TAOGLAS

Datasheet

# Meteor

**Part No:**
**FW.95.B.SMA.M**

**Description:**

ISM Band 915Mhz Flexible Whip Monopole Antenna SMA(M) Straight

**Features:**

External 915MHz Monopole Antenna
Designed for Outdoor Use
Over 60% high efficiency*
2.71dBi high peak gain*
Robust Inner Steel Core
Antenna Length: 226mm
SMA Type(M) Straight Connector
IP65 dust and water-resistant
*Tested on 30cm*30cm Ground Plane
RoHS Compliant

Ireland & USA
ISO 9001:2015
Certified

Taiwan
ISO 9001:2015
Certified

# 1. Introduction

The FW.95 is a flexible 915MHz whip antenna with a SMA type (M) connector for outdoor use. It features excellent efficiency (>60%) and high peak gain (>2.71 dBi) at 915MHz on a 30x30 cm ground plane.

The antenna was developed for monitoring systems, such as weather monitoring, motion / vibration sensors, and pollutants monitoring.

The FW.95 has an excellent omni-directional radiation pattern, ensuring wide coverage. The antennas high efficiency means that it allows your radio to consume less power than with a lower efficiency antenna when transferring data. It also means a better signal strength and better sensitivity in areas of low signal levels. The antenna performs at its best while attached to a ground plane with dimensions of at least 30x30 cm. For an environment where there is no ground-plane available we recommend to use the terminal mount antenna the TI.19 or the outdoor fiberglass omni antenna the OMB.915.

The FW.95 whip is made of a flexible inner steel core covered by PE so it is extremely resistant to abrasion and maintains its original shape and RF performance even after shock. This rugged design and IP65 rating on the housing ensure high reliability.

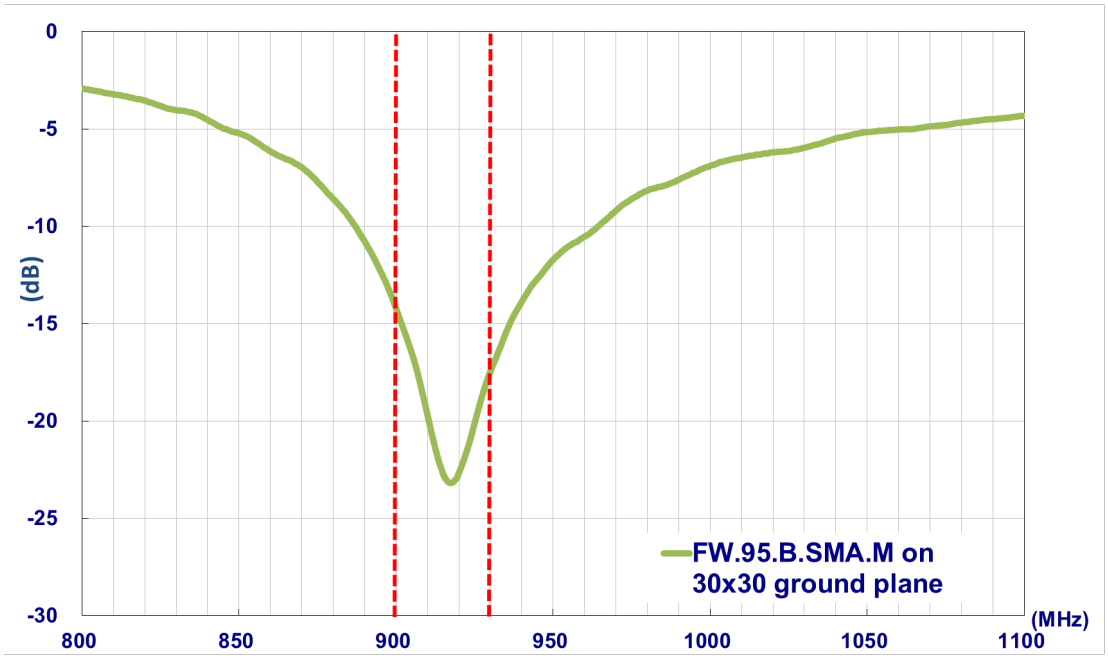
This antenna comes with SMA(M) connector as standard. Other custom variants can be provided subject to NRE and MOQ. Contact your regional Taoglas office for details..

