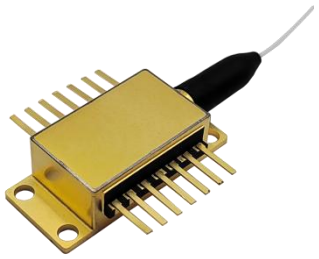
1683nm DFB Butterfly Laser Modules

LTBF1683-1-SM510A



Key Features

- **DFB Laser Chip, Butterfly Package**
- **High Stabilization**
- **Telecordia GR-468-CORE Compliant**
- **RoHS Compliant**

Applications

- **Light Source**
- **Test instrument**

Absolute Maximum Ratings

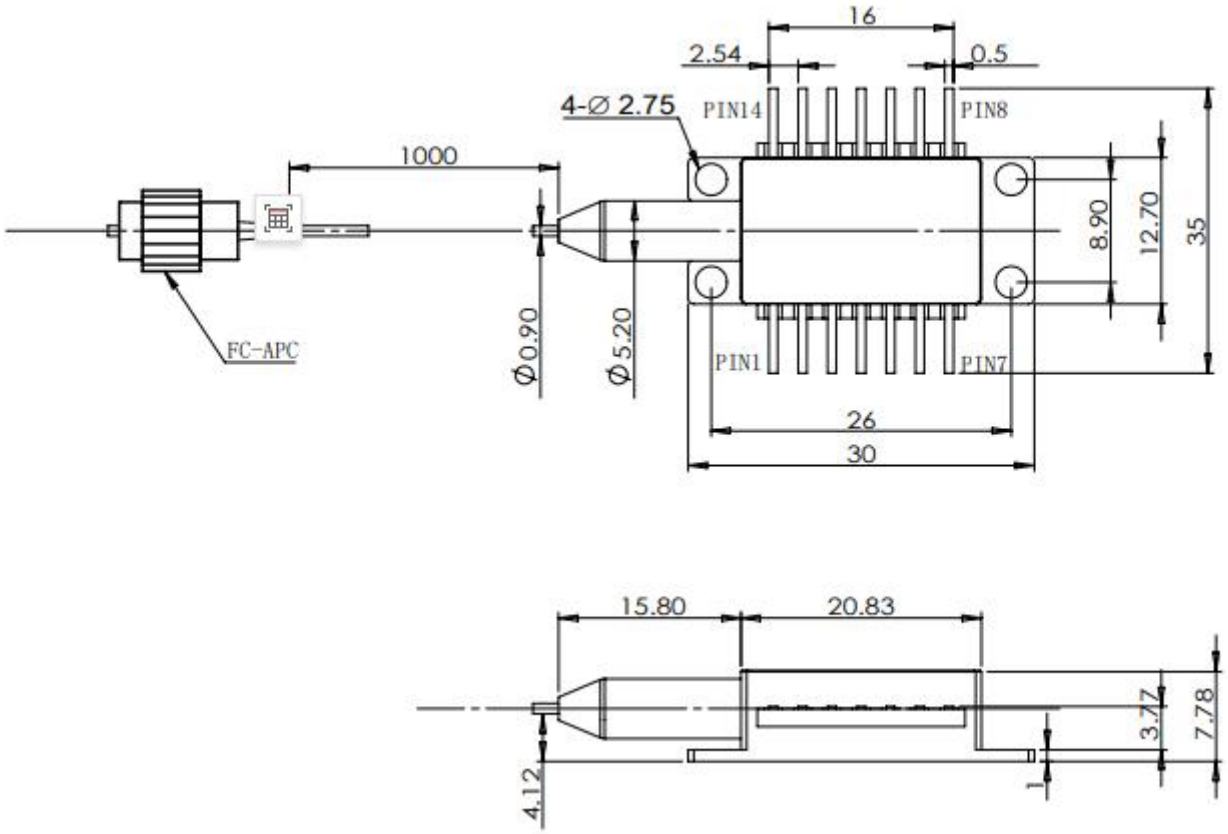
Parameter	Symbol	Min	Max	Unit
Storage Temperature	T_{stg}	-40	85	℃
Ambient Operating Temperature	Tc	-20	70	℃
Relative Humidity	RH	0	85	%
LD Forward Current	I_{LF}	-	110	mA
LD Reverse Voltage	V_{LR}	-	1	V
PD Reverse Voltage	V_R	-	10	V
TEC Current	I_{tec}	-	1.8	A
TEC Voltage	V_{tec}	-	4	V
Lead Soldering Temperature and Time	$T_{sold/t}$	-	260/10	℃ /s
Fiber bend radius	r	30	-	mm

Optical/Electrical Characteristics

Parameter	Symbol	Test Conditions	Min.	Typ	Max.	Unit
Threshold Current	I_{th}	@25℃, CW	-	-	25	mA
Operation Current	I_{op}	-	-	90	110	mA
Optical Output Power	P	@25℃, $I_F=I_{op}$	-	10	-	mW
Monitor Operation Current	I_{MON}	@25℃, CW	50	-	4000	μA
TEC Current	I_{TEC}	-	-	-	1.6	A
Thermistor Resistance	RT	@25℃	9.5	10	10.5	kΩ
Thermistor Temp. Coeff.	α	@25℃	-	-4.39	-	%/℃
Peak Wavelength	c	@25℃, $I_F=I_{op}$	1680	1683	1686	nm
Side Mode Suppression Ratio	SMSR	@25℃, $I_F=I_{op}$	35	-	-	dB
Isolation	ISO	@25℃, CW	30	-	-	dB
Fiber Length	-	-	-	1	-	m
Fiber Core/Cladding/Buffer	-	-	-	9/125/900	-	μm

Package Outline:

Dimensions are in millimeters and (inches)



PIN Description

Type A

Pin	Description	Pin	Description
1	Thermistor	8	Case Ground
2	Thermistor	9	Case Ground
3	Laser (-)	10	Null
4	MPD (+)	11	Laser (+)
5	MPD (-)	12	Laser (-)
6	TEC (+)	13	Laser (+)
7	TEC (-)	14	Null

Ordering Information

Example: LTBF1683-1-SM510A

Family Name	Wavelength	-	Cooled	-	Fiber	Connector	Optical power	PIN Description
LTBF	1683	-	1:with cooled	-	SM	2：SC/APC 5：FC/APC	10:10mW	A: Type A
LTBF	1683	-	1	-	SM	5	10	A