Descriptions

FP ,DFB and C-WDMdesigned for analog applications. The module contains a power monitor photodiode. This laser module complies with telecom requirements described in Telcordiaтм GR-This laser module is manufactured in an ISOтм9002 certified production line.

Features

Low threshold current High side mode suppression ratio High power over wide temperature range Multi-quantum Well (MQW) active laser FP ,DFB and C-WDM (1270~1610nm) wavelength are available Wide temperature or

Applications

Fiber Channel Telecommunication Storage area networks Analog fiber optic links Access networks Long-distance transmitter

Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
LD Reverse Voltage	Vrld	2	V
PD Reverse Voltage	Vrpd	10	V
PD Forward Current	IFPD	2	mA
Operating Temperature	Topr	0 ~ 70	°C
Storage Temperature	Tstg	-40 ~ 85	°C

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit
Threshold Current	lth	-	-	15	mA
		0.5	-	2	
Optical Output Power	Pf	2	-	4	mW
		4	-	10	
		n-20	n	n+20	
Peak Wavelength	λ	n-5	n	n+5	nm

		n-3	n	n+3	
Side mode Suppression Ratio	SMSR	30	35	-	dB
Slope Efficency	SE	0.12	-	-	W/A
Forward Voltage	Vf	-	1.2	1.5	V
Rise / Fall Time	Tr / Tf	-	-	0.3	ns
Tracking Error	ΔPf /Pf	-1.5	-	1.5	dB
PD Monitor Current	lm	100	-	-	μA
PD Dark Current	ldark	-	-	0.1	μA
PD Capacitance	Ct	-	6	15	pF
Isolation	lso	30	-	-	dB

All optical data refer to a coupled $9/125\mu m$ SM fiber

RF Characteristics (Tc=25°C)

Parameter	Symbol	Min	Тур	Max	Unit
	fR	-	1.25	-	GHz
Relaxation Oscillation Frequency		-	2.5	-	GHz
		-	-	10	GHz
Frequency Response	? S ₂₁ ?	-	± 0.5	-	dB
Relative Intensity Noise	RIN	-	-	-155	dB/Hz
Composite Second Order Distortion	cso	-	-	-50	dBc
Composite Triple Beat	СТВ	-	-	-60	dBc
Carrier to Noise Ratio	CNR	51	-	-	dB

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Notes
CW
CW, Ith+25mA, kink free
CW, Ith+25mA, kink free
CW, Ith+35mA, kink free
FP, Po= Pr, CW, TL=25 °C
DFB,Po= Pr, CW, TL=25 °C

CWDM,Po= Pr, CW, TL=25 °C
CW, Pf = Pf(Min), 0 ~ 70°C
TL=25 °C
CW, Pf = Pf(Min)
lbias=Ith, 10~90%
APC, 0 ~ 70°C
CW, Pf = Pf(Min), VRPD = 2V
Vrpd = 5V
VRPD = 5V, f = 1MHz
Tc=over temperature

Test Conditions
FP /DFB Po=5.0 mW
FP /DFB/CWDM Po=5.1 mW
1550/1310 DFB Po=5.0 mW
lf=lop
CW,Po= Pr, f=5 MHz to 1000 MHz, Optical reflection=-40 dB
Measured with 6T-channels with received power –4 dBm.Measured at 6 MHz and 38 MHz.
Measured with 6T-channels with received power –4 dBm.Measured at 25 MHz.
Measured with 6T-channels with received

power –4 dBm.