



## Features

- Class B+ GPON OLT transceiver
- Small Form Factor, 2 x 10 pigtailed bi-directional
- 1490 nm DFB Tx /1310 nm APD Rx
- 2488 Mbps downstream Tx/1244 Mbps upstream Rx
- -5 to 70°C case temperature operation
- Single 3.3 V supply
- ITU-T G.984.2 compliant
- 20 km reach
- SC/UPC fiber connector; IEC 61754-4 compliant
- RoHS compliance
- Meets UL 94V-1 flammability

**Table 1 – General Operating**

| Parameter                   | Symbol           | Min. | Typical | Max. | Unit | Notes |
|-----------------------------|------------------|------|---------|------|------|-------|
| Operating Voltage           | V <sub>cc</sub>  | 3.14 | 3.3     | 3.46 | V    |       |
| Supply Current              | I <sub>cc</sub>  | -    | -       | 450  | mA   |       |
| Operating Temperature(case) | T <sub>opr</sub> | -5   |         | 70   | °C   |       |
| Storage Temperature         | T <sub>stg</sub> | -40  | -       | 85   | °C   |       |

**Table 2 – General Optical Parameters**

| Parameter                    | Min. | Typical | Max. | Unit |
|------------------------------|------|---------|------|------|
| Back Reflection at 1490 nm   | -    | -       | -20  | dB   |
| Back Reflection at 1310 nm   | -    | -       | -20  | dB   |
| 1490 nm to 1310 nm crosstalk | -    | -       | -45  | dB   |

**Table 3 – Optical Characteristics**

| Transmitter                                |                             |      |         |      |      |       |
|--------------------------------------------|-----------------------------|------|---------|------|------|-------|
| Parameter                                  | Symbol                      | Min. | Typical | Max. | Unit | Notes |
| Centre Wavelength                          | $\lambda_c$                 | 1480 | 1490    | 1500 | nm   |       |
| Optical Spectrum Width (-20dB)             | $\Delta\lambda$             | -    | -       | 1    | nm   |       |
| Side Mode Suppression Ratio                | SMSR                        | 30   | -       | -    | dB   |       |
| Average Launch Power                       | P <sub>OUT</sub>            | 1.5  | -       | 5    | dBm  |       |
| Average Launch Power-OFF Transmitter       | P <sub>OFF</sub>            | -    | -       | -40  | dBm  |       |
| Extinction Ratio                           | ER                          | 10   | -       |      | dB   | 1     |
| Laser Overshoot                            |                             | -    | -       | 300  | %    |       |
| Optical Path Penalty                       |                             |      |         | 0.5  | dB   | 2     |
| Optical Rise and Fall Time                 |                             | -    | -       | 160  | ps   | 3     |
| Tolerance to TX back reflection            |                             | -15  | -       | -    | dB   | 4     |
| Data Rate                                  |                             | -    | 2488    | -    | Mbps |       |
| Optical Eye Diagram                        | Compliant With ITU-T G984.2 |      |         |      |      |       |
| Receiver                                   |                             |      |         |      |      |       |
| Operating Wavelength                       | $\lambda_c$                 | 1260 | 1310    | 1360 | nm   |       |
| Upstream Data Rate +/- 100ppm (burst-mode) |                             | -    | 1244    | -    | Mbps |       |
| Sensitivity                                | P <sub>SEN</sub>            | -    | -       | -28  | dBm  |       |
| Overload                                   | P <sub>OL</sub>             | -8   | -       | -    | dBm  |       |
| Maximum Reflectance of Receiver            | RX_r                        | -    | -       | -20  | dB   |       |

Notes:

1. PRBS  $2^{23}-1$ , NRZ, 50% duty cycle
2. Over 20km with dispersion value of 300ps/nm.
3. 20% to 80%
4. 1 dB degradation of receiver sensitivity

