

# NV30-C1xxx-C1xxx-50

Dual Channel Optical CWDM Transmitter for SMPTE 297-2006 Video applications

## Data Sheet



### Description

The NV30-C1xxx-C1xxx-50 is a Small Form Factor Pluggable (SFP) LC dual channel optical transmitter. The unit is specially designed to meet SMPTE 297-2006 and to give robust performance when SDI pathological signals are present. It contains two independent DFB CWDM lasers providing error-free transmissions with more than 60km of fiber. DVB-ASI and all SD-, HD- and 3G-SDI signal formats are supported. It is made with AutoSFP™ enabled functionality to fit the miniHUB product range

### Part Number Options

Part Number	Laser wavelength (nm)	Temperature *)
NV30-C1270-C1290-50	1270/1290	0°C to +40°C
NV30-C1310-C1330-50	1310/1330	0°C to +40°C
NV30-C1350-C1370-50	1350/1370	0°C to +40°C
NV30-C1390-C1410-50	1390/1410	0°C to +40°C
NV30-C1430-C1450-50	1430/1450	0°C to +40°C
NV30-C1470-C1490-50	1470/1490	0°C to +40°C
NV30-C1510-C1530-50	1510/1530	0°C to +40°C
NV30-C1550-C1570-50	1550/1570	0°C to +40°C
NV30-C1590-C1610-50	1590/1610	0°C to +40°C

\*) Rated temperature for the complete miniHUB.

### Features

- AutoSFP™ enabled functionality
- Compliant to SMPTE 297-2006
- Excellent performance with SDI-Checkfield test signal at SD-, HD- and 3G-SDI
- Available wavelengths: 1270nm to 1610nm, with 20nm channel spacing
- DFB laser
- Typical Link lengths at 2.97Gbps:
  - 0.5 to 250m @ 50µm MMF
  - 0.5 to 250m @ 62.5µm MMF
  - 0.5 to 60km @ 9µm SMF
  - using APD receiver > 80km, 9µm SMF
- Non-MSA Video compliant pinning
- SFF-8472 diagnostic features
- Hot-pluggable
- Class 1 21CFR and IEC60825-1 laser safety compliant
- Pb-free and RoHS compliant
- Available with extended temperature

### Absolute Maximum Ratings

Absolute maximum ratings are those values beyond which functional performance is not intended, device reliability is not implied, and damage to the device may occur.

Parameter	Minimum	Maximum	Unit
Storage temperature (non-operating)	-40	+85	°C
Case operating temperature:	-20	+80	°C
Relative Humidity (non-condensing)	5	95	%
Supply voltage (Vcc)	0	3.6	V

### Recommended Operating Conditions

Parameter	Minimum	Typical	Maximum	Unit
Case operating temperature:	0		+70	°C
Relative Humidity (non-condensing)	5		90	%
Supply voltage (Vcc)	3.14	3.3	3.47	V

### Electrical Characteristics

Parameter	Minimum	Typical	Maximum	Unit
Power dissipation		650	1000	mW
Data rate	50		3000	Mbps

### Transmitter Optical Characteristics

Parameter	Minimum	Typical	Maximum	Unit
Transmitting circuit fiber	Single Mode (9/125 $\mu$ m), Multi Mode compatible			
Light source	DFB laser			
Optical output power	0	+1	+3	dBm
Optical extinction ratio	5	7.5		dB
Optical center wavelength ( $\lambda = 1270\text{nm to }1610\text{nm}$ )	$\lambda - 6\text{nm}$	$\lambda$	$\lambda + 7.5\text{nm}$	nm
Spectral width (-20dB)			1	nm
Optical rise/fall time (20-80%)		105	180	ps

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