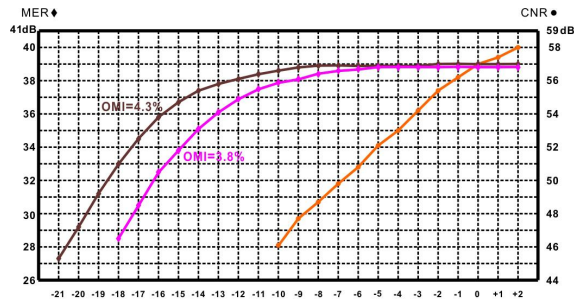


7.0 PRODUCT SERIES

Model	Input wavelength	CATV Operating wavelength	Data pass wavelength	Fiber connector	From
H9122LG	1310 or 1550nm	1260~1620nm	-	SC/APC	A-Type
H9122LG/WF	1310, 1490/1550nm	1540~1563nm	-	SC/APC	
H9122LG/WD	1310, 1490/1550nm	1540~1563nm	1310/1490nm	LC/APC	B-Type

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 LG / □ □ - □ - □ □

FTTx receiver	Work bandwidth	RF output ports	Output level(Pin=-15dBm)	LG	CWDM	Exterior	Optical Connector							
H	FTTH	9	47~862MHz	1	1port	22	22dBmV(82dBμV)	Ultra-low Optical receiver AGC	NC	Without	A	38×80×20 mm	LA	LC/APC
P	FTTB								WD	Built-in WDM	B	50×88×22 mm	SA	SC/APC
B	FTTB								WF	Built-in Filter	C	59.5×98×24 mm	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.

**H9122LG、H9122LG/WD、
H9122LG/WF**
**FTTH Digital TV Ultra-low Optical
AGC Optical Receiver**
(Pin=-15dBm、Vo≥82dBμV、MER≥36dB)
47~862MHz



H9122LG-A

User Manual

Ver. 2.6. en

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1.0 PRODUCT DESCRIPTION

H9122LG, the operating bandwidth of 47 ~862MHz, is a low power, high performance, cost-effective triple play, FTTH CATV optical receiver. Products with high sensitivity optical receiver tube and special low noise matching circuit.

H9122LG for Analog TV, in Pin =-10dBm when, Vo ≥ 69dBμV, CNR ≥ 43dB.

H9122LG for Digital TV, in Pin =-15dBm when, Vo ≥ 62.7dBμV, MER ≥ 36.8dB.

H9122LG for Digital TV, in Pin =-20dBm when, Vo ≥ 54.1dBμV, MER ≥ 29.4dB.

Triple play, fiber to the home, using the H9122LG can save a lot of optical fiber amplifier power resources. For operators, can greatly reduce the cost of building the network.

H9122LG optical port mode of the following three selection:

H9122LG :operating wavelength 1260~1620nm. A - Type

H9122LG/WD: Built-in CWDM, suitable for single-fiber triple wavelength system, CATV operating Wavelength 1550nm, passwavelength 1310/1490nm, can conveniently connect the ONU of EPON, GPON. B - Type

H9122LG/WF: built-in 1310/1490nm filter,suitable for single-fiber triple wavelength system,CATV operating wavelength 1550nm.

A - Type

2.0 PRODUCT FEATURE

1. Extra-low noise(3.8% modulate, -10dBm receive, CNR ≥ 43dB)
2. Wide dynamic receiving optical power range: within Pin=-15, MER≥36.8dB
3. Can save a large number of optical power resource, greatly reduce the network configuration cost
4. In the range of 47~862MHz, all have good flatness (Fl±0.75dB)
5. Metal shell, supply safeguards to opto-electrical sensing device
6. High output level can supply for many users
7. Low power consumption, high cost performance