**Table 4 – Electrical Characteristics**

| Transmitter                   |               |      |         |      |          |       |
|-------------------------------|---------------|------|---------|------|----------|-------|
| Parameter                     | Symbol        | Min. | Typical | Max. | Unit     | Notes |
| Input Differential Impedance  | $R_{IN}$      | 80   | 100     | 120  | $\Omega$ |       |
| Single Ended data input swing | $V_{IN, p-p}$ | 300  | -       | 1200 | mV       |       |
| Tx Disable (LVTTL)            | $V_d$         | 2    | -       | Vcc  | V        |       |
| Tx Enable (LVTTL)             | $V_{en}$      | 0    | -       | 0.8  | V        |       |
| SD_High                       | $V_{SDH}$     | 2    | -       | Vcc  | V        |       |
| SD_Low                        | $V_{SDL}$     | 0    | -       | 0.4  | V        |       |
| Tx_Fail_High (LVTTL)          | $V_{Fail}$    | 2    | -       | Vcc  | V        |       |

|                                         |                       |     |     |                 |    |   |
|-----------------------------------------|-----------------------|-----|-----|-----------------|----|---|
| Tx_Fail_Normal (LVTTL)                  | V <sub>Normal</sub>   | 0   | -   | 0.4             | V  |   |
| <b>Receiver</b>                         |                       |     |     |                 |    |   |
| Data Output Rise and Fall Time          | T <sub>OUT</sub>      | -   | 250 | -               | ps | 1 |
| Single ended data output swing (LVPECL) | V <sub>OUT, p-p</sub> | 300 | -   | 1200            | mV |   |
| Signal Detect Output LOW                | V <sub>DETL</sub>     | 0   | -   | 0.8             | V  |   |
| Signal Detect Output HIGH               | V <sub>DETH</sub>     | 2.4 | -   | V <sub>CC</sub> | V  |   |
| Signal Detect Response Time             | T <sub>SD</sub>       | -   | -   | -               | ns |   |

Notes:

1. 20% to 80%

**Table 5 – Digital RSSI Timing Specification**

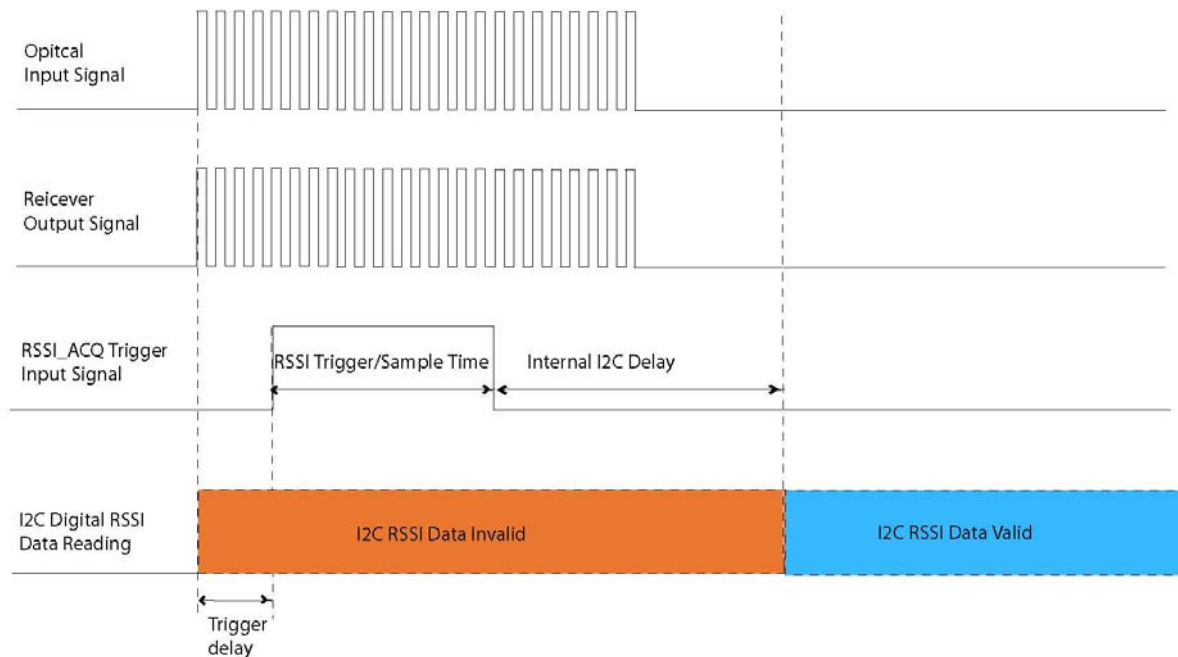
| Parameter                                    | Symbol                 | Min | Typical | Max   | Unit |
|----------------------------------------------|------------------------|-----|---------|-------|------|
| RSSI Trigger Delay <sup>a</sup>              | T <sub>Trigger</sub>   | 25  | -       | -     | ns   |
| RSSI Sampling Time                           | RSSI <sub>sample</sub> | 300 | -       | -     | ns   |
| Internal I2C Delay                           | T <sub>I2C</sub>       | -   | -       | 500   | μs   |
| Receiver Power DDM (RSSI) Error <sup>b</sup> | RX <sub>DDM</sub>      | -   | -       | +/- 3 | dB   |

