

SPECIFICATION

Part No. : **CGGBP.18.4.A.02**

Product Name : 18mm*18mm*4mm

GPS/GLONASS/GALILEO/BEIDOU

Embedded Patch Antenna

BEIDOU 1561MHz / GPS-GALILEO 1575MHz /

GLONASS 1602MHz

Feature : Dielectric Ceramic

Pin Mount

RoHS Compliant



1. Introduction

This 18mm*18mm square ceramic GPS/GLONASS/GALILEO/BEIDOU patch antenna's wide band of operation leads to excellent gain and radiation pattern stability on all three GNSS system bands.

Compared to using a smaller antenna, this will translate into the GNSS system having much higher location accuracy, improved reliability of lock in urban areas, better signal reception, with more satellites acquired and a quicker time to first fix.

The patch is mounted via pin and double-sided adhesive.

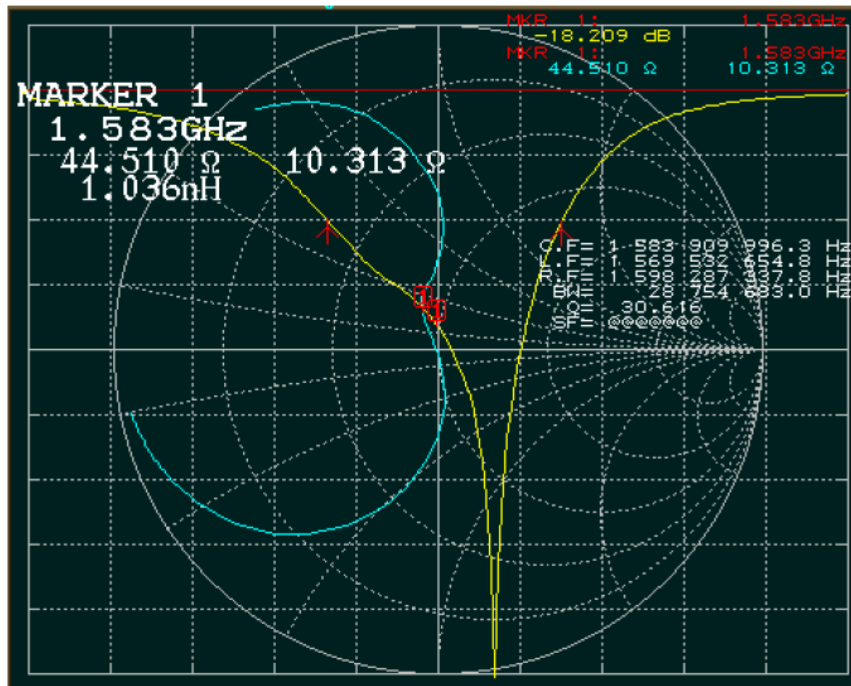
2. Specification

ELECTRICAL	
Frequency	BeiDou: 1561.098MHz \pm 2.046MHz GPS: 1575.42 \pm 1.023MHz GLONASS: 1602 \pm 5MHz
Centre Frequency	1583MHz \pm 3MHz
VSWR	BeiDou: 2.8 max. GPS: 2.8 max. GLONASS: 1.8 max.
Bandwidth	26MHz Return Loss @-10dB
Zenith Gain	BeiDou: +3.0dBi typ. GPS: +2.0dBi typ. GLONASS: +4.0dBi typ.
Impedance	50 Ω
MECHANICAL	
Dimensions	18*18*4mm
Material	Ceramic
Pin Diameter	0.9mm
Pin Length	1.65mm
ENVIRONMENTAL	
Operation Temperature	-40°C to 85°C
Storage Temperature	-40°C to 105°C
Humidity	Non-condensing 65°C 95% RH

