

# XGS-PON ONU Optical Transceiver SFP+ Module

The XGS-PON ONU Transceiver is designed for 10G XGS-PON transmission. The module incorporates 10Gb/s 1270nm burst-mode transmitter and 10Gb/s 1577nm continuous-mode receiver. An integrated WDM coupler can separate 1577nm input light and 1270nm output light. The metallic package guarantees excellent EMI and EMC characteristics, which totally comply with international relevant standards.

## Specifications

(tested under recommended operating conditions, unless otherwise noted)

| Parameter                            | Symbol | Unit | Value |         |      |
|--------------------------------------|--------|------|-------|---------|------|
|                                      |        |      | Min   | typical | Max  |
| Electrical Characteristics           |        |      |       |         |      |
| Power Consumption                    |        | W    | -     | -       | 2.0  |
| LVPECL Single Ended Data Input Swing |        | mV   | 100   | -       | 800  |
| CML Single Ended Data Output Swing   |        | mV   | 300   |         | 500  |
| Differential Data input impedance    |        |      | -     | 100     | -    |
| Signal Level(LVTTL)                  | VOH    | V    | 2.4   | -       | Vcc  |
|                                      | VOL    | V    | 0     | -       | 0.8  |
| Optical transmitter Characteristics  |        |      |       |         |      |
| Data Rate                            |        | Mbps | --    | 9953    | -    |
| Center Wavelength Range              | c      | nm   | 1260  | -       | 1280 |
| Spectral Width(@-20dB)               |        | nm   | -     | -       | 1    |

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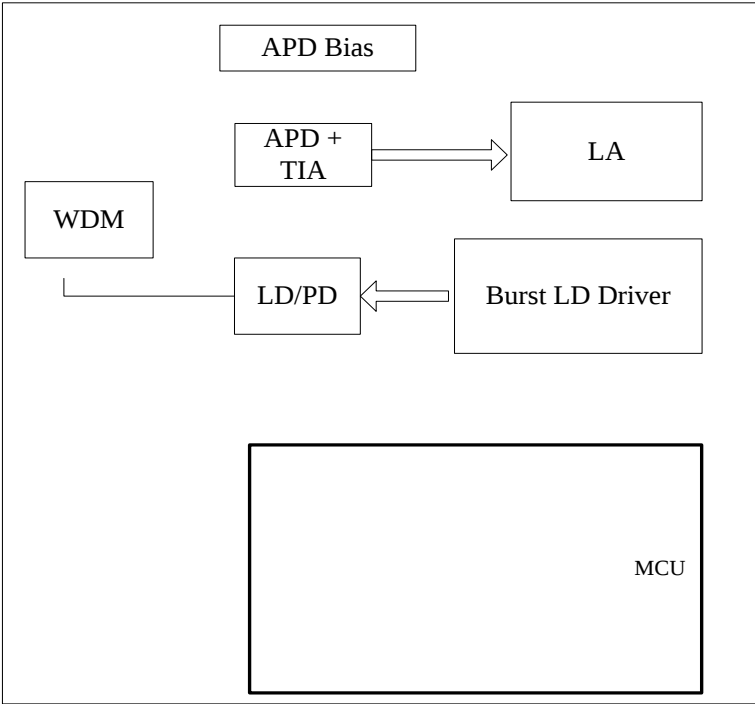
## Absolute Maximum Ratings

| Parameter                 | Symbol          | Unit | Min | Max |
|---------------------------|-----------------|------|-----|-----|
| Storage Temperature Range | T <sub>s</sub>  | °C   | -40 | +85 |
| Relative Humidity         | RH              | %    | 5   | 95  |
| Power Supply Voltage      | V <sub>cc</sub> | V    | 0   | +4  |
| Receiver Damage Threshold |                 | dBm  | +0  | -   |

## Recommended Operating Conditions

| Parameter                        | Symbol          | Unit | Min   | Typ | Max   |
|----------------------------------|-----------------|------|-------|-----|-------|
| Operating Case Temperature Range | T <sub>c</sub>  | °C   | 0     | -   | 70    |
| Power Supply Voltage             | V <sub>cc</sub> | V    | 3.135 | 3.3 | 3.465 |

## Principle diagram



## Optic Ports Definition

Single SC receptacle optical interface



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## Product appearance and Label

### Regulatory Compliance

| Feature                                              | Test Method                            | Performance                                                              |
|------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------|
| Electrostatic Discharge (ESD) to the Electrical Pins | MIL-STD-883E Method 3015.7             | Class 1 (>1.5kV) Human Body Model                                        |
| Electrostatic Discharge (ESD) Immunity               | IEC61000-4-2                           | LV4(Air discharge 15kV,Contact discharge 8kV)<br>Performance criterion B |
| Electromagnetic Interference (EMI)                   | CISPR22 ITE Class B<br>EN55022 Class B | Compliant with standards                                                 |
| Immunity                                             | IEC61000-4-3 Class 34 0.4              |                                                                          |



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## Update Information

