WTSP-M85-02D(I)-1

25G SFP28 Transceiver 850nm MMF 400m LC

Part Number **WTSP-M85-02D-1**	**Wavelength 850**	**Reach 300m** **OM3/400m OM4**
Temperature **0°C~+70°C**		



1. Product Overview

Features

- 25Gbps serial optical interface
- 850nm VCSEL transmitter and GaAs PIN PD receiver
- Rate Adaptation
- Operating temperature：
- Commercial (0°C~70°C)
- Industrial (-40°C~85°C)
- Maximum link length of 300m via OM3 multimode Fiber (MMF)
- Maximum link length of 400m via OM4 multimode Fiber (MMF)

Applications

- Inter Rack Connection
- High-speed Servers
- High-performance Computing Clusters
- SAN, Routers, Hubs, Load Balancer

2. Ordering Information

Part Number	Data Rate (Gb/s)	Wavelength(nm)	Transmission Distance(m)	Fiber Type	Connector	Temperature (oC) (Operating Case)
WTSP-M85-02D-1	25.78	850	300m OM3/400m OM4	MMF	LC	0°C~+70°C
WTSP-M85-02DI-1	25.78	850	300m OM3/400m OM4	MMF	LC	-40°C~+85°C

3. Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit	Notes
Storage Temperature	Ts	-40		85	°C
Relative Humidity	RH	0		85	%

4. Recommended Operating Conditions

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Case Temperature	TC	WTSP-M85-02D-1	0		70	°C
Case Temperature	TC	WTSP-M85-02DI-1	-40		85	°C
Power Supply Voltage	VCC		3.15	3.30	3.45	V
Bit Rate	BR			10.3125G&25.78125		Gbps

5. Optical Parameters

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter	Transmitter
Center wavelength	λ		840		860	nm
RMS spectral width	Pm				0.6	nm
Average optical power	Pavg		-5		2.4	dBm
Optical modulation amplitude	OMA		-5		3	dBm
Average launch power of OFF transmitter	Poff				-30	dBm
Extinction ratio	ER		3			dB
Optical return loss tolerance					12	dB
Receiver	Receiver	Receiver	Receiver	Receiver	Receiver	Receiver
Center wavelength	λ		840	850	860	nm
Damage threshold			3.4			dBm
Receive power overload			2.4			dBm
Receiver reflectance					-12	dB
Receiver sensitivity	SENS	Note1			-10.3	dBm
LOS Assert	LOSA		-30			dBm
LOS De-Assert	LOSD				-13	dBm
LOS Hysteresis	LOSH		0.5			dB

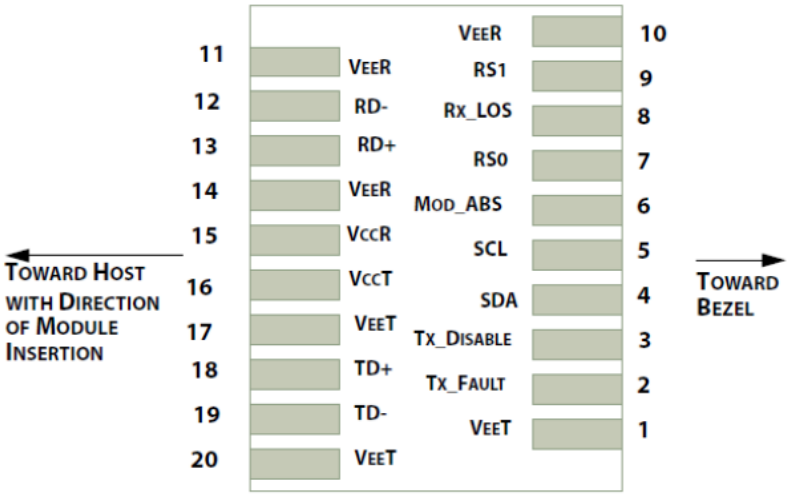
6. Electrical Characteristics

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Power Consumption					1	W
Supply Current	Icc				300	mA

7. Digital Diagnostics

Parameter	Accuracy	Unit
Internally measured transceiver temperature	+/-3	deg.C
Internally measured transceiver supply voltage	+/-3	%
Measured Tx bias current	+/-10	%
Measured Tx output power	+/-3	dB
Measured Rx received average optical power	+/-3	dB