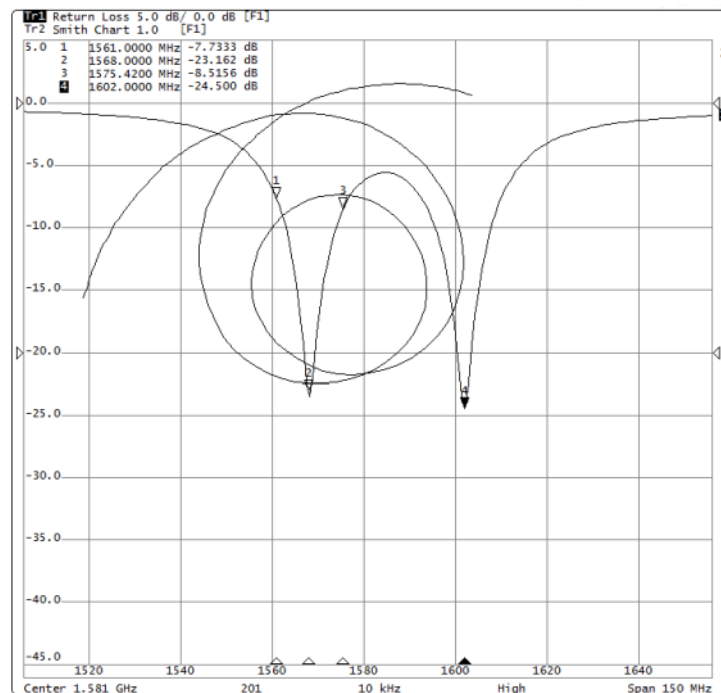
*measured on a 70*70mm Ground Plane

3. Antenna Characteristics

3.1. S11 Impedance

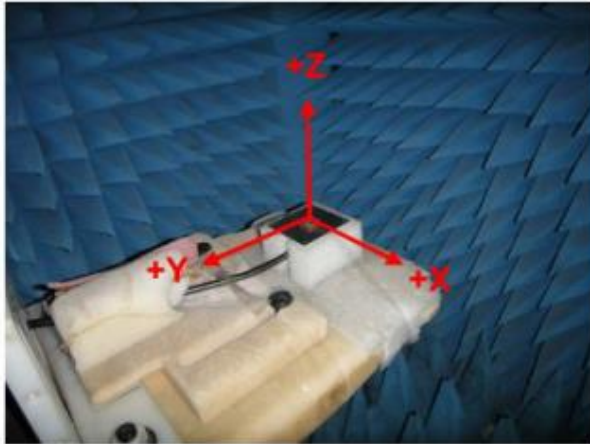


3.2. Return Loss

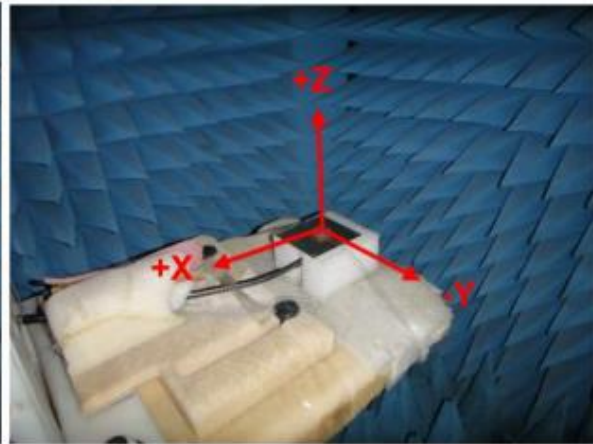


4. 2D Antenna Radiation

