

TRM7033

10Gbit/s External Modulator integrated Laser Transmitter Module

All specifications described herein are subject to change without notice.

FEATURES

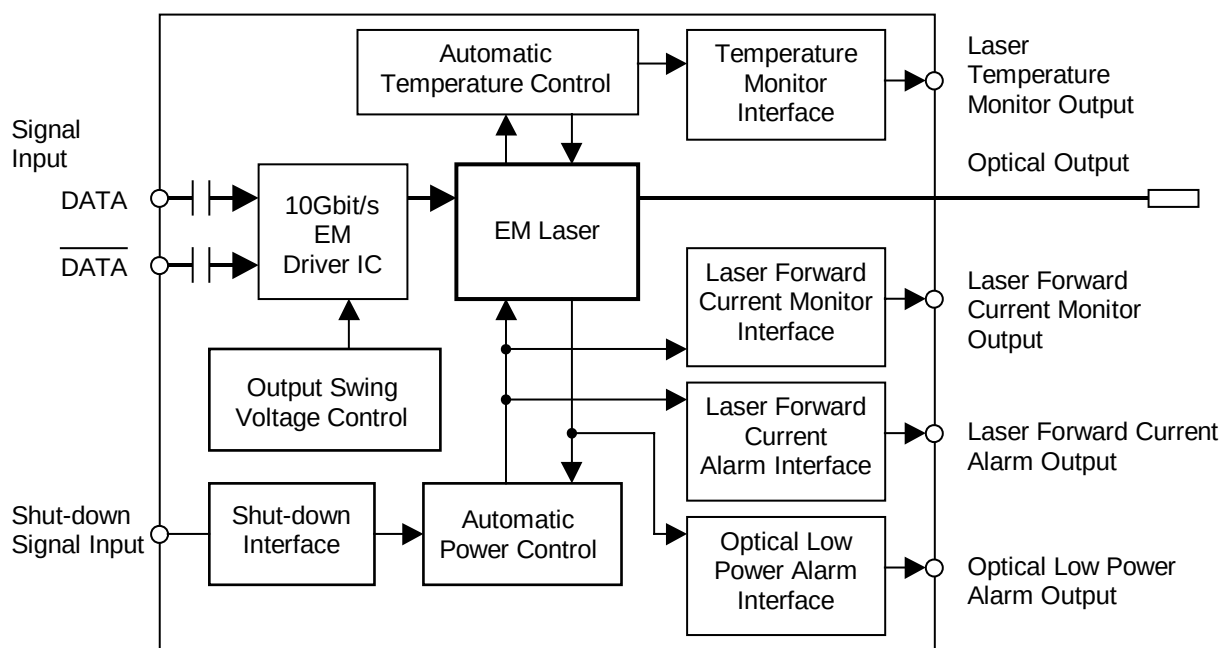
- **10Gbit/s intra-office applications**
- **Strained MQW DFB laser with a monolithically integrated external modulator**
- **Average output power: -6 dBm Min.**
- **Low power consumption: 4.0 W Typ.**
- **Operating case temperature range; 0 to 65°C**
- **Low power alarm and performance monitor functions**
- **Compact 40-pin package with high frequency SMA connectors; 75 x 117 x 23.2 mm³**

DESCRIPTION

General

The TRM7033 is an external modulator integrated DFB laser transmitter module, which operates at the data rate of 10Gbit/s for intra-office applications.

Block Diagram



PERFORMANCE SPECIFICATIONS**Optical Characteristics (Tc = 0 to 65°C)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions(Note)
Average Output Power	Po	-6.0		0	dBm	Point S
Peak Wavelength	λ_p	1,530	-	1,560	nm	
Extinction Ratio	ER	8.2	-	-	dB	
Side-mode Suppression Ratio	Sr	30	33	-	dB	
Optical Waveform	-	TBD			-	

Note; Unless otherwise specified, 9.95328Gbit/s NRZ data rate, 50% mark density, PRBS = 2³¹-1, VEE1 = -7.35V±5%, VEE2 = -5.2V±5%, VCC = +5.0V±5%, VEE3 = -2.0V±5%