# 2. Specifications

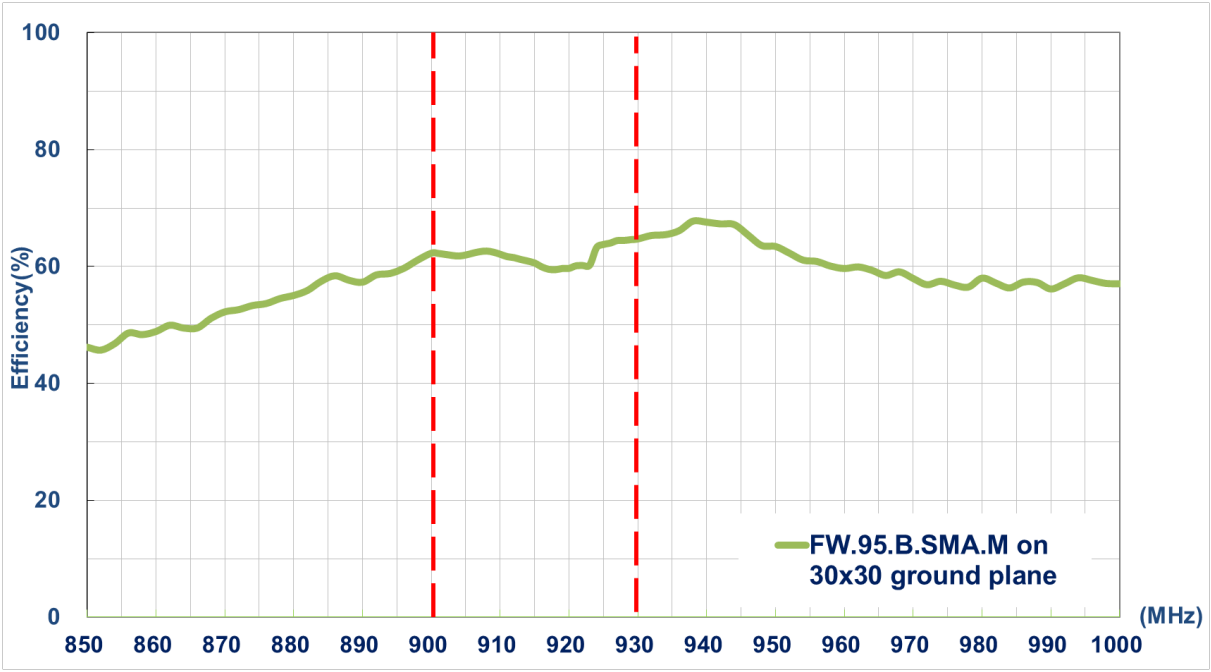
| ISM Band 915MHz | | | |
|---|---|---|---|
| Center Frequency | 902MHz | 915MHz | 928MHz |
| Design Environment | On 30x30cm ground | | |
| Efficiency | 62.07 % | 60.60 % | 64.46 % |
| Peak Gain | 2.30 dBi | 2.71 dBi | 3.75 dBi |
| Return loss | < -10 dB | | |
| VSWR | ≤ 2:1 | | |
| Impedance | 50 Ω | | |
| Polarization | Linear | | |
| Radiation Pattern | Omni-Directional | | |
| Input Power | 2 W | | |
| Tested Power | 10 W | | |
| **Mechanical** | | | |
| Dimensions | Length 226 ± 6 mm | | |
| Base Diameter | 16 ± 0.6 mm | | |
| Whip Diameter | 6.2 ± 0.6 mm | | |
| Casing | ABS | | |
| Connector | SMA Type(M) Straight | | |
| Weight | 38 g | | |
| Dust and Water Resistance | IP65 | | |
| **Environmental** | | | |
| Temperature Range | -40°C to 80°C | | |
| Humidity | Non-condensing 65°C 95% RH | | |

