Optical Fibre to L-Band Receive Module

1100nm-1650nm
Optical input converted to L-Band 850-2450MHz

Settings
Controlled by 5 position switch with power & status indicator lights

Flexible Mounting
Tapped screw & through hole mounting options

Compact
EMC sealed standalone housing with RF monitoring port

RF Parameters		
Frequency Range	850 to 2450 MHz	
RF Connectors	50 ohm SMA / 75 ohm BNC / 75 ohm F-type	
Flatness	±1.2dB 850 to 2150 MHz ±1.7dB 850 to 2450 MHz ±0.25dB, any 36MHz i/p > -50dBm ±0.5 dB, any 36MHz i/p < -50dBm	Full TX &RX link with 10km fibre link using SRY-TX-L1-104 Fixed gain mode
Output AGC flatness	±2.0 dB over full band	Input -10 to -40 dBm
Return Loss: 50 ohm SMA 50 ohm BNC 75ohm BNC 75 ohm F-type	18 dB typ.,12dB min 18 dB typ.,12dB min 16 dB typ, 12 dB min 16 dB typ, 12 dB min	All RF connectors are female. All RF ports are DC blocked
Monitor port	-20dB ±3dB	Mounted on module
OIP3	Typical 17 dBm Worst Case 14 dBm	Test condition: SRY-RX-L1-401, 1m fibre, 10 dB gain, -22 dBm tones at 2150 and 2152 MHz
CNR (in any 36MHz)	Typical -50 dB Worst Case –45 dB	Test condition: SRY-RX-L1-401, 1m fibre, -10 dBm RF i/p power, -10 dBm RF o/p total power.
NF	Typical 12dB Worst Case 15dB	Test condition: SRY-RX-L1-401, 0 dB optical link loss, -50 dBm RF i/p power, -10 dBm o/p power
Group Delay variation	2ns over full band	1ns over any 36MHz
SFDR	105 dB/Hz$^{2/3}$typ., 100 dB/Hz$^{2/3}$ min.	Test condition: SRY-RX-L1-401, 1m fibre, 10 dB gain, -22 dBm tones at 2150 and 2152MHz
IMD3	-65 dBc typ., -60 dBc min.	Test condition: As SFDR above
RF Input Signal Range	-30dBm to -10dBm (total power)	Operational i/p range
Optical Parameters		
Optical Wavelength	1100 to 1650nm	Optimised for 1310nm and 1550 nm
Optical Power Output	0 to 4.5dBm	Max 10 dBm
Optical Connectors	FC/APC SC/APC	Single mode fibre Use angle polish connectors only

Non RF Parameters		
Module swap	Hot swap	
Power supply voltage	12V ±1V	Single or dual redundant power
Power consumption	4W typical	
LNB Power	18/13V ±5 %, 500 mA max	Short circuit current 750 mA max.
MTBF	> 250,000 hours	Module MTBF

Control, Monitoring & Alarms			
Control DIP Switch Position	1 2 3 4 5 6	Reserved Output power bit 3 Output power bit 2 Output power bit 1 AGC on/Gain fixed Reserved	Remove cover to access DIP switch. Output power settable -30 to -10 dBm in 3 dBm steps.
Indicator lights Power Status Green Status Red		Module powered Module OK Internal monitoring alarm	
Monitoring includes		Status of amplifier stages Module temperature	Monitored in each module
AGC		Settable output power level	Once AGC level set, gain can be fixed

Environmental conditions		
Operating Temperature	-40°C to +65°C	Mount away from sources of heat. Forced air cooling may be required dependant on application.
Storage Temperature	-40°C to +90°C	
Location	Indoor use	Outdoor use as part of ETL ODU only
Humidity	20 to 90% non-condensing	Relative Humidity
Altitude	10,000 ft AMSL operational 30,000 ft AMSL storage/transport	Above mean sea level

Position Marked on Switch			Output
2	3	4	Power/dBm
0	0	0	-31
0	0	1	-28
0	1	0	-25
0	1	1	-22
1	0	0	-19
1	0	1	-16
1	1	0	-13
1	1	1	-10

*1 = switch is in ON position
0= switch is in OFF position

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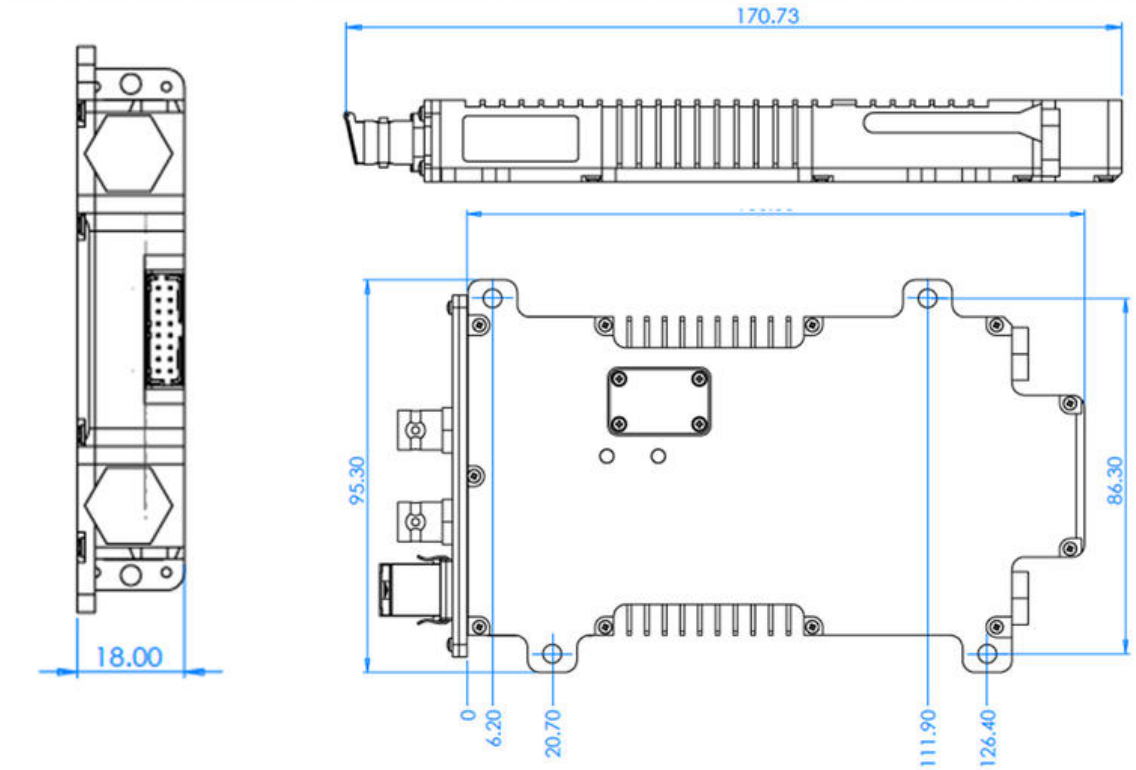
Physical Dimensions (mm)



Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.
Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.