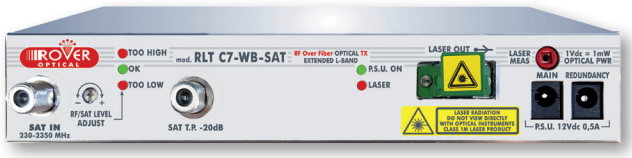
ROVER
OPTICAL SAT
A STEP AHEAD IN DIGITAL TELEVISION

RF Over Fiber SAT LINK SYSTEM for NEW WIDE BAND LNB 250-2.350 MHz

mod. RLT-C7 WB-SAT



SPECIALLY DESIGNED for NEW WB LNB (2 CABLES 4 POLAR.)

1550 nm CWDM DFB SINGLE MODE COAXIAL LASER

SAT LEVEL ADJ. & MONITORING LED FOR OPTIMAL PERFORMANCE

SAT RF LEVEL TEST POINT ON FRONT PANEL

DIN RAIL MODULAR ASSEMBLY OR 1U 19” RACK

TEST POINT for LASER POWER MEASUREMENT

ADVANCED TECHNOLOGY

FOR PROFESSIONAL CABLE & BROADBAND NETWORKS

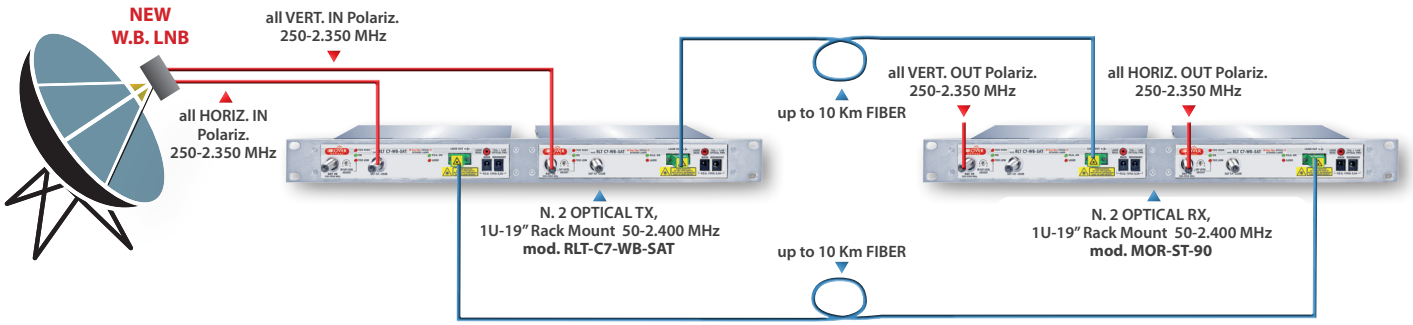
WTA MEMBER

RLT-C7 WB-SAT

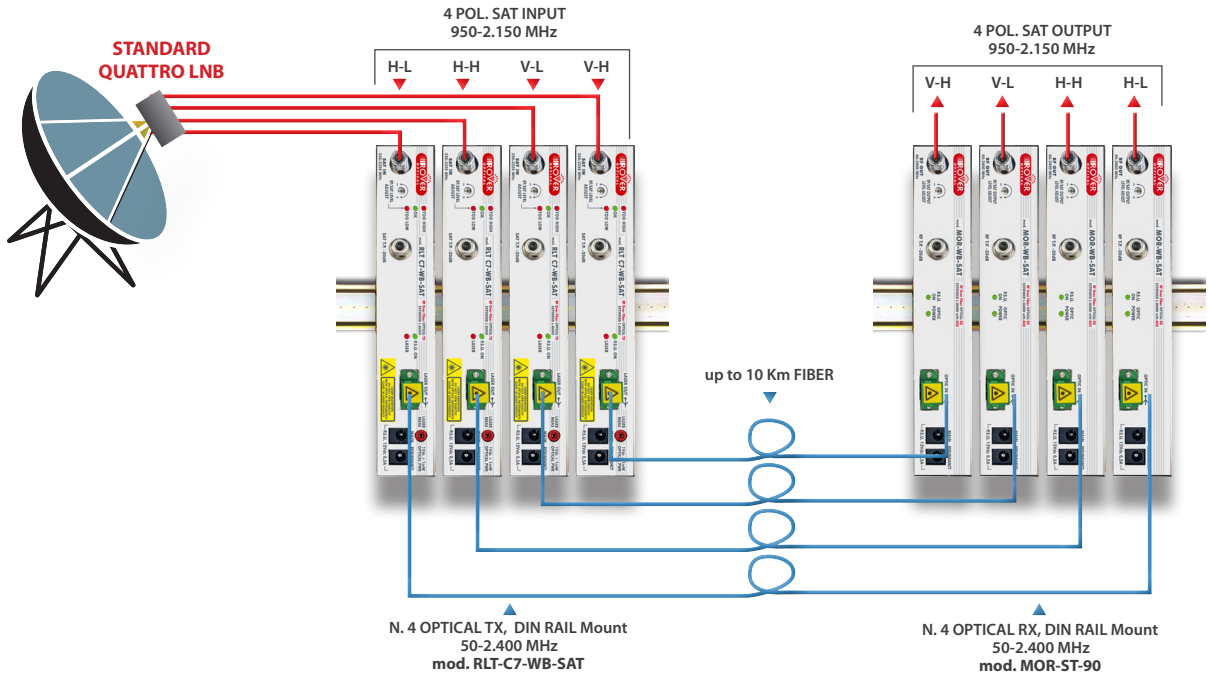
Modular & Compact CWDM Ultra W.B. Laser Optical Transmitter for NEW Wide Band LNB for SATCOM Link Distributions System

The ultra wide band, 50-2.400 MHz, optical laser Transmitter Rover "RLT" series, equipped with a coaxial DFB single mode laser, is designed for full loading, up to N. 60 SAT Transponders.

