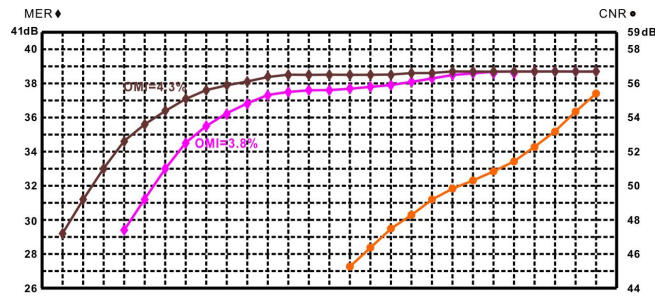


7.0 PRODUCT SERIES

Model	Input wavelength	CATV Operating wavelength	Data pass wavelength	Fiber connector
H9122TG	1310 or 1550nm	1260~1620nm	-	SC/APC
H9122TG/WD	1310, 1490/1550nm	1540~1563nm	1310/1490nm	LC/APC
H9122TG/WF	1310, 1490/1550nm	1540~1563nm	-	SC/APC

8.0 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

9.0 MODEL EXPLANATION

H 9 1 22 TG / □ □ - □ □

FTTx Receiver	Work bandwidth	Number of RF output	Output level (Pin=-18dBm)	TG	CWDM	Optical connector
H FTTH	9 47~1050MHz	1 1 ports	22 22dBmV(82dBμV)	Top AGC	NC Without	LA LP/APC
P FTTP					WD Build-in CWDM	LP LC/UPC
B FTTB					WF Build-in Filter	SA SC/APC
					SP	SC/UPC

10.0.NOTE

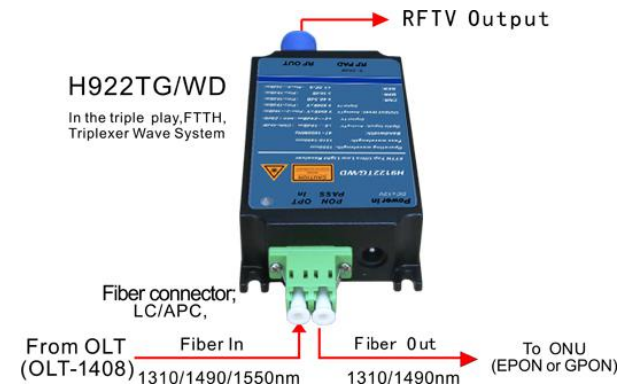
- The power adapter for this equipment: Input 220V, output DC 12V(0.6A)
- Keep the optical connector clean, the bad link will cause too low RF output level
- The built-in RF adjustable attenuator(PAD) of equipment can debug suitable level for system users .User Should not adjust by themselves, to avoid the device damage.

H9122TG、H9122TG/WD、H9122TG/WF

FTTH CATV Optical Receiver

(Pin=-19dBm、Vo≥83dBμV、MER≥36dB)

47~1050MHz



H9122TG-B

User Manual

Ver. 2.3. en

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1.0 PRODUCT DESCRIPTION

H9122TG, bandwidth of 47~1050MHz, is a type suitable for digital TV optical fiber to the home (FTTH) Top Ultra Low Light CATV receiver application, Whether used in analog television or digital television, have high reception sensitivity and excellent intermodulation distortion index. Because of the built-in AGC light, in the low optical power receiving, play a limiting output, so H9122TG in high dynamic +2dBm~-24dBm receiving light power range, have excellent characteristics.

H9122TG for Analog TV, in Pin =-10dBm when, Vo ≥ 85.7dB μ V, CNR ≥ 46.3dB.

H9122TG for Digital TV, in Pin =-19dBm when, Vo ≥ 83.2dB μ V, MER ≥ 36.5dB.

H9122TG for Digital TV, in Pin =-24dBm when, Vo ≥ 72.2dB μ V, MER ≥ 29.9dB.

Digital TV FTTH applications, the H9122TG can save a lot of optical fiber amplifier power resources. For operators, can greatly reduce the cost of building the network. Suitable for rural power digital TV, FTTH, triple play of wide application.H9122TG optical port mode with following three types optional:

H9122TG : operating wavelength 1260~1620nm.

H9122TG/WD: Built-in CWDM, suitable for single-fiber triple wavelength system,CATV orating wavelength 1550nm, passwavelength 1310/1490nm, can conveniently Connectthe ONU of EPON, GPON.

H1022TG/WF: built-in 1310/1490nm filter,suitable for single-fiber triple wavelength System, CATV Operating wavelength 1550nm.

