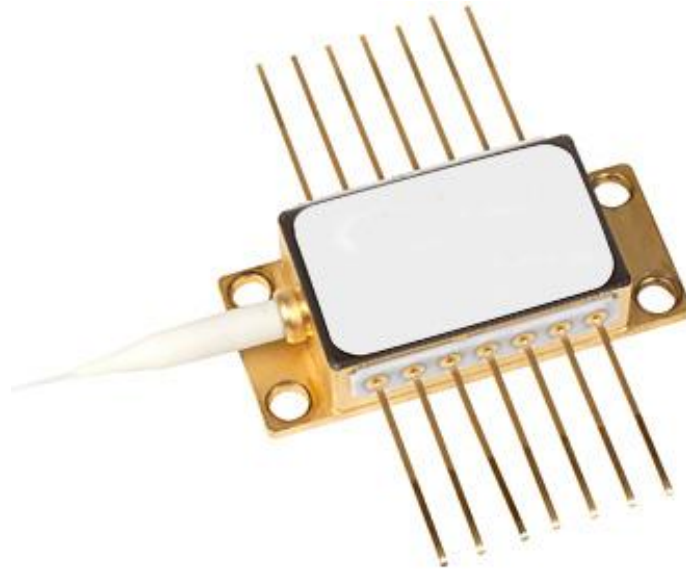




## 976nm 680mW SM Pumping Laser



- **Product Description**

Optional peak wavelength, optional output power, and optional FC/APC connector.

- **Product features**

Single-mode fiber output; high power stability; narrow linewidth characteristic; low noise design; industrial-grade package

- **Part Number**

MP-FP-976-680-14BF-SM



## ● Application area

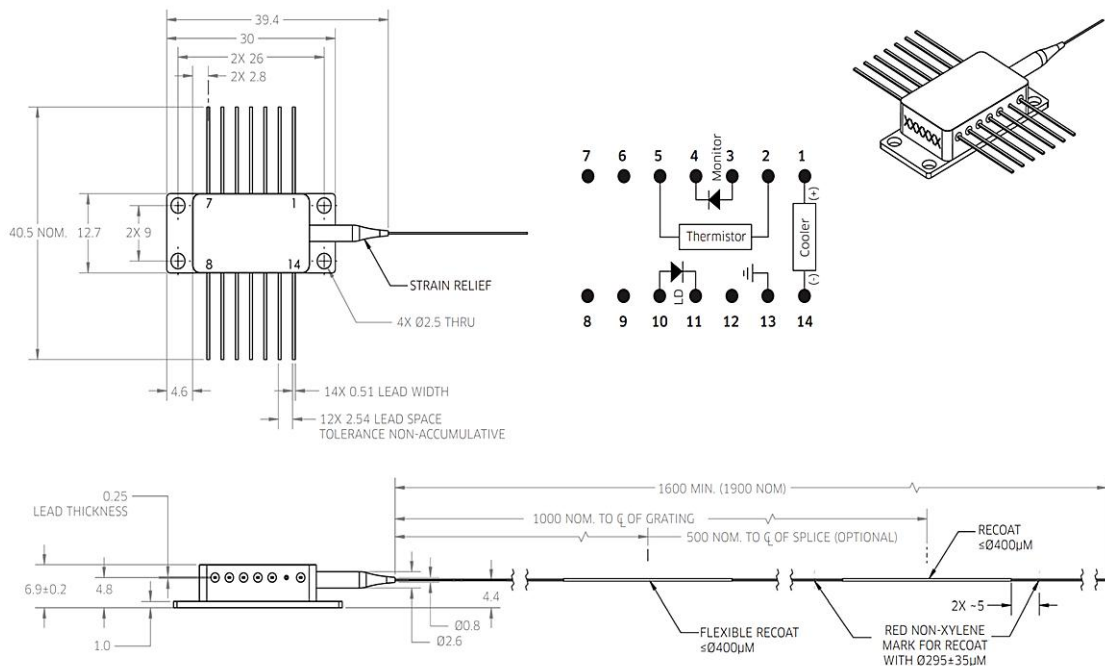
Fiber Amplifier Pumping | Fiber Lasers | Coherent Optical Communication |