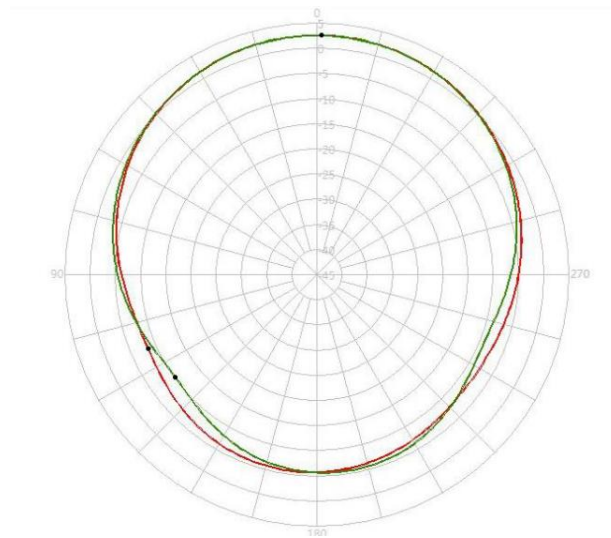
XZ-Plane



YZ-Plane

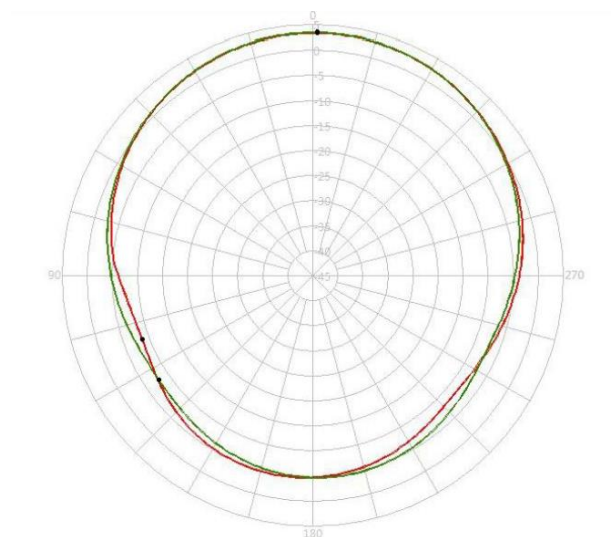


4.1. 1575.42MHz Free Space



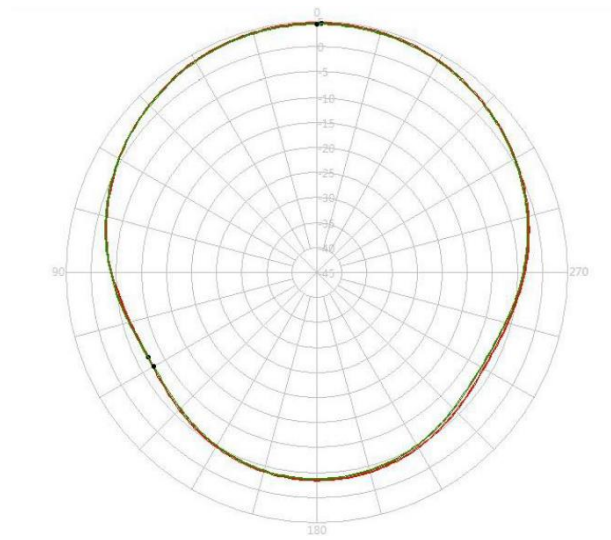
	Peak Gain (dBi)	Average Gain (dBi)
XZ Plane	2.57	-1.97
YZ Plane	2.56	-2.07

