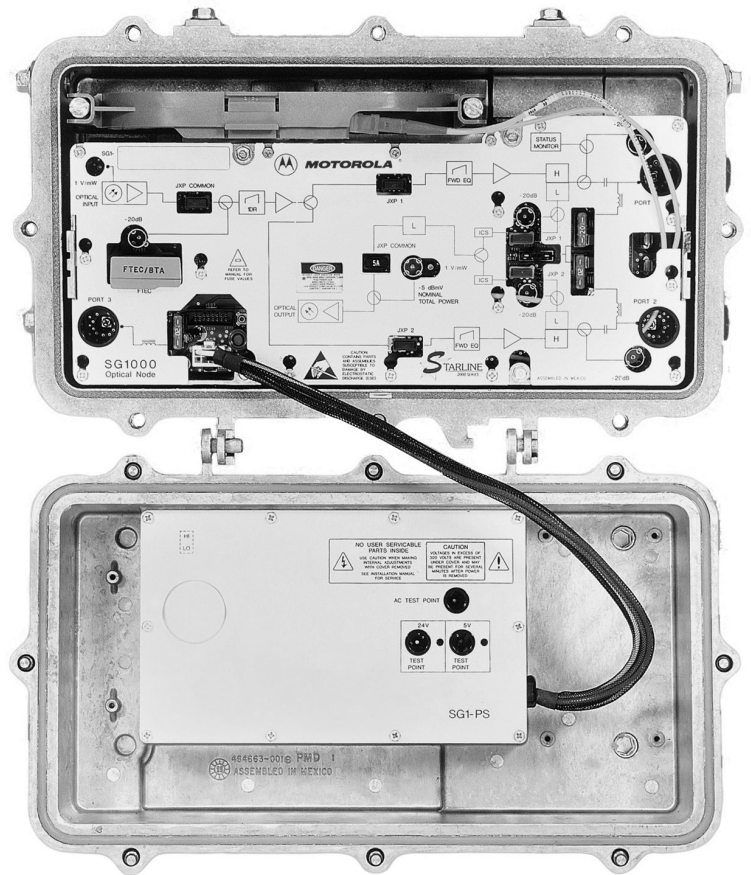


FEATURES

- 870 MHz GaAs technology
- Standard gain, 45 dBmV @ 870 MHz w/-3 dBm optical input
- High gain, 53 dBmV @ 870 MHz w/-3 dBm optical input
- 60/90 V powering standard
- 220 V line powering available
- Isolated Fabry Perot and Distributed Feedback laser transmitters
- User-friendly fiber management
- Gas Tube or Fast Transfer Electronic Crowbar (FTEC) surge protection
- Return path ingress switching available
- Status monitor available
- Eight 1550 nm CWDM return transmitter wavelengths available



SG1000

Compact Optical Node

The Motorola SG1000 optical node is the perfect solution for system operators expanding fiber-rich architectures with non-redundant, cost-effective optical nodes. Its compact size, flexible fiber management system, and straightforward electronics package simplify installation in both strand and pedestal applications. It supports 870 MHz in the forward passband using an integrated optical receiver and Gallium Arsenide hybrid technology. The Motorola SG1000 optical node features one or two high-performance RF outputs, and can be field-configured with passive accessories to activate a third RF port. Several different models of 1310 nm return transmitters from -4 to 3 dBm (0.4 to 2 mW) are available to configure the return path.

Motorola's new Coarse Wave Division Multiplexer (CWDM) 2.0 mW Distributed Feedback transmitters (DFBT) are also available. With the use of optical passives, multiple wavelengths can now be combined onto a single fiber, providing a cost-effective way to segment node locations and increase bandwidth per subscriber.

GENERAL SPECIFICATIONS

Optical

Optical wavelength	1310 (± 20) to 1550 (± 30) nm
Received optical input power range	-3 to +2 dBm
Optical input return loss	45 dB minimum
Receiver typical output level with 0 dBm receiver input power:	
77 channel load	25 dBmV

Station

Output level	Standard 45 and High 53 dBmV minimum virtual output level at 870 MHz with -3 dBm optical power 4% OMI per channel
--------------	-------------------------------------------------------------------------------------------------------------------

General

AC input voltage	44 to 90 VAC sine or square
AC bypass current	15 A
Hum modulation	-65 dB @ 15 A bypass current
Operating temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Housing dimensions	16.13" L x 9.80" W x 5.68" D (40.9 x 24.8 x 14.4 cm)
Weight	21 lbs. (9.5 kgs) maximum

RF

Forward passband frequency	47 to 870 MHz dependent upon split
Return passband	5 to 65 MHz dependent upon split
Flatness	± 0.5 dB F_{minfwd} to F_{maxfwd}
Return loss	16 dB
Output slope	6, 8, 10, 12.5, and 14 dB straight line slope

Performance

0 dBm optical input power	
12.5 dB slope	
77 channel NTSC plus 300 MHz compressed data	
6 dB below analog channel level	870/550/55 MHz, 43/44/36.5 dBmV
Composite triple beat	65 dBc minimum
Composite second order	62 dBc minimum
Carrier to composite noise	50 dB minimum

Node attenuation used to achieve output level.

All features, functionality, and other product specifications are subject to change without notice or obligation.

ORDERING INFORMATION

SG1000 Standard Gain Models

	Primary Features	Part Number
SG1-87SS/BGF-SNN-NNN-NNN-TNN-E	5-40/52-870MHz, SC/APC, FTEC, No return path transmitter	465000-232-00
SG1-87SK/BGF-SNN-NNN-NNN-TNN-E	5-42/54-870MHz, SC/APC, FTEC, No return path transmitter	465000-254-00
SG1-87SA/BGF-SNN-NNN-NNN-TNN-E	5-65/85-870MHz, SC/APC, FTEC, No return path transmitter	465000-288-00
SG1-87SS/BGF-SDN-NNN-NNN-TNN-E	5-40/52-870MHz, SC/APC, FTEC, DFBT transmitter	465000-269-00
SG1-87SK/BGF-SDN-NNN-NNN-TNN-E	5-42/54-870MHz, SC/APC, FTEC, DFBT transmitter	465000-291-00
SG1-87SA/BGF-SDN-NNN-NNN-TNN-E	5-65/85-870MHz, SC/APC, FTEC, DFBT transmitter	465000-248-00

SG1000 High Gain Models

	Primary Features	Part Number
SG1-87SS/DGF-SNN-NNN-NNN-TNN-E	5-40/52-870MHz, SC/APC, FTEC, No return path transmitter	465000-303-00
SG1-87SK/DGF-SNN-NNN-NNN-TNN-E	5-42/54-870MHz, SC/APC, FTEC, No return path transmitter	465000-201-00



Motorola, Inc. 101 Tournament Drive, Horsham, Pennsylvania 19044 U.S.A.
www.motorola.com

MOTOROLA and the Stylized M Logo are registered in the U.S. Patent and Trademark Office. All other product or service names are the property of their respective owners. © Motorola, Inc. 2005. All rights reserved.