



## 1x9 155M Multimode Transceiver

| Features                                                                                                                                                           | Applications                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| High Quality 850nm VCSEL<br>Fully Compliant with ITU-T G.957, G.958<br>LVPECL Logic Interface<br>Compliant with Telcordia GR-468-CORE<br>Single +3.3V Power Supply | Fast Ethernet<br>SONET/SDH System<br>ATM |

**Specifications****Electrical and Optical Characteristics(Condition: Ta=TOP)**

| Parameter             | Symbol          | Min.   | Typical | Max.   | Unit |
|-----------------------|-----------------|--------|---------|--------|------|
| Data Rate             | B               | --     | 155     | --     | Mb/s |
| Center Wavelength     | $\lambda_c$     | 830    | 850     | 860    | nm   |
| Output Spectral Width | $\Delta\lambda$ | --     | --      | 0.85   | nm   |
| Output Optical Power* | $P_0$           | -10    | --      | -3     | dBm  |
| Extinction Ratio      | E.R.            | 10     | --      | --     | dB   |
| Operating Current     | $I_{CC}$        | --     | 60      | 80     | mA   |
| Operating Voltage     | $V_{CC}$        | +3.0   | --      | +3.6   | V    |
| Input Voltage-Low     | $V_{IL}$        | -1.810 | --      | -1.475 | V    |
| Input Voltage-High    | $V_{IH}$        | -1.165 | --      | -0.880 | V    |
| Rising Time           | $T_r$           | --     | 1       | 3.0    | ns   |
| Falling Time          | $T_f$           | --     | 1       | 3.0    | ns   |
| Operating Wavelength  | $\lambda$       | --     | 850     | --     | nm   |
| Receiver Sensitivity  | $P_{min}$       | --     | --      | -24    | dBm  |
| Maximum Optical Power | $P_{max}$       | -3     | --      | --     | dBm  |
| Operating Current     | $I_{CC}$        | --     | 70      | 100    | mA   |
| Supply Voltage        | $V_{CC}$        | +3.0   | --      | +3.6   | V    |
| LOS Output-Low        | $V_{IL}$        | -1.810 | --      | -1.475 | V    |
| LOS Output -High      | $V_{IH}$        | -1.165 | --      | -0.880 | V    |
| LOS Asserted (H-L)    | PD              | --     | --      | -28    | dBm  |
| LOS Deasserted (L-H)  | PA              | -40    | --      | --     | dBm  |

\*Measure the average power coupled into 62.5/125um, 0.275NA graded index Multi-Mode fiber.





## LP Technical Development Ltd

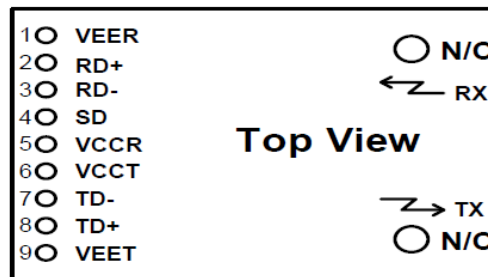
### Absolute Maximum Ratings(TC=25°C)

| Parameter                    | Symbol          | Min. | Max.            | Unit |
|------------------------------|-----------------|------|-----------------|------|
| Storage Temperature          | T <sub>ST</sub> | -40  | +85             | C    |
| Supply Voltage               | V <sub>CC</sub> | 0    | +3.6            | V    |
| Input Voltage                | V <sub>IN</sub> | 0    | V <sub>CC</sub> | V    |
| Soldering Temperature & Time | --              | --   | 240/10          | C /S |

### Recommended Operating Environment

| Parameter             | Symbol                                 | Min.  | Typical | Max.  | Unit |
|-----------------------|----------------------------------------|-------|---------|-------|------|
| Supply Voltage        | V <sub>CC</sub>                        | +3.15 | +3.3    | +3.45 | V    |
| Operating Temperature | T <sub>OP</sub><br>( Commercial grade) | 0     | --      | +70   | C    |
|                       | T <sub>OP</sub><br>( Industrial grade) | -40   | --      | +85   | C    |

### Pin Description



| Pin | Name              | Level  | Description                                                                        |
|-----|-------------------|--------|------------------------------------------------------------------------------------|
| 1   | V <sub>EE</sub> R |        | Negative power of receiver section, normally grounded                              |
| 2   | RD+               | LVPECL | Receiver Data Output                                                               |
| 3   | RD-               | LVPECL | Inverted Receiver Data Output                                                      |
| 4   | SD                | LVPECL | Optical alarm of receiver section, High level when normal, low level when no light |
| 5   | V <sub>CC</sub> R |        | Positive power of receiver section, normally +3.3V                                 |
| 6   | V <sub>CC</sub> T |        | Positive power of transmitter section, normally +3.3V                              |
| 7   | TD-               | LVPECL | Inverted Transmitter Data input                                                    |
| 8   | TD+               | LVPECL | Transmitter Data input                                                             |
| 9   | V <sub>EE</sub> T |        | Negative power of transmitter section, normally grounded                           |

### Ordering Information

| TRAN | Packaging | Data Rate     | Wave length | Connector      | Operation Temperature       | Operation Voltage  | SD Interface    |
|------|-----------|---------------|-------------|----------------|-----------------------------|--------------------|-----------------|
| TRAN | 1x9 SFP   | 155M<br>1.25G | 1310<br>850 | SC/PC<br>ST/PC | 1=0 ~ +70 C<br>2=-4 ~ +85 C | 5= +5V<br>3= +3.3V | P=PECL<br>T=TTL |