

MDO1200 COMPACT FORWARD PATH OPTICAL RECEIVER



- Downstream frequency range up to 1218 MHz
- Electronic configuration interface
- Optional GaN output stage
- Automatic optical gain control
- Cost-effective solution
- Optional GPON bypass port

GENERAL DESCRIPTION

The MDO1200 optical node is developed for customers, who provide video services by RF overlay with GPON data transmission. Regarding to this the device is available with a built-in WDM unit, that forwards the 1550 nm signals to the RF stages, and bypasses the other wavelengths to the GPON output. The alignment of the RF side is very easy, thanks to the fully electronic control and to the optical AGC. The node can be delivered with local or remote powering in special housing improved for use in apartment houses' cabinets.

TECHNICAL SPECIFICATIONS

Forward path parameters	MDO1200C	MDO1200D
Wavelength [nm]	1550±10 or 1100...1650	
Input optical power [dBm]	-7...+2	
Optical attenuation on bypassed GPON signals [dB]	<0.6	
Equivalent input noise current [pA/√Hz]	4.5	
Frequency range [MHz]	47...1218	
Equalizer breakpoint frequency [MHz]	1218	
Gain limited output RF level at 2% OMI/channel [dBμV]	115 @ 1218 MHz ⁽¹⁾	
RF attenuator range [dB]	0...15 ⁽²⁾	
RF equaliser range [dB]	6...22 ⁽²⁾	
Flatness [dB]	±0.75	
Output return loss (40MHz -1.5dB/octave) [dB]	>18	
Output RF testpoint attenuation [dB]	20±1	
CTB [dB]	-65 ⁽³⁾	-80 ⁽⁴⁾
CSO [dB]	-65 ⁽³⁾	-80 ⁽⁴⁾
Maximum output level @ PreBER = 10 ⁻⁷ [dBμV]	109 ⁽⁵⁾	114 ⁽⁵⁾
Output total composite power (TCP) [dBmV]	67	72

Specifications are subject to change without notice!

General parameters

RF connector

Optical connector

Power supply voltage [VAC]

Maximum power consumption (MDO1200C / MDO1200D) [W]

Screening factor [dB]

Degree of protection

Temperature range [°C]

Dimensions [mm]

Weight [kg]

MDO1200xL

MDO1200xR

PG11 (5/8", F)

SC/APC, EURO2000

230±20% ~ 30...65, □ 35...90

13 / 17

80

IP43

-20...+50

202x146x80

1.7

(1) Input optical level is -5 dBm

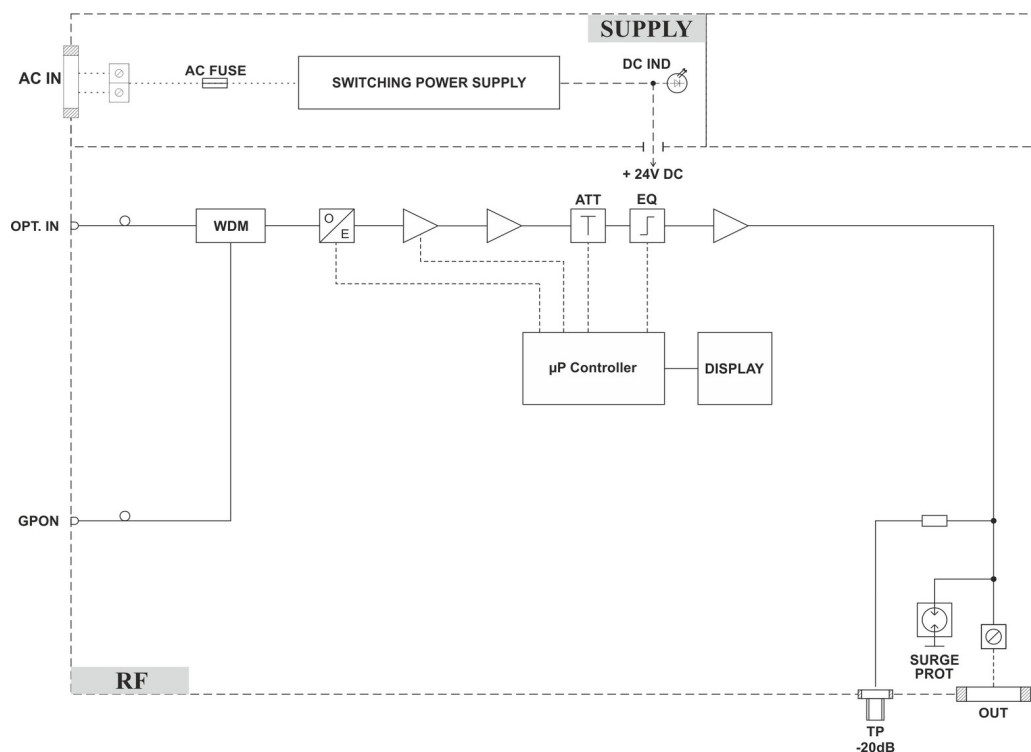
(2) Adjustable in 0.5 dB steps

(3) 46 dBmV at 1218 MHz, 7 dB tilt, 99 analog channels

(4) 60 dBmV at 1218 MHz, 22 dB extrapolated tilt, 79 analog channels + 111 digital channels (-6 dB offset)

(5) Measured at 997 MHz, with full digital load between 258 MHz and 1218 MHz, 9 dB tilt

BLOCK DIAGRAM



Specifications are subject to change without notice!

ORDERING INFORMATION

M	D	O	1	2	0	0	X	X	-	G	X	X	-	X	X
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Output stage type	
C	GaAs technology
D	GaN technology

Type of the optical connector	
SA	SC/APC (Recommended type)
EU	EURO2000

Power supply type	
L	Local powering
R	Remote powering

GPON bypass type	
00	No bypass
55	1550 nm dropped, all other bypassed

Option	Required modules	Ordering codes
Coax connection option	PG11-5/8" adaptor	PG11-5/8
Coax connection option	PG11-F adaptor	PG11-F

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