



EKSELANS BY ITS

OPTICAL TRANSMITTERS AND RECEIVERS



ENTER THE EK WORLD

OPTICAL TRANSMITTERS 1GHz AND 2.2 GHz

TO 3 1310 · TO 3 FI

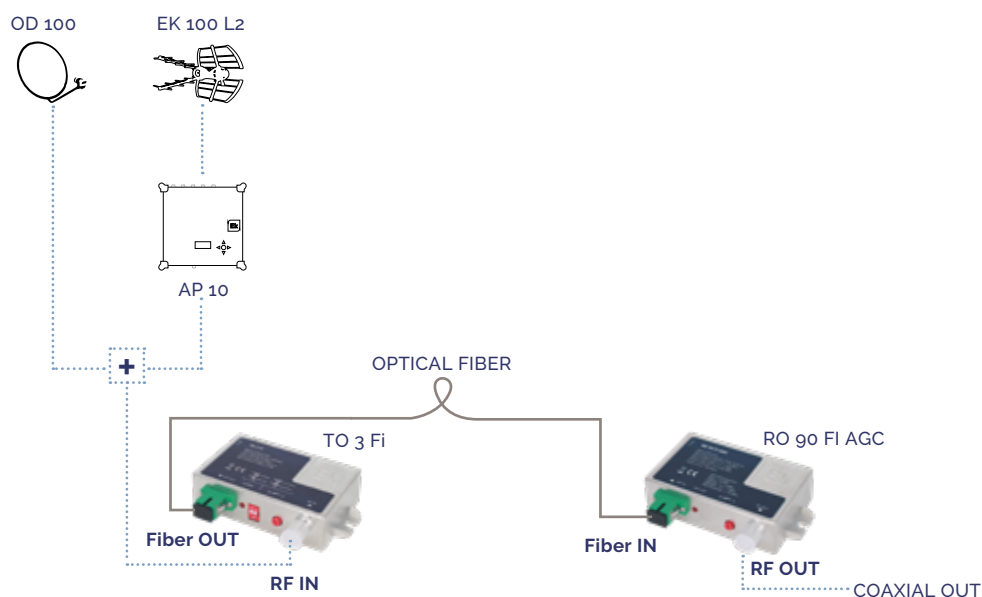
- ✓ They allow the distribution of radiofrequency signal over long distances taking advantage of optical fiber
- ✓ Led indicator of the optical output level
- ✓ Allows selection of satellite band and polarity (TO 3 FI)
- ✓ Input level regulation



TO 3 1310



TO 3 FI





TECHINCAL TABLE

REFERENCE		TO 3 1310	TO 3 FI
Code		271017	271001
RF Input			
Frequency	MHz	47 - 1000	30 - 2150
Flatness	dB	≥1	≥1
TV input level (AGC)	dBμV	75-85	75-85
SAT input level (AGC)	dBμV	-	76-92
Input level TV + SAT (AGC)	dBμV	-	72-84
Input regulation	dBμV	20	20
Return loss	dB	≥16	≥12
Connector		Tipo F	Tipo F
Optical output			
Wavelength	nm	1310	1310
Optical power output	dBm	3	3
Laser type		DFB	DFB
Optical adaptation	dB	>50	>50
Optical connector		SC / APC	SC / APC
Power supply	Vdc	12 (included)	12 (included)
LNB power supply	Vdc KHz	-	13 - 18 0 - 22
Operating temperature	°C	-20...+55	-20...+55

OPTICAL RECEIVERS 1GHz AND 2.6 GHz

RO 88 AGC · RO 90 FI AGC

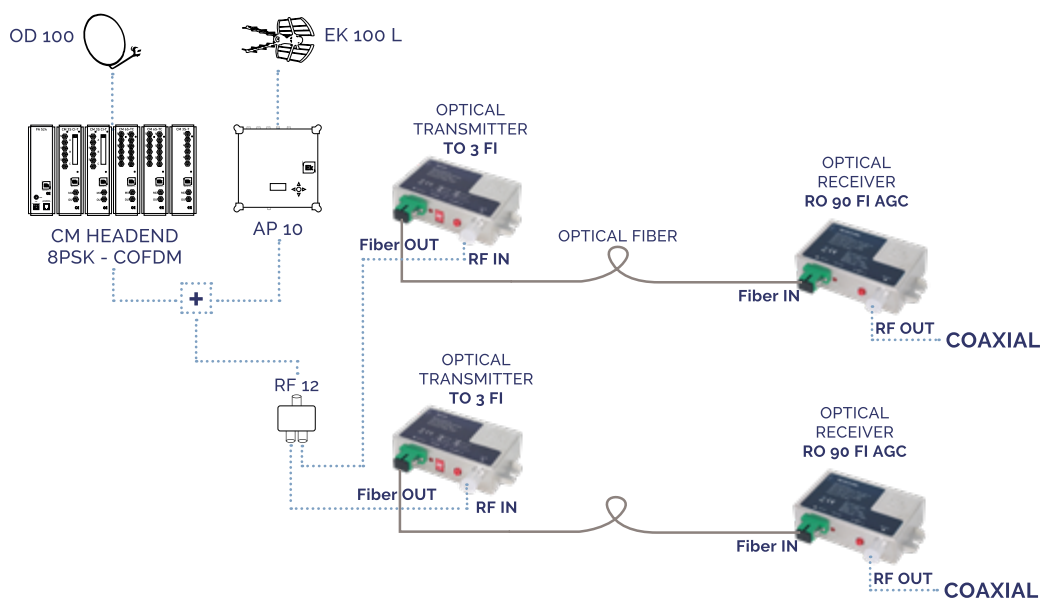
- ✓ It allows the reception of optical signal and its distribution in radiofrequency
- ✓ Automatic gain control



