



■ Features

- Forward RF bandwidth of 1218 MHz
- RF output power of 15 dBmV
- AGC controlled receiver with -6 to +2dBm optical input range
- Reverse 1610nm output Power: 2mW
- 4 KV surge protection for RF I/O ports
- LED on the housing for forward optical power, reverse optical power and 1V/ mW forward optical power
- With -20dB RF output test port
- Fully Compatible with SCTE Standards

■ Description

The RFoG Optical Network Unit (ONU) is an extremely compact optical node intended for installation at the subscriber premises. It is compliant with the SCTE 174 and DOCSIS 3.0 standards and is designed for PON applications and RF over Glass(RFoG) networks.

The RFoG ONU provides a high RF output level with a forward(downstream) bandwidth to 1218MHz.

These features make it ideal for use in high density applications, MDU' s, and commercial complexes such as campuses, hospitals, and industrial parks. The RFoG ONU return transmitter utilizes burst mode transmission to prevent unwanted optical signals from entering the network.

■ Characteristics

Table 1. This section lists the product specifications in tables.

Item	Unit	Specification
Receiver		
Receiving Wavelength	nm	1550±10
Optical AGC Range	dBm	- 6~ + 2
Optical LED	dBm	≥+2dBm Red LED Flashing ≤-6dBm Red LED on +2 ~-6dBm Green LED on
Optical Input Test point	V/mW	1.0

Frequency Range	MHz	54 to 1218
Flatness	dB	<±1
Equalizer, fixed	dB	4±1
Output impedance	Ohm	75
Return Loss	dB	>16@54~1002MHz; >14@1002~1218MHz
Thermal Stability	dBmV/Ch	±1.0
Output level	dBmV	15±1.5
Distortion①	dB	
CSO	dB	≥60
CTB	dB	≥62
CNR②	dB	≥48

Note:

- ①、PAL-D 60 channels flat; measured at 543.25 MHz; Optical power receiving at 0dBm
- ②、PAL-D 60 channels flat; measured at 543.25 MHz; Optical power receiving at [-3dBm@OMI=3.5%](#)

Table 2. Optical transmitter specifications.

Item	Unit	Specification
Transmitter		
Output Wavelength	nm	1610±3
Optical Output Power	mV	2
Laser mode	-	Burst mode
Frequency Range	MHz	5 ~ 42
Flatness	dB	±1
Return Loss	dB	>14
Input level	dBmV	15 ~ 62

Noise Power ratio	dB	20
RF ON Threshold	dBmV	16±1.5
RF OFF Threshold	dBmV	1±1.5
Time Delay On	us	≤1.3
Time Delay Off	us	≤1.6

Table 3. Power Supply and General Specifications.

Item	Unit	Specification
General Performance		
Powering	VDC	12
Power Consumption	W	3

Table 4. Environmental, Mechanical and Compliance/Safety Specifications.

Item	Unit	Specification
Environmental		
Operating Temperature	°C	-40 to +65
Water/Dust Ingress Rating	-	IP41
Humidity	%	<95 (non-condensing)
Mechanical		
Housing Dimensions	mm	180×85×40
Weight	Kg	0.36
Optical input connector	-	SC/APC
Output and Test Point	-	F-connector, Female
Connectors		
Compliance/Safety		
Electrical Safety	-	EN 50083-1, EN 60065, IEC 65
EMC Emissions	-	EN 50083-2
RoHS	-	Directive 2002/95/EC on the Restriction of the Use of Certain Hazardous Substances in

(1) Safety model number differs from the order number, part number, and shape number as per respective OEM/ODM factories.

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