

# HT-25SPON

Optical Module – SFP G.PON  
GPON SFP ONU – 2.5G

HEIGHTS

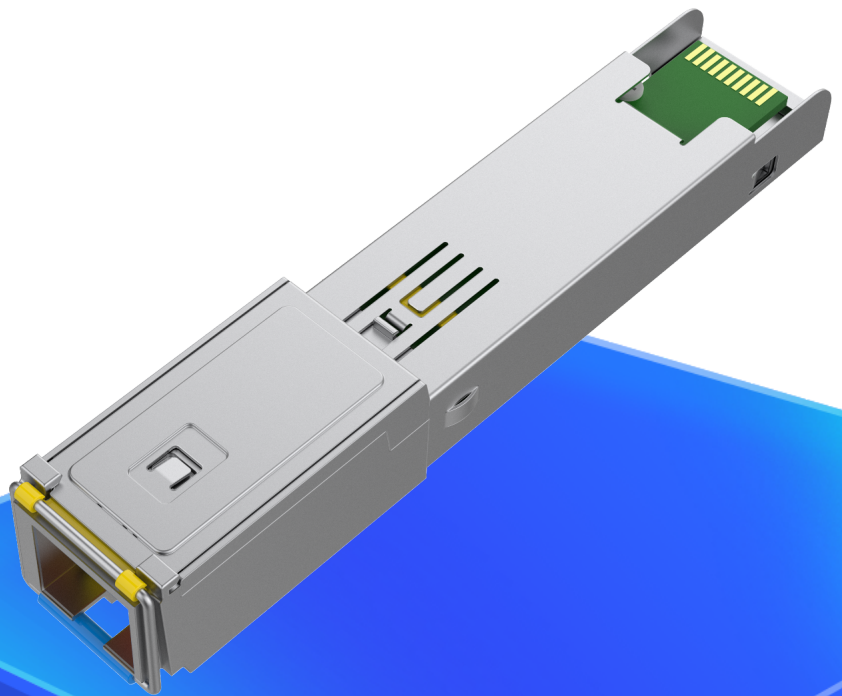
## Main Chip

Lantiq PEF98035ET

## Bandwidth

1.244Gbps uplink

2.488Gbps downlink



# Product Specifications



## GPON Uplink

|             |                                                                                                                                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interface   | 1x SC/APC or 1x SC/UPC connector, single mode fiber                                                                                                                                                  |
| Standard    | ITU-T G.984.x (G.984.5 support)<br>SFP MSA, INF-8074i<br>SFF-8472<br>IEEE 802.3<br>ITU-T G.984.2 Amd1, Class B+<br>FDA 21 CFR 1040.10 & 1040.11, Class I                                             |
| Transmitter | DFB transmitter working in 1310nm, with >10dB Extinction Ratio Mean launch power in 0.5~5dBm range<br>SMSR > 35dB<br>Turn on/off time at burst mode < 12.8ns                                         |
| Receiver    | APD receiver working in 1490nm, with -8 ~ -28dBm working range Isolation to 1310nm > 47dB<br>Isolation to (1440~1450nm), (1530~1540nm) > 25dB<br>Isolation to (1400~1440nm), (1540~1625nm) > 36dB    |
| Bandwidth   | Up: 1244.16Mbps / Down: 2488.32Mbps                                                                                                                                                                  |
| TCONT / GEM | Type 1~5 TCONT defined in G.984.3<br>8 TCONT<br>32 GEMPORT with 1:MP connectivity<br>12 GEMPORT with 1:P connectivity<br>8 802.1p mapper service profile<br>Flexible mapping between TCONT & GEMPORT |
| FEC         | Support upstream & downstream FEC                                                                                                                                                                    |
| Security    | AES-128 Decryption with key generation and switching                                                                                                                                                 |



## Golden Finger Downlink

|                         |                                     |
|-------------------------|-------------------------------------|
| Type                    | Support 1000BASE-X or SGMII 2.5Gbps |
| Transmit Rise/Fall Time | 100~200ps, from 20% to 80%          |
| Differential Impedence  | 80~120ohm                           |
| RX Differential Voltage | Output range 370 ~ 1000 mV          |
| TX differential Voltage | Input range 250 ~ 2400mV            |



## OAM Features

|                    |                                                               |
|--------------------|---------------------------------------------------------------|
| Management         | Support OMCI, Web GUI, CLI                                    |
| Upgrading firmware | upgrade via OMCI, WEB GUI, TFTP, FTP and from WAN side        |
| Image Rollback     | Hold a working image & a alternative image for image rollback |
| Restore Default    | Web GUI, Telnet                                               |