- a) RSSI\_ACQ input signal rising edge will trigger RSSI sampling, and falling edge will trigger internal digital RSSI information written to I2C. It is recommended that host shall not trigger RSSI\_ACQ input again until RSSI data is valid in I2C from previous RSSI trigger.
- b) RSSI DDM working range between -10 to -30dBm. RSSI DDM accuracy is better than +/-3dB for input power range between -12 to -30dBm and the accuracy reduces to +/-5dB for input power range between -10 to -12dBm. If the data pattern is at least 2<sup>17</sup>-1 or longer, a minimum average of 8 times is strongly recommended to maintain the RSSI reading accuracy.

Table 6 –Pin Function Definitions

| Pin | Name                              | Description                                                                                                                                                  |
|-----|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Acquire/ $\overline{\text{Hold}}$ | LVTTL input. High is Acquire mode and low is Hold mode.                                                                                                      |
| 2   | RSSI_ACQ                          | RSSI acquisition. LVTTL input. Acquired RSSI value is converted and read via I2C bus.                                                                        |
| 3   | RX_GND                            | Rx Ground                                                                                                                                                    |
| 4   | Reserved                          | No User Connection; Internal use                                                                                                                             |
| 5   | Reserved                          | No User Connection; Internal use                                                                                                                             |
| 6   | RX_GND                            | Rx Ground                                                                                                                                                    |
| 7   | RX_Vcc                            | Rx Vcc                                                                                                                                                       |
| 8   | BRST_Det                          | LVTTL output, active high. BRST_Det assert low when module reset, assert high when incoming burst detected                                                   |
| 9   | RXD-                              | Negative Data Output, LVPECL; DC coupled                                                                                                                     |
| 10  | RxD+                              | Positive Data Output, LVPECL; DC coupled                                                                                                                     |
| 11  | TX_Vcc                            | Tx Vcc                                                                                                                                                       |
| 12  | TX_GND                            | Tx Ground                                                                                                                                                    |
| 13  | TX_DIS                            | Tx Disable. LVTTL input. Laser output is disabled when this pin is asserted high or left unconnected. Laser output is enabled when this pin is asserted low. |
| 14  | TXD+                              | Positive Data Input, LVPECL or CML (AC coupled; internally 100 ohms differential termination).                                                               |
| 15  | TXD-                              | Negative Data Input, LVPECL or CML (AC coupled; internally 100 ohms differential termination).                                                               |
| 16  | TX_GND                            | Tx Ground                                                                                                                                                    |
| 17  | SCL                               | 2-Wire Serial Clock Input. Clocks data into and out of the device.                                                                                           |
| 18  | SDA                               | 2-Wire Serial Data I/O Pin. Transfers serial data to and from the device.                                                                                    |
| 19  | TX_FAIL                           | Tx Fail Alarm. LVTTL Output Active high.                                                                                                                     |
| 20  | TX_GND                            | Tx Ground                                                                                                                                                    |

## Digital RSSI Timing



**Figure 1. Digital RSSI Timing.**

RSSI\_ACQ Input signal rising edge will trigger RSSI sampling, and falling edge will trigger internal digital RSSI information written to I2C. It is recommended that host shall not trigger RSSI\_ACQ input again until RSSI data is valid in I2C from previous RSSI trigger.