4.2. 1561MHz Free Space



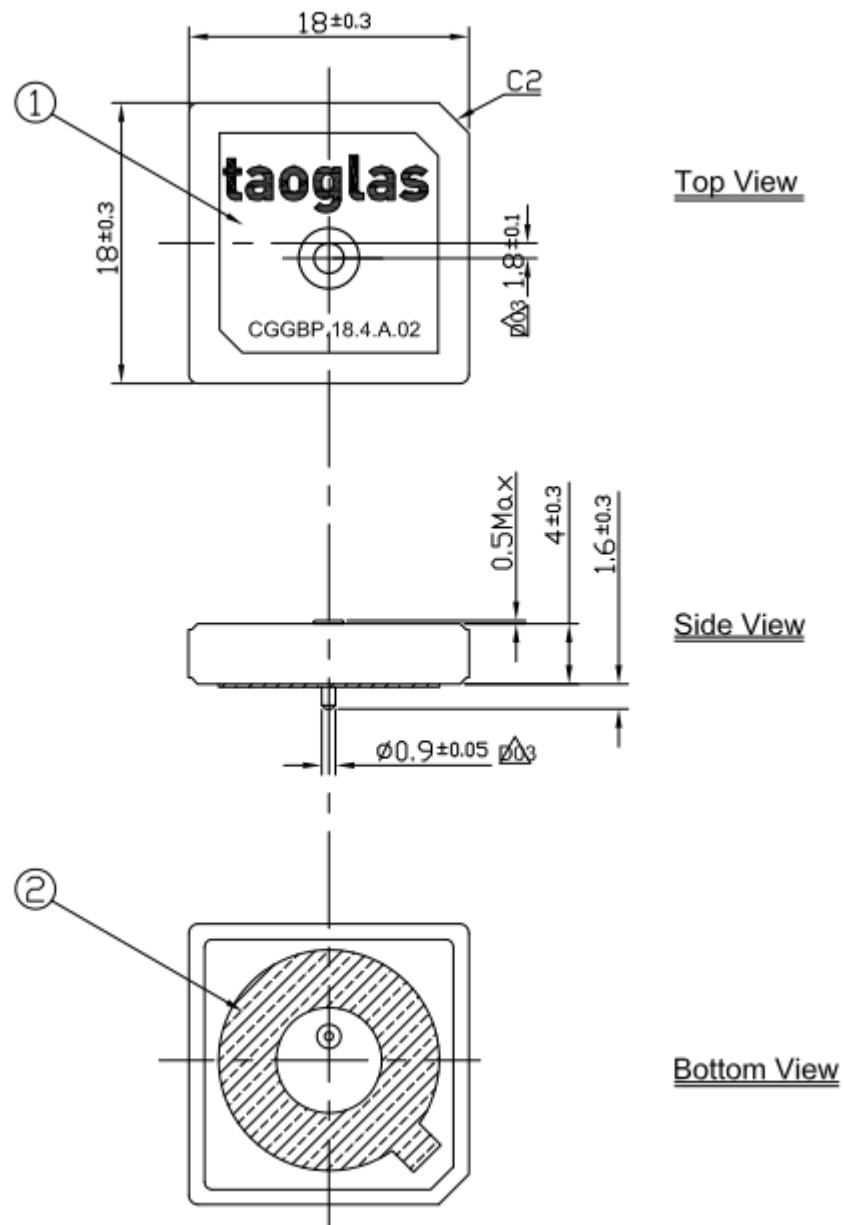
	Peak Gain (dBi)	Average Gain (dBi)
XZ Plane	3.32	-1.18
YZ Plane	3.45	-1.11

4.3. 1602MHz Free Space



	Peak Gain (dBi)	Average Gain (dBi)
XZ Plane	4.72	0.08
YZ Plane	4.52	-0.08

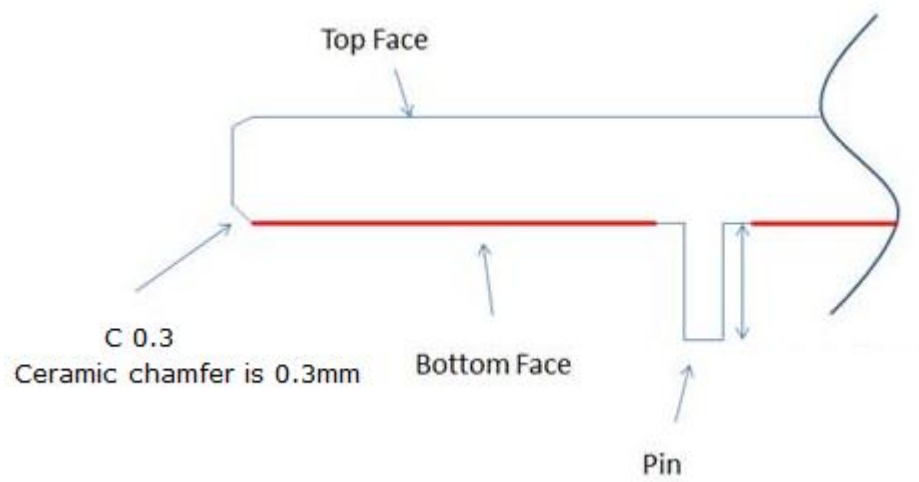
5. Mechanical Drawing



NOTES:

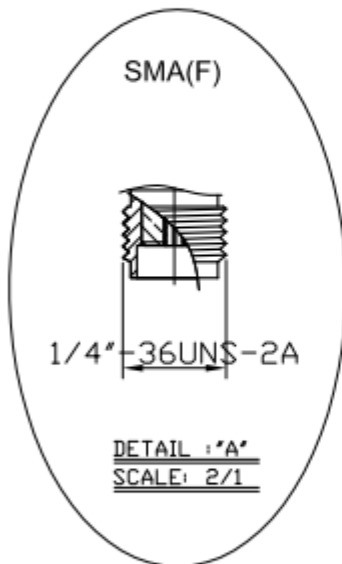
1. Double sided adhesive area 

5.1. Adhesive Thickness

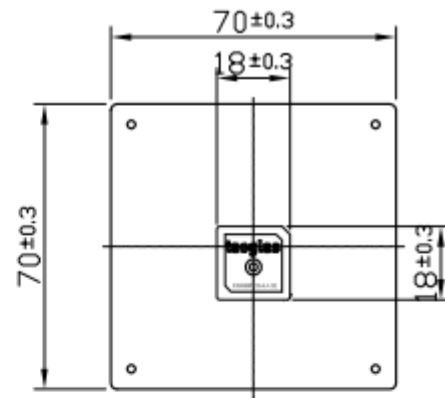


Red Line shows the adhesive without Liner – thickness 0.08~0.1mm

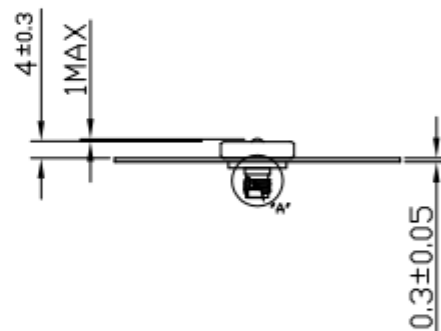
6. CGGBPD.18.A EVB



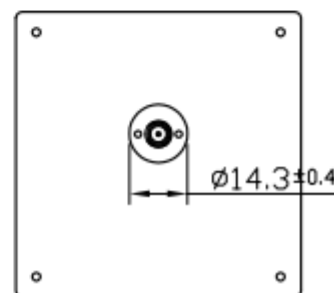
Top View



Side View



Bottom View

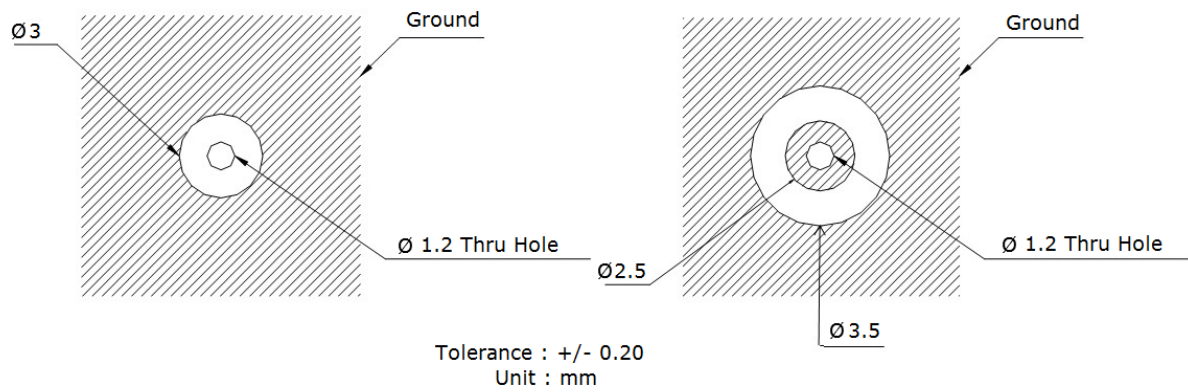


	Name	Material	Finish	QTY
1	Patch(18x18x4mm)	Ceramic	Clear	1
2	Ground-Plane(70x70x0.3mm)	Brass	Silver	1
3	SMA(F) ST	Brass	Gold	1