2.0 PRODUCT FEATURE

- Extra-low noise(3.8% modulate, -10dBm receive, CNR ≥ 46.3dB)
- AGC excellent characteristics: -1dBm ~ -17dBm
- Wide dynamic receiving optical power range: within Pin=-19, MER≥36.5B
- Applicable GPON, EPON, compatible with any FTTx PON technology
- Can save a large number of optical power resource, greatly reduce the network configuration cost
- Within 47~1050MHz bandwidth, all with excellent flatness feature (FL±0.75dB)
- Metal case, offer safeguard for optoelectronic sensitive devices
- High output level, can be used by many users
- Low power consume, high performance, high cost performance

5.0 TEST DATA(Pin=+2.0dBm~-24dBm)

Pin (dBm)	Vo (dBμV)	PAD (dB)	MER	BER		Pin (dBm)	Vo (dBμV)	PAD (dB)	MER	BER	
				POST	PER					POST	PER
+2	96.7	0	38.1	<1.0E-9	<1.0E-9	-12.0	90.9	0	38.3	<1.0E-9	<1.0E-9
+1	94.8	0	38.3	<1.0E-9	<1.0E-9	-13.0	91.2	0	38.2	<1.0E-9	<1.0E-9
0.0	92.7	0	38.6	<1.0E-9	<1.0E-9	-14.0	90.4	0	38.3	<1.0E-9	<1.0E-9
-1.0	90.1	0	38.6	<1.0E-9	<1.0E-9	-15.0	89.0	0	38.1	<1.0E-9	<1.0E-9
-2.0	88.3	0	38.6	<1.0E-9	<1.0E-9	-16.0	88.2	0	37.9	<1.0E-9	<1.0E-9
-3.0	86.8	0	38.3	<1.0E-9	<1.0E-9	-17.0	87.2	0	37.4	<1.0E-9	<1.0E-9
-4.0	84.8	0	38.3	<1.0E-9	<1.0E-9	-18.0	85.0	0	37.1	<1.0E-9	<1.0E-9
-5.0	85.6	0	38.5	<1.0E-9	<1.0E-9	-19.0	83.2	0	36.5	<1.0E-9	<1.0E-9
-6.0	86.1	0	38.2	<1.0E-9	<1.0E-9	-20.0	80.6	0	35.7	<1.0E-9	<1.0E-9
-7.0	86.9	0	38.5	<1.0E-9	<1.0E-9	-21.0	78.5	0	34.6	<1.0E-9	1.0E-9
-8.0	88.0	0	38.3	<1.0E-9	<1.0E-9	-22.0	76.7	0	33.1	<1.0E-9	1.0E-9
-9.0	89.0	0	38.3	<1.0E-9	<1.0E-9	-23.0	74.6	0	31.7	<1.0E-9	2.7E-4
-10.0	89.4	0	38.3	<1.0E-9	<1.0E-9	-24.0	72.2	0	29.9	<1.0E-9	5.0E-4
-11.0	90.1	0	38.3	<1.0E-9	<1.0E-9						

Remak : 1. The Original Signal : MER = 38.8dB, BER <1.0E-9
2. Test Frequency : The Curve is: 858.00MHz, OMI = 4.3%

6.0 TECHNICAL INDEX

Performance		Index	Supplement
Optic feature	CATV Work wavelength	(nm)	1260~1620 H9122TG
			1540~1563 H9122TG/WF,H9122TG/WD
	Pass wavelength	(nm)	1310, 1490 H9122TG/WD
	Channel Isolation	(dB)	≥40 1550nm & 1490nm
	Responsivity	(A/W)	≥0.85 1310nm
			≥0.9 1550nm
	Receiving power	(dBm)	+2~-10 Analog TV(CNR>45dB)
+2~-24 Digital TV(MER>29dB)			
Optical return loss	(dB)	≥55	
Optical fiber connector		SC/APC H9122TG, H9122TG./WF	
		LC/APC H9122TG/WD	
RF Feature	Work bandwidth	(MHz)	47 ~ 1050
	Flatness	(dB)	≤±0.75 47~1050MHz
	Output level	(dBμ V)	>85 Analog TV (Pin = +2~-10dBm)
			>82 Digital TV (Pin = -19dBm)
	Output level adjust	(dB)	0~18 MGC
	ALC(AGC) character (Δ Vo)	(dB)	≤±1.0 Pin=-1~-17dBm
	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)	51.8 Pin=-2dBm
	CNR2	(dB)	48.0 Pin=-10dBm
	CTB	(dB)	≤-65 Pin: 0~-10dBm
CSO	(dB)	≤-60 Pin: 0~-10dBm	
DigitalTV Link Feature	OMI	(%)	4.3
	MER	(dB)	≥36 Pin=-19dBm
			≥30 Pin=-24dBm
BER	(dB)	<1.0E-9 Pin:+2~-24dBm	
General feature	Power supply	(V)	DC+12V ±1.0V
	Power Consume	(W)	≤3 +12VDC,210mA
	Work temp	(°C)	-20 ~ +50
	Storage temp	(°C)	-40 ~ 85
	Work relative temp	(%)	5 ~ 95
	Size	(mm)	50×88×22