

## SPECIFICATION

- Part No.** : **OMB.433.B06F21**
- Description** : 433MHz 6dBi Omni Directional Outdoor Antenna with N Type Female Connector, U-Bolt, 1094mm Length
- Features** : Omni-Directional Radiation Pattern  
Collinear  
6dBi Peak gain, 433 MHz  
Fiberglass Housing  
Robust design for all weather operation  
IP65 waterproof  
Length: 1,094mm | Weight: 1,300g  
N type Female connector  
Wall mount bracket included  
**RoHS compliant**



## 1. Introduction

The OMB.433.B06F21 is a 6dBi fiberglass omni-directional outdoor antenna, operating in 433 MHz ISM band. The antenna is designed for applications such as metering, industrial/environmental monitoring, remote asset monitoring and mesh network applications.

The OMB.433 operates at 433MHz, one of the most widely used license free ISM bands, with a 6dBi peak gain. The omni-directional antenna radiates uniformly in the azimuth providing coverage over long distances. Coupled with a very low VSWR, this characteristic provides the best performance because the antenna gives maximum coverage range in the horizontal plane over 360 degrees, thus minimizing the amount of nodes needed for a mesh network.

The UV resistant fiberglass housing enables the OMB antenna to be utilized in all kinds of harsh environments, making it more robust and safer than traditional whip antennas. It can be connected directly to the access point or telemetry unit, or can be mounted on wall or device surface via the N-type connector.

A smaller model, OMB.433.B03F21, with 3dBi peak gain, is also available.

