



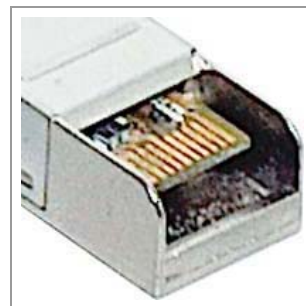
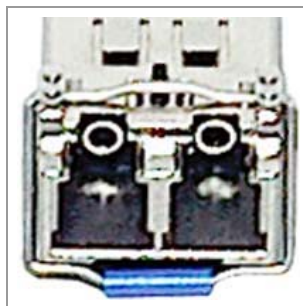
SFP SERIES

SMALL FORM FACTOR PLUGGABLE

1310nm 1.25Gbps Single Mode SFP
LCS-MGBIC-LX-10



1310 nm 1.25Gbps Single Mode
SFP LC Transceiver Module 3.3V



1310nm 1.25Gbps Single Mode SFP

The LCS-MGBIC-LX-10 is a high performance, cost effective module for serial optical data communications applications specified for a multimode of 1.25Gb/s. The module is intended for multi-mode fiber, operates at a nominal wavelength of 850nm and complies with Multi-Source Agreement (MSA) Small Form Factor Pluggable (SFP). LCS-MGBIC-LX-10 is a duplex LC transceiver designed for use in Gigabit Ethernet and to provide a IEEE-802.3z compliant link for 1.25Gb/s short reach applications.

Features

- Small Form Factor Pluggable MSA compliant.
- For Single Mode Applications.
- Standard LC Duplex Connector.
- Up to 1310nm & 1.25 Gb/s .
- Compliant for IEEE-802.3z Gigabit Ethernet.
- Power supply : +3.3V
- EEPROM with serial ID functionality
- TTL Signal detect indicator.
- PECL differential input & output logic levels.
- Uncooled MQW structure laser.
- 0° ~ +70° operating temperature.
- Class 1 laser safety compliance.
- $2^{23}-1$ PRBS, BER= 1×10^{-10} .
- 10 km reach.

Specifications

Absolute Maximum Ratings				
Parameter	Symbol	Min	Max	Unit
Operating temperature	T _{opr}	0	+70	°C
Storage temperature	T _{stg}	-40	+85	°C
Lead soldering limits	-	-	260/10	°C/sec
Supply voltage	V _{ccT}	-0.5	4	V

Electrical Characteristics					
Parameter	Symbol	Min	Typical	Max	Unit
Transmitter:					
Data rate (NRZ)	B	-	1250	-	Mb/s
Data PECL Differential input (6)	V _{il}		-	1.85	V
	V _{ih}	2.15			
Supply voltage	V _{CC} T	3.1	3.3	3.5	V
Supply current	I _{CC} T	-	130	-	mA
Receiver:					
Data rate (NRZ)	B	-	1250	-	Mb/s
Output rise time (10-90%)	t _r	-	-	400	ps
Output fall time (10-90%)	t _f	-	-	400	ps
Data PECL output (6)	V _{OL}	-	-	1.65	V
	V _{OH}	2.25	-	-	V
Supply voltage	V _{CC} R	3.1	3.3	3.5	V
Supply current	I _{CC} R	-	120	-	mA
Hysteresis		-	2.5	-	dB

SFP Series

LCS-MGBIC-LX-10

Optical Characteristics						
Parameter		Symbol	Min	Typical	Max	Unit
Transmitter:						
Optical output (avg.) (1) (3)		P _o	-10	-	-5	dBm
Extinction ratio		ER	10	-	-	dB
Output rise time (10-90%)		t _r	-	-	400	ps
Output fall time (10-90%)		t _f	-	-	400	ps
Optical wavelength		λ	1280	1310	1340	nm
Spectral width		Δλ	-	2	-	nm
Receiver:						
Optical input (avg.)	P _{IN}	-	-20	-	-	dBm
sensitivity (1) (5)						
Saturation		-	-	-	0	dBm
Optical wavelength		λ	1100	-	1600	nm
Signal detect asserted (avg)		P _A	-	-	-20	dBm
Signal detect deasserted (avg)		P _D	-31	-	-	dBm
Signal Detect-Hysteresis		P _A -P _D	1.0	-	-	dB
Signal Detect Assert Time		T _{SD+}	-	-	100	μs
Signal Detect Deassert Time		T _{SD-}	-	-	100	μs
Differential Output Voltage		V _{DEF}	0.37	-	2.0	V
Receiver Loss of Signal Output Voltage-low		RX_LOS _L	0	-	0.35	V
Receiver Loss of Signal Output Voltage-High		RX_LOS _H	2.4	-	V _{cc}	V
Receiver Loss of Signal Assert Time (off to on)		I _{ARX_LOS}	-	-	100	μs
Receiver Loss of Signal Assert Time (on to off)		I _{DRX_LOS}	-	-	100	μs

Note	
1	With 0.275 NA, 9/125μm Fiber.
2	Driven with a differential signal
3	Class 1 eye safe per FDA and IEC.
4	Compliant with IEEE 802.3Z Gigabit Ethernet.
5	2 ²³ - 1 PRBS, BER= 1*10 ⁻¹⁰ .
6	PECL Differential Voltage Mode.
7	Take normal ESD precautions when handling this product.