## Timing Diagram

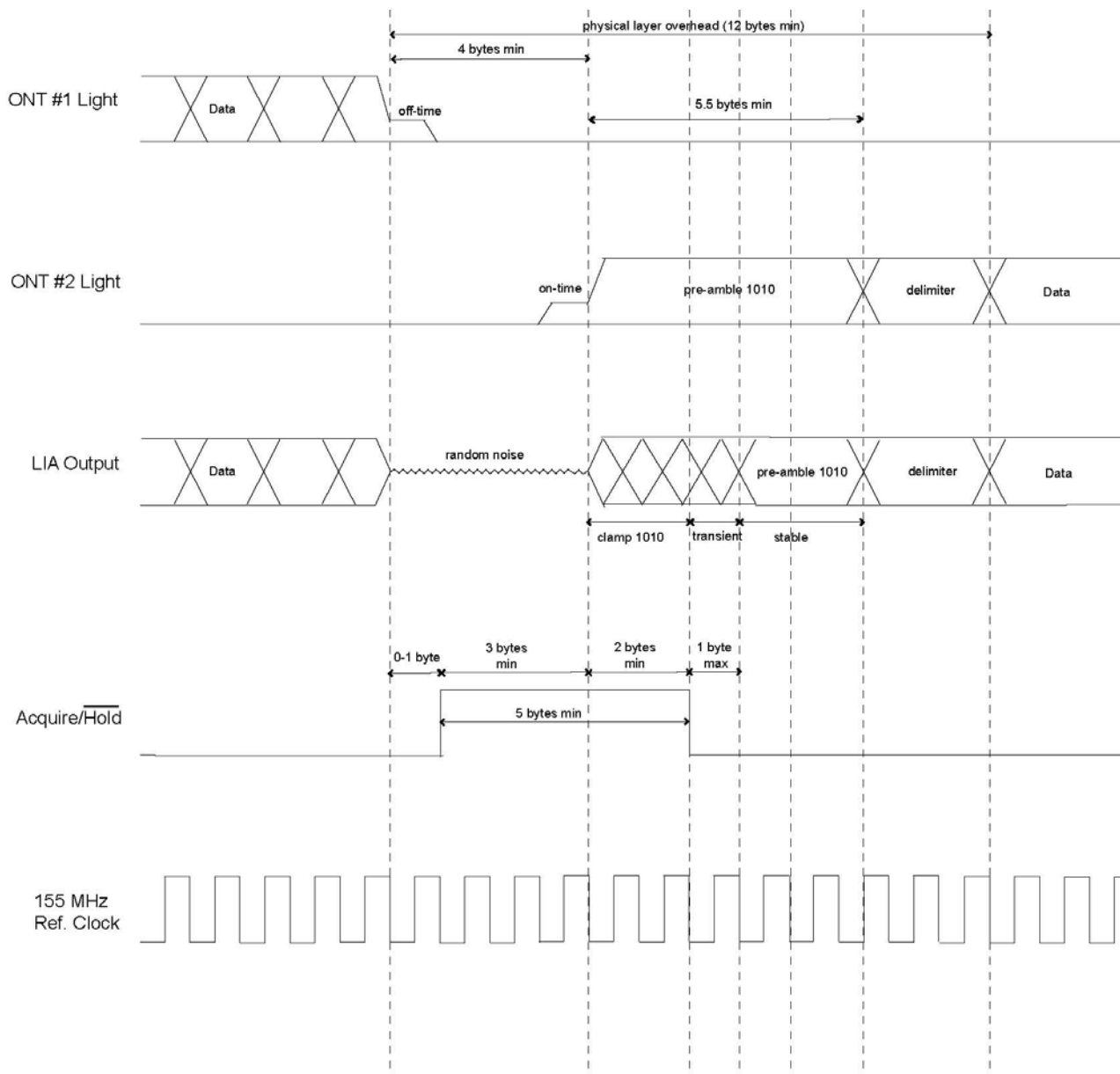


Figure 2. Timing Diagram

**Table 7 – EEPROM Content (A0h)**

| I <sup>2</sup> C A0h Address |           |                    |                               |                          |                                           |
|------------------------------|-----------|--------------------|-------------------------------|--------------------------|-------------------------------------------|
| DEC Addr.                    | HEX Addr. | Field Size (bytes) | Name                          | Default Value            | Description                               |
| 0                            | 00        | 1                  | Identifier                    | 02h                      | Module soldered to motherboard            |
| 1                            | 01        | 1                  | Extended Identifier           | 04h                      | Function defined by serial ID             |
| 2                            | 02        | 1                  | Connector                     | 0Bh (pigtail).           | Optical pigtail                           |
| 3                            | 03        | 8                  | Transceiver                   | 00 00 00 00 00 00 00 00h | Transceiver Code Field, not applicable    |
| 11                           | 0B        | 1                  | Encoding                      | 03h                      | NRZ encoding                              |
| 12                           | 0C        | 1                  | Nominal Bit Rate in 100 MBps  | 19h                      | 2488.32 Mbps                              |
| 13                           | 0D        | 1                  | Reserved                      | 00h                      | Reserved                                  |
| 14                           | 0E        | 1                  | Length (9μm) in km            | 14h                      | 20km                                      |
| 15                           | 0F        | 1                  | Length (9μm) in 100m          | C8h                      | 20km                                      |
| 16                           | 10        | 1                  | Length (50μm) in 10m          | 00h                      | Not Supported                             |
| 17                           | 11        | 1                  | Length (62.5μm) in 10m        | 00h                      | Not Supported                             |
| 18                           | 12        | 1                  | Length (Copper) in m          | 00h                      | Not Supported                             |
| 19                           | 13        | 1                  | Reserved                      | 00h                      | Reserved                                  |
| 20                           | 14        | 16                 | Vendor Name (ASCII)           | "SOURCEPHOTONICS"        | Vendor Name (ASCII)                       |
| 36                           | 24        | 1                  | Reserved                      | 00h                      | Reserved                                  |
| 37                           | 25        | 3                  | Vender IEEE Company ID        | 00 06 B5h                | Source Photonics IEEE ID                  |