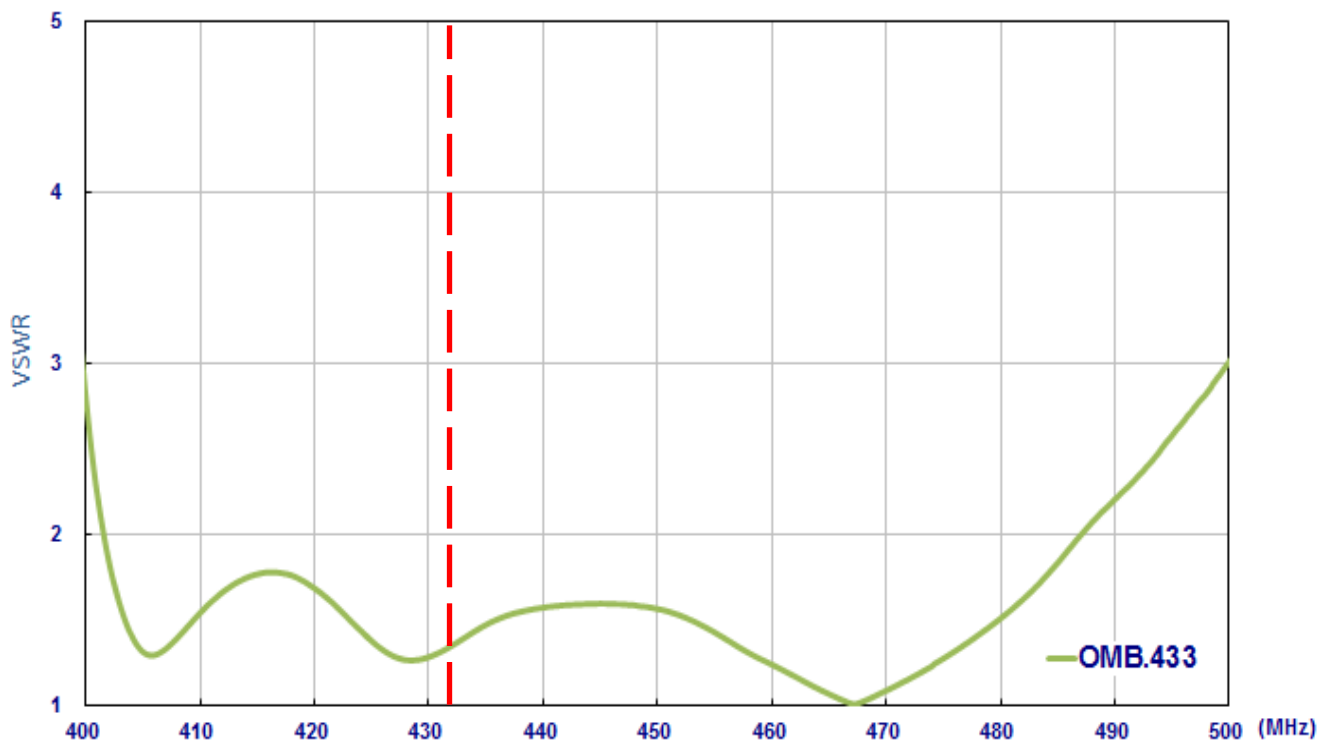
## 2. Specification

| ELECTRICAL                  |                        |
|-----------------------------|------------------------|
| Standard                    | ISM 433                |
| Band                        | 433 MHz                |
| Antenna Type                | Collinear Dipole Array |
| Peak Gain                   | 6 dBi                  |
| Polarization                | Vertical               |
| Impedance                   | 50 ohms                |
| Max Input Power             | 100 watts              |
| VSWR                        | 1.5:1                  |
| Radiation                   | Omni-Directional       |
| Vertical Beamwidth          | 36 Deg                 |
| Horizontal Beamwidth        | 360 Deg                |
| Internal Material           | Copper                 |
| Connector                   | N Type Female          |
| MECHANICAL                  |                        |
| Length                      | 1094 mm(Max)           |
| Bracket Dimension           | 70 x 35mm(Max)         |
| Antenna Weight              | 1300g                  |
| Mounting Accessories Weight | 70g                    |
| Application                 | Indoor/Outdoor         |
| Radome Material             | White Fiberglass       |
| Bracket Material            | Aluminum               |
| Mount Style                 | Pole Mount/Wall Mount  |
| Mount Hardware Material     | Stainless Steel        |
| Wind Resistance             | >150mph (>241km/h)     |
| Waterproof                  | IP65                   |

| ENVIRONMENTAL         |                        |
|-----------------------|------------------------|
| Storage Temperature   | -40°C to +85°C         |
| Operating Temperature | -40°C to +85°C         |
| Operating Humidity    | 10%~90% non-condensing |
| Storage Humidity      | 5%~90% non-condensing  |

