

LH series 1Channel CATV Receiver

LH series FTTH AGC CATV optical receiver, with bandwidth of 47~862MHz up to 1200MHz, AGC function, output RF level of $V_o=82.0\text{dB}\mu\text{V}$ up to $88\text{dB}\mu\text{V}$, applies to FTTH fiber to internet, is a low power consumption, high performance, high cost performance ONU optical receiver unit for RFTV broadcast network.

Featuring high sensitivity optic receiving tube and specialized low noise match circuit, 3.8% modulate, full channel transmit, -8dBm optical power receiving, and the CNR can reach high index 46dB still. Comes with optical AGC, realizing high performance automatic level control (ALC).



FEATURES

- Extra low noise (3.8% modulate, -8dBm receiving, $\text{CNR}\geq 45\text{dB}$)
- Receiving optical power within $+2\text{dBm}\sim -10\text{dBm}$, with excellent linearity
- except for LH1CR4182: $+3\text{dBm}\sim -7\text{dBm}$
- High performance ALC ($\Delta V_o\leq 1.0\text{dB}$, $\text{Pin}=\pm 2\sim -7\text{dBm}$) except for L1CR4182: ($\Delta V_o\leq 0.5\text{dB}$, $\text{Pin}=\pm 3\sim -7\text{dBm}$)
- LH1CR48xx: 47 ~ 862MHz bandwidth
- LH1CR41xx: 47~1200MHz bandwidth; all with excellent flatness feature ($\text{FL}\leq \pm 1.0\text{dB}$)
- Metal case, offer safeguard for optoelectronic sensitive device.

SPECIFICATIONS

Optic Features			Remark
CATV wavelength	1260~1620	nm	no filter
	1540~1560		-F & -C Options
Input wavelength	1310, 1490/1550	nm	
Pass wavelength	1310, 1490	nm	
Channel isolation	>40	dB	1550 & 1490nm
Responsivity	>0.85	A/W	1310nm
	>0.9		1550nm
Receiving power	$+2\sim -10$	dBm	Analog TV
	$+2\sim -16$		Digital TV
Optical return loss	>55	dB	
Optical fiber connector	LC/APC		no option & -F option
	SC/APC		C option
RF Specifications			
Bandwidth	45~862	MHz	
Flatness	$<\pm 1$	dB	
Output Level	82.0 ± 1.0	$\text{dB}\mu\text{V}$	$\text{Pin}:-7.0\sim +2.0\text{dBm}$ - LH1CR4882
	83.5 ± 0.5		$\text{Pin}:-7.0\sim +3.0\text{dBm}$ (PAD=1dB) LH1CR4182
	87.5		$\text{Pin}:-7.0\sim +2.0\text{dBm}$ LH1CR4888
	88.0		$\text{Pin}:-2.0\text{dBm}$ (PAD=4dB) LH1CR4188
ALC(AGC) character (V_o)	$<\pm 1.0$	dB	$\text{Pin}:-7.0\sim +2.0\text{dBm}$ LH1CR4882 & LH1CR4888
	$<\pm 0.5$		$\text{Pin}:-7.0\sim +3.0\text{dBm}$ LH1CR4182
Output level adjustment	0~18	MGC	

<i>Return loss @ 47-862MHz</i>	>16	dB	LH1CR4882 & LH1CR4888
<i>Return loss @ 47-1200MHz</i>	>14	dB	LH1CR1882 & LH1CR4188
<i>Output impedance</i>	75	Ω	
<i>Outport Port No.</i>	1		
<i>RF tie-in</i>	F - Female		
<i>Analog TV specifications</i>			
<i>Test channel</i>	59Ch (PAL-D)	Ch	NTSC/80Ch
<i>OMI</i>	3.8	%	
<i>CNR1</i>	53.5	dB	Pin= -2dBm
<i>CNR2</i>	47.5	dB	Pin= -7dBm
<i>CTB</i>	<-63	dB	Pin= 0~-10dBm
<i>CSO</i>	<-67	dB	Pin= 0~-10dBm
<i>HUM</i>	<-60	dB	
<i>Digital TV specifications</i>			
<i>Test channel</i>	<10	Ch	Analog
	Digital QAM		470-862 MHz
<i>MER (LH1CR4882)</i>	38	dB	Pin= -7.0~+2.0dBm
	35		Pin: -15.0dBm
<i>MER (LH1CR4182)</i>	39	dB	Pin= -7.0~+2.0dBm
	32		Pin: -14.0dBm
<i>MER (LH1CR4888)</i>	38	dB	Pin= -7.0~+2.0dBm
	35		Pin: -15.0dBm
<i>MER (LH1CR4188)</i>	39	dB	Pin= -7.0~+2.0dBm
	33		Pin: -13.0dBm
<i>BER</i>	<1.0E-9	dB	LH1CR4882 (Pin:-20.0~+2.0dBm)
			LH1CR4182 (Pin:-17.0~+1.0dBm)
			LH1CR4888 (Pin:-20.0~+2.0dBm)
			LH1CR4188 (Pin:-20.0~+2.0dBm)
<i>General Specifications</i>			
<i>Power Supply</i>	DC +12V	+/- 1.0V	LH1CR4882 & LH1CR4888
<i>Power Consumption</i>	<2	W	LH1CR4182 & LH1CR4188
	<3		
<i>Working temperature</i>	-20 ~ +50	$^{\circ}\text{C}$	
<i>Storage temperature</i>	-40 ~ +85	$^{\circ}\text{C}$	
<i>Relative humidity</i>	5~59	%	
<i>Dimension</i>	59x98x23	mm	

ORDERING INFORMATION

PN	RF Power (dBuV)	RF bandwidth (MHz)	SNMP Network Management
LH1CR4882-cdd	82	47~862	
LH1CR4182-cdd	82	88~1200	
LH1CR4888-cdd	88	47~862	
LH1CR4188-cdd	88	88~1200	
c	C	1310/1490 & 1550nm CWDM filter	
	F	1550nm filter	
dd	SA	SC/APC	
	LA	LC/APC	
e	R		
	N		
X	M		with SNMP Network Management
	N		without SNMP Network Management