2 W.B. FULL POLARITY 250-2.350 MHz, 10 Km RF Over Fiber SAT LINK SYSTEM



4 STANDARD POLARITY 950-2.150 MHz, 10 Km RF Over Fiber SAT LINK SYSTEM

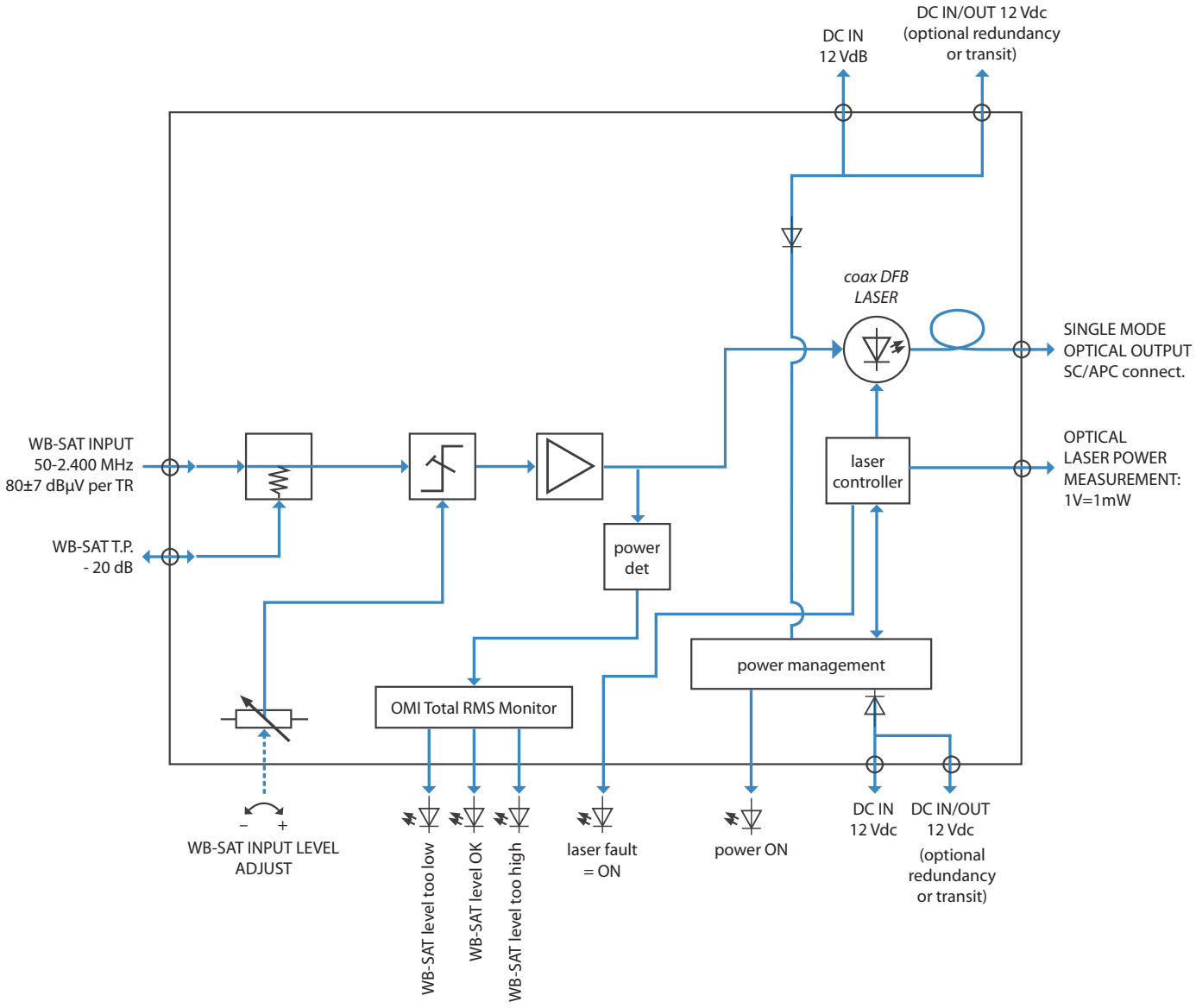


MAIN FEATURES

- Equipped with coax DFB Single Mode laser for good RIN
- W.B. SAT input 250-2.400 MHz up to 60 SAT Transponders
- SAT RF level Test Point connector
- Laser output power +7 dBm/5 mW
- RF-SAT input level adjustement with Monitoring Led
- SC/APC laser output connector with shutter
- Laser output connector on front panel
- Redundancy PSU adapter
- DIN RAIL easy assembling
- 19" Rack Assembly panel

