

FIBER OPTIC 10 Gbps SFP+ TRANSCEIVER

- * SFP package with LC connector
- * 1310nm DFP laser and PIN photo detector
- * Up to 120Km transmission on SMF
- * Power dissipation <1W
- * LVPECL compatible data input/output interface
- * Low EMI and excellent ESD protection
- * Laser safety standard IEC-60825 compliant
- * Compatible with RoHS
- * Compatible SFF-8472



Absolute Maximum Rating

Storage Temperature (°C)	-45 ~ +85 (Tst)
Supply Voltage (V)	0 ~ +3.6 (Vcc)
Operating Relative Humidity (%)	0 ~ 85 (RH)

Operation Environment

Parameters	Symbol	Min.	Typical	Max.
Supply Voltage (V)	Vcc	3.15	-	3.45
Operating Case Temperature (°C)	Tc	-5	-	+70
Commercial				
Power Dissipation (W)	-	-	-	1
Data Rate (Gbps)	-	-	10.3125	-

Optical Characteristics (Transmitter Section)

Parameters	Min.	Typical	Max.	Units
Center Wavelength (λ_0)	1290	1310	1330	nm
Side-Mode Suppression Ratio (SMSR)	35	-	-	dB
Average Output Power (Po)	-8	-	+0.5	dBm
Extinction Ratio (Er)	3.5	-	-	dB
Dispersion Penalty	-	-	3.2	dB
Relative Intensity Noise (RIN _{12OMA})	-	-	-128	dB/Hz
Total jitter (Tj)	IEEE 802.3ae			

HONG KONG

Romatecsans International Limited
7/F., Catic Building, No. 44 Tsun Yip
Street, Kowloon, Hong Kong
Tel. +852 8199 9706
asia@romatecsans.com

CHILE

Importadora y Exportadora Romatecsans Ltda.
Carmen Farina 6758, Vitacura,
Santiago, Chile
Tel.: +56 22 9797 922
ventas@romatecsans.com

sales@romatecsans.com
www.romatecsans.com



TECHNICAL SPECIFICATION

Optical Characteristics (Receiver Section)				
Parameters	Min.	Typical	Max.	Units
Center Wavelength (λ_0)	-	1310	-	nm
Receiver Sensitivity (Rsen)	-	-	-12.5	dBm
Receiver Overload (Rov)	0	-	-	dBm
Return Loss	12	-	-	dB
LOS Assert (LOSA)	-20	-	-	dBm
LOS Dessert (LOSD)	-	-	-17	dBm
LOS Hysteresis	0.5	-	4	

(Ambient Operating Temperature 0°C to +70°C, Vcc = 3.3 V)

Electrical Characteristics (Transmitter Section)					
Parameters	Min.	Typical	Max.	Units	
Input Differential Impedence (Zin)	90	100	110	Ohm	
Data Input Swing Differential (Vin)	180	-	700	mV	
TX Disable	Disable	2.0	-	Vcc	V
	Enable	0	-	0.8	V
TX Fault	Assert	2.0	-	Vcc	V
	Deassert	0	-	0.8	V

Electrical Characteristics (Receiver Section)					
Output Differential Impedence (Zout)	-	100		Ohm	
Data Input Swing Differential (Vout)	300	-	800	mV	
Rx_LOS	Assert	2.0	-	Vcc	V
	Deassert	0	-	0.8	V

EEPROM INFORMATION (A0)				
Addr	Field Size (Bytes)	Name of Field	HEX	Description
0	1	Identifier	03	SFP
1	1	Ext. Identifier	04	MOD4
2	1	Connector	07	LC
3 ~ 10	8	Transceiver	10 00 00 00 00 00 00 00	Transmitter Code
11	1	Encoding	'06	64B66B
12	1	BR, nominal	67	10000Mbps
13	1	Reserved	00	-