## Layer 2 Features

|          |                                                                                                                                                                                                                                                                   |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bridging | Support 4096 bytes MTU<br>Support GEM Port<br>Bridge Port<br>UNI Port Rate limit No Mac learning, forwarding based on the VLAN rules                                                                                                                              |
| VLAN     | Support V LAN Tag Filter based on G.988<br>Support VLAN Tag Operation based on G.988<br>Support Ext VLAN Tag Operation based on G.988<br>Received frame VLAN tagging operation table max size in EVTOCD is 100<br>Support Multicast VLAN Operation based on G.988 |
| QoS      | Support SP, WRR, SP+WRR in the upstream<br>Support SP in the downstream                                                                                                                                                                                           |
| IGMP     | Support IGMPv1, IGMPv2, MLDv1                                                                                                                                                                                                                                     |



## Compliance Features

|              |                                                                             |
|--------------|-----------------------------------------------------------------------------|
| Regulatory   | CE, TUV, WT-177 compliant                                                   |
| EMC/EMI      | EN 55022, class B<br>EN 300 386<br>EN 61000-4-1~5                           |
| Safety       | IP20 mechanical design<br>Fire resistance material, UL 94-V0<br>IEC 60950-1 |
| ENV kindness | Compliant with RoHS 2.0 standard                                            |



## Physical Features

|                       |                                                                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Dimension             | Compliant with SFF 8472i<br>74.7mm x 14.1mm x 12.4mm                                                                                       |
| Weight                | <40g                                                                                                                                       |
| Power Supply          | One single 3.3V power supply                                                                                                               |
| DC input              | 3.3V +/- 5%                                                                                                                                |
| Consumption           | At 25C: 1.0W for idle condition;<br>1.8W for full loading condition<br>At 60C: 1.4W for idle condition;<br>2.2W for full loading condition |
| Operating Temperature | -40 ~ 60°C for Ambient Temperature<br>-40 ~ 85°C for Case Temperature                                                                      |
| Operating Humidity    | 10% ~ 95%, noncondensing                                                                                                                   |

# Pin Definition

| PIN # | Name           | In/Out | Function                                                    | Remark                                                  |
|-------|----------------|--------|-------------------------------------------------------------|---------------------------------------------------------|
| 1     | VEET           | Power  | Transmitter Ground                                          |                                                         |
| 2     | TX_fault/ToD   | Output | Transmitter Fault interrupt<br>High: TX fault / Low: Normal | Open collector output.                                  |
| 3     | TX_disable     | Input  | Disable transmitter<br>High: Disable / Low: Enable          | Pulled up internally.                                   |
| 4     | SDA            | Bi-    | I2C SDA                                                     | Pulled up internally.                                   |
| 5     | SCL            | Input  | I2C SCL                                                     | Pulled up internally.                                   |
| 6     | Module Present | Output | Low active.<br>High: Absent / Low: Present                  | Pulled up Internally.                                   |
| 7     | Dying-Gasp     | Input  | Dying-Gasp input.<br>High: Normal / Low: Dying              | Pulled up with 10Kohm internally.                       |
| 8     | LOS/IPPS       | Output | LOS of RX Signal<br>High: loss of RX signal<br>Low: Normal  | Pulled up int, max 8mA driver                           |
| 9     | VEER           | Power  | Receiver Ground                                             | *This pin can be lpps with a different mounting option. |
| 10    | VEER           | Power  | Receiver Ground                                             |                                                         |
| 11    | VEER           | Power  | Receiver Ground                                             |                                                         |
| 12    | RD-            | Out    | Receiver Inverted DATA out.                                 | AC coupled internally.                                  |
| 13    | RD+            | Out    | Receiver Non-inverted DATA out.                             | AC coupled internally.                                  |
| 14    | VEER           | Power  | Receiver Ground                                             |                                                         |
| 15    | VCCR           | Power  | Receiver Power Supply                                       | 3.3V±5%, connected with VCCT int                        |
| 16    | VCCT           | Power  | Transmitter Power Supply                                    | 3.3V±5%, connected with VCCR int                        |
| 17    | VEET           | Power  | Transmitter Ground                                          |                                                         |
| 18    | TD+            | In     | Transmitter Non-Inverted DATA in.                           | AC coupled int.                                         |
| 19    | TD_            | In     | Transmitter Inverted DATA in.                               | AC coupled int.                                         |
| 20    | VEET           | Power  | Transmitter Ground                                          |                                                         |

# Drawing.