RLT-C7 WB-SAT BLOCK DIAGRAM

on REAR PANEL



on FRONT PANEL

TECHNICAL SPECIFICATIONS

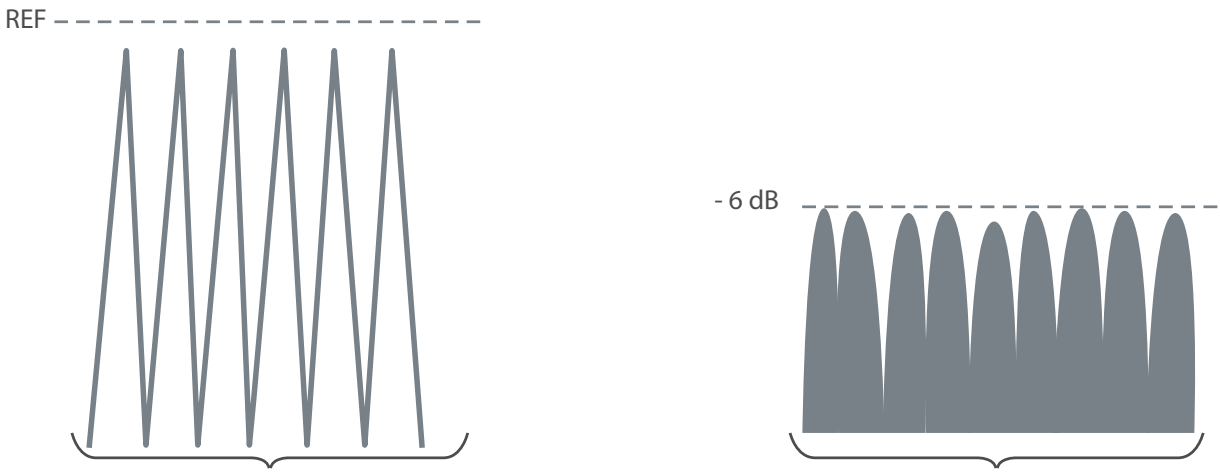
SMATV, CATV & SAT	
RF/SAT frequency range	50-2.400 MHz
RF connectors	75 ohm type "F"
RF Return Loss	> 12 dB
Typical level for WB-SAT input	75 dbuV +/– 7 dB per channel
Test point for SAT input	input level - 20 dB
WB-SAT Gain mode adjust	Manual, adjustable +/– 7 dB, with led level indicator monitor: - too low - ok - too high, for the best performance
LASER	
Laser type	DFB coaxial single mode with optical isolator
Laser optical power	+ 7 dBm/5mW
Optical power stability	typ. +/– 0,5 dB, max +/– , 1dB Max
Optical wavelength	1.550 +/– 4 nm (opt. 1.310)
RIN	–140 dB/Hz worst case
Optical insulation	30 dB min
Optical return loss	> 40 dB
Optical connector:	SC/APC with shutter (other on request)
POWER SUPPLIES	
TX Power supply	12 Vdc, 300 mA
Power supply adapter (opt.)	IN 100/230 Vac, OUT 12 Vdc 3A
Power consumption	< 8 W
MECHANICAL	
Module	1/2 Unit 19" rack (up 2 module in 1 U 19" Rack mount mod. RAP-2 opt.)
Weight	0,8 kg
Single Module Dimension	H 33 x P 80 x W 190
Assembling type	(19" Rack with optional front panel), or DIN Rail or wall mount brackets
SAFETY, EMC, INSTALLATION ENVIRONMENT	
Safety	EN 50 083-1 and EN 60 950 See yellow label on the equipment.
Laser Safety	Class 1M acc. IEC 60 825-1 (eye safe for normal viewing). During normal operations the laser beam is confined within optical fiber. Optical transmitter is intended to work ONLY connected to the proper optical network
Installation environment	Temperature range: –5° / + 45° (max 55°) According to ETS 300 019-1-3 Class 3,1 Controlled Temp. Loc.
Relative humidity	90 % (95 max)
EMC	EN 50 083-2

FULL LOAD WB-SAT NETWORK PERFORMANCE

	Number of transponders: up to 70 from 250 to 2.350 MHz
OMI	1,5 % per single Transponder
CNR	> 30 dB
CXM	< 38 dBc

- All transponders FLAT ± 6 dB max
- TX test method: transmitted power 7 dBm/5mW + 10 Km G652 Fiber
- RX test method: received power = –6 dBm, noise current = 7pA/√Hz

ANALOG & DIGITAL SAT LEVELS CONFIGURATION SUGGESTED



SAFETY

THE EQUIPMENT MAY ONLY BE INSTALLED BY QUALIFIED PERSONNEL, WHO HAVE RECEIVED THE NECESSARY TRAINING IN HANDLING OPTICAL AND ELECTRICAL EQUIPMENT AND HAVE BEEN INSTRUCTED IN LASER SAFETY.