| 40                           | 28        | 16                 | Vendor Part Number (ASCII)    | "SFU4348HHPCDE"          | Vendor Part Number (ASCII)                |
| 56                           | 38        | 4                  | Vendor Rev (ASCII)            | 31 20 20 20              | Revision                                  |
| 60                           | 3C        | 2                  | Laser Wavelength in nm        | 05 D2h                   | 1490nm Tx Wavelength                      |
| 62                           | 3E        | 1                  | Reserved                      | 00h                      | Reserved                                  |
| 63                           | 3F        | 1                  | Check Code for Base ID Fields | xxh                      | Checksum from byte 0-62                   |
| 64                           | 40        | 2                  | Options                       | 00 1Ch                   | TX_DIS, TX_Fault, SD                      |
| 66                           | 42        | 1                  | Upper Bit Rate Margin in %    | 00h                      | BR, Max not specified                     |
| 67                           | 43        | 1                  | Lower Bit Rate Margin in %    | 00h                      | BR, Min not specified                     |
| 68                           | 44        | 16                 | Vendor Serial Number (ASCII)  | "xxxxxxxxxxxxxxxx"       | 16 byte Serial number field (ASCII)       |
| 84                           | 54        | 8                  | Date Code                     | xx xx xx xx xx xx 20 20h | Year(2 bytes) month(2 bytes) day(2 bytes) |

|     |    |     |                                   |                     |                                                                        |
|-----|----|-----|-----------------------------------|---------------------|------------------------------------------------------------------------|
| 92  | 5C | 1   | Diagnostic Monitoring Type        | 58h                 | Ext Calibration, Average Power Measurement                             |
| 93  | 5D | 1   | Enhanced Options                  | E0h                 | Optical Alarm/warning implemented<br>Soft TX_DIS, TX_FAULT implemented |
| 94  | 5E | 1   | SFF-8472 Compliance               | 02h                 | Compliance to SFF-8472 Rev 9.4                                         |
| 95  | 5F | 1   | Check Code for Extended ID Fields | xxh                 | Checksum from byte 64-69                                               |
| 96  | 60 | 30  | Vendor Specific                   | "SFU-43-48H-HP-CDE" | SP part number (ASCII)                                                 |
| 126 | 7E | 2   | Vendor Specific                   | 00 00h              | Reserved                                                               |
| 128 | 80 | 128 | Reserved                          | 00....00h           | Reserved; return to 0                                                  |

Note: The "xx" byte should be filled in according to practical case. For more information, please refer to the related document of SFF-8472 Rev 9.5.