RO 88 AGC



RO 90 FI AGC



TECHINCAL TABLE

REFERENCE		RO 88 AGC	RO 90 FI AGC
Code		270002	270003
Optical input			
Wavelength	nm	1260-1620	1260-1620
Optical power	dBm	+2/-20 digital (≥ 36 dB) +2/-10 g/5000 analogical (CNR >45dB)	+3/-10 digital (≥ 36 dB) +2/-8 g/5000 analogical (CNR >45dB)
AGC range	dBm	0 / -12	2 / -7
Efficiency	A/W	$\geq 0,85/1310$ nm $\geq 0,9/1550$ nm	$\geq 0,9/1310$ nm $\geq 0,95/1550$ nm
Optical return loss	dB	>55	>50
Optical connector		SC / APC	SC / APC
RF Output			
Frequency range	MHz	47 - 862	47 - 2150
Flatness	dB	$\geq 0,75$	$\geq 1,5$
Output level	dB μ V	>80	>80
Regulation	dB	20	20
Return loss	dB	≥ 14	≥ 12
Connector		Tipo F	Tipo F
Voltage feeding	Vdc	12 (included)	12 (included)
Power consumption	W	1,9	2,9
Working temperature	°C	-20...+55	-20...+55

TRANSMITTER AND OPTICAL RECEIVER FOR 4 POLARITIES OF SATELLITE + TERR.

TO 4 ST / RO ST 44

- ✓ It allows the transmission of 4 satellite polarities and DTT through a single fiber
- ✓ Excellent linearity and flatness.
- ✓ Single mode fiber high return loss
- ✓ Ultra Low Noise Technology
- ✓ Red LED for power indication
- ✓ It incorporates CWDM (TO 4 ST / RO ST 44), using high linearity PD (RO ST 44)
- ✓ Incorporates optical AGC (RO ST 44)
- ✓ DFB type laser (TO 4 ST)
- ✓ Compatible with quattro or quad type LNBs (TO 4 ST)
- ✓ Supports up to 16 RO 44 ST



TO 4 ST



RO ST 44



TECHINCAL TABLE

REFERENCE		TO 4ST
Coce		276001
User interface		
RF Connector		F-hembra
Optical connector		SC/APC
Power supply		F-hembra
Optical parameters		
Return loss	dB	≥ 45dB
Output wavelength	nm	1510 VL
		1530 HL
		1550 VH+Terr.
		1570 HH
Responsiveness	A/W	≥ 0.9
Output power per λ	dBm	+3
Fiber optic type		Monomodo
Terr parameters + Sat-IF		
Input impedance	Ω	75
Terr. Frequency range	MHz	47-860
Terr. Curly	dB	± 0.75
Terr. input level	dBμV	65-85
Terr. Return loss	dB	≥ 14
Sat-IF frequency range	MHz	950-2150
Sat-IF return loss	dB	≥ 10dB
Planitud Sat-IF	dB	± 1.5
Sat-IF input level	dBμV	65-85
LNB power	V/KHz	13-18/0-22
Other parameters		
Power supply	Vdc	20 (Incluida)
Power consumption	W	< 10