INVISIBLE LASER RADIATION, DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS, CLASS 1M LASER PRODUCT. MAXIMUM OUTPUT POWER: 10 mW, WAVELENGTH: 1550 nm IEC 60825-1:2007 (EN 60825-1:2007, DIN EN 60825:2008-05).

NOTICE

Laser equipment installation, operation and maintenance must only be carried out by people who have received adequate training in laser safety.

Optical transmitters and amplifiers emit optical power in the invisible infra–red spectrum range. Under normal operating conditions, the optical power is transferred in the fibers and is not accessible.

Each optical transmitter and each optical amplifier is assigned to a laser class according to IEC 60825–2 and a hazard level according to IEC 60825–2.

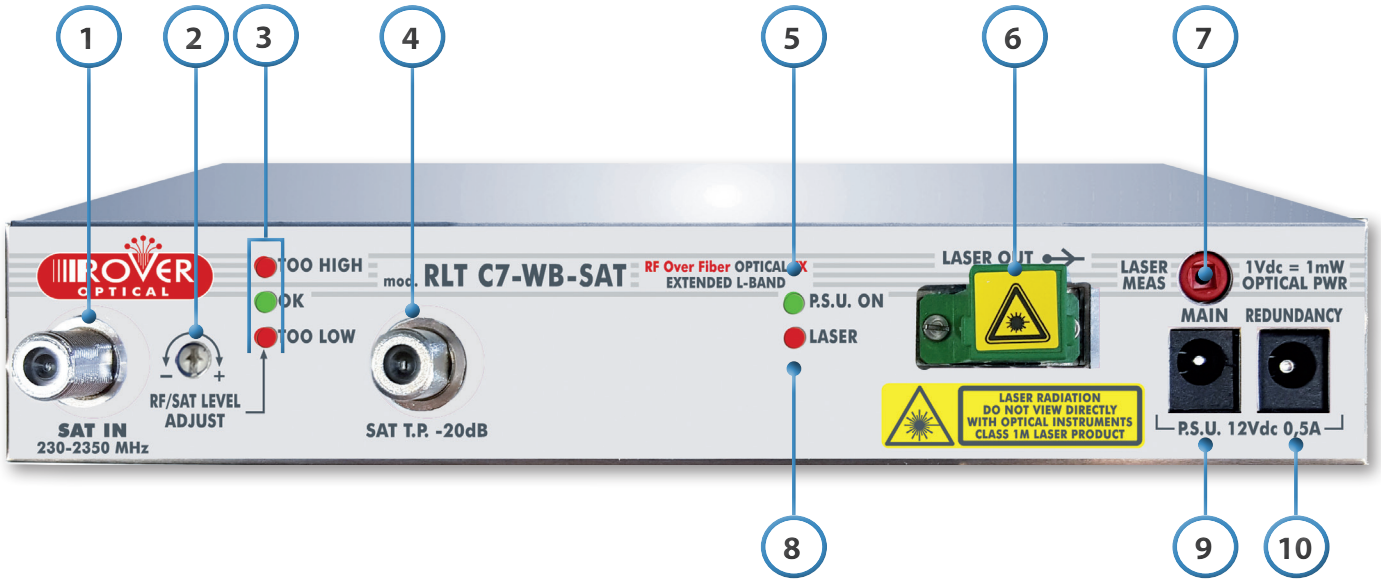
The hazard level is based on radiation that could become accessible under reasonable foreseeable circumstances, e.g. disconnected fiber connector, fiber cable break.

Both levels are documented in the according operating manual of the device and with a laser safety label on the device.

The device may be integrated in an optical fiber communication system (OFCS) complying with IEC 60825-2.

