

# GENERIC SPECIFICATION

## TERMINATION PANEL

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## General

The RN Optical Termination Panel(RN OTP) is specifically designed to house optical splitters while also catering for fiber termination in a single enclosure. The RN OTP is basically intended for the following purposes:

To house either 8/16 optical splitters within the enclosure.

Allow termination of a 16 fiber ( by splicing each fiber to SC Pigtail and inserting the SC connector into a SC Adaptor)

Provide storage space for the excess lengths of pigtails while meeting optical cable parameters such as 30mm fiber bending radius.

## Description

1. The RN OTP is a wall-mountable and the color of the cabinet is beige.
2. Internally, the enclosure house 3main components, namely:
  - 1) up to 2pcs of 1:8 or 1pcs of 1: 16
  - 2) Adaptor plate or SC Adaptors
  - 3) Splice Tray to accommodate splicing of the raw fiber to pigtail and Splitter

In the design of the enclosure, the minimum allowable bending radius of 30mm for pigtail and optical fiber is taken into consideration.

3. The RN OTP shall be of corrosion resistance, robust construction and waterproofing and shall allow entry for access to the splice trays. Specific selection of the entry points shall be made at the time of installation.
4. The RN OTP is designed an enclosure that is able to house up to 2number of 1:8 or 1:16 splitter and Adaptor plate that can be mounted in the enclosure so as to provide a connection point between the Optical splitter and cable.
4. The dimension specification of RN OTP shall be shown in the following Table-1

**Table-1**

Items	Dimension (W X D x H)	Max. Capacity	Note
RN OTP-8	181 X45 X207 mm	8 ports & splice	Pole/ Wall
RN OTP-16	220 X 80 X 300 mm	16 ports & splice	Pole/Wall

## Distribution Module

### □ Adapter Plate

The adapter plate located in the RN OTP consists of adapter panels to provide mounting for SC adapters. The adapter panel shall be designed for easy routing of the patch cord.

Optical adaptors shall be used for connections and be connected with optical attenuators if needed.

### □ Adapter

The adapter designed to be used in the RN OTP shall be able to connect Optical Splitter from the splice tray with patch cord.

## Splice Module

### □ Construction of Splice Tray

A splice tray attached in the RN OTP shall have the capacity to secure the fiber splices each and house optical splitter. Fibers shall be completely retained within the splice tray with no possibility of trapping, pinching or other damage to the fibers during installation and arrangement. The splice tray shall include a mechanism to secure the loose tubes or protection tubes, and the retaining mechanism shall be resistant to vibration.

The splice tray can hold loose tube or ribbon fiber splices. A splice tray shall accommodate maximum 16 sleeves for loose tube connection.

### □ Optical Characteristics

The design of the splice tray shall ensure that the fiber shall not bent to a radius  $\leq 30\text{mm}$ .

The splice protector shall restore the mechanical integrity of the fiber and shall not create any residual forces in the fiber.

The splice protector may be a suitable plastic heat shrinkable material with an internal stainless steel rod for tension relief.

## Components

### □ Cable Clamp

The cable clamp shall be required to secure the outside plant cables and can clamp the cable diameters from 3mm to 12mm.

## Test Certification

### General

This section specifies the RN OTP and its material physical, chemical environmental and mechanical requirements and the tests to be applied for the determination of compliance to these requirements.

The materials of the IJP Box shall be compatible with all cable components and splicing materials.

### Workmanship

All components of the frame shall be high quality design, workmanship, and finish.

All components shall be free of pinholes, cracks, sharp edges or other defects which may detract from the service requirements of the frame.

All Plastic and metal shall be a high standard of workmanship.

### Materials

The components of the RN OTP and its accessories shall not contain any hazardous or toxic materials.

All the components shall be corrosion resistance.

## RN OTP Parts List

No.	Part Name	Material	Unit	Q'ty
1	Housing	ASA/PC	pcs	1
2	Cable Clamp	SUS304 1.5T	pcs	2
3	Fixture 3mm	Silicon	pcs	2
4	Fixture 8mm	Silicon	pcs	2
5	Strength Member Clamp	SUS304 1.5T	pcs	2
6	Fixing Bolt	M4X5, SUS304	pcs	8
7	Cable Gland	NYLON,NEOPRENE	pcs	2
8	Gland pipe	10mm, NYLON	Pcs	2
9	Patch cord Fixture	Silicon	pcs	8/12
10	Adaptor Plate	ASA/PC	pcs	1
11	Cover gasket	Silicon	pcs	1
12	Middle Tray	PC/APS	pcs	1

## Tests of Assembled IJP Box

### □ Temperature Cycling

The sample shall be subjected to 10 continuous test cycles. Each test cycle shall be:

Temp cycle:  $-40\pm 2^{\circ}\text{C} \sim 60\pm 2^{\circ}\text{C}$

Cycle period: 8hr

Test Cycle: 9cycle

Test hour: 72hr

On completion, neither corrosion nor deformation shall be occurred on the sample.

### □ Vibration Test

The cables connected to the sample shall be rigidly clamped 500mm from the distribution frame. The distribution frame shall be vibrated at a frequency of 10~55~10Hz and an amplitude of 0.35mm for a period of 1 hour. The cycle takes 10 minutes and vibrates in a perpendicular way. On completion, neither separation of components nor damage shall be occurred.