# 3. Antenna Characteristics

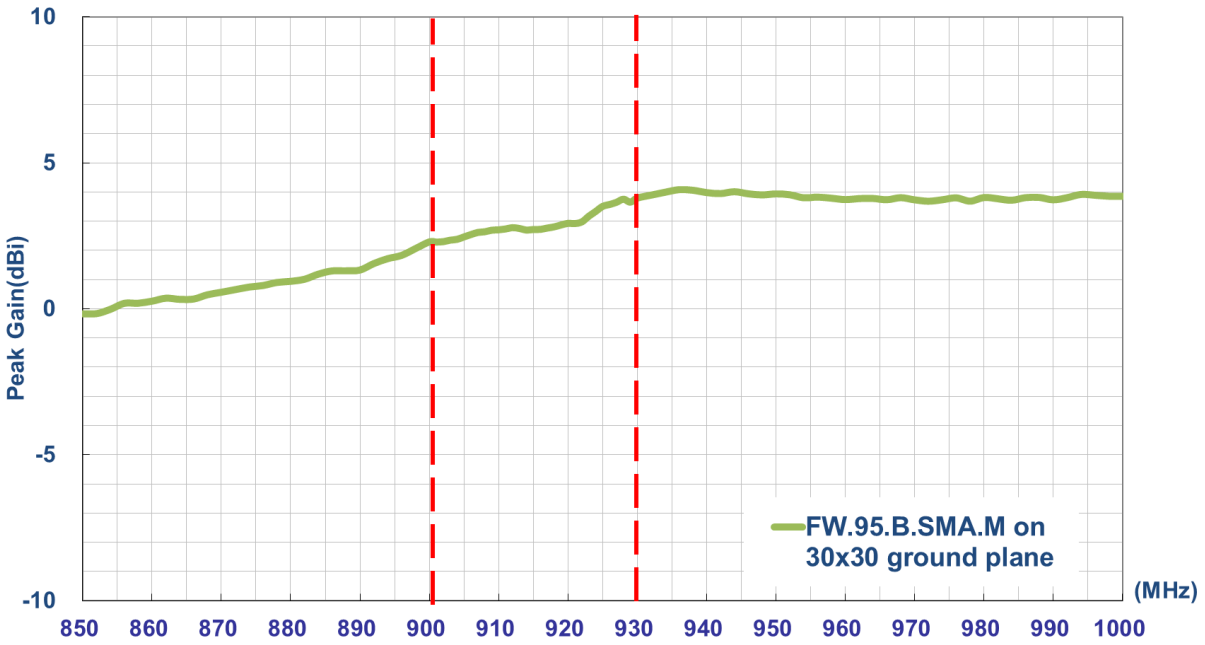
## 3.1 Return Loss



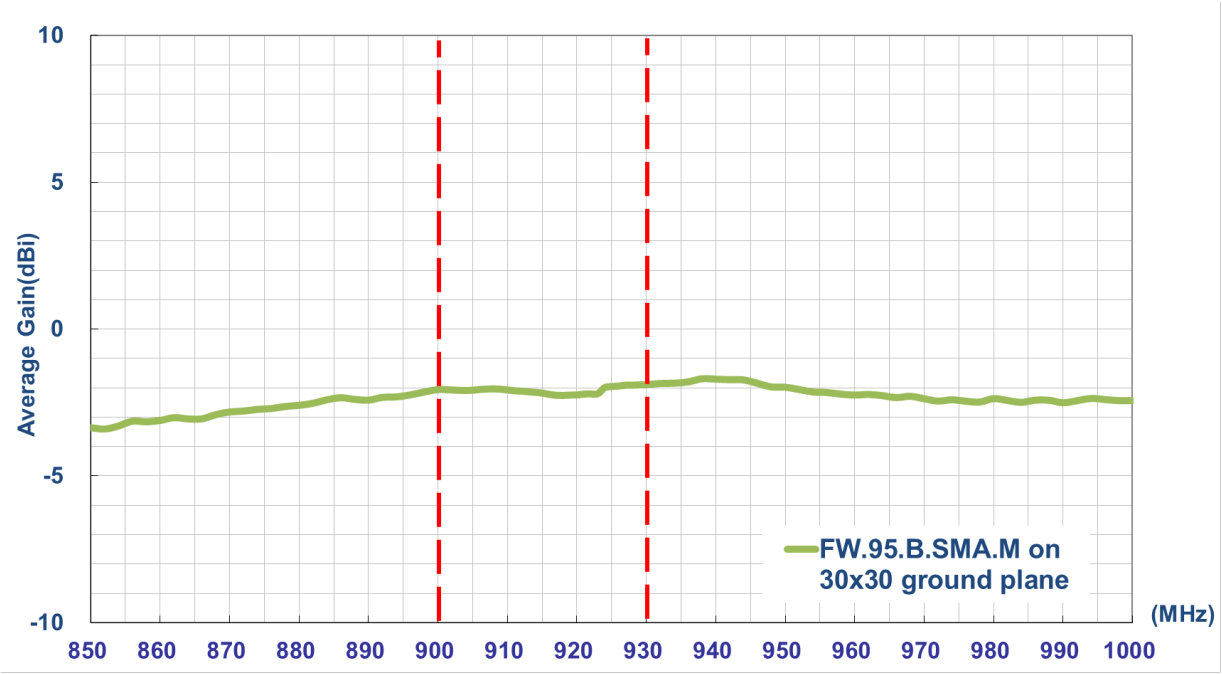

## 3.2 Efficiency



## 3.3 Peak Gain

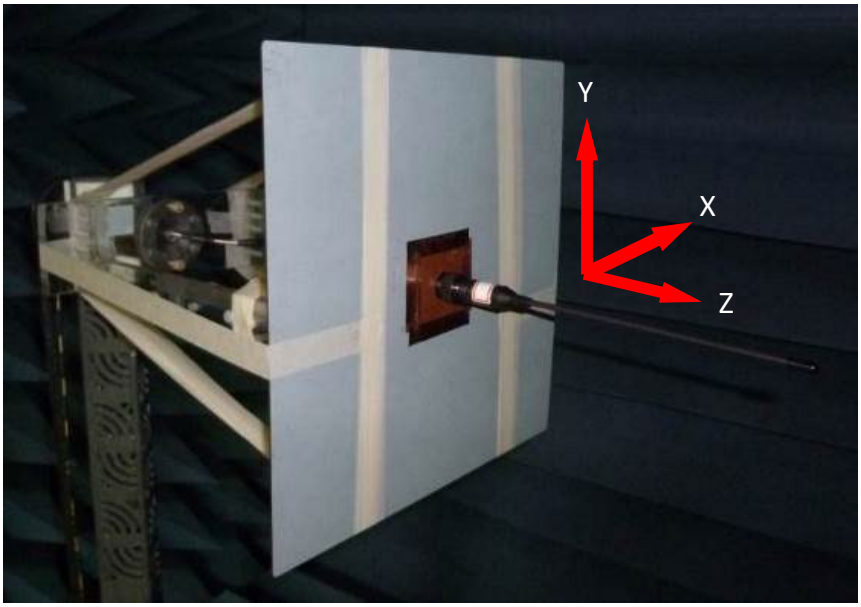



## 3.4 Average Gain



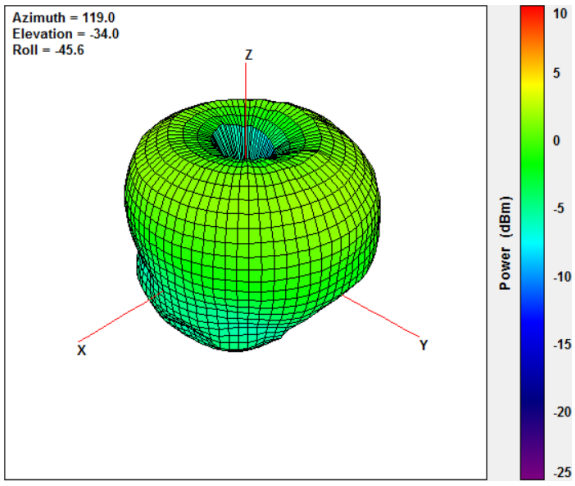