CGGBP.18.4.A.02 Patch on 70*70mm Ground Plane

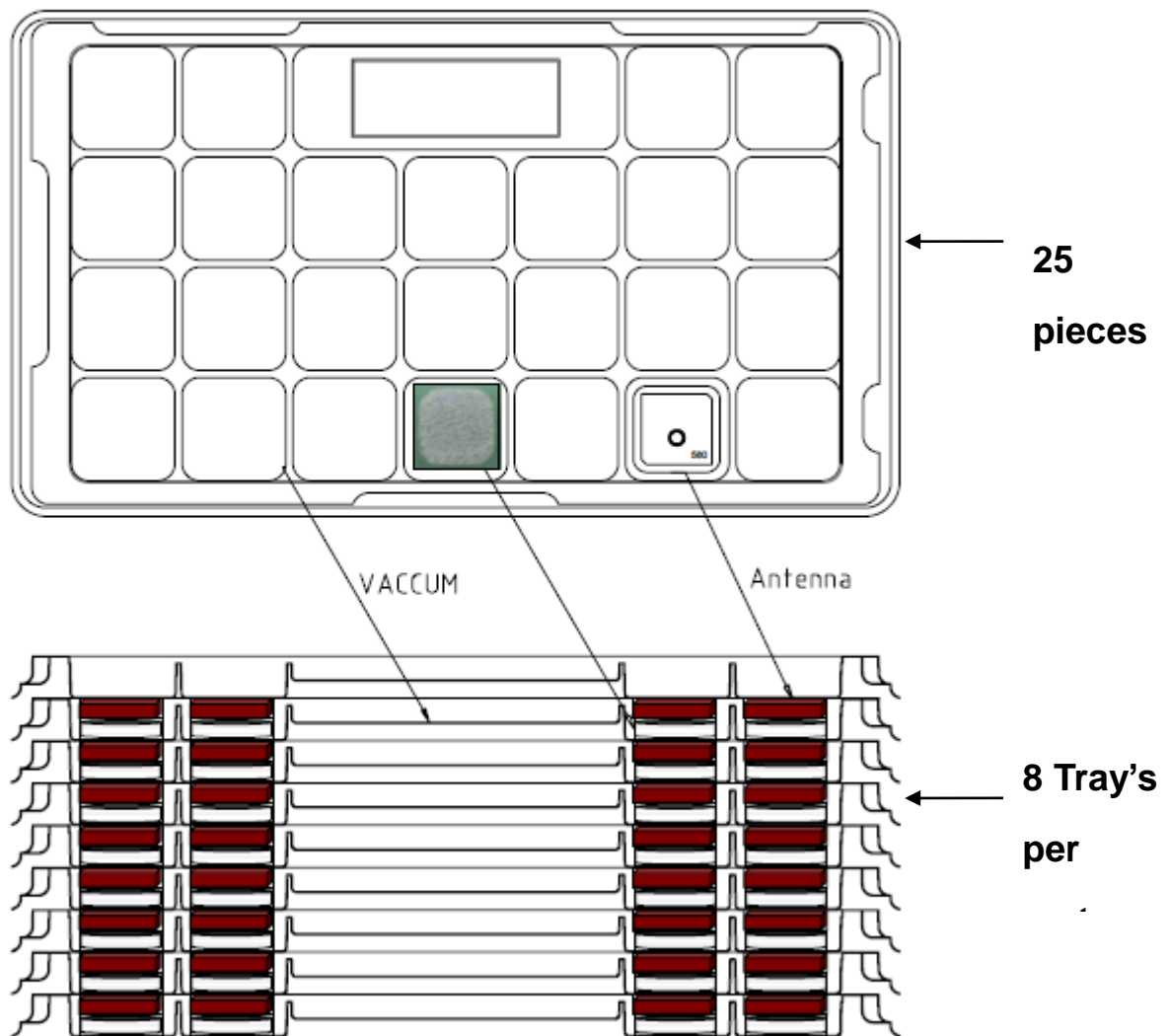
7. PCB Footprint Recommendation



8. Packaging

8.1. Inner Tray

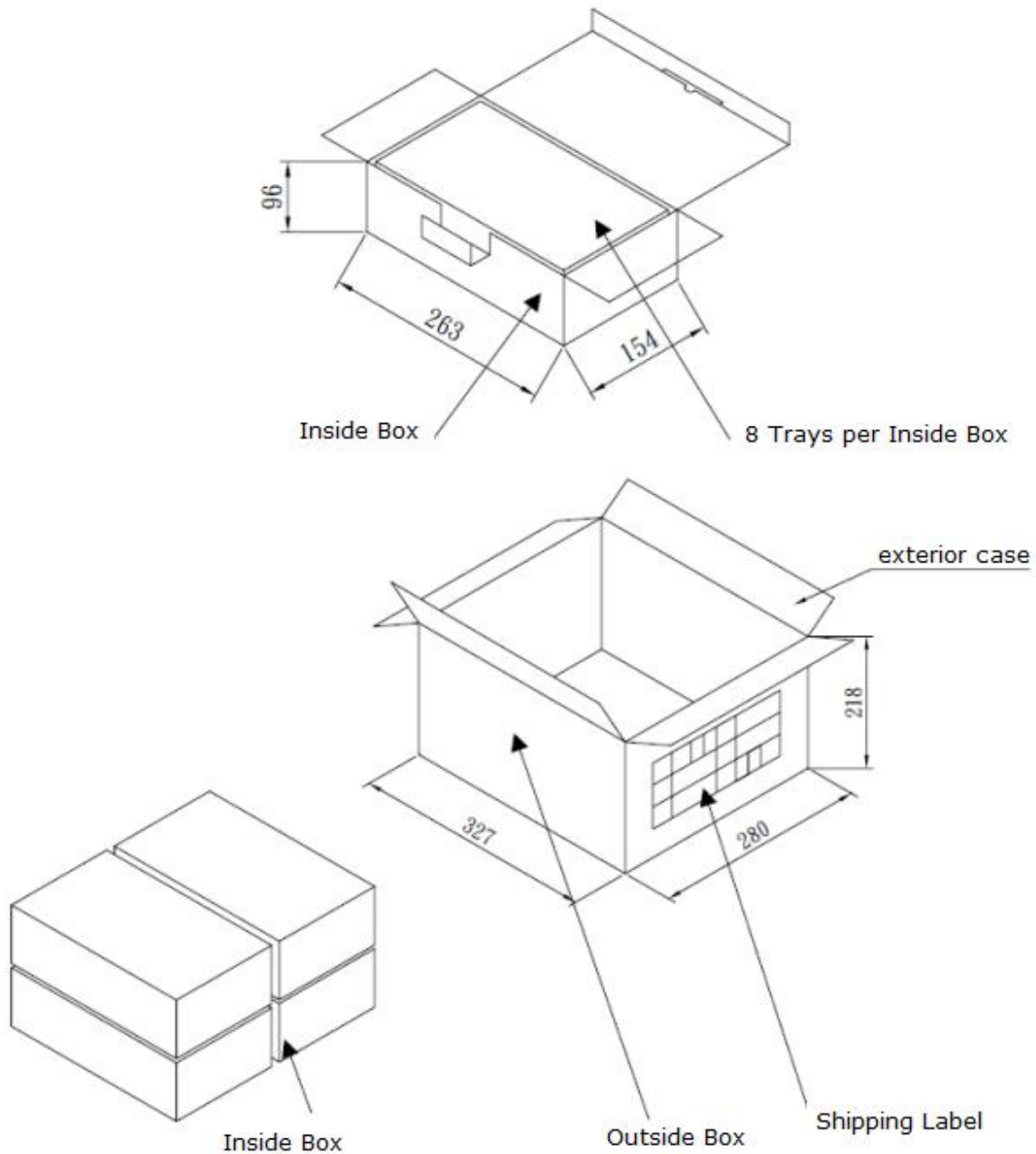
Per Tray: 25 pieces



8.2. Carton

Per Carton(Inside Box) – 8 Trays = 200 pieces

Outer Carton (Outside Box)– 4 Cartons = 800 pieces



Taoglas makes no warranties based on the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Taoglas reserves all rights to this document and the information contained herein.

Reproduction, use or disclosure to third parties without express permission is strictly prohibited.

Copyright © Taoglas Ltd.