REFERENCE		RO ST 44
Coce		276003
User interface		
RF Connector		F-hembra
Optical connector		SC/APC
Power supply		F-hembra
Optical parameters		
Pérdidas de retorno	dB	≥ 45dB
Output wavelength	nm	1510 VL
		1530 HL
		1550 VH+Terr.
		1570 HH
Responsiveness	A/W	≥ 0.9
Responsiveness	dBm	-15~3
Input power	dBm	-7~2 AGC
Fiber optic type		Monomodo
Terr parameters + Sat-IF		
Input impedance	Ω	75
Terr. Frequency range	MHz	47-860
Terr. Curly	dB	± 0.75
Terr. input level	dBμV	≥ 80 AGC
Terr. Return loss	dB	≥ 14
CNR	dB	≥ 50
CSO	dB	≥ 62 (*)
CTB	dB	≥ 65 (*)
Sat-IF frequency range	MHz	950-2150
Sat-IF return loss	dB	≥ 10dB
Planitud Sat-IF	dB	± 1.5
Sat-IF input level	dBμV	75 ± 5 AGC
AGC stability	dB	± 1
Other parameters		
Power supply	Vdc	20 (Incluida)
Power consumption	W	< 10

(*) Test conditions: -1dBm of input power, 1550nm 3.8% IMO at 59Ch Pal-D

OPTICAL RECEIVERS FOR GPON NETWORKS

RO 68 CWD · RO 88 CWD

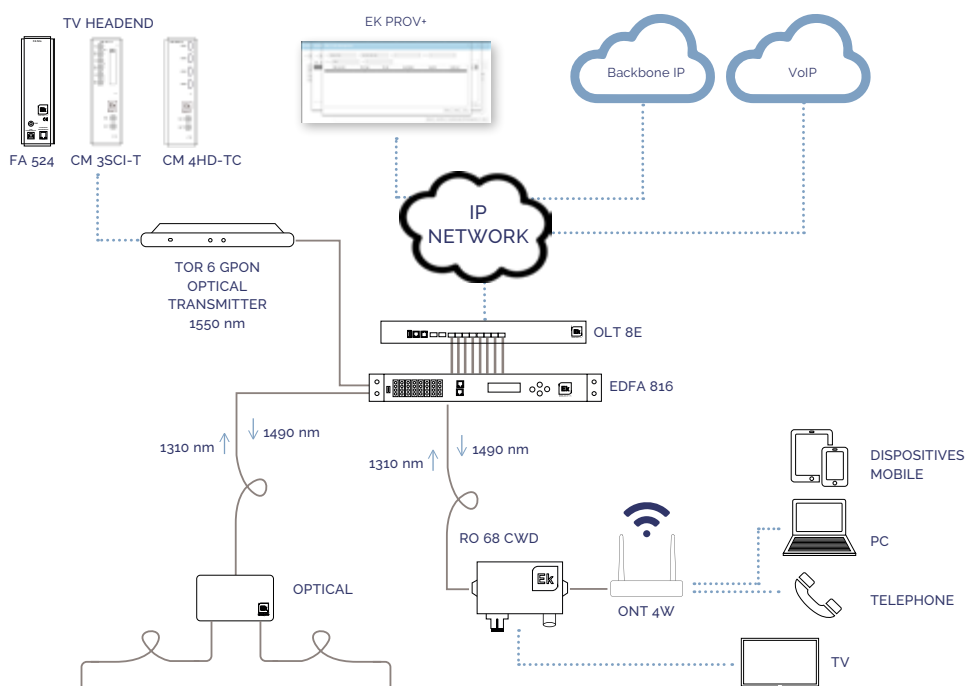
- ✓ It allows the reception of optical signal and can continue distributing it in radiofrequency
- ✓ Compatible with GPON networks. Wavelength pitch 1310/1490 nm
- ✓ RO 68 CWD: passive behavior. No need power



RO 68 CWD



RO 88 CWD



TECHINCAL TABLE

REFERENCE		RO 68 CWD	RO 88 CWD
Code		270005	270004
Optical input			
Wavelength	nm	1540 - 1563	1540 - 1563
Pass wavelength	nm	1310 / 1490	1310 / 1490
Optical input level	dBm	+2/-12 digital (≥ 36 dB) +2/-6 analogical (CNR >45dB)	+2/-20 digital (≥ 36 dB) +2/-10 analogical (CNR >45dB)
AGC range	dBm	-	0 / -12
Efficiency	A/W	$\geq 0,80/1310$ nm $\geq 0,85/1550$ nm	$\geq 0,85/1310$ nm $\geq 0,9/1550$ nm
Optical return loss	dB	>50	>55
Optical connector	-	SC/APC (IN/OUT)	SC/APC (IN/OUT)
RF Output			
Frequency range	MHz	47 - 862	47 - 862
Flatness	dB	$\geq 1,5$	$\geq 0,75$
Output level	dB μ V	68 @ -1dBm	>80
Return loss	dB	≥ 14	≥ 14
Output connector	-	F	F
General			
Voltage feeding	Vdc	Not required	12 (PSU included)
Power consumption	W	-	≤ 3
Working temperature	$^{\circ}$ C	-20 - +55	-20 - +55



EKSELANS BY ITS

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