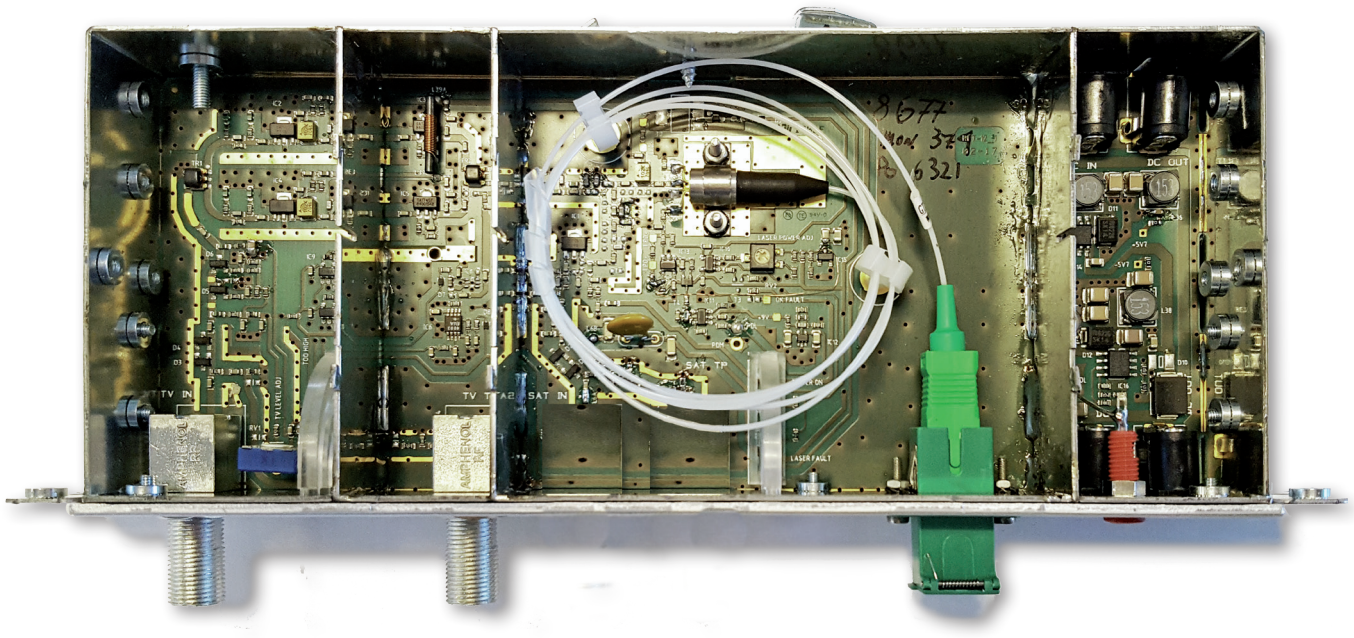
For subsequent accessible locations within the OFCS, the operator of the OFCS is obliged to assign appropriate hazard levels and to install applicable laser safety measures according to IEC 60825-2.

FRONT VIEW



1. WB RF/SAT input 50-2.400 MHz
2. SAT level adjust trimmer to correct OMI
3. RF/SAT correct input level monitor Led
4. RF/SAT Input level Test point - 20 dB
5. POWER "ON" Led
6. LASER output connector with shutter
7. Optical PWR measurement 1Vdc = 1mW Laser PWR
   2Vdc = 2mW Laser PWR
8. Laser fault = LED ON
9. PSU Input 12 V d.c.
10. PSU REDUNDANCY or TRANSIT 12 Vdc

