

## Cisco Compatible GLC-LH-SM Quick Spec:

Part Number	GLC-LH-SM
Form Factor:	SFP
TX Wavelength:	1310nm
Reach:	10km
Cable Type:	SMF
Rate Category:	1000Base
Interface Type:	LX
DDM:	No
Connector Type:	Dual-LC



## Cisco Compatible GLC-LH-SM Features

- Up to 1.25Gb/s data links
- Hot-pluggable SFP Footprint
- Compliant with specifications for IEEE802.3Z
- Eye Safety Designed to meet Laser Class1 Compliant with IEC60825-1
- Single +3.3V Power Supply
- RoHS compliance
- 10km links on standard 9/125 micron singlemode fiber
- Operating temperature range:
  - Standard 0 to +70 °C
  - Industrial -40 to +85 °C

## Cisco Compatible GLC-LH-SM Applications

- Gigabit Ethernet
- 1x Fiber Channel
- Other optical links

## Cisco Compatible GLC-LH-SM Specification

### Electrical and Optical Characteristics (Condition: Ta=TOP)

Parameter	Symbol	Min.	Typ	Max.	Unit
Transmitter Differential Input Volt	+/-TX_DAT	650		2000	mV p-p
Supply Current	I <sub>CC</sub>		200	250	mA
Tx_Disable Input Voltage – Low	V <sub>IL</sub>	0		0.8	V
Tx_Disable Input Voltage – High	V <sub>IH</sub>	2.0		V <sub>CC</sub>	V
Tx_Fault Output Voltage – Low	V <sub>OL</sub>	0		0.8	V
Tx_Fault Output Voltage – High	V <sub>OH</sub>	2.0		V <sub>CC</sub>	V
Receiver Differential Output Volt	+/-RX_DAT	0.4		2000	mV p-p
Rx_LOS Output Voltage- Low	V <sub>OL</sub>	0		0.8	V
Rx_LOS Output Voltage- High	V <sub>OH</sub>	2.0		V <sub>CC</sub>	V

## Optical Characteristics

TX					
Parameter	Symbol	Min	Typ	Max	Unit
Data Rate	B	-	1250	-	Mb/s
Centre wavelength	$\lambda_c$	1296	1310	1330	nm
Output Spectral Width	$\Delta\lambda$	-	-	4	nm
Average Output Power	$P_o$	-9	-	-3	dBm
Extinction Ratio	EXT	10	-	-	dB
Data Input Voltage-High	$V_{IHS}$	$V_{cc}-1.16$	-	$V_{cc}-0.89$	V
Data Input Voltage -Low	$V_{ILS}$	$V_{cc}-1.82$	-	$V_{cc}-1.48$	V
Supply Current	$I_{cc}$	-	90	150	mA
Output Optical Eye	Compliant with IEEE802.3Z				

RX					
Parameter	Symbol	Min	Typ	Max	Unit
Receive Sensitivity	$P_{min}$	-	-	-21	dBm
Maximum Input Power	$P_{MAX}$	-3	0	-	dBm
Signal Detect Threshold-Assertion:	$SD_{HIGH}$	-	-	-23	dBm
Signal Detect Threshold-Deassertion:	$SD_{LOW}$	-35	-	-	dBm
Hysteresis	-	-	2.0	-	dBm
Output High Voltage	$V_{OH}$	$V_{cc}-1.03$	-	$V_{cc}-0.89$	V
Output Low Voltage	$V_{OL}$	$V_{cc}-1.82$	-	$V_{cc}-1.63$	V
Operating Wavelength	$\lambda_c$	1100	-	1600	nm
Supply Current	$I_{cc}$	-	80	110	mA

## Absolute Maximum Ratings ( $T_C=25^{\circ}\text{C}$ )

Parameter	Symbol	Min	Max	Unit
Storage Temperature	$T_{ST}$	-40	+85	$^{\circ}\text{C}$
Operating Temperature (Standard)	$T_{IP}$	0	+70	$^{\circ}\text{C}$
Operating Temperature (Industrial)	$T_{IP}$	-40	+85	$^{\circ}\text{C}$
Input Voltage	$T_{CC}$	0	5	V

## Recommended Operation Environment

Parameter	Symbol	Min	Typ	Max	Unit
Supply Voltage	$V_{CC}$	+3.0	3.3	+3.6	V
Operating Temperature	$T_{OP}$	0	-	+50	$^{\circ}\text{C}$