

Laser Source Module Specification

1. Product Description

PN: WSLX-XXXXX2114-01

Applications:

- 1550-nm broadcast and point-to-point applications
- Digital CATV transmission
- Sensing
- Testing system

Features:

- Meets GR 468 reliability specifications

2. Performance Specifications

2.1 Absolute Maximum Ratings

Parameter	Symbol	Condition	Min.	Max.	Unit
Operating Case Temperature	T _c	I=I _{op}	0	65	°C
Storage Temperature	T _{stg}	--	-40	85	°C
Laser Forward Current	I _f	--	--	900	mA
Laser Reverse Bias	V _r	--	--	3.5	V
Photodiode Reverse Bias	V _{rpd}	--	--	10	V
TEC Current	I _{tec}	0 °C < T _c < 65 °C, Top=25 °C I _f =I _{op} mA		1.5	A

2.2 Electrical and Optical Characteristics

Parameters are over operating temperature range unless otherwise noted.

Parameters	Symbol	Test Conditions	Min	Typ	Max	Unit
Operating Case Temperature	T _c		20	--	30	°C
Laser Set Temperature	T _L		--	25	--	°C
Center Wavelength*	λ _c	P= P _o , CW	1540	--	1560	nm
Spectral Width(-20dB)	Δλ _c	P= P _o , CW	--	--	1	nm
Operating Current	I _{op}	CW	300	--	800	mA
Threshold Current	I _{th}		--	--	50	mA
Optical Output Power	P _o	CW, I _{op} ≥300mA	40	--	100	mW
Forward Voltage	V _F	P= P _o	--	--	3.5	V
Monitor Current	I _{mon}			TBD		
Monitor Dark Current	I _D			TBD		
Optical Isolation	I _s	0 °C ≤ T _c ≤ 25 °C	30	--	--	dB
Side-mode Suppression Ratio	SMSR	P= P _o , CW	45	--	--	dB
Linewidth	Δλ	CW, I=I _{op}	--	--	100	KHz
Current Tuning Rate	I _{tr}	I _{op} =200mA to 800mA	0.2	--	0.4	GHz/mA
Temperature Tuning Rate	T _{tr}		--	0.1	--	nm/°C
Polarization Extinction Ratio	PER	With Panda PM fiber, Slow-axis align with E-field	20	--	--	dB

Thermistor Resistance	R_t	$T=25\text{ }^{\circ}\text{C}$	9.5	--	10.5	K Ω
Thermistor B Constant	B	$T=25\text{ }^{\circ}\text{C}$	--	3900	--	K
TEC Current	I_c	$\Delta T=40\text{ }^{\circ}\text{C}$	--	--	1.5	A
TEC Voltage	V_c	$\Delta T=40\text{ }^{\circ}\text{C}$	--	--	2.0	V

*See available wavelengths from Ordering Options. WDM wavelength set by laser sub-mount temperature.

3. Pin Information & Electrical Schematics:

1	Thermistor
2	Thermistor
3	No connection
4	PD Anode(-)
5	PD Cathode (+)
6	Thermoelectric Cooler (+)
7	Thermoelectric Cooler (-)
8	Case Ground
9	Case Ground
10	Case Ground
11	Laser Common (+),Case Ground
12	DC Laser Bias (-)
13	Laser Common (+),Case Ground
14	Case Ground