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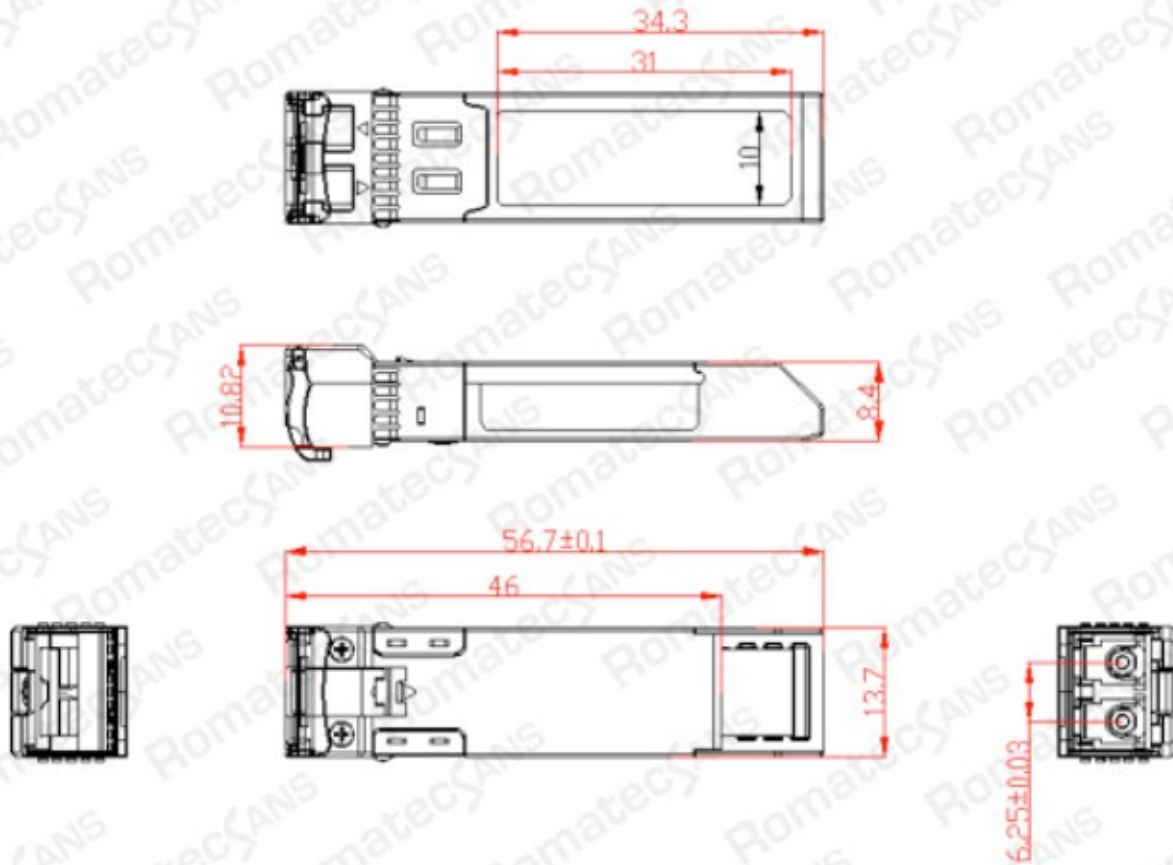
sales@romatecsans.com
www.romatecsans.com



EEPROM INFORMATION (A0)				
Addr	Field Size (Bytes)	Name of Field	HEX	Description
14	1	Length (9um) - km	0A	-
15	1	Length (9um)	00	-
16	1	Length (50um)	00	-
17	1	Length (62.5um)	00	-
18	1	Length (copper)	00	-
19	1	Reserved	00	-
20 ~ 35	16	Vendor name	57 49 4E 54 4F 50 20 20 20 20 20 20 20 20 20 20	Romatecsans
36	1	Reserved	0	-
37 ~ 39	3	Vendor OUI	00 00 00	-
40 ~ 55	16	Vendor PN	XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX	ASC II
56 ~ 59	4	Vendor rev	31 2E 30 20	V1.0
60 ~ 61	2	Wavelength	05 1E	1310nm
62	1	Reserved	00	-
63	1	CC BASE	XX	Check sum of byte 0~62
64 ~ 65	2	Options	00 1A	LOS, TX_DISABLE, TX_FAULT
66	1	BR, Max	00	-
67	1	BR, Min	00	-
68 ~ 83	16	Vendor SN	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	Unspecified
84 ~ 91	8	Vendor date code	XX XX XX XX 20	Year, Month, Day
92 ~ 94	3	Reserved	0	-
95	1	CC_EXT	XX	Check sum of byte 64~94
96 ~ 255	160	Vendor specific	-	-

Diagnostics			
Parameter	Range	Accuracy	Cablibration
Temperature (°C)	-10 ~ +75	±3	Internal
Voltage (V)	0 ~ Vcc	0.1	Internal
Bias Current (mA)	0 ~ 100	0.5	Internal
Tx Power (dBm)	-8 ~ +1	±1	Internal
Rx Power (dBm)	-18 ~ 0	±1	Internal

Outline Drawing



ORDERING INFORMATION

SFP Type	Fiber type		DDM		Distance				Quantity of ports	
105SFP	M	Multimode	D	DDM	0.2	2 KM	4	40 KM	S	Simplex
	S	Singlemode			1	10 KM	8	80 KM	D	Duplex
					2	20 KM	12	120 KM		

ORDERING INFORMATION EXAMPLE

10SFP	S	D	12	D
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Configuration: SFP+ 10 Gbps Singlemode with DDM 120KM Duplex LC

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