Inspection Certificate

<u>Certificate No.: 00-SWH-11-SYN01</u>   Date: Nov.28, 2000

Customer	Sycamore Networks	Customer Order No.	6049
Serial No.	L001194	Customer's Part No.	N/A
Model No.	N108LRST-SSS9	Connector Type	I/O: BSC II/UPC
Description	LT800 1x8 SM Fiberoptic Switch Module, TTL control, Latching type	Pigtail Type	1.0 ± 0.1 Meter, φ900-μm loose tube, SMF-28 fiber pigtails
Wavelength	1550nm		

1x8 Switch Test Report

I.   Optical Performance (dB) (with two connectors):

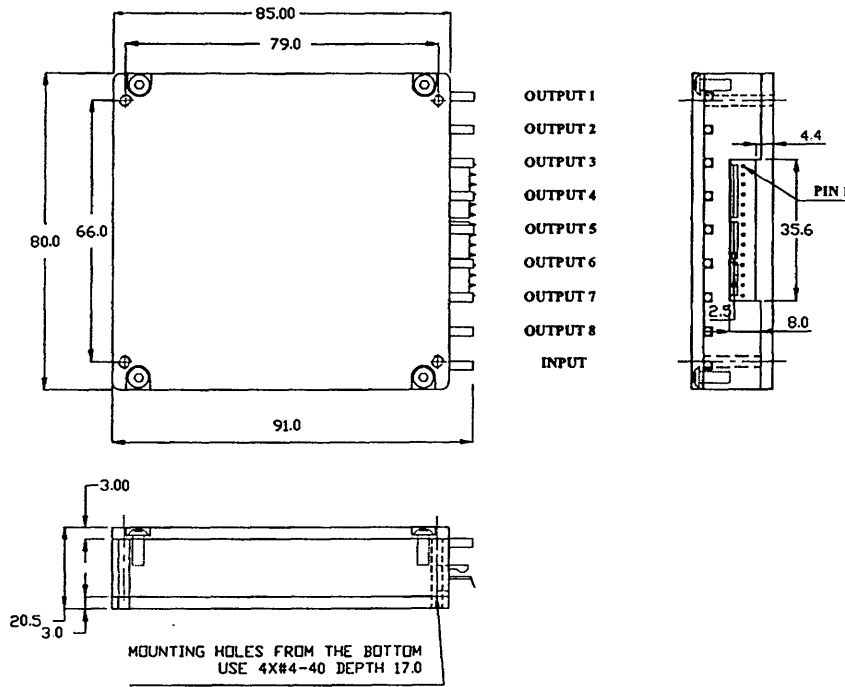| Ports	Insertion Loss	Back Reflection	P.D.L.
01	1.25	-55	Pass
02	1.19	-58	Pass
03	1.25	-57	Pass
04	1.20	-55	Pass
05	1.19	-55	Pass
06	1.23	-55	Pass
07	1.20	-55	Pass
08	1.20	-55	Pass

II.   Function Test: O.K.

We hereby certify that the products herein described in this certificate have been tested and inspected, and meet customer's specification requirements and LighTech's Standards.

f Steven - QA

Manager/Quality Assurance

LIGHTech FIBEROPTICS, INC.

Operation Manual:
LT-800 1X8 Fiberoptics Switch
(w/ Built-in TTL Control)
N108xRxT-xxxx-0R3

OUTPUT 1
OUTPUT 2
OUTPUT 3
OUTPUT 4
OUTPUT 5
OUTPUT 6
OUTPUT 7
OUTPUT 8
INPUT

85.00
79.0
80.0
66.0
91.0

4.4
PIN 1
35.6
2.3
8.0

3.00
20.5
3.0

MOUNTING HOLES FROM THE BOTTOM
USE 4X#4-40 DEPTH 17.0

Pin assignments

(14 Pin Header, Molex part No: 22 – 12 – 2144)

Pin Number	Name	Input / Output	Function
Pin 1	Switch Power		+5 V 200 mA
Pin 2	Switch GND		
Pin 3	Controller GND		
Pin 4	Controller Power		+5 V 200 mA
Pin 5	Strobe	Input	Low pulse = change optical channel This is a strobe pin that is used to trigger a data read to change switching channel. Data is latched on the falling edge. If Reset pin is high, trigger a data to switch a channel. If Reset pin is low, trigger a reset action.
Pin 6	Ready/Busy	Output	Ready = Low, Busy = High
Pin 7	Error	Output	Normal = Low, Error = High
Pin 8	Reset	Input	Normal = High, Reset = Low
Pin 9	Data Bit 0	Input	Data Bit 0 (LSB)
Pin 10	Data Bit 1	Input	Data Bit 1
Pin 11	Data Bit 2	Input	Data Bit 2
Pin 12	Data Bit 3	Input	Data Bit 3
Pin 13	Data Bit 4	Input	Data Bit 4
Pin 14	Data Bit 5	Input	Data Bit 5 (MSB)

Control logic

Strobe (Pin 5): This pin is used to trigger a data read to change switching channel. Data is latched on the falling edge.

Ready/Busy (Pin 6): This pin is normally low, and changes to high (Busy) 600ns max after the strobe goes to low. This pin remains high during the switching period, and goes to low as soon as the switch reaches the requested channel.

Error (Pin 7): This pin is normally low, and changes to high (Error) only if an error occurs on the switch module (e.g. when a channel gets stuck).

Reset (Pin 8): If this pin is high, and a strobe is applied to Strobe pin (Pin 5), data bit pin (Pin 9 ~ Pin 14) are read and the switch moves to the channel defined by data bit pin (Pin 9 ~ Pin 14). Reset pin must be high to move to channel 1 through channel 8. If this pin is low, and a strobe is applied to Strobe pin (Pin 5), the switch will move to the reset position, which is channel 1.

Data Bit (Pin 9 ~ Pin 14): These data bits are used to set switching channels.

Reset Pin 8	DB5 (MSB)	DB4	DB3	DB2	DB1	DB0 (LSB)	Optical Channel
0	X	X	X	X	X	X	Reset (Channel 1)
1	0	0	0	0	0	0	Input → Output 1
1	0	0	0	0	0	1	Input → Output 2
1	0	0	0	0	1	0	Input → Output 3
1	0	0	0	0	1	1	Input → Output 4
1	0	0	0	1	0	0	Input → Output 5
1	0	0	0	1	0	1	Input → Output 6
1	0	0	0	1	1	0	Input → Output 7
1	0	0	0	1	1	1	Input → Output 8

Timing Diagram