# 4. Radiation Patterns

## 4.1 Test Setup



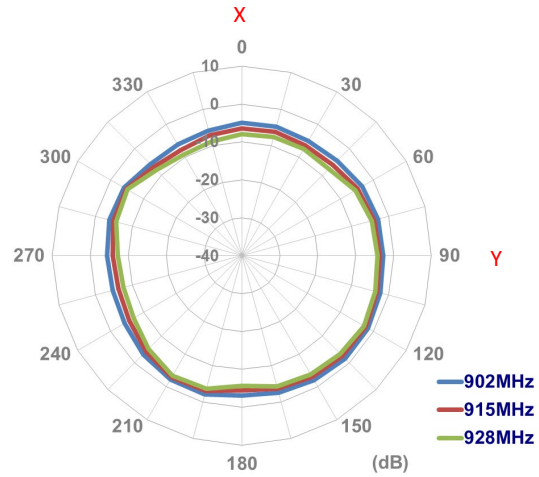

On 30x30 cm ground plane

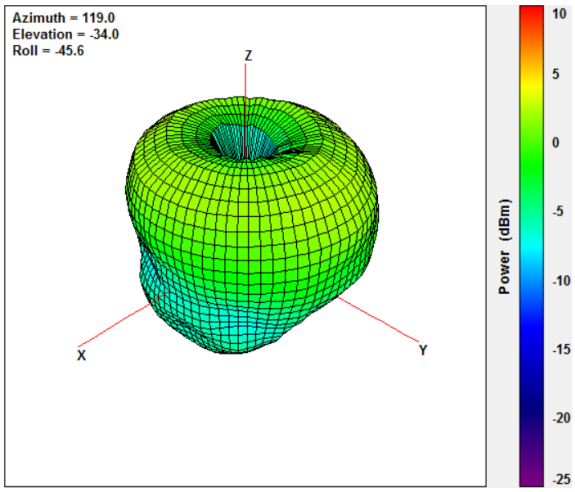
## 4.2 3D and 2D Radiation Patterns (0n 30cm*30cm Ground Plane)




