

# WISI LR 22 W x00E

Node for single Fiber-HFC-Systems

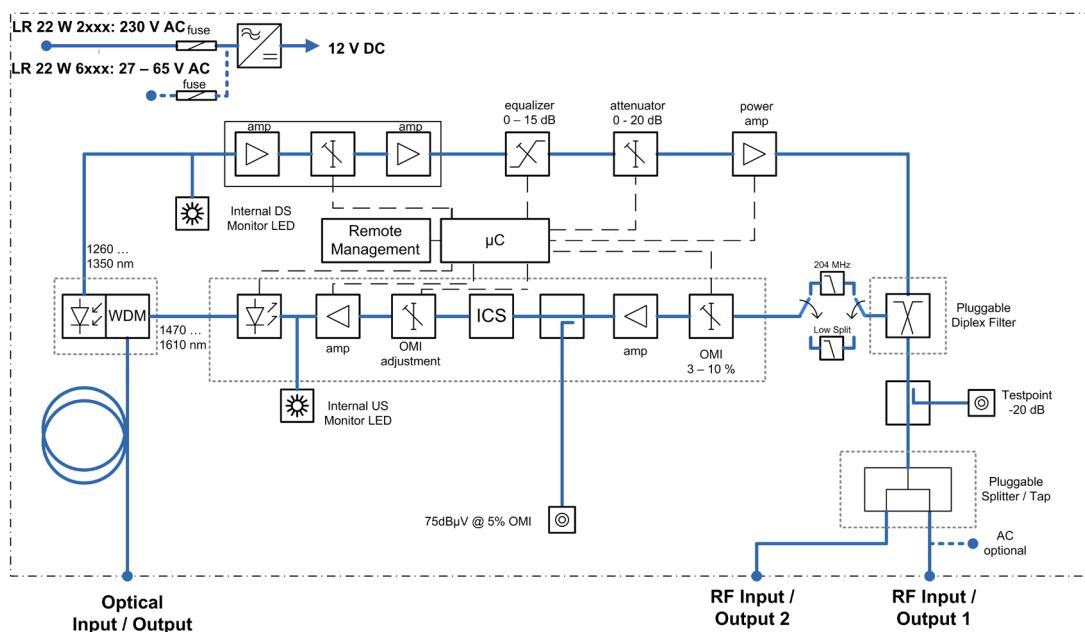


## At a glance:

- High RF output level of 109 dB $\mu$ V for a full DOCSIS 3.1 load in FTTC or FTTB networks
- DOCSIS-3.1-compliant frequency range: Downstream up to 1.2 GHz, Upstream up to 204 MHz
- Pluggable diplexers enable migration towards DOCSIS 3.1 upstream
- Pluggable output splitters / taps for flexible configuration of the two RF outputs
- Device control via bluetooth app or via handset OH 41
- Optional: Remote control compliant to IEC 60728-14 via FSK receiver module
- Compact housing for outdoor deployment (IP66)
- Optical ALC for regulated output levels

## Description

The fiber nodes of the LR 22 Wx00E series are modular RF overlay nodes for 1310 nm networks, which can be extended to single fiber HFC nodes (with LT22 modules). The difference to the standard LR 22 Node is the already integrated optical filter. The way in which the WDM filter is connected in the Single Fiber HFC Node also enables the selective use / replacement of the return path module in order to optimize operating costs and field handling.



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## Technical data

Downstream	
Optical input power	-8...+2 dBm
Wavelength	1260...1350 nm
Frequency range	85...1218 MHz (depending on diplexer)
Noise current density	max. < 4,5 pA/√Hz
Attenuator downstream	0...20 dB (0,5 dB steps)
Equalizer downstream	0...15 dB (0,5 dB steps)
Outputlevel 10 dB slope (121 x QAM256), (EN60728-3-1)	109 dBμV (BER <1 exp-9), (@ 2,5% OMI)
Outputlevel flat (121 x QAM256), (EN60728-3-1)	107 dBμV (BER <1 exp-9), (@ 2,5% OMI)
Amplitude response	±0,75 dB
Test point	-20 dB
RF return loss	> 18 dB (-1 dB/oct., min. 14 dB)
Optical return loss	> 40 dB

## Upstream

with LT 22 xxxx (not included!)	
Optical output power	3 dBm
Wavelength	1470...1610 nm (CWDM grid, corresponding to order code)
Frequency range	5...204 MHz (depending on diplexer)
Flatness	±0,75 dB
Nominal RF input level	75 dBμV (OMI 5%)
Attenuator range	3...10% (OMI attenuation)
Test point	75 dBμV (for 5% OMI per channel)
Ingress Control Switch (ICS)	0/-6/>45 dB
RF return loss	> 18 dB (-1 dB/oct., min. 14 dB)
Optical return loss	>40 dB

## Interfaces

Optical connectors	SC/APC (see order code)
RF Interfaces	F-plug
Bluetooth antenna LB 01	1x PG11

## User interfaces

Status LED downstream	Optical input power
Status LED upstream	Laser activity
Management ports RJ11	1 pcs. (for handset OH 41)
Remotely controlled parameters via FSK	DS on/off, US on/off, ICS 0/-6/-45 (with optional Rx module)
Bluetooth version	4.0 / LE
Bluetooth profiles	GATT
Bluetooth transmit power	≤ 0 dBm
Bluetooth frequency	2.4 GHz
Bluetooth app compatibility	Android 4.3 or higher

## Technical data

General data	
Supply voltage	LR 2x x 2xxx: 180...264 V AC, LR 2x x 6xxx: 27...65 V AC
Power consumption max.	16 W (including US TX)
Output impedance	75 Ω
Dimensions (width x height x depth)	232 x 145 x 86 mm
Electro Magnetic Compatibility (EMC)	EN 50083-2
Protection class	IP 66
Ambient temperature	-20...+55 °C

## LR 22 W XXXX

### Custom Options:

- 1 – default configuration
- A-Z – custom configurations

### Upstream Wavelength:

- 00 – RF Overlay with PON
- 43 – 1430 nm (single fiber HFC)
- 45 – 1450 nm (single fiber HFC)
- 47 – 1470 nm (single fiber HFC)
- 49 – 1490 nm (single fiber HFC)
- 51 – 1510 nm (single fiber HFC)
- 53 – 1530 nm (single fiber HFC)
- 55 – 1550 nm (single fiber HFC)
- 57 – 1570 nm (single fiber HFC)
- 59 – 1590 nm (single fiber HFC)
- 61 – 1610 nm (single fiber HFC)

### Power Supply:

- 2 – 230 VAC local powered
- 6 – 65 VAC remote powered

### Connection Options:

- W – including optical filter

### Type of Node:

- 2 – Node for HFC applications

## LT 22 3XX1

### Upstream Wavelength:

- 27 – 1270 nm
- 29 – 1290 nm
- 31 – 1310 nm
- 33 – 1330 nm
- 35 – 1350 nm
- 37 – 1370 nm
- 39 – 1390 nm
- 41 – 1410 nm
- 43 – 1430 nm
- 45 – 1450 nm
- 47 – 1470 nm
- 49 – 1490 nm
- 51 – 1510 nm
- 53 – 1530 nm
- 55 – 1550 nm
- 57 – 1570 nm
- 59 – 1590 nm
- 61 – 1610 nm

### Output Power:

- 3 – 3 dBm