**Table 9 – EEPROM Content (A2h)**

| I <sup>2</sup> C A2h Address |           |                    |                       |               |                                                    |
|------------------------------|-----------|--------------------|-----------------------|---------------|----------------------------------------------------|
| DEC Addr.                    | HEX Addr. | Field Size (bytes) | Name                  | Default Value | Description                                        |
| 0                            | 00        | 2                  | Temp High Alarm       | xx xxh        | Temperature high alarm threshold                   |
| 2                            | 02        | 2                  | Temp Low Alarm        | xx xxh        | Temperature low alarm threshold                    |
| 4                            | 04        | 2                  | Temp High Warning     | xx xxh        | Temperature high warning threshold                 |
| 6                            | 06        | 2                  | Temp Low Warning      | xx xxh        | Temperature low warning threshold                  |
| 8                            | 08        | 2                  | Voltage High Alarm    | 94 70h        | 3.8V                                               |
| 10                           | 0A        | 2                  | Voltage Low Alarm     | 6D 60h        | 2.8V                                               |
| 12                           | 0C        | 2                  | Voltage High Warning  | 8C A0h        | 3.6V                                               |
| 14                           | 0E        | 2                  | Voltage Low Warning   | 75 30h        | 3.0V                                               |
| 16                           | 10        | 2                  | Bias High Alarm       | 83 81h        | 110mA                                              |
| 18                           | 12        | 2                  | Bias Low Alarm        | 02 64h        | 2mA                                                |
| 20                           | 14        | 2                  | Bias High Warning     | 77 8Ch        | 100mA                                              |
| 22                           | 16        | 2                  | Bias Low Warning      | 03 96h        | 3mA                                                |
| 24                           | 18        | 2                  | TX Power High Alarm   | xx xxh        | +5.5 dBm                                           |
| 26                           | 1A        | 2                  | TX Power Low Alarm    | xx xxh        | +0.5dBm                                            |
| 28                           | 1C        | 2                  | TX Power High Warning | xx xxh        | +5.0dBm                                            |
| 30                           | 1E        | 2                  | TX Power Low Warning  | xx xxh        | +1.0dBm                                            |
| 32                           | 20        | 2                  | RX Power High Alarm   | FF FFh        | No alarm                                           |
| 34                           | 22        | 2                  | RX Power Low Alarm    | 00 00h        | No alarm                                           |
| 36                           | 24        | 2                  | RX Power High Warning | FF FFh        | No alarm                                           |
| 38                           | 26        | 2                  | RX Power Low Warning  | 00 00h        | No alarm                                           |
| 40                           | 28        | 16                 | Reserved              | 00....000h    | Reserved                                           |
| 56                           | 38        | 4                  | RX_PWR(4) Calibration | xx xx xx xxh  | 4 <sup>th</sup> order RSSI calibration coefficient |

