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completing the picture

Sat-Light Platinum Series

PL7440DT DWDM Wideband RF Link

Features & Benefits

- Supports 10mW High power CWDM and DWDM butterfly-type lasers
- Wideband: 10–3000 MHz
- Powerful management capabilities via a front panel LCD and rack mounted SNMP
- User control and setting of required IMD level
- Variety of RF and optical connectors

Product Description

Global Foxcom's Platinum **PL7440DT DWDM Wideband Transmitter** is designed to meet the increasing demand for superior long distance transmission with High CNR. With high RF input power and wide dynamic range, the Transmitter is designed to provide full specification service up to a full 32 dB optical budget with the **PL7220R25** receiver. Utilizing Global Foxcom's DigiRF technology, the user has full control of all-important functions for setup, operation, and analysis via the front panel LCD or via the associated sub-rack SNMP capability.

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In addition **IMizer**, an automated adjustable link calibration embedded system enables the user to align the RF links IMD/CNR to specific linearity performances without a two-tone test. Select the desired IMD for the optical transmitter, either locally or remotely, **IMizer** automatically adjusts the laser drive to meet the IMD requirements. The **IMizer** requires the use of a correction factor table above 2.5 GHz.

Each low profile individual transmitter or receiver can be "hot swapped" in the sub-rack chassis maintaining the best subsystem uptime capability. Each module contains an individual processor to maximize specification performance at all times under demanding user applications.

The **PL7440DT** transmitter is a compatible Platinum chassis mounted device. The associated Platinum chassis, model PL7010, has 12 active slots, one main control processor (MCP) slot and two redundant power supplies. No fans are required even under full sub-rack loading and full LNB powering.

Specifications

Wideband PL7440DT DWDM [10dBm laser]

RF Specifications	Units	Typical	Minimum	Maximum
Frequency Range - Bandwidth	MHz	10 - 3000		3000
Amplitude Response @ Unity Gain				
10 - 3000 MHz	dB	±2		±2.25
any 36 MHz		±0.25		±0.3
Gain Stability	dB/24hr	± 0.2		± 0.25
Gain Slope[1]	dB	0	-1.5	+1.5
Gain Variation over temperature	dB	0	-2	2
SFDR[1]	dB/Hz[2/3]		90	
DR (Dynamic Range - single channel)[3]	dB			50
CNR [1Hz][1]	dB		37	
Noise Figure (NF)[1]	dB			41
Noise Figure (NF)[2]	dB			20
Output IP3 (OIP3)[4]	dBm			+20
Group Delay Variation- linear	ns			
10 to 60 MHz		13		
60 - 3000 MHz		1.5		
Input/Output Impedance	Ohm	50 or 75		
1 dB Compression Point	dBm		3	11
Phase Noise[6]	dBm	None		
Third Order InterModulation [IMD][3]	dBc		-55	-40
Input Signal Range - Total Power[7]	dBm		-50	0
Maximum Input without Damage	dBm			+15
TX/RX Input/Output Return Loss	dB			
50 Ohm		-15		-15
75 Ohm [9]		-13		-11
Test Port [front panel sample port][8]	dB	-20	-22	-18
RF Connector Type		F, SMA, N		
Input/Output		F, BNC		
Test Port				
Optical Specifications		**Typical**	**Minimum**	**Maximum**
Optical Wavelength	nm	DWDM/CWDM		
Optical Power Output	mW / dBm	6 / 10		
Optical Budget / Distance	dBm/Km	Depends on receiver sensitivity		
Optical Connector Types	Type	FC/APC or SC/APC (E2000 option)	-	
Optical Return Loss	dB		-60	-55
Electrical Specifications				
Supply Voltage	Vdc	12		
Supply Current [TX][11]	Amps	0.5		
EMI Rating		FCC Class B CE Mark		
Physical Specifications				
Operating Temperature Range	ºC		-10	+55
Storage Temperature Range	ºC		-45	+85
Altitude	ft / Km	10,000 [3.08] operating[8] 14,000 [12.2] non-operating		

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Dimensions [D×W×H]	ins/cm	12×0.8×4 / 30.5×2×10.2
Weight	lbs./Kg	0.8 / 0.23
MTBF	Hours	TX: 309, 481
MTTR	Hours	0.083
Shock & Vibration		Designed for normal transportation environment per section 514.4 MIL-STD-810E. Designed to withstand 20G at 11 ms [½ sine pulse] in non-operating configuration.

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1. -20 dBm RF input, link gain = 0 dB, IMD=-40 dBc @ 25 dB opt. loss
2. -50 dBm RF input, link gain = 30 dB, IMD=-40 dBc @ 25 dB opt. loss
3. User adjustable
4. User adjustable, -5 dBm RF in @ IMD=-50 dBc
5. -25 dBm RF input, link gain = 0 dB, IMD=-40 dBc @ 16 dB opt. budget [-13 dBm optical input - max. RF input]
6. Direct modulation utilized
7. Under 10º add 120 mA [laser heating]
8. With standard adiabatic derating at 2ºC/1000ft. [0.3 Km.]
9. -13 dB @10 to 3000MHz, -11dB @ 2500 to 3000MHz

All specifications are subject to change without notice.