SOFTEL

FTTH CATV Optical Receiver With AGC And WDM

SR2020AW

Hangzhou Softel Optic Co., Ltd

User Manual

Ver. 2.0

1.0 PRODUCT DESCRIPTION

SR2020AW, the operating bandwidth of 47~1000MHz, is a low power, high performance, cost-effective triple play, FTTH CATV optical receiver, Whether used in analog television or digital television. Products with high sensitivity optical receiver tube and special low noise matching circuit. Receiving at high optical power can be adjusted by PAD level, played limiting output, so SR2020AW within a large dynamic range of the received optical power of +2 dBm ~-21dBm, have excellent characteristics.

Triple play, fiber to the home, using the SR2020AW can save a lot of optical fiber amplifier power resources. For operators, can greatly reduce the cost of building the network.

2.0 PRODUCT FEATURE

1. Extra-low noise(3.8% modulate, -10dBm receive, CNR ≥ 45.3dB)
2. Wide dynamic receiving optical power range: within Pin=-16, MER≥36.1dB
3. Applicable GPON, EPON, compatible with any FTTx PON technology
4. Can save a large number of optical power resource, greatly reduce the network configuration cost
5. Within 47~1000MHz bandwidth, all with excellent flatness feature (FL≤±0.75dB)
6. Metal case, offer safeguard for optoelectronic sensitive devices
7. High output level, can be used by many users
8. Low power consume, high performance, high cost performance

3.0 MAIN APPLICATION

1. CATV FTTH
2. Integration of three network
3. FTTH PON

4.0 STATUS INDICATION

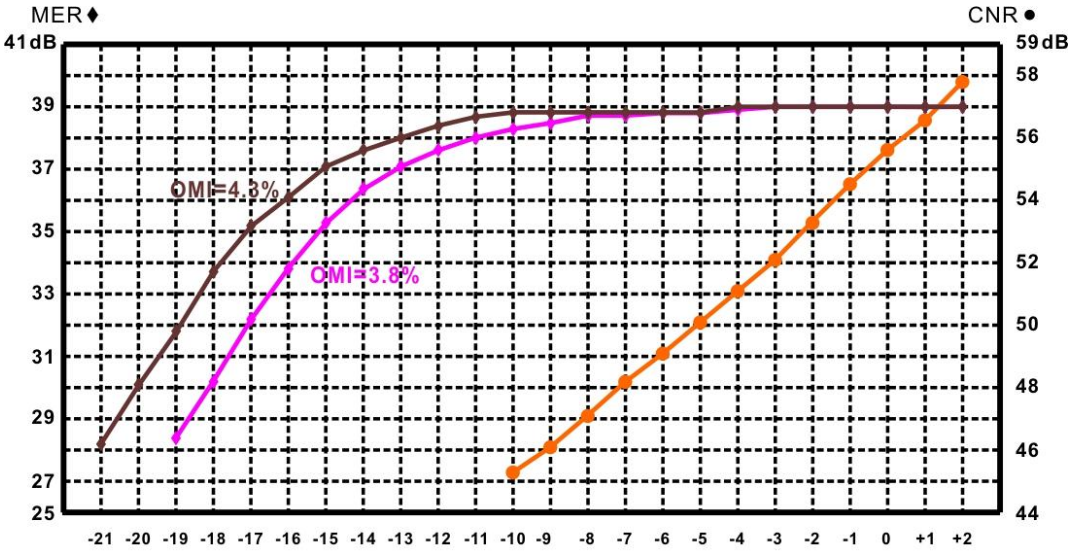
1. Red: No optical input or optical power < -16dBm
2. Green: Optical power range ＞-16dBm

5.0 TECHNICAL INDEX

Performance		Index		Supplement
Optic Feature	CATV Work wavelength	(nm)	1540~1563	
	Pass wavelength	(nm)	1310, 1490	
	Channel Isolation	(dB)	≥40	1550nm &1490nm
	Responsibility	(A/W)	≥0.85	1310nm
			≥0.9	1550nm
	Receiving power	(dBm)	+2~-18	Analog TV (CNR>45dB)
			+2~-20	Digital TV (MER>30dB)
	Optical return loss	(dB)	≥55	
	Optical fiber connector		SC/APC	
RF Feature	Work bandwidth	(MHz)	47~1000	
	Flatness	(dB)	≤±0.75	47~1000MHz
	Output level	(dBμV)	>78	Pin=-1~-14dBm AGC
	Return loss	(dB)	≥14	47 ~ 862MHz
	Output impedance	(Ω)	75	
	Output port Number		1	
	RF tie-in		F-Female	
Analog TV Link Feature	Test channel	(CH)	59CH(PAL-D)	
	OMI	(%)	3.8	
	CNR1	(dB)	53.3	Pin=-2dBm
	CNR2	(dB)	45.3	Pin=-10dBm
	CTB	(dB)	≤-61	
	CSO	(dB)	≤-61	

Digital TV Link Feature	OMI	(%)	4.3	
	MER	(dB)	≥36	Pin=-16dBm
			≥30	Pin=-20dBm
	BER	(dB)	<1.0E-9	Pin:+2~-21dBm
General Feature	Power supply	(V)	DC+12V	±1.0V
	Power Consume	(W)	≤3	+12VDC, 210mA
	Work Temp	(℃)	-20 ~ +55	
	Storage Temp	(℃)	-40 ~ 85	
	Work relative temp	(%)	5 ~ 95	
	Size	(mm)	50×88×22	

6.0 CNR, MER DEGRADATION TABLE



Note:1.CNR Test conditions: 59CH PAL-D, OMI = 3.8%

2. MER test conditions: The Original Signal : MER = 39.0dB, BER <1.0E-9,
Test Frequency : 47 ~ 862MHz Full Channel, (The Curve is：858. 00MHz) .
Red curve: OMI=3.8%
Brown curve:OMI=4.3%

3. Digital television Receiving Low Light, appropriate to increase the system modulation (OMI), can greatly improve the MER degradation.

7.0 NOTE

1. The power adapter for this equipment: Input 110220V, output DC 12V(0.6A).
2. Keep the optical connector clean, the bad link will cause too low RF output level.
3. Should not adjust by themselves, to avoid the device damage.