Fiber Optic Sensing | Quantum Technology

## ● Core parameters

Center Wavelength	Output Power
976nm	680mW

## ● Dimension Drawing



## ● General Parameters

### Model Parameters

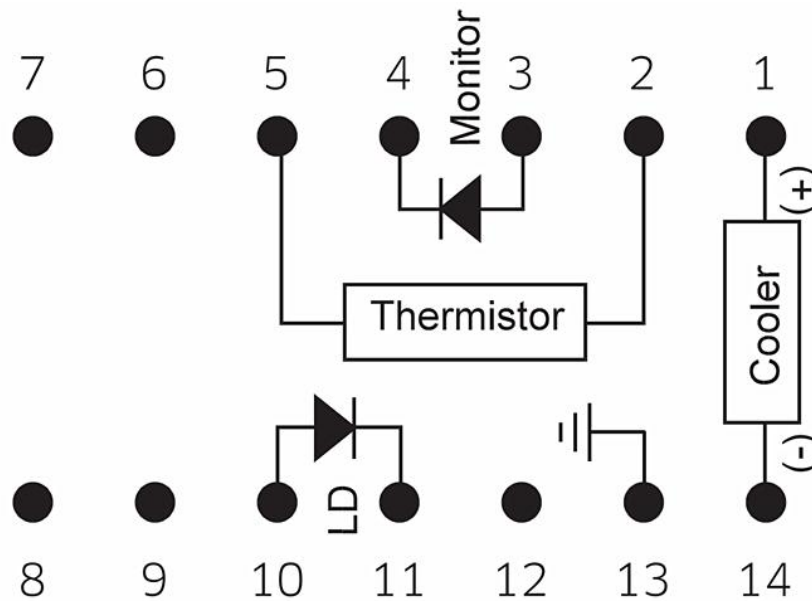
Parameter	Symbol	Min	Typ	Max	Unit
Center Wavelength	$\lambda$	974	976	980	nm
Spectral Width	$\Delta\lambda$	0.6	0.8	2.0	nm
Threshold Current	$I_{th}$	-	90	110	mA
Operating Current	$I_{op}$	-	120	150	mA
Fiber Output Power	$P_f$	400	600	1000	mW
Wavelength Tuning vs. Temperature	$\Delta\lambda/T$	-	-	0.01	nm/ <sup>o</sup> C
Tracking Ratio ( $0.1P_{op} < P_f < P_{op}$ ) <sup>1</sup>	TR	0.52	-	1.48	-
Tracking Error <sup>2</sup>	TE	-48	-	48	-
PD Monitor Responsivity	IBF	0.5	-	5	$\mu$ A/m W
Thermal Resistance ( $T_{set} = 25^{\circ}C$ ) <sup>3</sup>	$R_{th}$	-	20K	-	ohm
PD Dark Current ( $V_{RD} = 5 V$ )	$I_d$	-	-	0.1	$\mu A$

<b>Extinction Ratio (PM Version)</b>	<b>PER</b>	<b>17</b>	<b>20</b>	<b>-</b>	<b>dB</b>
<b>Fiber Type</b>	<b>HI1060</b>				
<b>Forward Voltage</b>	<b>Vf</b>	<b>-</b>	<b>1.8</b>	<b>2.6</b>	<b>V</b>
<b>Thermistor Resistance</b>	<b>RT</b>	<b>9.5</b>	<b>10</b>	<b>10.5</b>	<b>kΩ</b>
<b>Thermistor Temperature Efficiency</b>	<b>-</b>	<b>-</b>	<b>-4.4</b>	<b>-</b>	<b>%/°C</b>
<b>Output Connector</b>	<b>-</b>	<b>-</b>	<b>None or FC/APC</b>	<b>-</b>	<b>-</b>

## HI1060 Fiber Characteristics & Tolerances

<b>Parameter</b>	<b>Value</b>
<b>Cut-off Wavelength</b>	<b>920 nm</b>
<b>Maximum Attenuation</b>	<b>2.1 dB/km</b>
<b>Cladding Diameter</b>	<b>125 μm</b>
<b>Coating Diameter</b>	<b>250 μm</b>
<b>Core-Cladding Concentricity Error</b>	<b>≤ 0.5 μm</b>
<b>Mode Field Diameter</b>	<b>5.9 μm</b>

## Pin Definitions



Pin	Description	Pin	Description
1	Thermoelectric Cooler (+)	8	N/C
2	Thermistor	9	N/C
3	PD Monitor Anode (-)	10	Laser Anode (+)
4	PD Monitor Cathode (+)	11	Laser Cathode (-)
5	Thermistor	12	N/C
6	N/C	13	Case Ground
7	N/C	14	Thermoelectric Cooler (-)



## Ordering Information

Peak Wavelength
973.0 to 975.0 nm
975.0 to 977.0 nm
973.0 to 981.5 nm

Maximum Operating Power
600 mW
620 mW
640 mW
660 mW
680 mW
700 mW
720 mW
740 mW
760 mW
780 mW
800 mW
820 mW
840 mW
860 mW
880 mW
900 mW
950 mW