### □ Water Immersion Test

Test Condition (IP 54)

- 1) Place the enclosure in the open air.
- 2) Oscillating tube device with spary holes is about 1~2m apart from the enclosure
- 3) Repeat opening and shutting of the enclosure three times in series before water proof test.
- 4) Water is sprayed onto all sides of the enclosure over an arc of 180degree from vertical for 60min.
- 5) Inspect inside the enclosure after completion of spraying water.

No water leakage & No any opening, No ingress of dust

## Packing

RN OTP shall be packed as a complete kit containing all components necessary for installation.

Each item is to be covered with a protective material to prevent scratching or damage during shipping or storage.

Complete assembly and installation instructions in English shall be provided with each packaged unit.

The final shipping cartons shall be of sufficient strength and durability to protect the contents from handling during storage and shipping by land, sea, or air.

## Marking

The details given below shall be distinctively marked in English with a weatherproof material, on at least two sides of the shipping carton.

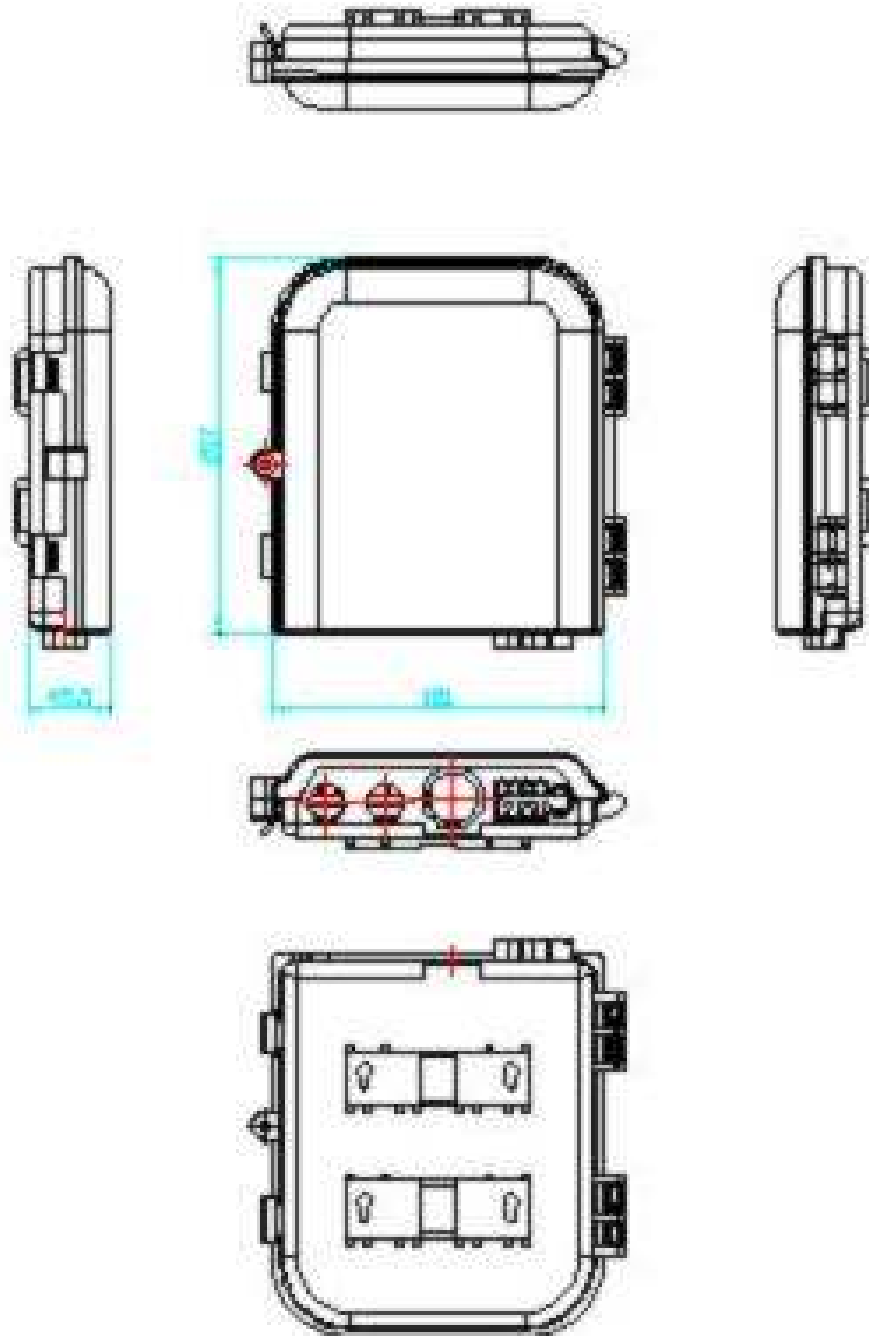
- ❖ The company to be delivered
- ❖ The product item
- ❖ Country of origin
- ❖ Manufacturer's name and/or trademark
- ❖ Date of manufacture
- ❖ Caution mark

Each fiber distribution frame shall be marked with the company, the month and year of manufacture

and the trademark and/or name of manufacturer in legible color.

Spec No.	NWC-RN OTP-8	<b>Assembly Overview (RN OTP-8)</b>
Code No.	Fig - 2	
Initial	2009. 07. 10	
Revised		

Unit : mm  
Tolerance : 1/100



Spec No.	NWC-RN OTP-16	<b>Assembly Overview (RN OTP-16)</b>
Code No.	Fig - 1	
Initial	2007. 01. 02	
Revised		

Unit : mm  
Tolerance : 1/100