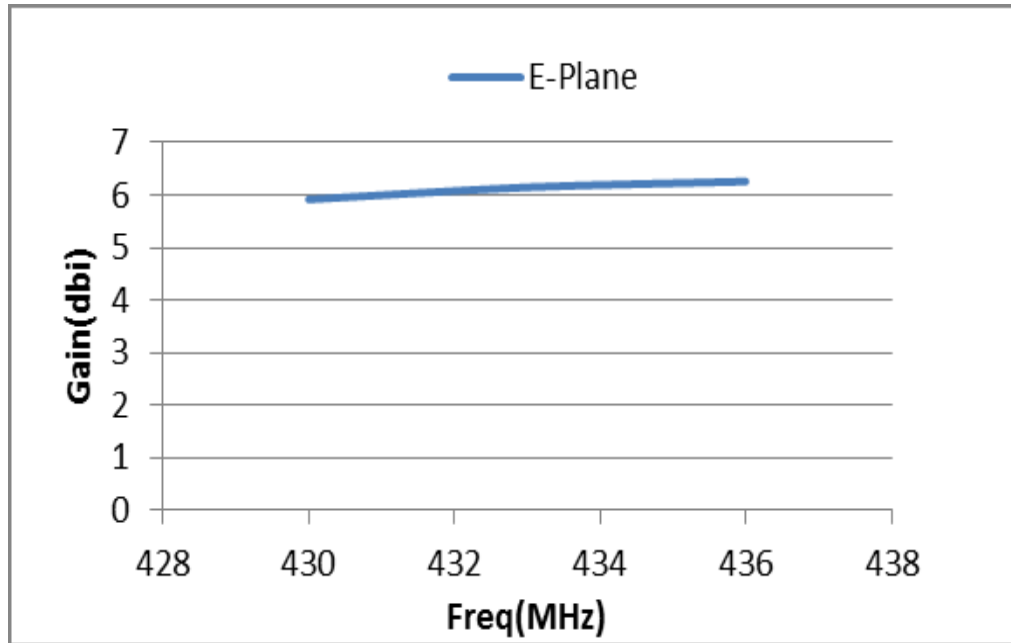
### 3. Antenna Characteristics

#### 3.1 VSWR

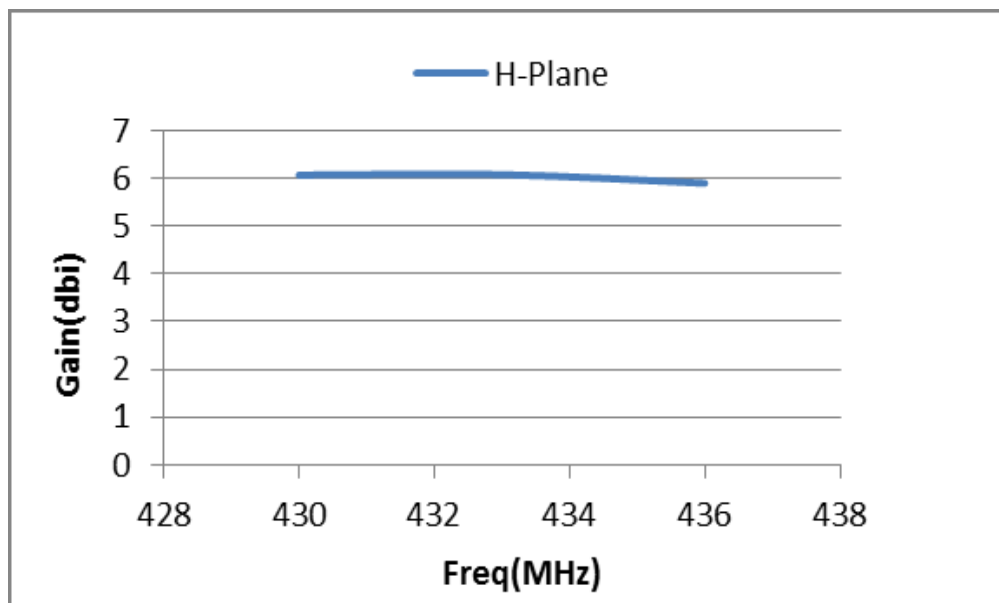


### 3.2 Peak Gain

E-plane



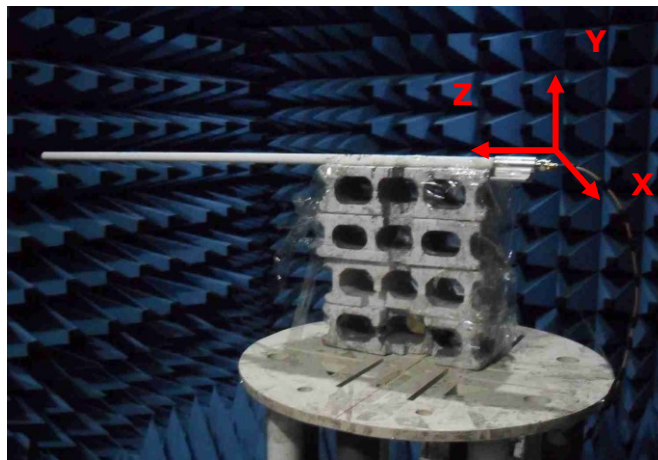