INTERNAL VIEW



ASSEMBLING EXAMPLES

FLAT WALL ASSEMBLING

FLAG WALL ASSEMBLING

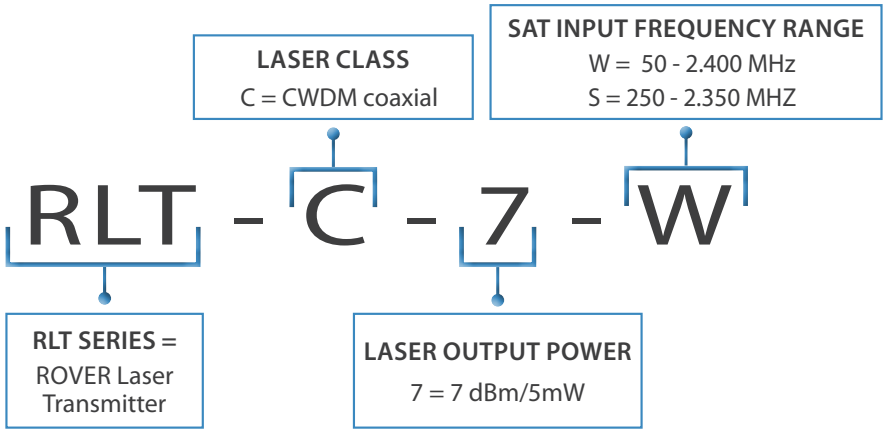
DIN RAIL ASSEMBLING

MULTIPLE DIN RAIL ASSEMBLING

N° 2 OPTICAL TX mod. "RLT-C7-WB-SAT" IN 1 U 19" RACK

N° 1 OPTICAL TX mod. "RLT-C7-WB-SAT"
+ N° 1 EDFA OPTICAL AMPLIFIER mod. "REA-C20" IN 1 U 19" RACK

ORDERING CODE DEFINITION



ORDERING MODEL / CODE EXAMPLE

MODEL / CODE	DESCRIPTION	APPLICATION
RLT-C-7-W	CWDM Laser transmitter with DFB LASER, 7 dBm power, 1 front panel LASER out, SAT 50-2.400 MHz input frequency range (no PSU included)	SMATV, CATV & SAT DISTRIBUTIONS

OPTIONS

MODEL / CODE	DESCRIPTION	APPLICATION
TRASF-12V-3A	PSU adapter IN 100/230 Vac OUT 12 Vdc 3A, also suitable for up to 4 modular devices in cascade or for redundancy	P.S.U.
RAP-2	19" RACK ASSEMBLY PANEL can carry up 2 modules	19" RACK ASSEMBLY

ROVER OPTICAL PRODUCTS RANGE

TX **RLT-C9**

CWDM HIGH POWER, ULTRA WIDE BAND CATV & SAT 47-2.700 MHZ OPTICAL LASER TRANSMITTER 9 dBm

TX **RLT-D10**

DWDM HIGH POWER, ULTRA WIDE BAND CATV & SAT 47-2.800 MHZ OPTICAL LASER TRANSMITTER 10 dBm

EDFA **REA-20**

EDFA OPTICAL AMPLIFIER 20 dBm, FROM 1 TO 8 OUTPUT

SWITCH **ROS-2**

REDUNDANCY OPTICAL SWITCH

SAT PROC. **RSP-30-4/8**

WIDE BAND SATELLITE TRANSPONDER PROCESSOR FOR NEW EXTENDED BAND LNB WITH 8 INPUT FROM 250 TO 2.350 MHZ

RLT-C7

MODULAR OPTICAL LASER TRANSMITTER 7 dBm

REA-C20

MODULAR EDFA OPTICAL AMPLIFIER 20 dBm

RLT-C7-WB-SAT

OPTICAL TX EXT. L-BAND

MOR-WB-SAT

OPTICAL RX EXT. L-BAND WITH AGC

AOT-STC

APARTMENT OPTICAL RECEIVER/TERMINATION CATV & SAT WITH AGC

RX

COR-STC

CONDOMINIUM OPTICAL FIBER NODE RECEIVER CATV & SAT WITH AGC

RX

RoHS 2002/95/EC

Product made in Italy by Rover Broadcast.com

CERTIFICATES N°
1263 ISO 9001
1264 ISO 14001
1265 BS OHSAS 18001
DIMITTO

Specifications and features are subject to change without notice.

RO.VE.R. Laboratories S.p.A.
Via Parini, 2 - 25019 Sirmione (BS) Italy
info@roverinstruments.com • www.roverbroadcast.com