCycle®

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