

MEDALLION 6000 Series

1550 nm Externally Modulated Transmitter

APPLICATIONS

- High Performance Supertrunking Links
- High Power Distribution Networks
- Redundant Ring Architectures
- FTTx Networks
- RFOG Applications
- SAT-IF Transport
- DWDM Node Splitting

FEATURES

- Single or Dual Optical Outputs
- QAM loading to 1003 MHz
- Dual Power Supplies and Fans, Redundant & Hot Swappable
- Front Panel RF Test Point
- SNMP Control Interface
- Vacuum Fluorescent Status Display
- OMI / RF Gain Adjustment
- AGC Select: CW, Video, Manual (No AGC)
- Industry Leading Field Adjustable SBS Suppression
- Field Adjustable Electronic Dispersion Compensation (EDC)



The L-Type/D-Type/S-Type/H-Type/F-Type/N-Type Medallion 6000 series product line is a family of state-of-the-art high performance 1550 nm externally modulated CATV fiber optic transmitters optimized for varying network applications. Packaged in a convenient 1RU housing, this line of optical transmitters couples high optical output powers, up to 11.0 dBm, with low optical linewidth resulting in unmatched performance. The optical modulator, combined with proprietary predistortion circuitry, provides superior CTB and CSO performance with SBS suppression levels of greater than 20 dBm. Advanced features such as built in field adjustable SBS control and electronic dispersion compensation allows these transmitters to be quickly optimized in the field for any link or application without the need to procure specifically tuned transmitters. This affords the system designer a level of flexibility previously unknown in the CATV market place.

The **L-Type** series are designed as a high performance solution for applications where the simultaneous transport of CATV and SAT-IF FM signals is required. The SAT-IF signals can be applied anywhere in the 950 to 2800 MHz band.

The **D-Type** series are designed as a low cost, high performance solution for applications where the required fiber length is in the range of 20 to 50 kilometers. Advanced, high power, DFB laser technology allows these transmitters to be fielded without the use of expensive and performance degrading EDFAs.

The **S-Type** series transmitters are designed to be the most versatile model within the Medallion 6000 series family. They can easily be configured to meet most HFC network solutions requiring link lengths in the range of 50 to 70 kilometers with one EDFA as well as links utilizing multiple EDFAs.

The **H-Type** series transmitters are optimized for single EDFA fiber links in the 70 to 90 kilometer range. These transmitters take advantage of our advanced fiber dispersion compensation circuitry to provide exceptional CATV performance.

The **F-Type** series transmitters are intended for use in FTTx and RFOG architecture designs requiring high quality transmission over varying transmission lengths and EDFA output powers. These transmitters successfully support very high optical launch powers while controlling the detrimental effects of Stimulated Brillouin Scattering (SBS), group velocity dispersion (GVD), and self phase modulation (SPM).

The **N-Type** series transmitters are intended for use in node-splitting architecture designs requiring cost effective DWDM transmission over medium length fiber distances.

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GENERAL & MECHANICAL SPECIFICATIONS

PROPERTY	REQUIREMENT	COMMENTS
Wavelength	1555 ±5 nm	Various options + ITU-grid available
Channel Plan	Various - see specification tables	Customer channel plans available
Optical Connector	SC/APC	Other styles available
Monitoring Interfaces	100 Base-T Ethernet (SNMP) Rear Panel RS-232 Interface VFD Screen Front Panel Controls	VFD (Vacuum Fluorescent Display)
Operating Temperature	0°C to 50°C	
Storage Temperature	-20°C to 70°	
Power Consumption	65W max	
Transportation Vibration	GR-2853-CORE	In shipping package
Transportation Shock	GR-2853-CORE	In shipping package
Operating Humidity	20% to 85%	Non-condensing
Supply Range (VAC)	90 to 265 VAC, 50/60 Hz	
(VDC)	± (36 - 72) VDC	
Dimensions	19.0"W x 15.0"D x 1.72"H	(width includes 19" front panel ears, depth includes connectors, fans & front panel)
Input Power Range	17 ±1 dBmV/ch 80 NTSC channels 15 ±1 dBmV/ch 110 NTSC channels 18 ±1 dBmV/ch 60 PAL channels 20 ±1 dBmV/ch 42 CENELEC channels 16 ±1 dBmV/ch 89 PAL channels 27 ±1 dBmV/ch SAT-IF channels	Manual mode Manual mode Manual mode Manual mode Manual mode Manual mode
Input Power Range	19 ±2 dBmV/ch 80 NTSC channels 17 ±2 dBmV/ch 110 NTSC channels 20 ±2 dBmV/ch 60 PAL channels 18 ±2 dBmV/ch 42 CENELEC channels 22 ±2 dBmV/ch 89 PAL channels 29 ±2 dBmV/ch SAT-IF channels	CW mode CW mode CW mode CW mode CW mode CW mode
Front Panel RF Gain / OMI Adjustment Range	+2 / -4 from nominal setting	CATV performance can vary slightly
CATV Frequency Range	45 MHz - 1003 MHz	
CATV Flatness	±0.50 dB ±0.75 dB	45 MHz - 550 MHz 45 MHz - 1003 MHz
CATV Flatness - N-Type	±0.75 dB	45 MHz - 1003 MHz (N-Type)
CATV Input Impedance	75 Ω	
CATV Input Return Loss	16 dB min	45 MHz - 1003 MHz
CATV Front Panel RF Tap	-20 ±1 dB down from RF input	
CATV Front Panel RF Tap Flatness	±1 dB	45 MHz - 1003 MHz
SAT-IF Frequency Range	950 - 2800 MHz	
SAT-IF Flatness	±2 dB	
SAT-IF Input Impedance	75 Ω	
SAT-IF Input Return Loss	10 dB min	950 MHz - 2800 MHz
SAT-IF Front Panel RF Tap	7 ±2.5 dBmV/ch at 1% OMI/ch	
SAT-IF Front Panel RF Tap Flatness	±1 dB	950 MHz - 2800 MHz