

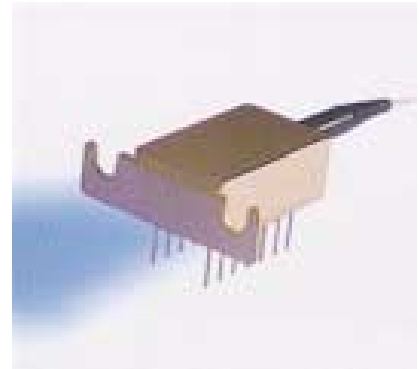
1.29 ÷ 1.33
μmCW output power
> 1.0 mW

LFO-14-i

Description:

LFO-14-i – is a series of optical modules based on Mitsubishi 1310nm MQW InGaAsP/InP Fabry-Perot laser diode and coupled with singlemode optical fiber. Hermetically sealed modules are performed in standard «DIL-14» package with built-in InGaAs monitor photodiode, thermocooler and thermistor. The modules operate in wide temperature range, have stable output power and more than $5 \cdot 10^5$ hours of lifetime.

LFO-14-i – are the best light sources for digital (up to 622Mb/s) fiber-optic communication lines, optical testers, systems of optical synchronization and other applications.

**Absolute maximum ratings:**

Laser diode		Thermocooler	
Max. output power (mW)	1.5	Forward current (mA)	450
Reverse voltage (V)	2.0	Forward voltage (V)	9.0
Monitor photodiode		Environment	
Reverse voltage (V)	10	Operating temperature range (°C)	-40..+55
Forward current (mA)	1.5	Storage temperature range (°C)	-40..+70
Thermistor		Assembly	
Max. current (mA)	0.1	Pin soldering temperature (°C)	200
Voltage drop (V)	10	Pin soldering time (sec)	3.0

Optical and electrical characteristics (T=25°C):

Characteristics	Symbol	Test condition	Min	Typ.	Max	Units
Laser diode						
Output power from fiber end	P_{OP}	I_{OP}	0.8	1.0		mW
Wavelength	λ_{OP}	P_{OP}	1290	1310	1330	nm
Spectral width (FWHM)	$\Delta\lambda$	P_{OP}		1.0	2.0	nm
Threshold current	I_{TH}	CW		5.0	15	mA
Forward current	I_F	P_{OP}		30	40	mA
Forward voltage	U_{OP}	P_{OP}		1.1	1.5	V
Rise time/fall time	τ_R/τ_F	P_{OP}		0.3	0.7	ns
Monitor photodiode						
Monitor current	I_{PD}	$U_{REV}=5.0\text{ V}, P_{OP}$	100	500		μA
Dark current	I_D	$U_{REV}=5.0\text{ V}$		0.01	0.1	μA
Capacitance	C_{PD}	$U_{REV}=5.0\text{ V}, f=1\text{ MHz}$		10	20	pF
Thermistor						
Resistance	R_T	$T=T_{OP}$		10		kΩ
Thermocooler						
Forward current	I_C	P_{OP}			0.35	A
Forward voltage	U_C	P_{OP}			6.5	V
Optical fiber						
Fiber core/cladding diameter	D_C/D_{CL}			9/125		μm
Fiber length	L			400..1500		mm
Optical connector type				«FC»		

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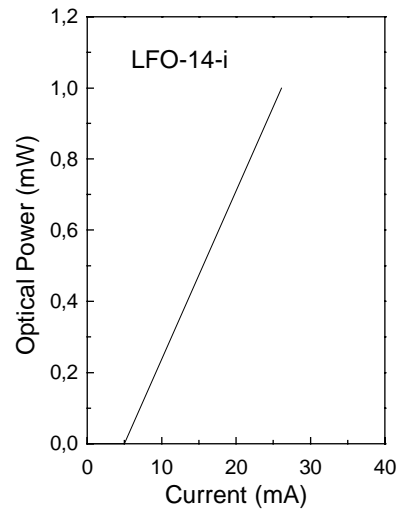
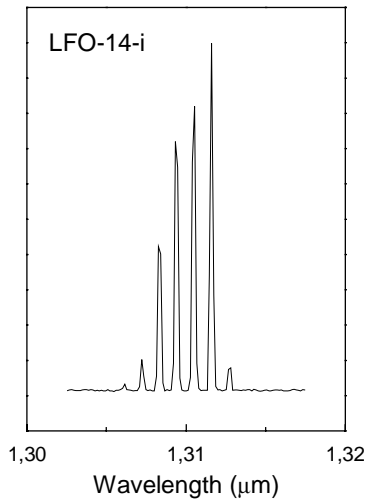
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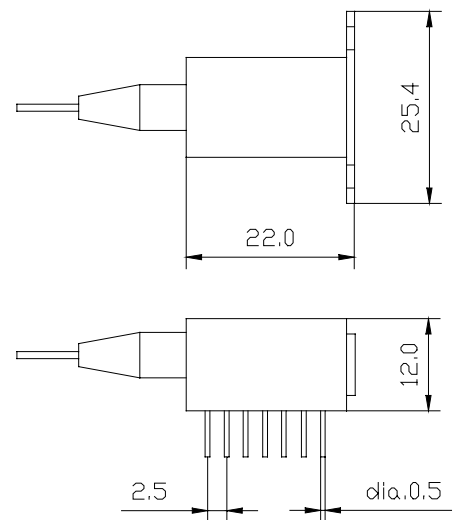
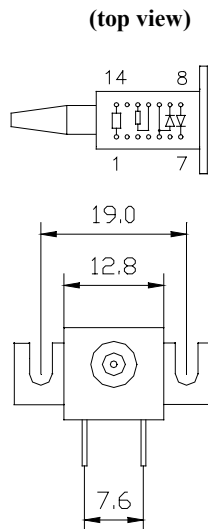
LFO-14-i

Typical optical and electrical characteristics (T=25°C):



Package specifications (DIL-14pin fiber package):

Pin	Function
1	"+" thermocooler
2	—
3	—
4	—
5	LD anode (+)
6	—
7	PD cathode (+)
8	PD anode (-)
9	LD cathode (-)
10	LD anode (+)
11	thermistor
12	thermistor
13	—
14	"-" thermocooler



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