10G SFP+ Active Optical Cables

TSSP-85192-xxxC

Features



- Electrical interface compliant to SFF-8431
- 850nm VCSEL laser and PIN photo-detector
- Maximum link length of 150m on OM2 MMF and 300m on OM3 MMF
- Hot Pluggable
- Built-in digital diagnostic functions
- Operating case temperature 0°C to 70°C
- RoHS compliant

Applications

- 10G Ethernet
- Data Centers
- Infiniband transmission

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	TS	-20	85	°C
Relative Humidity	RH	0	85	%
Case Operating Temperature	TCase	0	70	°C
Supply Voltage	VCC	-0.5	3.6	V

8 Jinxiu Middle Road, Pingshan, Shenzhen, Guangdong, 518118, P. R. China
+86 755 32983688 |info@china-tscom.com | www.china-tscom.com

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Case Operating Temperature	TCase	0	-	70	°C
Supply Voltage	VCC	3.13	3.3	3.47	V
Supply Current	Icc	0	-	150	mA
Data Rate	DR	-	10.3125	-	Gbit/s

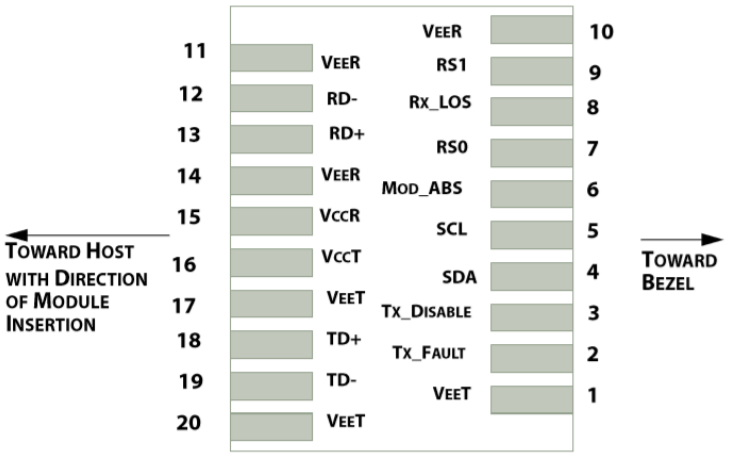
Transmitter Specification

Parameter	Symbol	Min	Typical	Max	Unit
Input differential impedance	Zin	90	100	110	Ohm
Differential Data Input Swing	Vin	200	-	1600	mVp-p
Transmit Enable Voltage	VEN	-	-	0.8	V
Transmit Disable Voltage	VD	2.0	-	-	V

Receiver Specification

Parameter	Symbol	Min	Typical	Max	Unit
Differential Data Output Swing	Vout	370	-	1600	mVp-p
Bit Error Rate	BER	-	-	10-12	-
Output Differential Impedance	Zout	90	100	110	Ohm
LOS Fault	VOH	2.4	-	-	V
LOS Normal	VOL	-	-	0.4	V

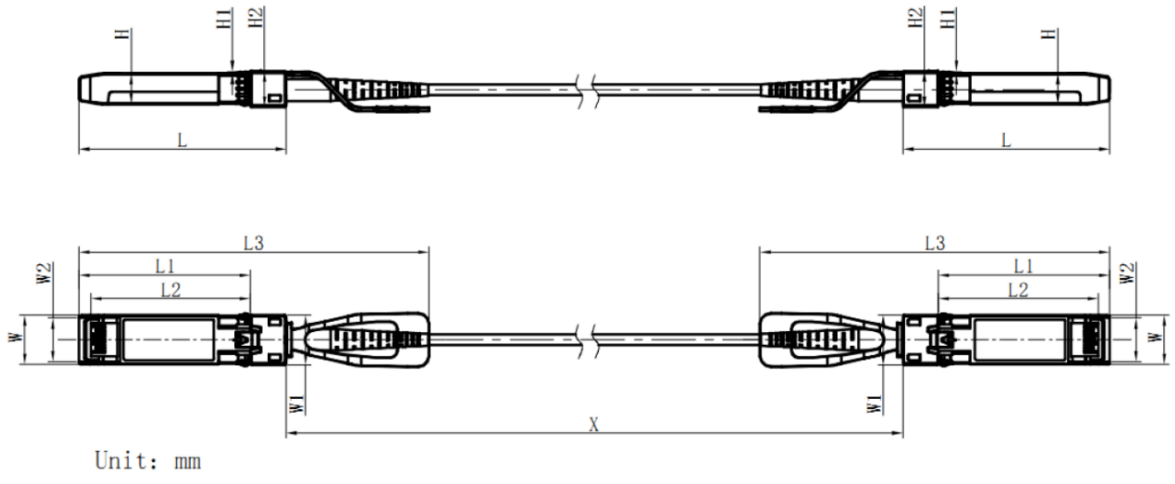
Pin Descriptions



Pin Definitions

Pin	Symbol	Name/Description
1	VeeT	Transmitter Signal Ground
2	TX_FAULT	Transmitter Fault (LVTTL-O) – Not used. Grounded inside the module
3	TX_DISABLE	Transmitter Disable (LVTTL-I) – High or open disables the transmitter
4	SDA	Two Wire Serial Interface Data Line (LVCMOS – I/O)
5	SCL	Two Wire Serial Interface Clock Line (LVCMOS – I/O)
6	MOD_ABS	Module Absent (Output), connected to VeeT or VeeR in the module
7	RS0	Rate Select 0 - Not used, Presents high input impedance.
8	RX_LOS	Receiver Loss of Signal (LVTTL-O)
9	RS1	Rate Select 1 - Not used, Presents high input impedance.
10	VeeR	Receiver Signal Ground
11	VeeR	Receiver Signal Ground
12	RD-	Receiver Data Out Inverted (CML-O)
13	RD+	Receiver Data Out (CML-O)
14	VeeR	Receiver Signal Ground
15	VccR	Receiver Power + 3.3 V
16	VccT	Transmitter Power + 3.3 V
17	VeeT	Transmitter Signal Ground
18	TD+	Transmitter Data In (CML-I)
19	TD-	Transmitter Data In Inverted (CML-I)
20	VeeT	Transmitter Signal Ground

Mechanical Specifications



Unit: mm

	L	L1	L2	L3	W	W1	W2	H	H1	H2
MAX	57.75	48.0	44.65	102.5	13.75	14.0	12.25	8.65	0.55	10.4
Typical	57.55	47.8	44.45	101.5	13.65	13.9	12.15	8.55	0.5	10.2
MIN	57.35	47.6	44.25	100.5	13.55	13.8	12.05	8.45	0.45	10.0

Ordering information

Part Number	Product Description
TSSP-85192-xxxC	SFP+ 10G AOC 0°C ~ +70°C
xxx = denotes the AOC length with unit meter. For example, 001 denote 1m, 002 denote 2m … 099 denote 99m.	

Important Notice

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8 Jinxiu Middle Road, Pingshan, Shenzhen, Guangdong, 518118, P. R. China
+86 755 32983688 |info@china-tscom.com | www.china-tscom.com