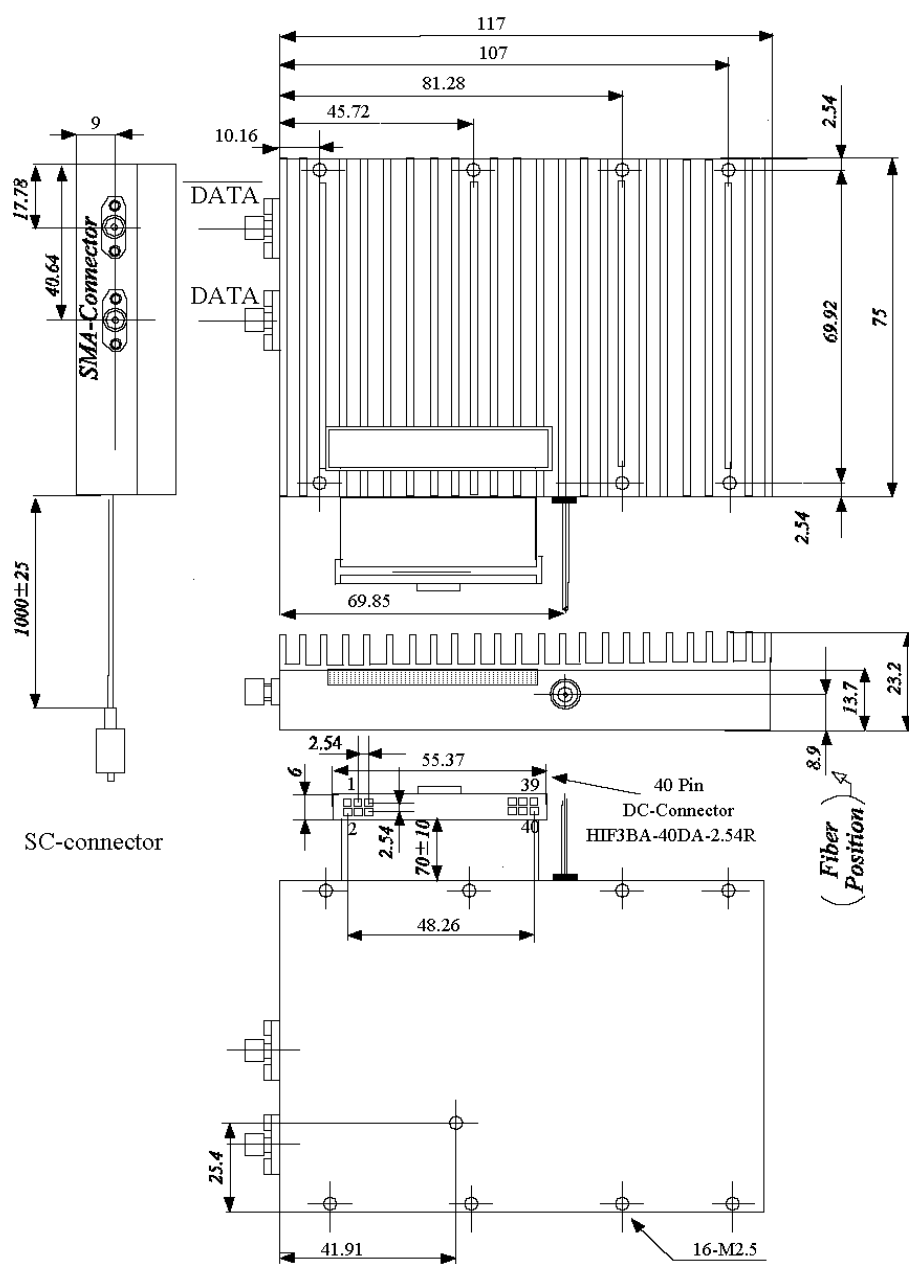
Electrical Characteristics (Tc = 0 to 65°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions(Note)
Data Input Voltage	Vin	400	-	1,000	mVpp	
DC Power Supply Voltage	VCC	4.75	5.00	5.25	V	
	VEE1	-7.72	-7.35	-6.98	V	
	VEE2	-5.45	-5.20	-4.95	V	
	VEE3	-2.10	-2.00	-1.90	V	
DC Power Supply Current	ICC	-	-	800	mA	
	IEE1	-	-	640	mA	
	IEE2	-	-	600	mA	
	IEE3	-	-	1,300	mA	
Power Consumption	Pc	-	4.0	10.0	W	
Low Power Alarm – Low	Vopt(L)	-	-	0.5	V	Normal
Low Power Alarm – High	Vopt(H)	4.2	-	-	V	3dB down
Laser Enable Input	VSD(L)	-	-	1.0	V	
Laser Disable Input	VSD(H)	3.5	-	-	V	
Laser Forward Current Alarm – Low	VLFC (L)	-	-	0.5	V	Normal
Laser Forward Current Alarm – High	VLFC(H)	4.2	-	-	V	50% increase

Note; Unless otherwise specified, 9.95328Gbit/s NRZ data rate, 50% mark density, PRBS = 2³¹-1, VEE1 = -7.35V±5%, VEE2 = -5.2V±5%, VCC = +5.0V±5%, VEE3 = -2.0V±5%

Package Dimensions

Dimension: mm



Pin Configuration

DC Connector

Pin	Description	Pin	Description
1	Shut-down Signal Input	21	VEE1 = -7.35V
2	Ground	22	VEE1 = -7.35V
3	Ground	23	VEE2 = -5.2V
4	Ground	24	VEE2 = -5.2V
5	Optical Low Power Alarm Output	25	VEE2 = -5.2V
6	Ground	26	VEE2 = -5.2V
7	Laser Forward Current Alarm Output	27	Ground
8	Ground	28	Ground
9	Laser Forward Current Monitor Output	29	Ground
10	Ground	30	Ground
11	Temperature Monitor Output (+)	31	VEE3 = -2.0V
12	Temperature Monitor Output (-)	32	VEE3 = -2.0V
13	Ground	33	VEE3 = -2.0V
14	Ground	34	VEE3 = -2.0V
15	Ground	35	Ground
16	VCC = +5.0V	36	Ground
17	VCC = +5.0V	37	Ground
18	VCC = +5.0V	38	Ground
19	VEE1 = -7.35V	39	Ground
20	VEE1 = -7.35V	40	Ground
Metal case should be grounded.			