|     |      |      |                            |              |                                                                |
|-----|------|------|----------------------------|--------------|----------------------------------------------------------------|
| 60  | 3C   | 4    | RX_PWR(3) Calibration      | xx xx xx xxh | 3 <sup>rd</sup> order RSSI calibration coefficient             |
| 64  | 40   | 4    | RX_PWR(2) Calibration      | xx xx xx xxh | 2nd order RSSI calibration coefficient                         |
| 68  | 44   | 4    | RX_PWR(1) Calibration      | xx xx xx xxh | 1 <sup>st</sup> order RSSI calibration coefficient             |
| 72  | 48   | 4    | RX_PWR(0) Calibration      | xx xx xx xxh | 0 <sup>th</sup> order RSSI calibration coefficient             |
| 76  | 4C   | 2    | TX_I(Slope) Calibration    | 01 A3h       | Slope for Bias calibration                                     |
| 78  | 4E   | 2    | TX_I(Offset) Calibration   | 00 00h       | Offset for Bias calibration                                    |
| 80  | 50   | 2    | TX_PWR(Slope) Calibration  | xx xxh       | Slope for TX Power calibration                                 |
| 82  | 52   | 2    | TX_PWR(Offset) Calibration | xx xxh       | Offset for TX Power calibration                                |
| 84  | 54   | 2    | T(Slope) Calibration       | 01 00h       | Slope for Temperature calibration                              |
| 86  | 56   | 2    | T(Offset) Calibration      | xx xxh       | Offset for Temperature calibration, in units of 256ths C       |
| 88  | 58   | 2    | V(Slope) Calibration       | 01 00h       | Slope for VCC calibration                                      |
| 90  | 5A   | 2    | V(Offset) Calibration      | 00 00h       | Offset for VCC calibration                                     |
| 92  | 5C   | 3    | Reserved                   | 00h          | reserved                                                       |
| 95  | 5F   | 1    | Checksum                   | xxh          | Checksum                                                       |
| 96  | 60   | 2    | Transceiver Temperature    | xx xxh       | Temperature in C/256                                           |
| 98  | 62   | 2    | Supply Voltage             | xx xxh       | Vcc                                                            |
| 100 | 64   | 2    | TX Bias Current            | xx xxh       | BIASMON                                                        |
| 102 | 66   | 2    | TX Optical Output Power    | xx xxh       | Back facet monitor                                             |
| 104 | 68   | 2    | RX Optical Input Power     | xx xxh       | RSSI                                                           |
| 106 | 6A   | 2    | Reserved                   | 0000h        | Reserved                                                       |
| 108 | 6C   | 2    | Reserved                   | 0000h        | Reserved                                                       |
| 110 | 6E.7 | 1bit | TX_DIS State               | x            | Digital state of the TX Disable Input Pin.                     |
|     | 6E.6 | 1bit | Soft TX Disable            | x            | Read/write bit that allows software disable of laser.          |
|     | 6E.5 | 1bit | Reserved.                  | 0            | Reserved.                                                      |
|     | 6E.4 | 1bit | Rate Select State          | 0            | NOT SUPPORTED.                                                 |
|     | 6E.3 | 1bit | Rate Select                | 0            | NOT SUPPORTED.                                                 |
|     | 6E.2 | 1bit | TX_FAULT                   | x            | Digital state of the TX Fault Output Pin.                      |
|     | 6E.1 | 1bit | LOS                        | 0            | Digital state of the LOS Output Pin. NOT SUPPORTED             |
|     | 6E.0 | 1bit | Data_ready_bar             | x            | Indicates transceiver has achieved power up and data is ready. |
| 111 | 6F.7 | 1bit | Reserved                   | 0            | Reserved                                                       |
|     | 6F.6 | 1bit | Reserved                   | 0            | Reserved                                                       |
|     | 6F.5 | 1bit | Reserved                   | 0            | Reserved                                                       |
|     | 6F.4 | 1bit | Reserved                   | 0            | Reserved                                                       |