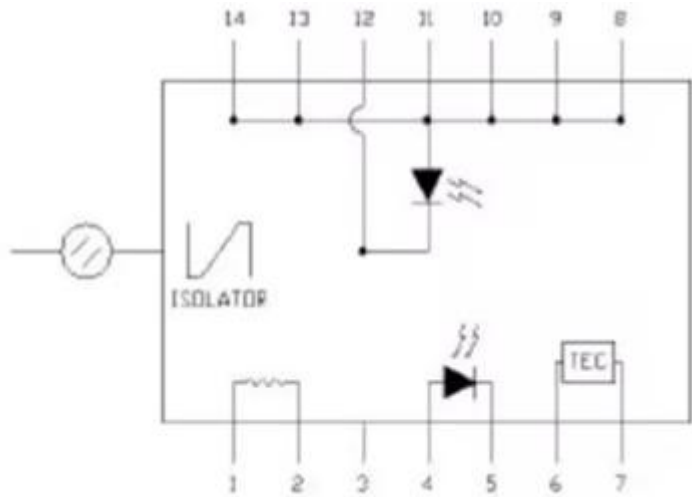
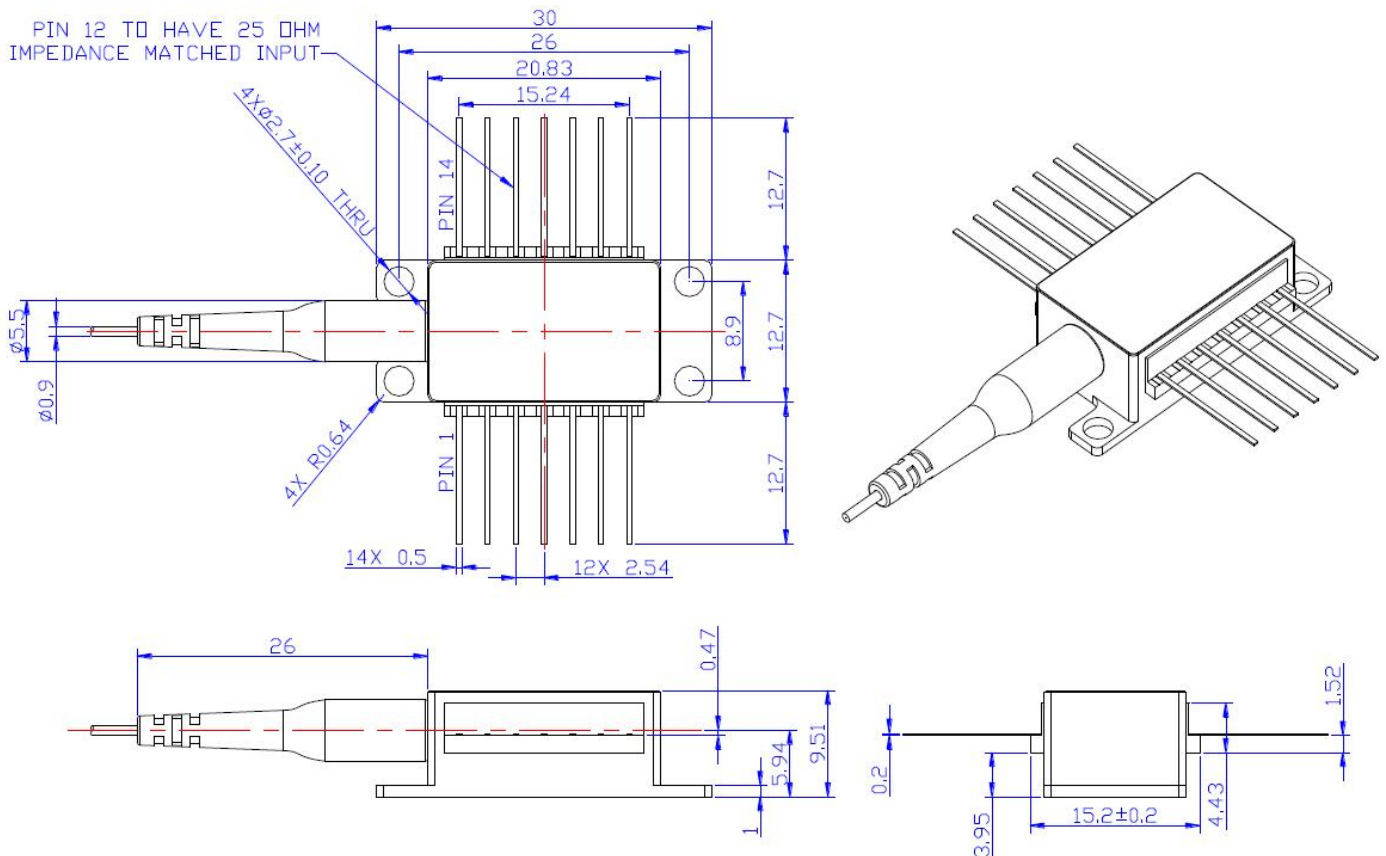


Figure 1. Laser Schematic

4. Outline Diagram:

Dimensions are in millimeters



5. Test Report:

Test report will be attached with each product. The following characteristic test data should be included : -Optical Output Power, Center Wavelength, P-I curve, Pin Assignments.

6. Packaging:

Black vacuumize anti-static plastic package.

Revision History

Revision	Notes	Authors	Checked	Approval	Date
Rev A0	New release				2024-04-01