

ITLA-3020-C ITLA-3010-L

Fully tunable over the C or L band

MSA-compliant Integrated Tunable Laser Assembly

Features

- 1550 nm CW DFB tunable laser assembly for DWDM systems
- Tunable over C- or L-Band: 36+ nm tuning range
- High optical power (up to 20 mW)
- Variable Optical Attenuation
- Excellent Relative Intensity Noise (RIN): -140 dB/Hz typical
- High Side Mode Suppression Ratio (SMSR): 50 dB typical
- Highly reliable DFB performance and wavelength stability
- Built-in Digital Signal Processor (DSP) and control electronics

Applications

- LR, LR2 and LH ULH DWDM optical transport
- Large form factor full band tunable transponders

Benefits

- Easy integration using OIF MSA-compliant ITLA

The ITLA-3020-C and ITLA-3010-L are a new generation of compact C- and L-band widely tunable transmission laser assemblies built with Santur's own DFB array technology. This assembly provides industry-leading tunable laser performance with control hardware and firmware in the smallest available MSA-compliant form factor.

Ideally suited for integration into a wide variety of DWDM systems, the Santur ITLA provides the best combination of performance features available, offering a unique combination of high optical power, wide tunability, and low power dissipation. The ITLA assembly includes an integrated wavelength locker, industry standard electrical interface, and a uniquely stable and reliable DFB laser design.

High performance, reliability, ease of manufacture, and economies of scale derived from the exclusive, proven design differentiate this product from others in the industry.



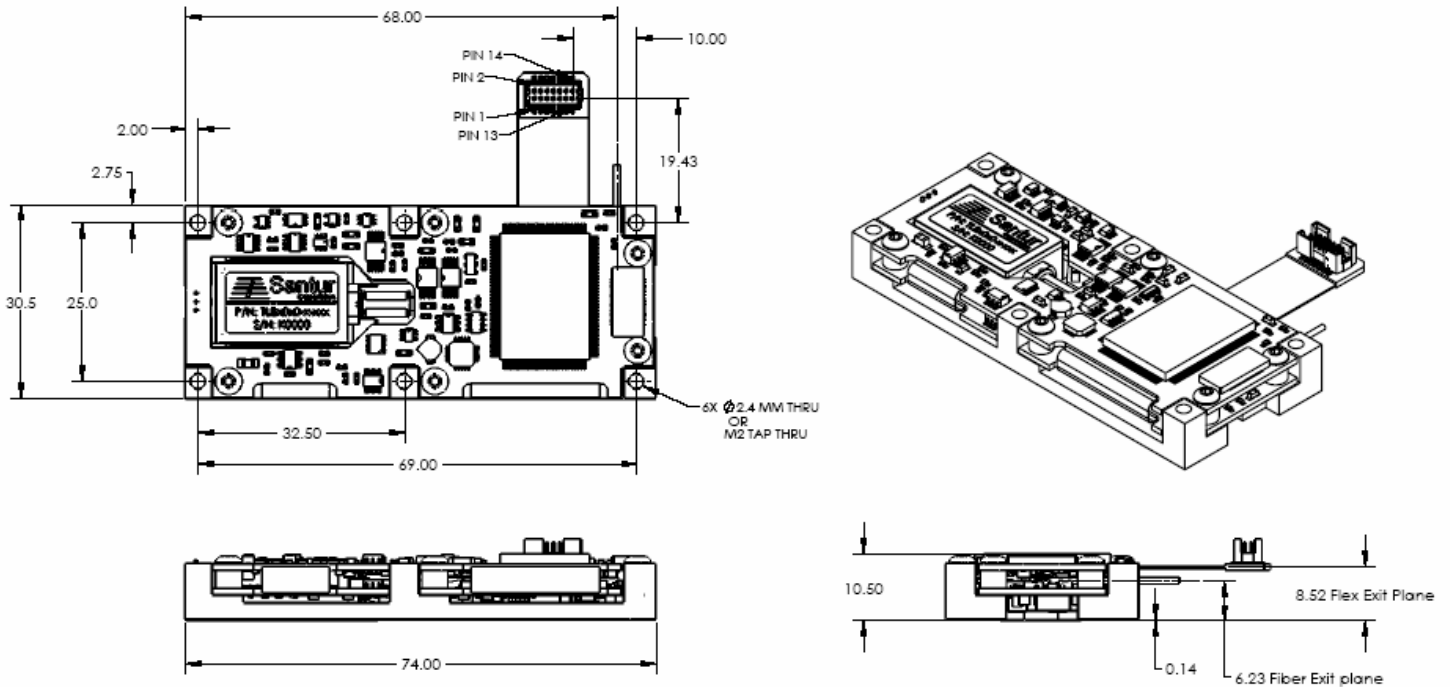
Specifications:

