

# SL-ChromaFlex

## SL-CIR ChromaFlex Chromadigm Integrated RFoG Transmitter



SL-CF-CIR  
(front view)

The SL-Chromadigm integrated transmitter (CIR) is a transmitter for RFoG and other applications where only a single wavelength is required. It incorporates the advanced features available in Sealight's revolutionary full band multi-wavelength transmitter (CHS series) such as clipping mitigation and chirp cancellation for superior performance

The CIR is a 1.218 GHz single ITU wavelength transmitter capable of high SBS suppression. An integrated EDFA provides the option of two, four or eight outputs at +18 or 20 dBm each. Each output can be configured to include 1610nm reflect ports for the upstream RFoG return and express ports for all PON wavelengths to eliminate external space requirements and multiple optical connections, increasing network reliability.



SL-CIR Integrated RFoG Transmitter

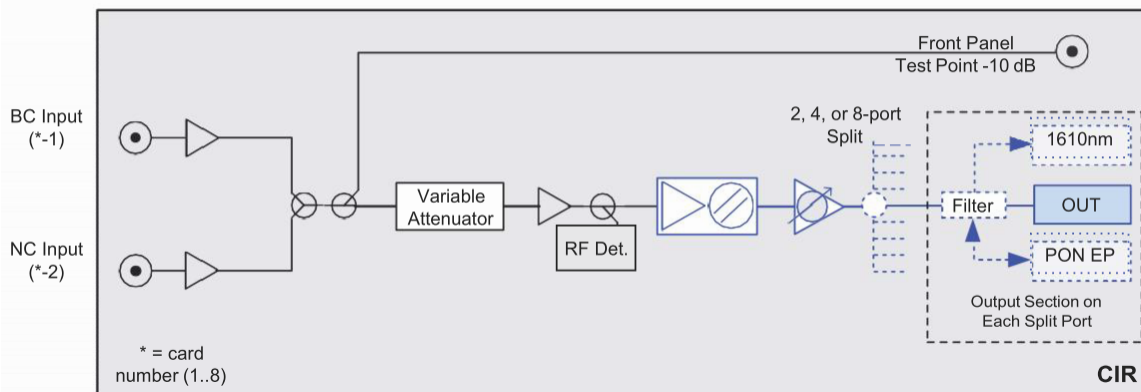
### Applications

- RFoG/FTTx
- RF video overlay for PON

### Features

- Transmitter with integrated EDFA with up to eight 20 dBm outputs is ideal for centralized RFoG deployments
- Integrated filters for 1610nm RFoG return and all PON wavelengths (EPON, 10G EPON, GPON and xGPON) to eliminate external WDM and multiple connections
- Chromadigm high performance patented technology advantage:
  - Chirp cancellation for distance independent performance
  - Clipping mitigation circuitry for error-free QAM performance
  - High Optical Modulation Index (OMI) for superior MER, CNR, CSO and CTB performance with lower RFoG optical receive levels
- +20 dBm SBS threshold over 20 km
- Remote monitoring via SNMP v2c, Web GUI, Telnet, or local CLI interface
- Four modules in a single 2RU SL-ChromaFlex chassis

### Functional Schematic



# Specifications

## Integrated RFoG Transmitter

		CIR
<b>TRANSMITTER PERFORMANCE<sup>(1)(2)(3)</sup></b>		
CARRIER-TO-NOISE (CNR)		> 51 dB
COMPOSITE TRIPLE BEAT (CTB)		> 70 dB
COMPOSITE SECOND ORDER (CSO)		> 63 dB
PRE-FEC BER		1E-9
<b>OPTICAL OUTPUTS</b>		
WAVELENGTH		ITU CHs 21-37
NUMBER OF OUTPUT PORTS		2, 4 or 8
OUTPUT POWER PER PORT		18, 20 dBm
<b>EXPRESS PORTS</b>		
PASSBAND		1545-1562nm
REFLECT BAND	SINGLE EXPRESS	1260-1543, 1565-1620nm
	DUAL EXPRESS PON	1260-1543, 1565-1590nm
	DUAL EXPRESS RFOG	1600-1620nm
INSERTION LOSS	SINGLE EXPRESS OR DUAL EXPRESS RFOG	< 0.6 dB
	DUAL EXPRESS PON	< 1.2 dB
<b>RF INPUT</b>		
BANDWIDTH		50-1218 MHz
AGC MODE	BROADCAST RF INPUT RANGE	15-21 dBmV
	RECOMMENDED BC INPUT (80 CHs ANALOG)	18 dBmV
	RECOMMENDED QAM CHs INPUT	12 dBmV
MGC MODE	BROADCAST RF INPUT RANGE	15-21 dBmV
	RECOMMENDED BC INPUT (80 CHs ANALOG)	15 dBmV
	RECOMMENDED QAM CHs INPUT	9 dBmV
RF TEST POINT LEVEL RELATIVE TO RF INPUT		-10 dB +/- 1.0 dB
<b>ELECTRICAL</b>		
POWER CONSUMPTION		Varies by Module 8x 18 dBm < 50W; 8x 21 dBm < 70W
<b>ENVIRONMENTAL</b>		
OPERATING TEMPERATURE		0°C to +50°C (+32°F to +122°F)
STORAGE TEMPERATURE		-40°C to +85°C (-40°F to +185°F)
HUMIDITY		5-85% Non-condensing
<b>PHYSICAL</b>		
DIMENSIONS		ChromaFlex Two-slot Module, 1.7"H x 7.5"W x 14.4"D (4.3H x 18.9W x 36.5D cm)
WEIGHT		1.8 lbs (0.8 kg)
NETWORK MANAGEMENT		SNMP v2c, CLI, Web GUI, Telnet
<b>USER INTERFACE</b>		
RF CONNECTOR		RF Type F Test Point
OPTICAL CONNECTORS		LC/APC

### NOTES:

- (1) Measured with a reference receiver using a network analyzer with appropriate levels from 50-1002 MHz.
- (2) With 77 NTSC channels, up to 40 km of fiber (version dependent), 0 dBm received power into an analog receiver with noise current density < 7 pA/Hz; with field DMux optical isolation > 30 dB.
- (3) Specified over temperature and lifetime

## Ordering Information

Part Number Format: CIR__-____-____ a a b c c d d e	
<b>b = Number of Optical Outputs</b>	<b>dd = Number of Express Ports per Output</b>
2 = Two Optical Outputs	0E = None
4 = Four Optical Outputs	1E = One Express Port per Output
8 = Eight Optical Outputs	2E = One 1611nm Express Port and One PONx Express Port per Output*
<b>cc = Output Power per Port</b>	* Max. of 24 LC/APC per Module, Equivalent to Eight Outputs with 2xExpress Ports per Output
18 = 18 dBm	
20 = 20 dBm	
	<b>e = Connector Type</b>
	L = LC/APC

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