902MHz

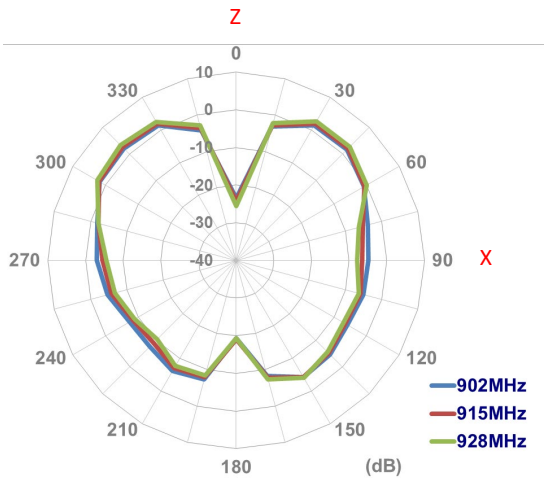
XZ Plane

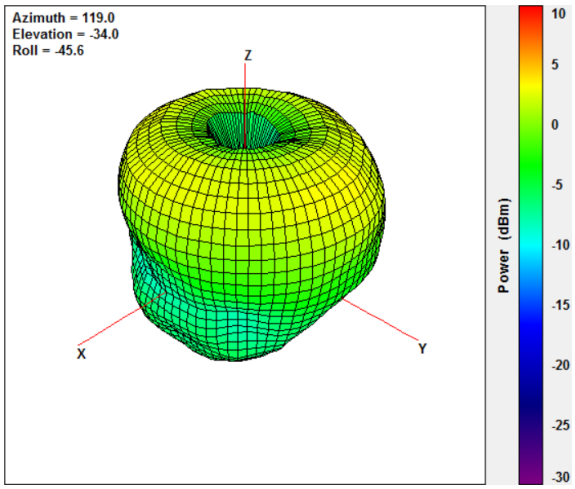



915MHz

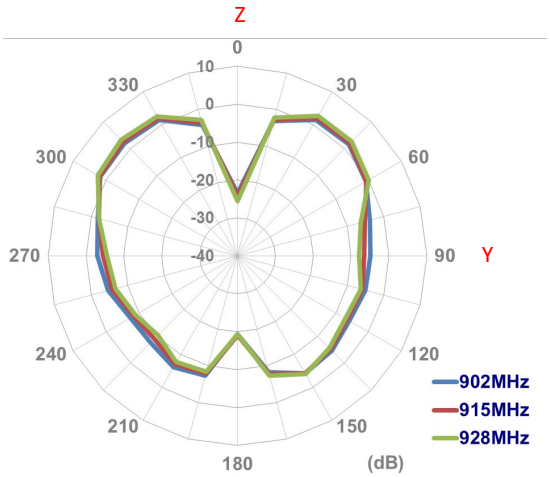
XZ Plane



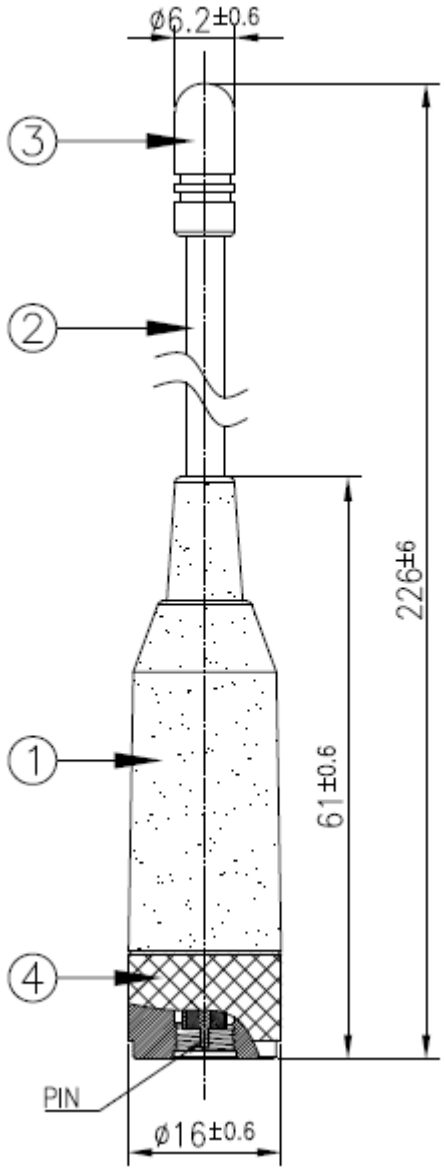




928MHz

YZ Plane



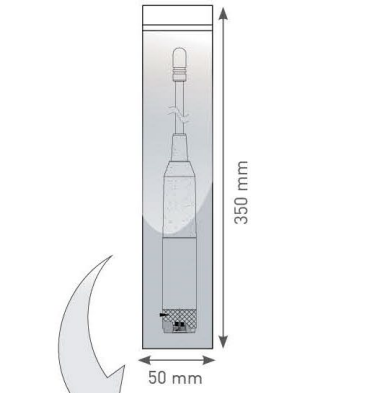
# 5. Mechanical Drawing (Units: mm)



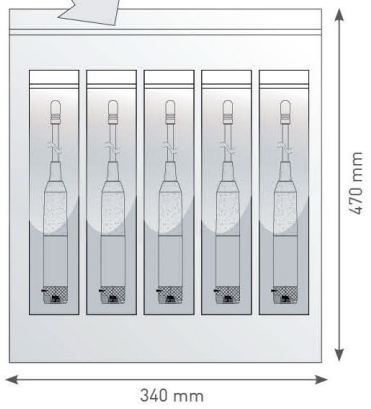

| | Name | Material | Finish | QTY |
|---|---|---|---|---|
| 1 | Housing | ABS | Black | 1 |
| 2 | Flexible Whip | Steel+PE Jacket | Black | 1 |
| 3 | Cap | ABS | Black | 1 |
| 4 | SMA(M)ST | Brass | Black | 1 |

# 6. Packaging

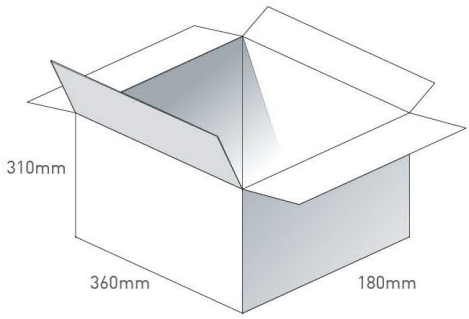
1 pcs FW.95.B.SMA.M per PE Bag
Bag Dimensions - 380*50mm
Weight - 38g



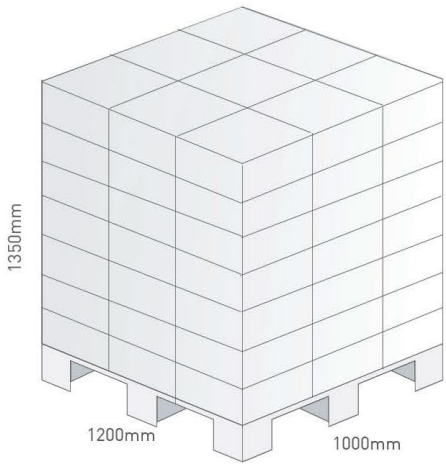

50 PE Bags per Large PE Bag
50 pcs FW.95.B.SMA.M per Large PE Bag
Large PE Bag Dimensions - 470*340mm
Weight – 2Kg




5 Large PE Bags per Carton
50 pcs FW.95.B.SMA.M per Carton
Carton Dimensions - 360*310*180mm
Weight - 10.5Kg




Pallet Dimensions:
1200*1000*1350mm
63 Cartons Per Pallet
9 Cartons Per Layer
7 Layers



Changelog for the datasheet

## SPE-16-8-007 - FW.95.B.SMA.M

| Revision: C (Current Version) | |
|---|---|
| Date: | 2025-03-24 |
| Changes: | Updated max operation temperature to 80° |
| Changes Made by: | Conor McGrath |

### Previous Revisions

| Revision: B | |
|---|---|
| Date: | 2019-08-16 |
| Changes: | Updated to new format |
| Changes Made by: | Dan Cantwell |

| Revision: A (Original First Release) | |
|---|---|
| Date: | 2015-12-01 |
| Notes: | |
| Author: | Wayne Yang |

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