

## Product Datasheet

### TL-SM5220-10M-C

#### TP-Link® Compatible 10Gb/s SFP+ Direct Attach Cable Copper, Passive, 10m

##### FEATURES

- Available lengths 0.5m to 10m
- Supports multi-gigabit data rates up to 10.5Gbps
- Supports 1x, 2x, 4x and 8x Fiber Channel data rates
- Hot-pluggable SFP 20PIN footprint
- Serial ID module on MOD (0-2)
- AC coupling of PECL signals
- EMI/EMC performance
- Low Power Consumption < 0.5W
- Power Supply:+3.3V
- Compliant to SFP+ MSA
- Temperature Range: 0~ 70 °C
- ROHS

##### APPLICATIONS

- Storage Area Networks (SAN), Network Attached Storage and Storage Servers
- 1G/2G/4G/8G Fiber Channel
- Switched fabric I/O such as ultra-high bandwidth switches and routers
- Data center cabling infrastructure
- High density connections among network equipment

##### STANDARDS

- Compliant with SFP MSA (INF-8074i)

##### DESCRIPTION

ATGBICS Compatible TL-SM5220-10M-C SFP+ cable is a high-performance, cost effective I/O solution for 10Gb Ethernet and 10G Fiber Channel applications. SFP+ copper modules allow hardware manufacturers to achieve high port density, configurability and utilization at a very low cost and to reduce power budget. The high-speed cable assemblies meet and exceed the performance and reliability requirements stipulated by Gigabit Ethernet and Fiber Channel industry standard.

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### Recommended Operating Environment:

| Parameter                          | Symbol          | Min  | Typical | Max  | Unit |
|------------------------------------|-----------------|------|---------|------|------|
| <b>Storage Ambient Temperature</b> |                 | -40  |         | +85  | ° C  |
| <b>Operating Case Temperature</b>  | T <sub>c</sub>  | 0    |         | +70  | ° C  |
| <b>Power Supply Voltage</b>        | V <sub>CC</sub> | 3.14 | 3.3     | 3.47 | V    |
| <b>Power Dissipation</b>           | PD              |      |         | 0.5  | W    |

### Systems

| Performance   | Media  |
|---|--|
| 10.5 Gbps line speed, full duplex<br><br>Bit error rate: better than 10E-12 | Hot-pluggable, industry-standard Small Form-Factor |

### Specifications (Tested under recommended operating conditions, unless otherwise noted)

| Parameter  | Symbol             | Min | Type | Max             | Units | Notes |
|--|--------------------|-----|------|-----------------|-------|-------|
| <b>Electrical Characteristics</b>                    |                    |     |      |                 |       |       |
| <b>Supply Current</b>                                | I <sub>cc</sub>    | -   | -    | 100             | mA    | 1     |
| <b>Transmitter Differential Input Voltage (PECL)</b> | V <sub>IN</sub>    | 250 | -    | 1200            | mVpp  |       |
| <b>Receiver Differential Output Voltage (PECL)</b>   | V <sub>O</sub>     | 185 | -    | 1000            | mVpp  |       |
| <b>Impedance</b>                                     | Z <sub>cable</sub> | 90  | 100  | 110             | Ohms  |       |
| <b>MOD-DEF1, 2</b>                                   | V <sub>IH</sub>    | 2.0 | -    | V <sub>cc</sub> | V     |       |

#### Note:

1. The supply current includes SFP Module's supply current and test board working current.

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### Physical Data

| Parameter      | Description            | 30AWG | 24AWG | Units |
|----------------|------------------------|-------|-------|-------|
| Cable Diameter | OD                     | 4.5   | 6.5   | mm    |
| Bend Radius    | Minimum Sustained Bend | 25    | 35    | mm    |

### AWG Information

| Reach @ 10Gb/s (m) | AWG |
|--------------------|-----|
| 0.5                | 30  |
| 1                  | 30  |
| 3                  | 30  |
| 5                  | 24  |
| 7                  | 24  |
| 10                 | 24  |

### Mechanical Information

