



## Electrical and Optical Characteristics (at 25°C (T<sub>chip</sub> and T<sub>case</sub>) and Begin of Life (BOL)):

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Operating Power	c.w.	P <sub>op</sub>		500		mW
Operating Current	c.w.	I <sub>op</sub>		800	850	mA
Pulsed Operating Peak Power	< 500ns / duty cycle <5%	P <sub>op</sub>		1500		mW
Pulsed Operating Peak Current	< 500ns / duty cycle <5%	I <sub>op</sub>		2.3		A
Rise and fall time				2.5		nsec
Threshold Current		I <sub>th</sub>		55	70	mA
Forward Voltage	at I <sub>op</sub>	V <sub>op</sub>		1.62	1.95	V
Peak Wavelength λ <sub>peak</sub>	at P <sub>op</sub>	λ	970	975	980	nm
Spectral Width (FWHM)	at P <sub>op</sub> , with FBG	Δλ			1	nm
Optical Power Stability	at I <sub>op</sub> , t = 60 sec	P <sub>op</sub> / t			0.5	%
Polarization extinction ratio	PM fiber version		12			dB
Spectral Shift with Temp.	FBG Temp.	Δ / T			0.02	nm/ °C
Side Mode Suppression	at P <sub>op</sub> , with FBG		-20			dB
Monitor Responsivity		R	0.1	0.5	10	μA / mW
Monitor Dark Current				5	40	nA
TEC Current	chip 25°C, case 70°C	I <sub>TEC</sub>		1.3	1.8	A
TEC Voltage	chip 25°C, case 70°C	V <sub>TEC</sub>		2.3	2.8	V
Thermistor Resistance	T=25°C	R <sub>th</sub>	9.5	10	10.5	kOhm
Thermistor B constant		B	3850	3950	4050	K
Steinhart-Hart-Equation coefficients	C <sub>1</sub> = 1.1292E-03 / C <sub>2</sub> = 2.3411E-04 / C <sub>3</sub> = 8.7755E-08					
Large Signal Modulation Bandwidth				200		MHz

### Fiber Specifications

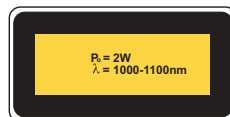
Fiber Type Corning HI1060, single mode (PM Fiber PM980 on request)

## Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage temp.	T <sub>max</sub>	-40	85	°C
Operating case temp.	T <sub>op, case</sub>	-20	60	°C
Operating chip temp.	T <sub>op, chip</sub>	20	40	°C
Soldering temp. (max. 10sec)		260		°C
LD Forward current (c.w.)	I <sub>op, max</sub>		1000	mA
LD Forward current (Pulse 500ns 5% D.C.)			2.5	A
LD Reverse voltage	V <sub>R, max</sub>		2	V
Monitor forward current	I <sub>F, PD</sub>		5	mA
Monitor reverse voltage	V <sub>R, PD</sub>		20	V
TEC Current	I <sub>TEC</sub>		2.6	A
TEC Voltage	V <sub>TEC</sub>		3.5	V
ESD Damage (2)			500	V
Fiber pigtail bend radius	HI 1060		25	mm
Maximum transient (<3μs) forward current			2	A

(2) A standard human body model (1.5kOhm, 100pF) is used for ESD thresholds

## User Safety



Your ideas are welcome.