|     |      |      |                               |     |                                                 |
|-----|------|------|-------------------------------|-----|-------------------------------------------------|
|     | 6F.3 | 1bit | Reserved                      | 0   | Reserved                                        |
|     | 6F.2 | 1bit | INTERRUPT_NOT                 | x   | Interrupt state (active low)                    |
|     | 6F.1 | 1bit | MODE_EN                       | 0   | TX FAULT pin enable                             |
|     | 6F.0 | 1bit | APD_SHUTDOWN                  | x   | APD shut-down latch. Write 0 to clear condition |
| 112 | 70.7 | 1bit | Temperature too high alarm    | x   | Temperature too high alarm                      |
|     | 70.6 | 1bit | Temperature too low alarm     | x   | Temperature too low alarm                       |
|     | 70.5 | 1bit | VCC too high alarm            | x   | VCC too high alarm                              |
|     | 70.4 | 1bit | VCC too low alarm             | x   | VCC too low alarm                               |
|     | 70.3 | 1bit | BIASMON too high alarm        | x   | BIASMON too high alarm                          |
|     | 70.2 | 1bit | BIASMON too low alarm         | x   | BIASMON too low alarm                           |
|     | 70.1 | 1bit | BFMON too high alarm          | x   | BFMON too high alarm                            |
|     | 70   | 1bit | BFMON too low alarm           | x   | BFMON too low alarm                             |
| 113 | 71.7 | 1bit | RSSI too high alarm           | x   | RSSI too high alarm                             |
|     | 71.6 | 1bit | RSSI too low alarm            | x   | RSSI too low alarm                              |
|     | 71.5 | 1bit | Reserved interrupt status bit | x   | Reserved interrupt status bit                   |
|     | 71.4 | 1bit | Reserved interrupt status bit | x   | Reserved interrupt status bit                   |
|     | 71.3 | 1bit | Reserved interrupt status bit | x   | Reserved interrupt status bit                   |
|     | 71.2 | 1bit | Reserved interrupt status bit | x   | Reserved interrupt status bit                   |
|     | 71.1 | 1bit | Reserved interrupt status bit | x   | TX Fail went HIGH                               |
|     | 71   | 1bit | Reserved interrupt status bit | x   | APD Shutdown event detected                     |
| 114 | 72   | 1    | Reserved                      | 00h | Interrupt Mask for ISRC0                        |
| 115 | 73   | 1    | Reserved                      | 00h | Interrupt Mask for ISRC1                        |
| 116 | 74.7 | 1bit | Temperature too high warning  | x   | Temperature too high warning                    |
|     | 74.6 | 1bit | Temperature too low warning   | x   | Temperature too low warning                     |
|     | 74.5 | 1bit | VCC too high warning          | x   | VCC too high warning                            |
|     | 74.4 | 1bit | VCC too low warning           | x   | VCC too low warning                             |
|     | 74.3 | 1bit | BIASMON too high warning      | x   | BIASMON too high warning                        |
|     | 74.2 | 1bit | BIASMON too low warning       | x   | BIASMON too low warning                         |

|     |      |      |                         |                             |                                                         |
|-----|------|------|-------------------------|-----------------------------|---------------------------------------------------------|
|     | 74.1 | 1bit | BFMON too high warning  | x                           | BFMON too high warning                                  |
|     | 74   | 1bit | BFMON too low warning   | x                           | BFMON too low warning                                   |
| 117 | 75.7 | 1bit | RX Power High Warning   | x                           | RSSI too high warning                                   |
|     | 75.6 | 1bit | RX Power Low Warning    | x                           | RSSI too low warning                                    |
|     | 75.5 | 1bit | Reserved                | 0                           | Reserved                                                |
|     | 75.4 | 1bit | Reserved                | 0                           | Reserved                                                |
|     | 75.3 | 1bit | Reserved                | 0                           | Reserved                                                |
|     | 75.2 | 1bit | Reserved                | 0                           | Reserved                                                |
|     | 75.1 | 1bit | Reserved                | 0                           | Reserved                                                |
|     | 75   | 1bit | Reserved                | 0                           | Reserved                                                |
| 118 | 76   | 1    | Reserved                | 00h                         | Interrupt Mask for ISRC2                                |
| 119 | 77   | 1    | Reserved                | 00h                         | Interrupt Mask for ISRC3                                |
| 120 | 78   | 8    | Vendor Specific         | 00 00 00 00<br>00 00 00 00h | Vendor Specific                                         |
| 128 | 80   | 120  | User EEPROM             | all 00h                     | User EEPROM                                             |
| 248 | F8   | 1    | ER Control              | 00h                         | Default 00h                                             |
| 249 | F9   | 1    | ALU proprietary ID,MSB  | 02h                         | ALU Specific Control Address, 02 for B+, active high SD |
| 250 | FA   | 1    | ALU proprietary IDs,LSB | 01h                         | ALU Specific Control Address, 01 for digital RSSI       |
| 251 | FB   | 5    | Vendor specific         | 00 00 00 00<br>00h          | Vendor specific                                         |

**VIEW A**  
SCALE: 2/1  
4 PLACES

**TOP VIEW**  
RECOMMENDED PCB HOLE MOUNTING PATTERN  
SCALE: 2/1

**BOTTOM VIEW**

### Figure 3, Mechanical Diagram

## Warnings

**Handling Precautions:** This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures.

**Laser Safety:** Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation.

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