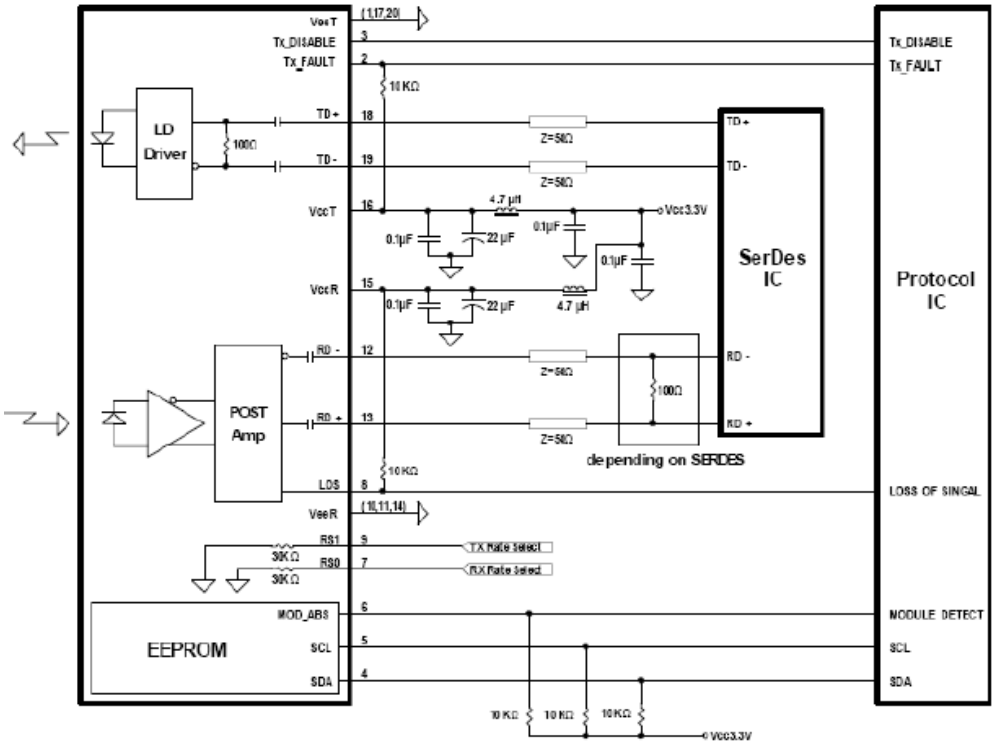
8. Pin Assignment



9. Pin Descriptions

PIN	Logic	Symbol	Name / Description
1		VeeT	Module Transmitter Ground
2	LVTTL-O	TX_Fault	Module Transmitter Fault
3	LVTTL-I	TX_Dis	Transmitter Disable; Turns off transmitter laser output
4	LVTTL-I/O	SDA	2-Wire Serial Interface Data Line
5	LVTTL-I	SCL	2-Wire Serial Interface Clock
6		MOD_DEF0	Module Definition, Grounded in the module
7	LVTTL-I	RS0	Receiver Rate Select
8	LVTTL-O	RX_LOS	Receiver Loss of Signal Indication Active LOW
9	LVTTL-I	RS1	Transmitter Rate Select (not used)
10		VeeR	Module Receiver Ground
11		VeeR	Module Receiver Ground
12	CML-O	RD-	Receiver Inverted Data Output
13	CML-O	RD+	Receiver Data Output
14		VeeR	Module Receiver Ground
15		VccR	Module Receiver 3.3 V Supply
16		VccT	Module Receiver 3.3 V Supply
17		VeeT	Module Transmitter Ground
18	CML-I	TD+	Transmitter Non-Inverted Data Input
19	CML-I	TD-	Transmitter Inverted Data Input
20		VeeT	Module Transmitter Ground

10. Electrical Interface



11. Revision History

Version	Date	Description	Prepared by
V6	2025	Unified WincoTek datasheet format	WincoTek
V6.1	2026-10-23	Engineering and format review	WincoTek