Symbol	Parameter	Conditions	ITLA-3020-C-101			ITLA-3010-L-102			Unit
			Min	Typ	Max	Min	Typ	Max	
Output Power									
P_{peak}	Radiant output power from pigtail	-	-	20	-	-	10	-	mW
	Power Variation	Over wavelength	-0.3		0.3	-0.3		0.3	dB
		Over temperature	-0.3		0.3	-0.3		0.3	dB
VOA	Variable optical attenuation		-3		0	-3		0	dB
Optical Characteristics									
λ_R	Wavelength tuning range	-	35.1		-	36.6		-	nm
	Channel spacing	ITU Grid		50			50		GHz
	Lower wavelength limit		-	-	1528.77	-	-	1570.42	nm
	Upper wavelength limit		1563.86	-	-	1607.47	-	-	nm
T_{switch}	Wavelength switching speed	-	-	2	30	-	2	30	seconds
f_w	Spectral linewidth	FWHM	-	3	10	-	3	10	MHz
f_d	Frequency inaccuracy over life	Steady-state	-2.5		2.5	-2.5		2.5	GHz
SMSR	Side mode suppression ratio	-	40	50	-	40	50	-	dB
ISO	Optical isolation	-	30	-	-	30	-	-	dB
RIN	Relative intensity noise	20 MHz to 10 GHz	-	-143	-135	-	-138	-130	dB/Hz
PER	Polarization extinction ratio	E-field along slow axis	20	-	-	20	-	-	dB
Electrical Specifications									
V_{cc}	Positive supply voltage	-	3.15	3.3	3.45	3.15	3.3	3.45	V
V_{ee}	Negative supply voltage		-5.45	-5.2	-4.94	-5.45	-5.2	-4.94	V
I_{cc}	Positive supply current	-	-	-	0.65	-	-	0.65	A
I_{ee}	Negative supply current, peak	while tuning			1.2			1.2	A
P_d	Total power dissipation, steady-state	$T_{case} = 25^{\circ}C$	-	1.5	3.5	-	1.5	3.5	W
		$T_{case} = 75^{\circ}C$	-	3	6.5	-	3	6.5	W
Fiber Pigtail									
	Fiber type	Fujikura Panda PM	-	-	-	-	-	-	
L	Length of pigtail		1.0	-	-	1.0	-	-	m
R	Bending radius		35	-	-	35	-	-	mm
F	Tensile strength (fiber to case)		-	-	5	-	-	5	N
	Optical connector	FC/UPC R-Type (narrow key)	-	-	-	-	-	-	
	Key alignment	Slow axis	-	-	-	-	-	-	
Absolute Maximum Ratings									
T_{op}	Case operating temperature*	-	-5	-	75	-5	-	75	$^{\circ}C$
T_{stg}	Storage temperature range*	-	-40	-	85	-40	-	85	$^{\circ}C$
	Signal pin voltage		-0.3		3.6	-0.3		3.6	V
					3.6			3.6	V

*non-condensing

Custom OEM specifications possible. Contact Santur for your needs.

Mechanical Outline:



Schematic measurements are in millimeters.

Flex-attached primary connector Samtec ASP-119097-01 mates with Samtec CLM-107-02-F-D.

Pin Assignment

Pin Name	Pin #	Pin #	Pin Name
+3.3V	1	2	DIS*
+3.3V	3	4	SRQ*
GND	5	6	MS*
GND	7	8	TxD
-5.2V	9	10	RxD
-5.2V	11	12	RST*
OIF Res.	13	14	Ana. Dither

Additional information on the communication interface and command set can be found in OIF document oif2005.128.04. See www.oiforum.com.

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This is an OEM product that does not comply with the requirements of 21 CFR Subchapter 1 as applicable. It is the responsibility of the user to report the end product and to certify that it meets all applicable requirements.



DANGER: Fiber output is >10 mWatt at 1555 nm.
Do not look into fiber end.

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