H-plane



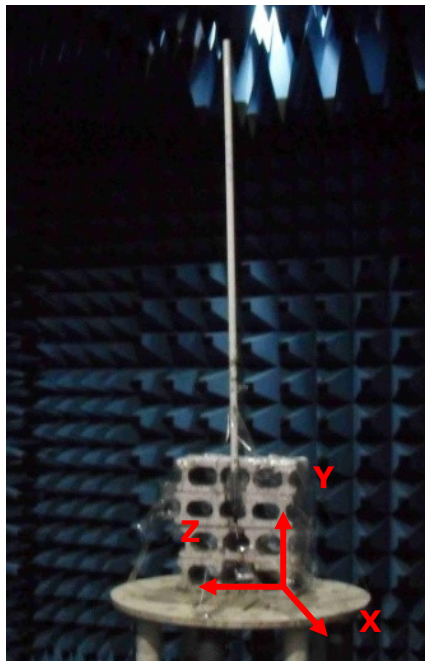
## 4. Antenna Radiation Pattern

### 4.1 Measurement Setup

Vertical Pattern – E plane

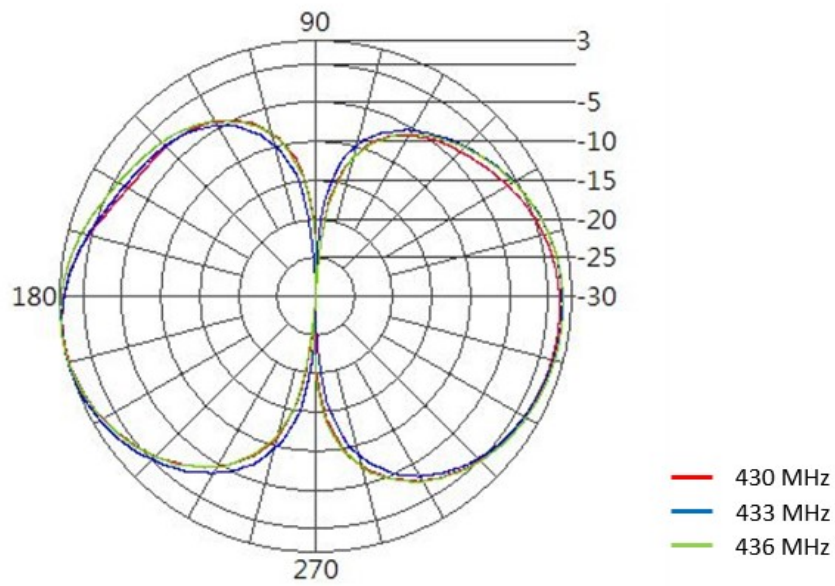


