

## Свойства

850нм VCSEL лазер, PIN фотоприемник

до 70м на OM3 многомодовом оптическом кабеле, до 100м на OM4 многомодовом оптическом кабеле

цифровая диагностика (DDMI)

дуплексный LC коннектор

## Применение

25.78 Gb/s single lane 100GE SR4

### ● Максимальные параметры

Parameter	Symbol	Min.	Typical	Max.	Unit
Storage Temperature	$T_S$	-40		+85	°C
Case Operating Temperature	$T_A$	0		70	°C
Maximum Supply Voltage	$V_{CC}$	0		3.5	V
Relative Humidity	RH	0		85	%

### ● Электрические характеристики (TOP = 0 to 70 °C, VCC = 3.135 to 3.465 Volts)

Parameter	Symbol	Min.	Typical	Max.	Unit	Note
Supply Voltage	$V_{CC}$	3.135		3.465	V	
Supply Current	$I_{CC}$			300	mA	
Power Consumption	$P$			1	W	
Data Rate	$R$	-	25.78		Gb/s	
<b>Transmitter Section:</b>						
Input differential impedance	$R_{in}$		100		$\Omega$	1
Tx Input Single Ended DC Voltage Tolerance (Ref VeeT)	$V$	-0.3		4	V	
Differential input voltage swing	$V_{in,pp}$	200		600	mV	2
Transmit Disable Voltage	$V_D$	2		$V_{CC}$	V	3
Transmit Enable Voltage	$V_{EN}$	Vee		Vee+0.8	V	
<b>Receiver Section:</b>						
Single Ended Output Voltage Tolerance	$V$	-0.3		4	V	
Rx Output Diff Voltage	$V_O$	300		900	mV	

LOS Fault	$V_{LOS\ fault}$	2		$V_{CCH\ OST}$	V	4
LOS Normal	$V_{LOS\ norm}$	Vee		Vee+0.8	V	4

Note:

1. Connected directly to TX data input pins. AC coupling from pins into laser driver IC.
2. Per SFF-8431 Rev 3.0
3. Into 100 ohms differential termination.
4. LOS is an open collector output. Should be pulled up with 4.7k – 10kΩ on the host board. Normal operation is logic 0; loss of signal is logic 1. Maximum pull-up voltage is 3.5V.

● **Оптические параметры** (TOP = 0 to 70 °C, VCC = 3.135 to 3.465 Volts)

Parameter	Symbol	Min.	Typical	Max.	Unit	Note
<b>Transmitter Section:</b>						
Center Wavelength	$\lambda_t$	840	850	860	nm	
spectral width	$\Delta\lambda$			0.8	nm	
Average Optical Power	$P_{avg}$	-7.6		+2.4	dBm	1
Laser Off Power	$P_{off}$			-30	dBm	
Extinction Ratio	ER	2.0			dB	
<b>Receiver Section:</b>						
Center Wavelength	$\lambda_r$	840	850	860	nm	
Receiver Sensitivity (OMA)@25.78Gb/s	Sen			-10.3	dBm	2
Los Assert	$LOS_A$	-30		-	dBm	
Los Dessert	$LOS_D$			-11	dBm	
Los Hysteresis	$LOS_H$	0.5		5	dB	
Overload	Sat	3			dBm	3

Note:

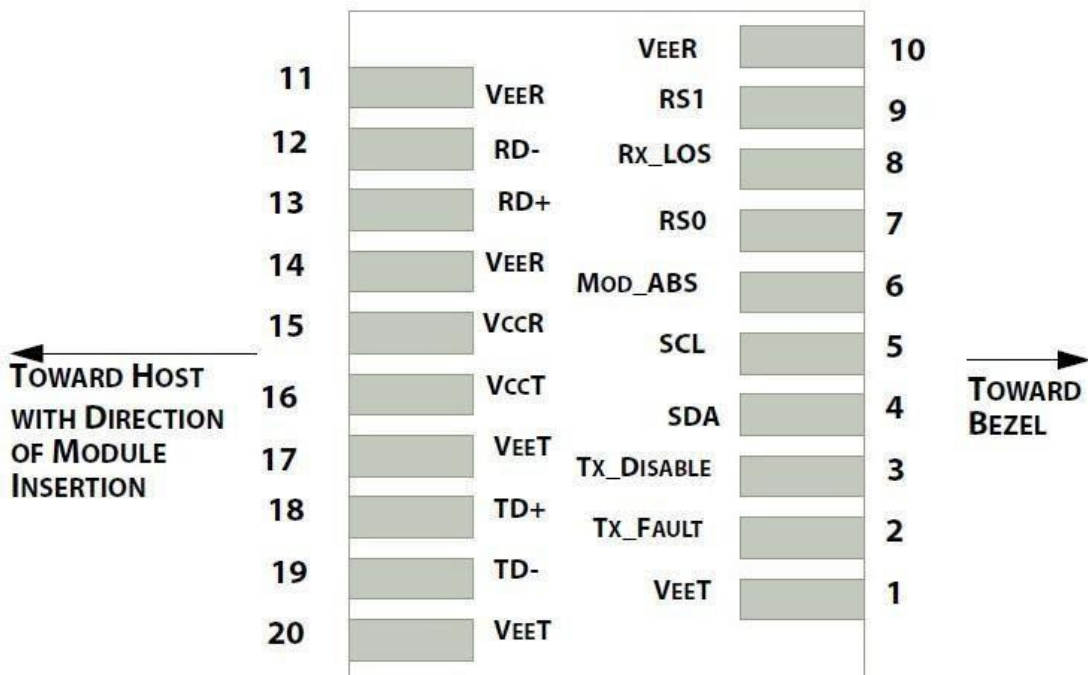
1. Average power figures are informative only, per IEEE802.3by.
2. Average Receiver Sensitivity is information. Shall be measured with conformance test signal for BER=5E-5.
3. Receiver overload specified in OMA and under the worst comprehensive stressed condition.

● **Timing Characteristics**

Parameter	Symbol	Min.	Typical	Max.	Unit
TX_Disable Assert Time	$t_{off}$			100	ms
TX_Disable Deassert Time	$t_{on}$			100	ms
Time to Initialize Include Reset of TX_FAULT	$t_{int}$			300	ms
TX_FAULT Assert Time	$t_{fault}$			100	ms
Receiver Loss of Signal Assert Time	$t_{Loss\_on}$			100	ms
Receiver Loss of Signal Deassert Time	$t_{Loss\_off}$			100	ms

● Контакты разъема SFP28 slot

Diagram of Host Board Connector Block Pin Numbers and Name



● **Описание контактов**

PIN #	Name	Function	Notes
1	VeeT	Module transmitter ground	1
2	Tx Fault	Module transmitter fault	2
3	Tx Disable	Transmitter Disable; Turns off transmitter laser output	3
4	SDL	2 wire serial interface data input/output (SDA)	4
5	SCL	2 wire serial interface clock input (SCL)	4
6	MOD-ABS	Module Absent, connect to VeeR or VeeT in the module	2
7	RS0	Rate select0: module inputs and are pulled low to VeeT with > 30 kΩ resistors in the module	
8	LOS	Receiver Loss of Signal Indication	
9	RS1	Rate select1: module inputs and are pulled low to VeeT with > 30 kΩ resistors in the module.	
10	VeeR	Module receiver ground	1
11	VeeR	Module receiver ground	1
12	RD-	Receiver inverted data out put	
13	RD+	Receiver non-inverted data out put	
14	VeeR	Module receiver ground	1
15	VccR	Module receiver 3.3V supply	
16	VccT	Module transmitter 3.3V supply	
17	VeeT	Module transmitter ground	1
18	TD+	Transmitter non-inverted data out put	
19	TD-	Transmitter inverted data out put	
20	VeeT	Module transmitter ground	1

Note:

1. The module ground pins shall be isolated from the module case.
2. This pin is an open collector/drain output pin and shall be pulled up with 4.7K-10Kohms to Host\_Vccon the host board.
3. This pin shall be pulled up with 4.7K-10Kohms to VccT in the module.
4. This pin is an open collector/drain output pin and shall be pulled up with 4.7K-10Kohms to Host\_Vccon the host board.

● Размеры

