Lightem LCT5EMx 1550nm CATV / ITU-TG.692 Tunable External Modulation Optical Transmitter

LCT5EM all C band tunable CATV external modulation optical transmitter, is an industry-leading and pioneer product. With choices of tunable wavelength 1548~1563nm & ITU-TG.692, it provides the flexibility in various application. User can configure, switch and route etc wavelength management function quickly, accurately. High wavelength accuracy, high wavelength stability, fast tuning rate, perfectly fit in the applicaotin of the NGB (Next Generation Broadcasting) DWDM system. It's high wavelength flexibility and replaceability will become the development direction of next generation broadcast television network (NGB) external modulation optical transmitter.

FEATURES

- High performance: Externally modulated technology, no laser chirp, low dispersion distortion, high extinction ratio, with excellent characteristic within 47~862MHz.
- Narrow bandwidth (0.65MHz), lower noise, DFB continuous wave laser, is propitious to reduce the influence of the dispersion.
- ITU standard wavelength, ±200GHz (±1.6nm) adjustable.
- Operating bandwidth is up to 47~1000MHz.
- CNR ≥ 53dB and excellent CTB, CSO index.
- SBS: 13dBm
- AGC/MGC mode is optional at spot. OMI can be optimized at spot.
- Low noise, narrow linewidth (Typ.=0.3MHz)
- SNMP Network management.
- Excellent cost performance.

MAIN APPLICATION

- Used in main links and distribution network links in large and middle CATV station head-end.
- Analog digital hybrid transmission >200Km (with dispersion compensation).
- Pure digital transmission (without dispersion compensation) >400Km, (with dispersion compensation) >700Km.
- LCT5EMU ITU wavelength adjustable, applicable to the value-added service of DWDM fiber optic CATV system
- and CFG dispersion compensation system.
- Suitable in branch FTTH that has Point to Point>65Km, CSO ≤ -65dB.
- Feature high qualified and reliable value-added service such as RFTV, IPTV and VOD for the secondary users.

APPLICATION CASES

- 255Km PAL-D/56CH & 20CH Digital QAM Hybrid Transmission
- 587Km pure digital TV 1550nm overlength optical trunk application Cases
- FTTH application diagram

CATV RF SYSTEM

SPECIFICATIONS

Optic Features	Min	Typ	Max	Supplement
Operating wavelength		1548~1563 nm		LCT5EMC
		ITU-TG.692 nm		LCT5EMU
Wavelength tuning Range		±1.6 (±200GHz) nm		LCT5EMU
Wavelength tuning Mode		±0.05nm stepping		LCT5EMU
Wavelength stability		-1~0 (Pm/°C)		Tc=20~70°C
Linewidth		0.65 MHz		FWHM(Δλ) (-3dB fullwidth)
Side mode supression	45 dB			SMSR
Equivalent noise intensity			-160 dB/Hz	RIN (20~1000MHz)
Number of Output port		2		
Output power of each port		13 dBm		2x5
		12		2x7
		11		2x9
		10		2x10
		8.5		2x11
		7.0		2x12
		4.5		2x13
Return loss	50 dB			
Optical connector	SC/APC			Optional LC/APC, FC/APC
Work bandwidth	47 MHz		862 MHz	Optional 47~ 1000MHz
RF Features				
Input level	18dBmV		28 dBmV	AGC
Flatness	-0.75 dB		+0.75 dB	47~ 862MHz
	-1.5 dB		+1.5 dB	862~1000MHz (Optional)
Return loss	16 dB			
Input impedance		75 Ω		
RF connector		F - Female		
Link Features				
SBS restrain	13 dB		18 dB	Adjustable
Transmit channel	PAL-D/60CH		PAL-D/99CH	back to back
CNR1	≥53.0 dB		≥51.5 dB	65km optical fiber, 0dBm receive
CNR2	≥51.5 dB		≥49.5 dB	
CTB	≤-65 dB		≤-65 dB	
CSO	≤-65 dB		≤-65 dB	
General Features				
SNMP network management interface		RJ45		
Communication interface		RS232		
Power supply	90 VAC		265 VAC	50 / 60Hz
Power Consumption	-72 VDC	-48 VDC	-36 VDC	
			50	
Operating temp.	-5		65 °C	
Storage temp.	-40		85 °C	
Operating relative humidity	5		95%	
Size (W)x(D)x(H)		483x386x44 mm		S Type
		483x455x44 mm		L Type

ORDERING INFORMATION

P/N				
LCT5EMx aa-bbb-cc-dd-y	x – Operating wavelength/ aa- Output power/ bbb- Bandwidth/ cc- connector type			
x :C – CATV	aa: 05- 4.5dBm	bbb 086- 47-862Mhz	cc: FA- FC/APC	dd: 22- 220V AC
1548-1563nm	07- 7dBm	100- 47-1000Mhz	SA- SC/APC	11- 110V AC
	09- 8.5dBm		LA- LC/APC	48- -48V DC
U – ITU-TG.692	10- 10dBm			42- -48V DC & 220V AC
(200GHz)	11- 11dBm			
	12- 12dBm			
	13- 13dBm			
Y:	M- with SNMP Network Management			
	N- without SNMP Network Management			