Horizontal Pattern – H plane

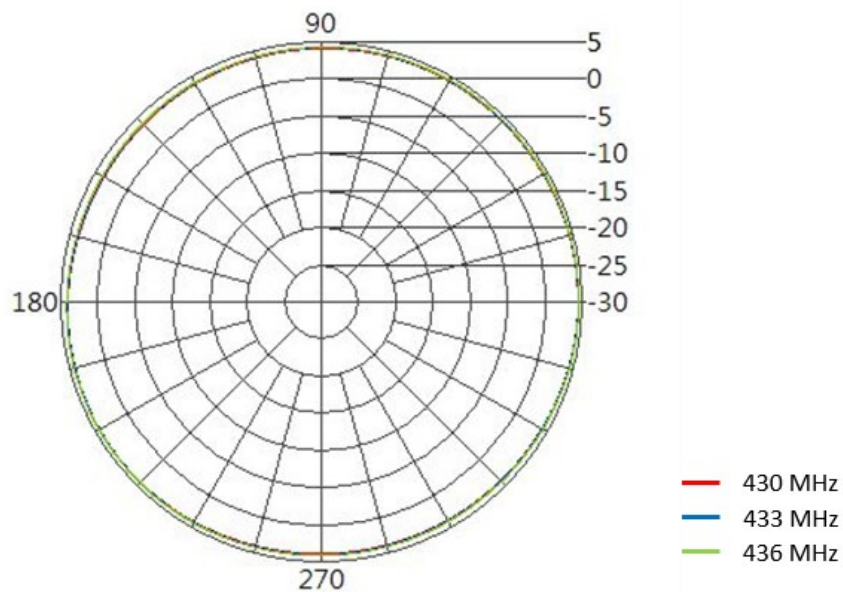


## 4.2 2D Radiation Pattern

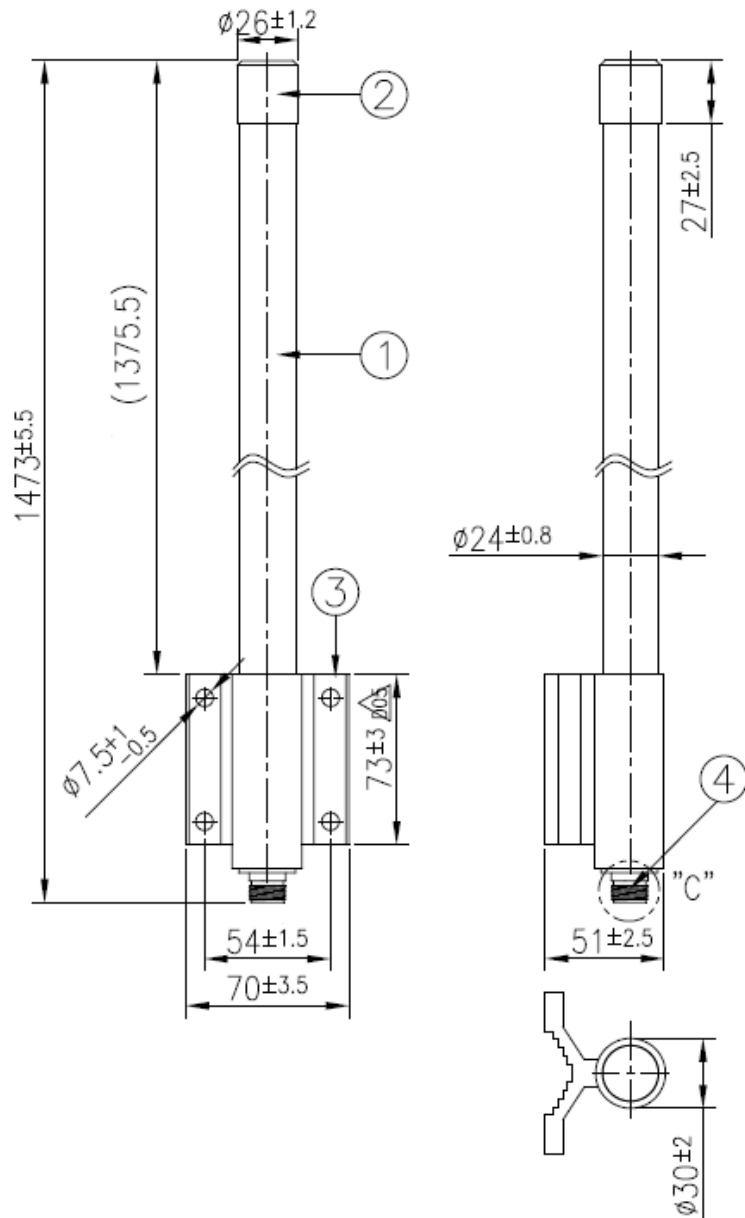
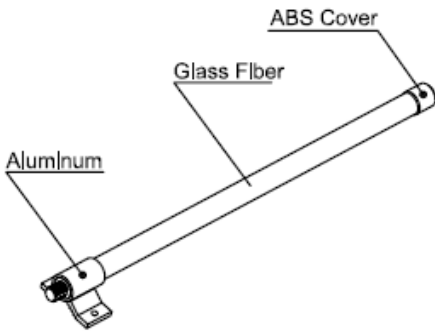
Vertical Pattern – E plane