3.0 MAIN APPLICATION

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

4.0 STATUS INDICATION

1. RED: >+2dBm
2. GREEN: +2~-16dBm
3. ORANGE: -16~-20dBm
4. RED: <-20dBm

5.0 TEST DATA(Pin=+2.0dBm~-20dBm)

Pin (dBm)	Vo (dBμV)	MER	BER		Pin (dBm)	Vo (dBμV)	MER	BER	
			POST	PER				POST	PER
+2.0	98.4	39.0	<1.0E-9	<1.0E-9	-10.0	93.3	38.6	<1.0E-9	<1.0E-9
+1.0	99.0	39.0	<1.0E-9	<1.0E-9	-11.0	91.2	38.4	<1.0E-9	<1.0E-9
+0.0	100.3	39.0	<1.0E-9	<1.0E-9	-12.0	89.4	38.1	<1.0E-9	<1.0E-9
-1.0	101.2	39.0	<1.0E-9	<1.0E-9	-13.0	87.9	37.8	<1.0E-9	<1.0E-9
-2.0	101.0	39.0	<1.0E-9	<1.0E-9	-14.0	85.5	37.4	<1.0E-9	<1.0E-9
-3.0	100.9	38.9	<1.0E-9	<1.0E-9	-15.0	83.4	36.7	<1.0E-9	<1.0E-9
-4.0	101.3	38.9	<1.0E-9	<1.0E-9	-16.0	81.4	35.8	<1.0E-9	<1.0E-9
-5.0	100.7	38.9	<1.0E-9	<1.0E-9	-17.0	79.3	34.5	<1.0E-9	<1.0E-9
-6.0	100.9	38.9	<1.0E-9	<1.0E-9	-18.0	77.7	33.0	<1.0E-9	<1.0E-9
-7.0	99.6	38.9	<1.0E-9	<1.0E-9	-19.0	75.4	31.2	<1.0E-9	<1.0E-9
-8.0	97.7	38.9	<1.0E-9	<1.0E-9	-20.0	73.2	29.2	<1.0E-9	<1.0E-9
-9.0	95.2	38.8	<1.0E-9	<1.0E-9					

Remak : 1. The Original Signal : MER = 39.0dB, 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 H9122LG (A-type)
			1540~1563 H9122LG/WF,H9122LG/WD (A & B -Type)
	Pass wavelength	(nm)	1310, 1490 H9122LG/WD (B & C-Type)
	Channel Isolation	(dB)	≥40 1550nm & 1490nm
	Responsivity	(A/W)	≥0.85 1310nm
			≥0.9 1550nm
	Receiving power	(dBm)	+2~-10 Analog TV(CNR>43dB)
			+2~-20 Digital TV(MER>29dB)
Optical return loss	(dB)	≥55	
Optical fiber connector		SC/APC H9122LG, H9122LG/WF	
		LC/APC H9122LG/WD	
RF Feature	Work bandwidth	(MHz)	47 ~862
	Flatness	(dB)	±0.75 47~862MHz
	Output level	(dBμV)	>88 AnalogTV (Pin=+2~-8dBm)
			>82 Digital TV (Pin=-15dBm)
	ALC(AGC) character (ΔVo)	(dB)	≤±1.0 Pin=+2.0~-8.0dBm
	Output level adjust	(dB)	0~18 MGC
	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)	54.6 Pin=-2dBm
	CNR2	(dB)	45.1 Pin=-10dBm
	CTB	(dB)	≤-65 Pin: 0~-10dBm
DigitalTV Link Feature	CSO	(dB)	≤-65 Pin: 0~-10dBm
	OMI	(%)	4.3
	MER	(dB)	≥36 Pin=-15dBm
			≥29 Pin=-20dBm
BER	(dB)	<1.0E-9 Pin:+2~-20dBm	
General feature	Power supply	(V)	DC+12V ±1.0V
	Power Consume	(W)	≤5.5 +12VDC,210mA
	Work temp	(°C)	-20 ~ +50
	Storage temp	(°C)	-40 ~ 85
	Work relative temp	(%)	5 ~ 95
	Size	(mm)	38×80×20 A-Type
50×88×22 B-Type			