

## DESCRIPTION

GBIC series from Radiant are high performance and cost-effective modules for serial optical data communication applications specified for single mode at 1.25 Gbps. Multimode and DWDM versions are also available.

The units are compatible with Cisco switches and will show reports of errors, stats, packets. Units are tested and guaranteed to work with your existing equipment.

The module is intended for single-mode fiber, operates at a nominal wavelength of CWDM and complies with Gigabit Interface Converter (GBIC). Each module consists of a transmitter optical subassembly, a receiver optical subassembly and an electrical subassembly. All of them are housed in a metal package and the combination produces a reliable component.

The module is a duplex SC connector transceiver designed for use in Gigabit Ethernet applications and to provide IEEE-802.3z compliant link for 1.25 Gbps long reach applications. The characteristics are performed in accordance with ITU-T G.694.2 and G.695.

## ▶ GBIC Modules

### ▶ APPLICATION

- CWDM
- Gigabit Ethernet Links
- Fibre Channel Links at 1.06 Gbps
- High Speed Backplane Interconnects
- Switched Backbones

### ▶ FEATURES

- CWDM 8 wavelengths Transmitter
- Data Rate: 1.25 Gbps, NRZ
- Single +3.3V/5V Power Supply
- AC/AC or DC/AC Differential Electrical Interface
- Compliant with Gigabit Interface Converter (GBIC)
- Duplex SC Connector
- Compliance with specifications for IEEE-802.3z Gigabit Ethernet at 1.25 Gbps
- Compliance with ANSI specifications for Fibre Channel applications at 1.06 Gbps Eye Safety
- Multimode and DWDM units available



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11/2005

# GBIC Modules

## SPECIFICATIONS

### Transmitter Electrical to Optical

Center Wavelength:	1310 nm 1280-1335 nm Min-Max 1550 nm 1525-1575 nm Min-Max																		
CWDM Version:	<table> <tr> <td>Minimum Typical</td> <td>Maximum</td> </tr> <tr> <td>1464.5 1470</td> <td>1477.5 nm</td> </tr> <tr> <td>1484.5 1490</td> <td>1497.5 nm</td> </tr> <tr> <td>1504.5 1510</td> <td>1517.5 nm</td> </tr> <tr> <td>1525.5 1530</td> <td>1537.5 nm</td> </tr> <tr> <td>1544.5 1550</td> <td>1557.5 nm</td> </tr> <tr> <td>1564.5 1570</td> <td>1577.5 nm</td> </tr> <tr> <td>1584.5 1590</td> <td>1597.5 nm</td> </tr> <tr> <td>1604.5 1610</td> <td>1617.5 nm</td> </tr> </table>	Minimum Typical	Maximum	1464.5 1470	1477.5 nm	1484.5 1490	1497.5 nm	1504.5 1510	1517.5 nm	1525.5 1530	1537.5 nm	1544.5 1550	1557.5 nm	1564.5 1570	1577.5 nm	1584.5 1590	1597.5 nm	1604.5 1610	1617.5 nm
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1604.5 1610	1617.5 nm																		
Spectral Width: (-20 dB)	1 nm																		
Side Mode Suppression Ratio:	30 dB minimum																		
Average Optical Output Power:	+5 dBm Max																		
Extinction Ratio:	9 dB minimum																		
RIN:	-120 db/Hz																		
Power Supply Current:	70 mA typical 180 mA maximum																		
Transmitter Enable Voltage:	0 to 0.8 V																		
Transmitter Disable Voltage:	2.0 V minimum																		
Data Inputs Voltage:	300 mV minimum to 1600 mV max																		
Transmitter Fault Output Voltage:	0 to 2.0 V maximum																		
Optical Rise/Fall Time:	260 ps																		
Optical Fall Time:	260 ps																		
Output Eye:	Compliant with IEEE 8-02.3z/D5.0																		

### Receiver Optical to Electrical

Operating Wavelength:	1260 to 1620 nm
Sensitivity:	-24 dBm typical
Saturation:	-3 dBm minimum
Optical Return Los:	12 dB minimum
LOS Asserted:	-35 dBm
LOS De-Asserted:	-24 dBm maximum
LOS Hysteresis:	0.5 dB
Power Supply Current:	80 mA typical 170 mA maximum
Data Outputs Voltage:	800 mV typical 400 mV minimum 1000 mV maximum
LOS Low Voltage:	0.8 V maximum
LOS High Voltage:	2.0 V minimum

### General Characteristics

Connector Type:	Duplex SC
Power Supply Voltage:	+3.1 to +5.5 V
Supply Current:	300 mA
Operating Case Temperature:	0° to +70° C
Storage Temperature:	-40° to +85° C
Size:	30.4 mm W x 65.6 mm D x .12 mm H

## ORDERING INFORMATION

PART NUMBER	DESCRIPTION	ATTENUATION	MAX DISTANCES
GBIC-850	GBIC, 2 Fiber, Multimode 850 nm	2 dB	.5 km
GBIC-1310	GBIC, 2 Fiber, Singlemode 1310 nm	5 dB	10 km
GBIC-1550	GBIC, 2 Fiber, Singlemode 1550 nm	10 dB	40 km
GBIC-1550 HP	GBIC, 2 Fiber, Singlemode 1550 nm	18 dB	70 km
GBIC/CW-1470	GBIC, Gray Latch Color, 2 Fibers, Singlemode 1470 nm	18 dB	70 km
GBIC/CW-1490	GBIC, Violet Latch Color, 2 Fibers, Singlemode 1490 nm	18 dB	70 km
GBIC/CW-1510	GBIC, Blue Latch Color, 2 Fibers, Singlemode 1510 nm	18 dB	70 km
GBIC/CW-1530	GBIC, Green Latch Color, 2 Fibers, Singlemode 1530 nm	18 dB	70 km
GBIC/CW-1550	GBIC, Yellow Latch Color, 2 Fibers, Singlemode 1550 nm	18 dB	70 km
GBIC/CW-1570	GBIC, Orange Latch Color, 2 Fibers, Singlemode 1570 nm	18 dB	70 km
GBIC/CW-1590	GBIC, Red Latch Color, 2 Fibers, Singlemode 1590 nm	18 dB	70 km
GBIC/CW-1610	GBIC, Brown Latch Color, 2 Fibers, Singlemode 1610 nm	18 dB	70 km

### Notes:

- DWDM versions available, contact factory
- Devices are Cisco compatible



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