Horizontal Pattern – H plane

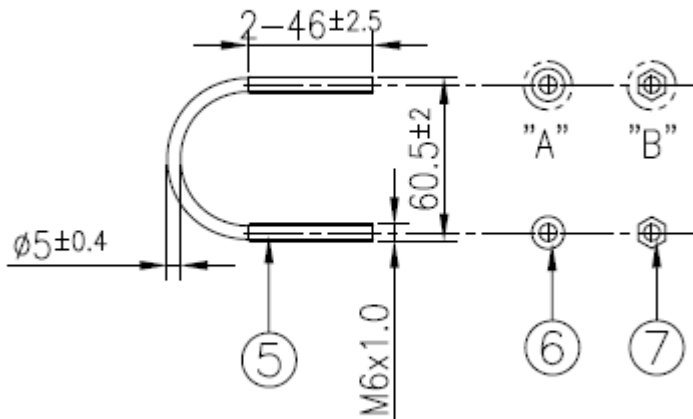


## 5. Mechanical Drawing (Unit: mm)

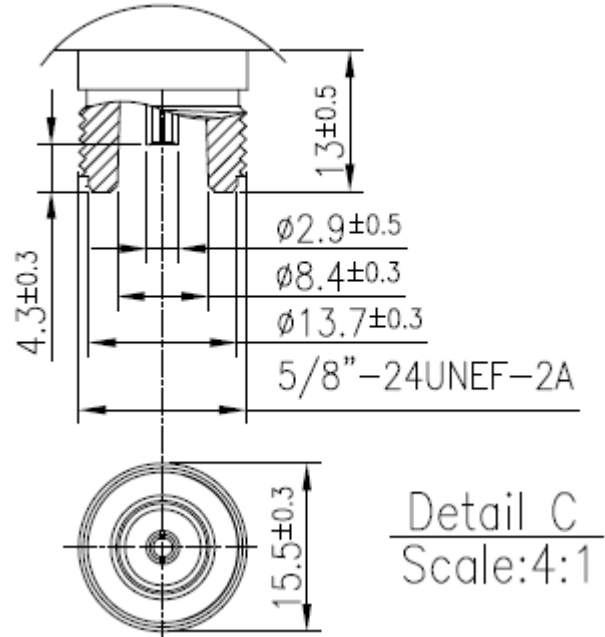




### U Bolt(m6x1.0)

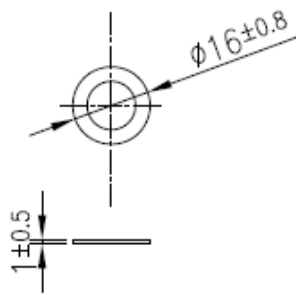


### N Type(F)



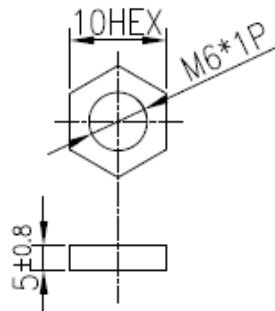
Detail C  
Scale:4:1

### Washer



Detail A  
Scale:2:1

### Nut



Detail B  
Scale:2:1

|   | Name            | P/N            | Material        | Finish    | QTY |
|---|-----------------|----------------|-----------------|-----------|-----|
| 1 | OMB.433 Antenna | 001215A000021A | Fiberglass      | White     | 1   |
| 2 | Cover           | 000111K000021A | ABS             | Sliver    | 1   |
| 3 | Bracket         | 000312B000021A | Aluminum        | Silver    | 1   |
| 4 | N Type(F)       | 201211K000021A | Brass           | Ni Plated | 1   |
| 5 | M6 U Bolt       | 000412B000021A | Stainless Steel | Sliver    | 2   |
| 6 | M6 Washer       | 000411K010021A | Stainless Steel | Silver    | 4   |
| 7 | M6 Nut          | 000411K020021A | Stainless Steel | Sliver    | 4   |

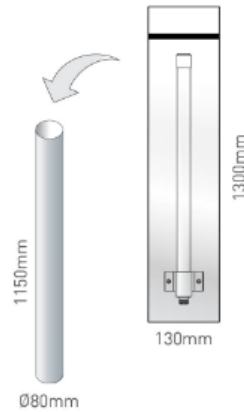


## 6. Packaging

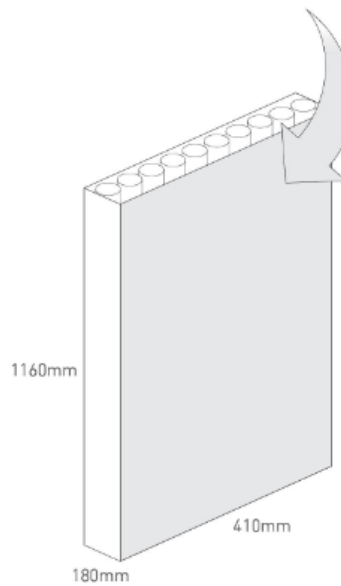
### OMB.433.B06F21

#### Packaging Specifications

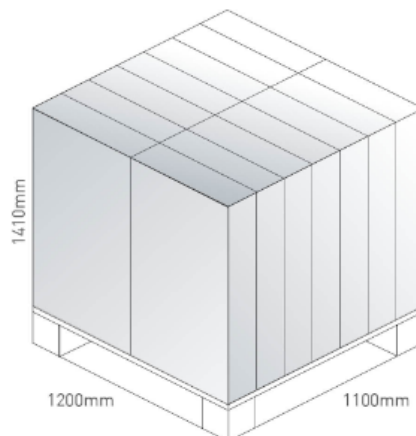
1 OMB.433.B06F21 per PE Bag  
 Bag Dimensions 130mm\*1300mm  
 1 PE Bag per Tube  
 Tube Dimensions - Ø80mm\*Height 1150mm  
 Total Weight - 1.16Kg



10 tubes per carton  
 Carton Dimensions - 1160\*410\*180mm  
 Weight - 13.12Kg



Pallet dimensions 1200\*1100\*1410mm  
 14 Cartons per pallet



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